FM 5-0

PLANNING AND ORDERS PRODUCTION

NOVEMBER 2024

Incorporating Change 1, August 2025

DISTRIBUTION RESTRICTION:

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This publication supersedes FM 5-0, dated 16 May 2022.

HEADQUARTERS, DEPARTMENT OF THE ARMY

Change No. 1
Field Manual
No. 5-0

Headquarters
Department of the Army
Washington, D.C., 08 August 2025

Planning and Orders Production

1. Change 1 to FM 5-0, 4 November 2024, replaces all occurrences of the term “gender” with the term “sex” in accordance with Executive Order 14168, dated 20 January 2025.

2. A plus sign (+) marks modified content.

3. FM 5-0, 08 August 2025, is changed as follows:

Change Version Page(s)	Change Description
Page 57	Replaces “gender” with “sex”
Page 61	Replaces “gender” with “sex”
Page 126	Replaces “gender” with “sex”
Page 166	Replaces “gender” with “sex”
Page 168	Replaces “gender” with “sex”
Page 170	Replaces “gender” with “sex”
Page 172	Replaces “gender” with “sex”
Page 252	Replaces “gender” with “sex”
Page 287	Replaces “genders” with “sexes”

4. An updated Authentication page has amended the prior authentication reflected in the rear of this publication.

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Field Manual
No. 5-0

Headquarters
Department of the Army
Washington, DC, 04 November 2024

PLANNING AND ORDERS PRODUCTION

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*This publication supersedes FM-5-0, dated 16 May 2022.

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Preface

FM 5-0, *Planning and Orders Production*, is the Army's comprehensive reference manual for planning. It provides an overview of the fundamentals of planning and details the various planning methodologies for planning operations. It is the Army's doctrinal source for problem solving, the military decision-making process, troop leading procedures, assessment planning, and formats for Army plans and orders.

To comprehend the doctrine contained in this publication, readers must first understand the Army operations described in ADP 3-0 and FM 3-0. Readers must also fully understand the fundaments of command and control and the principles of mission command described in ADP 6-0 and the fundamentals of the operations process found in ADP 5-0.

The principal audience for FM 5-0 includes Army commanders, leaders, and unit staffs (including officers, noncommissioned officers, and Soldiers). Commanders and staffs of Army headquarters serving as a joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning planning. For joint planning readers should refer to JP 5-0. When planning operations as part of a North Atlantic Treaty Organization operation, readers should refer to Allied Joint Publication 5.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and, in some cases, host-nation laws and regulations. Commanders at all levels ensure that their Soldiers operate in accordance with the law of armed conflict and the rules of engagement. (See FM 6-27 for more information on the law of armed conflict.)

FM 5-0 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which FM 5-0 is the proponent publication (the authority) are marked with an asterisk (*) in the glossary. When first defined in the text, terms for which FM 5-0 is the proponent publication are boldfaced and italicized, and definitions are boldfaced. When first defining other proponent definitions in the text, the term is italicized, and the number of the proponent publication follows the definition. Following uses of the term are not italicized.

FM 5-0 applies to the Active Army, the Army National Guard/Army National Guard of the United States, and the United States Army Reserve unless otherwise stated.

The proponent of FM 5-0 is the United States Army Combined Arms Center. The preparing agency is the Combined Arms Doctrine Directorate, United States Army Combined Arms Center. Send comments and recommendations on a DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) to Commander, United States Army Combined Arms Center and Fort Leavenworth, ATTN: ATZL-MCD (FM 5-0), 300 McPherson Avenue, Fort Leavenworth, KS 66027-2337; by email to usarmy.leavenworth.mccoe.mbx.cadd-org-mailbox@army.mil; or submit an electronic DA Form 2028.

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Introduction

Planning—the art and science of understanding a situation, envisioning a desired future, and determining effective ways of bringing that future about—is a key activity of the operations process. While planning may start an iteration of the operations process, planning does not stop with the production of an order. During preparation and execution, commanders and staffs continuously revise the plan based on changing circumstances and the assessed progress of an operation.

An outcome of planning is a plan or order that that guides subordinates through each phase of an operation. Since planning is continuous, a plan or order is an interim product based on information and understanding at a moment that is subject to revision. The measure of a good plan is not whether execution transpires as planned, but whether the plan facilitates effective action in the face of unforeseen events.

Operations demand a flexible approach that adapts planning methods to each situation. An effective planning process helps structure the thinking of commanders and staffs while supporting their insight and creativity. FM 5-0 describes several planning methodologies commanders and staffs use to help understand situations; develop solutions to problems; direct, coordinate, and synchronize actions; prioritize efforts; and anticipate events.

This version of FM 5-0 incorporates ADP 3-0, FM 3-0, and ADP 3-13 changes. Examples of these changes include but are not limited to—

- Updated the operational framework from decisive, shaping, and sustaining to deep, close, and rear operations executed by the main and supporting efforts.
- Added the discussion of three dimensions described through the five domains.
- Updated the concept of operations description (time, space, purpose, and resources).
- Added tenets and imperatives as described in FM 3-0.
- Added considerations for planning in a multinational environment.
- Abbreviated troop leading procedures for applicability in large scale combat operations.
- Aligned Appendix B, command and support relationships, with FM 3-0.
- Updated concept of the operation and scheme of the operation taxonomy.
- Updated Annex C, Operations attachment list.
- Added scheme of air defense to the base order and Annex I, Air Defense as a new annex to the order.

FM 5-0 contains eight chapters and seven appendices. The following paragraphs provide a brief introduction by chapter and appendix.

Chapter 1 describes the nature of operations in which commanders, supported by their staffs, develop plans and orders for the conduct of operations. This chapter defines and describes planning. A discussion of the functions of planning follows. The chapter then describes integrated planning to include a summary of the Army's planning methodologies. The chapter concludes with a description of plans and orders, guides to effective planning, and common planning pitfalls to avoid.

Chapter 2 discusses operational art in relation to planning. This chapter describes planning and the levels of warfare. A discussion of operational art follows. The chapter concludes with a discussion of the elements of operational art— the tools available to commanders and staffs in the application of operational art.

Chapter 3 describes a systematic approach to solving problems and serves as the baseline for problem solving methodologies. The chapter begins by discussing problem solving as related to decision making. The chapter concludes by discussing the seven-step process used in Army problem solving.

Chapter 4 defines Army design methodology (ADM) and describes its key concepts. Considerations for when to employ ADM and forming a planning team follows. Next, the chapter describes framing an operational environment (OE), framing problems, and developing an operational approach. The chapter concludes with a description of transitioning to detailed planning and reframing.

Chapter 5 discusses the military decision-making process (MDMP) and its application for units with a staff. This chapter defines and describes the MDMP. It provides an overview of the process followed by a detailed explanation for conducting each of the seven steps of the MDMP. The chapter concludes with techniques for modifying the MDMP in a time-constrained environment.

Chapter 6 describes the major activities of execution to include assessing, decision making, and directing action necessary to support rapid decision-making and synchronization. The chapter concludes with a discussion of the rapid decision-making and synchronization process (RDSP).

Chapter 7 discusses troop leading procedures (TLP), providing small-unit leaders without a staff a framework for planning and preparing for operations. This chapter describes the eight steps of TLP. The chapter concludes with an explanation of the eight-step process small-unit leaders use to develop plans and prepare for operations.

Chapter 8 provides an overview of assessment within planning and the operations process and incorporates processes described in multi-Service tactics, techniques, and procedures from the Air, Land, Sea, and Space Application Center (known as ALSSA) publications. The chapter describes the steps of the assessment process and a discussion on assessment planning. The chapter concludes with a section on assessment in the MDMP.

Appendix A provides information on operational and mission variables. The operational and mission variables are tools for commanders and staffs to use for analyzing an operation and organizing information. This appendix provides a description of the variables to assist commanders and staffs in applying these tools.

Appendix B provides information on command and support relationships. Establishing clear command and support relationships is a key aspect in task organizing the force for operations. This appendix defines and describes joint command relationships and other authorities, followed by a discussion of Army command and support relationships. It concludes with a discussion of command and control considerations for multinational operations.

Appendix C describes how commanders and staffs build and maintain their running estimates throughout the operations process. This appendix then provides a generic running estimate format that commanders and staff elements may modify to fit their functional areas.

Appendix D provides administrative instructions and formats for preparing Army plans and orders. The appendix begins by describing types of plans and the requirements for planners in developing a plan or order. The appendix then provides sample formats for all types of plans and orders with a description of key pieces to include when developing each plan or order.

Appendix E provides administrative instructions and formats for preparing annexes that support plans and orders. The appendix provides an overview of all annexes and a list of the associated tabs. The appendix then provides sample annex formats and administrative instructions with key pieces to include when developing each annex.

Appendix F provides information on decision tools and their role in the operations process. It defines key terms throughout and concludes by describing how and when decision tools are developed within the MDMP.

Appendix G summarizes the integrating processes and identifies key inputs and outputs of each of these processes within the steps of the MDMP.

Chapter 1
Fundamentals of Planning

This chapter describes the nature of operations in which commanders, supported by their staffs, develop plans and orders for the conduct of operations. It defines and describes planning and provides a summary of Army's planning methodologies. The chapter also provides a description of plans and orders, guides to effective planning, and common planning pitfalls to avoid. The chapter concludes with multinational planning considerations.

THE NATURE OF OPERATIONS

1-1. To understand the fundamentals of planning, Soldiers must appreciate the general nature of operations. Military operations vary in scale of forces involved, duration, and level of violence. While most operations conducted by Army forces occur below the threshold of armed conflict, large-scale combat operations are the most demanding. In armed conflict, Army forces face thinking and adaptive enemies, differing agendas of various actors, and changing perceptions of civilians in an operational area. As friendly forces try to impose their will on enemy forces, enemy forces resist and seek to impose their will on friendly forces. A similar dynamic occurs among civilian groups whose own desires influence and are influenced by military operations. Appreciating these relationships among opposing human wills is essential to understanding the fundamental nature of operations.

1-2. Military operations are inherently dynamic and uncertain. The complexity of friendly and enemy organizations, unique combinations of terrain and weather, and the dynamic interactions among all participants create uncertainty. Chance and friction further increase the potential for chaos and uncertainty during operations. Chance pertains to unexpected events or changes beyond the control of friendly forces, while friction describes the obstacles that make the execution of even simple tasks difficult. Both are always present for all sides during combat.

1-3. The scale, scope, tempo, and lethality of large-scale combat operations add to the chaotic and uncertain nature of operations, making precise cause-and-effect determinations difficult or delayed. For example, a commander and staff may be uncertain about the exact location and strength of an enemy force. Even if the staff feels confident about the enemy's location and strength, the commander still questions what to infer from those facts-the enemy's intentions, for example. Even if the commander makes a reasonable inference, the many options available to the enemy make predicting the enemy's exact behavior difficult. Given the nature of operations, the object of planning is not to eliminate uncertainty but to develop a framework for action in the middle of it.

PLANNING

1-4. *Planning* is the art and science of understanding a situation, envisioning a desired future, and determining effective ways to bring that future about (ADP 5-0). Planning helps leaders understand situations; identify and develop solutions to problems; direct, coordinate, and synchronize actions; prioritize efforts; and anticipate events. In its simplest form, planning helps leaders determine how to move from the current state to a more desirable future state and identify opportunities and risks that may arise along the way.

1-5. Planning may be highly structured, involving the commander, staff, subordinate commanders, and others who develop a fully synchronized plan or order. Planning may also be less structured, involving the commander and leaders who quickly determine a scheme of maneuver for a hasty attack. Sometimes a planned activity is quite specific with clear goals. At other times, planning must first determine the activity and the goals. Planning is conducted along various planning horizons—points in time that focus an organization's planning efforts—depending on the echelon and circumstances. Some headquarters may plan out to years and months, others plan out to days and hours.

1-6. An output of planning is a plan or order—a directive for future action. The five-paragraph format (situation, mission, execution, sustainment, and command and signal) is the standard for issuing army plans and orders. Commanders issue plans and orders to subordinates to communicate their understanding of a

situation and their vision for how an operation should unfold. Plans and orders synchronize the action of forces in time, space, and purpose to achieve objectives and accomplish the mission. They inform others outside the organization on how to cooperate and provide support. The plan serves as a foundation from which the force can adjust based on changing circumstances.

PLANNING AND THE OPERATIONS PROCESS

1-7. Planning is a continuous activity of the *operations process*—the major command and control activities performed during operations: planning, preparing, executing, and continuously assessing the operation (ADP 5-0). Commanders use the operations process to drive the conceptual and detailed planning necessary to understand an operational environment (OE); visualize and describe the operation's end state and operational approach; make and articulate decisions; and direct, lead, and assess operations as shown in figure 1-1.

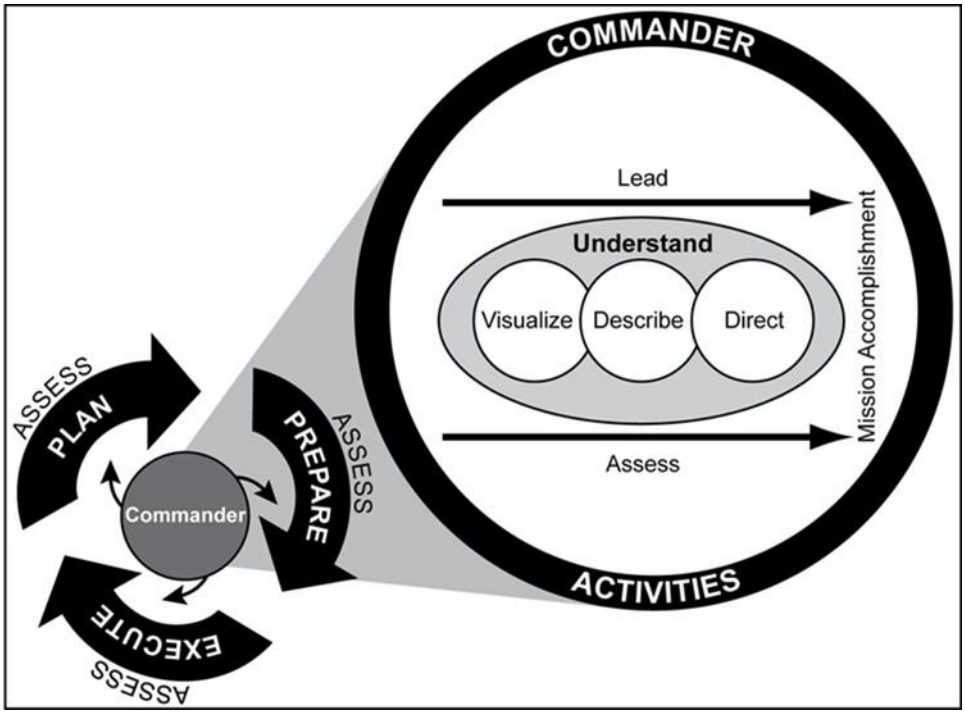

Figure 1-1. The operations process

1-8. The activities of the operations process are not discrete; they overlap and recur as circumstances demand. While planning may start an iteration of the operations process, planning does not stop with the production of an order. During preparation and execution, the commander and staff continuously refine the order, to include developing branch plans, to account for changes in the situation. Subordinates and others provide assessments about what works, what does not work, and how the force can do things better. In some circumstances, commanders may determine that the current order (including associated branches and sequels) no longer applies. In these instances, instead of modifying the current order, commanders reframe the problem and develop a new plan. (See ADP 5-0 for doctrine on the operations process.)

PLANNING AND MISSION COMMAND

1-9. Effective planning incorporates the principles of *mission command*—the Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation (ADP 6-0). Mission command is based on the Army's view that war is a human endeavor and inherently dynamic and uncertain. No plan can account for every possibility, and most plans must change rapidly during execution if they are to succeed. The principles of mission command are—

- Competence.
- Shared understanding.

- Mutual trust.
- Mission orders.
- Commander's intent.
- Disciplined initiative.
- Risk acceptance.

1-10. Mission command requires an environment of trust and shared understanding among commanders, staffs, and subordinates. It requires building effective teams and a command climate in which commanders encourage subordinates to accept risk and exercise initiative to seize opportunities and counter threats within the commander's intent. Through mission orders, commanders focus leaders on the purpose of the operation rather than on the details of how to perform assigned tasks. Doing this minimizes detailed control and allows subordinates the greatest possible freedom of action to accomplish tasks. Finally, when delegating authority to subordinates, commanders set the necessary conditions for success by allocating appropriate resources to subordinates based on assigned tasks. (See ADP 6-0 for doctrine on command and control and the principles of mission command.)

THE SCIENCE AND ART OF PLANNING

1-11. Planning is both a science and an art. Many aspects of military operations, such as movement rates, fuel consumption, and weapons effects, are quantifiable. They are part of the science of planning. The combination of forces, choice of tactics, and arrangement of activities belong to the art of planning. Soldiers often gain knowledge of the science of planning through institutional training, education, and self-study. They gain understanding of the art of planning primarily through operational training and experience. Effective planners are grounded in both the science and the art of planning.

1-12. The science of planning encompasses aspects of operations that can be measured and analyzed. These aspects include the physical capabilities of friendly and enemy organizations. The science of planning includes a realistic appreciation for time-distance factors, an understanding of how long it takes to initiate certain actions, the techniques and procedures used to accomplish planning tasks, and the terms and graphics that compose the language of military operations. While not easy, the science of planning is important to understand and master.

1-13. There are several resources available to planners concerning the scientific aspects of operations, including planning factors by warfighting functions, friendly unit tables of organization, detailed sustainment planning factors, and threat models. In addition to specific echelon and unit doctrinal publications, key Department of the Army approved resources that contain planning tools, factors, and data include—

- ATP 5-0.2-1 that contains detailed planning considerations and factors by echelon and by warfighting function.
- The U.S. Army Directorate of Force Management, force management system website at https://fmsweb.fms.army.mil that provides tables of organization and equipment for all Army units, including the command relationships of subordinate organizations.
- The Combined Arms Support Command planning branch website at https://cascom.army.mil/g_staff/g3/SUOS/site-sustainment/pages/hot-topics.htm that provides several sustainment related planning tools and calculators, including—
  - Operational logistics planner.
  - Quick logistics estimation tool.
  - Platform calculator.
  - Food and water tool.
  - Class III bulk estimation tool.
  - Convoy planning tool.
- ATP 4-02.55 provides discussion on the use of joint medical planning tool and Army health system support planning.
- Army technique publications on Russian, Chinese, North Korean, and Iranian forces.
- Center for Army Lessons Learned and Joint Lessons Learned Information Systems (known as JLLIS) Observations, Insights and Lessons (also known as OIL) products and publications.

1-14. Mastery of the science of planning is necessary for military professionals to understand the physical and procedural constraints under which units operate. These constraints include the effects of terrain, weather,

and time on friendly and enemy forces. However—because combat is an intensely human activity—the solutions to problems cannot be reduced to a formula. This realization necessitates the study of the art of planning.

1-15. The art of planning requires creative application of doctrine, units, and resources. It incorporates operational art (discussed in Chapter 2) and the art of tactics (discussed in FM 3-90) to develop plans that comply with the commander's intent and planning guidance. The art of planning requires understanding the dynamic relationships among friendly forces, the threat, and other aspects of an OE during operations. It includes making decisions based on skilled judgment acquired from experience, training, study, imagination, and critical and creative thinking. Commanders, supported by their staffs, apply judgment based on their knowledge and experience to select the right time and place to act, assign tasks, prioritize actions, and allocate resources.

THE FUNCTIONS OF PLANNING

1-16. Imperfect knowledge and assumptions about the future are inherent in all planning. Planners cannot predict with precision how enemies will react or how other actors will respond during operations. Nonetheless, the understanding and learning that occurs during planning has great value. Even if units do not execute the plan exactly as envisioned—and few ever do—planning results in an improved understanding of the situation that facilitates future decision making. Planning and plans help leaders—

- Build situational understanding.
- Identify, understand, and develop solutions to problems.
- Identify, mitigate, and accept risk.
- Direct, coordinate, and synchronize action.
- Task-organize the force and prioritize efforts.
- Anticipate events.

BUILD SITUATIONAL UNDERSTANDING

1-17. Success in operations demands timely and effective decisions based on applying judgment to available information and knowledge. As such, commanders and staffs seek to build and maintain situational understanding throughout the operations process. *Situational understanding* is the product of applying analysis and judgment to relevant information to determine the relationships among the operational and mission variables (ADP 6-0). Planning, including an analysis of the operational and mission variables, helps commanders and staffs develop their initial understanding of an OE as it relates to the unit's mission. Continuous planning helps to maintain situational understanding and build a shared understanding across the force.

Understanding an Operational Environment

1-18. An *operational environment* is the aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander (JP 3-0). For Army forces, an OE includes portions of each of the five domains (land, maritime, air, space, and cyberspace) understood through three dimensions (human, physical, and information). The land, maritime, air, and space domains are defined by their physical areas. The cyberspace domain, a man-made network of networks, transits and connects the other domains through the electromagnetic spectrum.

1-19. The interrelationship among the land, maritime, air, space, and cyberspace domains require cross domain understanding. As such, Army leaders seek to understand an OE through the physical, information, and human dimensions inherent to each domain. Understanding the three dimensions from a friendly, threat (adversary or enemy), and neutral perspective helps leaders identify problems; anticipate potential outcomes; and effectively plan operations.

1-20. The *physical dimension* is the material characteristics and capabilities, both natural and manufactured, within an operational environment (FM 3-0). While war is a human endeavor, it occurs in a material environment, and it is conducted with physical things. Each of the domains is inherently physical. Terrain, weather, military formations, electromagnetic radiation, weapons systems and their ranges, and many of the things that support or sustain forces are part of the physical dimension. Activities or conditions in the physical dimension create effects in the human and information dimensions.

1-21. The information dimension is the content, data, and processes that individuals, groups, and information systems use to communicate. The information dimension contains the information itself, including text and images. It also includes the flow or communication pathways of information. Information exchange may be in the form of electromagnetic transmission, print, or speech. The information dimension connects humans to the physical world.

1-22. The *human dimension* encompasses people and the interaction between individuals and groups, how they understand information and events, make decisions, generate will, and act within an operational environment (FM 3-0). The will to act and fight emerges from the complex interrelationship of culture, emotion, and behavior. Influencing these factors-by affecting attitudes, beliefs, motivations, and perceptions-underpins the achievement of military objectives. (See FM 3-0 for more information about the domains and dimensions of an OE.)

Operational Variables

1-23. The operational variables assist commanders and staffs in refining their understanding of the domains and dimensions of an OE. Planners analyze and describe an OE in terms of eight interrelated operational variables: political, military, economic, social, information, infrastructure, physical environment, and time (known as PMESII-PT). The operational variables help leaders understand the land domain and its interrelationships with information, relevant actors, and capabilities in the other domains. (See Appendix A for a detailed discussion of the operational variables.)

Mission Variables

1-24. Upon receipt of a mission, commanders filter information categorized by the operational variables into relevant information with respect to the mission. They use the mission variables, in combination with the operational variables, to refine their understanding of the situation and to visualize, describe, and direct operations. The mission variables are mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and integrated into the other variables, informational considerations, remembered with the mnemonic METT-TC (I).

1-25. METT-TC (I) represents the mission variables leaders use to analyze and understand a situation in relationship to the unit's mission. *Informational considerations* are those aspects of the human, information and physical dimensions that affect how humans and automated systems derive meaning from, use, act upon, and are impacted by information (FM 3-0). Informational considerations is expressed as a parenthetical variable in that it is not an independent variable, but an important component of each variable of METT-TC that leaders pay particular attention to when developing understanding of a situation. (See Appendix A for a detailed discussion of the mission variables.)

IDENTIFY, UNDERSTAND, AND DEVELOP SOLUTIONS TO PROBLEMS

1-26. Planning helps leaders better understand and identify problems and develop solutions to solve or manage those problems. A problem is an issue or obstacle that makes it difficult to achieve a desired goal or objective. In a broad sense, a problem exists when an individual becomes aware of a significant difference between what is currently observed or occurring in the environment, and what is desired. In the context of operations, an operational problem is the issue or set of issues that impede commanders from achieving their desired end state. (See paragraph 1-53 for further discussion on identification of problems and problem solving.) Identification of the actual problem to solve is critical to successful planning. Misidentification of the problem often leads to an ineffective plan and operational approach and time critical to subordinates for development of their plans.

1-27. Throughout operations, Army leaders face various problems, requiring unique and creative solutions. Not all problems require the same level of planning. Leaders often identify simple problems immediately and quickly decide on a solution—sometimes on the spot. However, planning is critical when a problem is a set of interrelated issues, and the solution to each issue affects the others. For unfamiliar situations, planning offers ways to solve the complete set of problems. In general, the more complex a situation is, the more important and involved the planning effort becomes.

1-28. Just as planning is only part of the operations process, planning is only part of problem solving. In addition to planning, problem solving includes implementing the planned solution (execution), learning from the implementation of the solution (assessment), and modifying or developing a new solution as required. The object of problem solving is not just to solve near-term problems, but to do so in a way that forms the basis for long-term success. (See Chapter 3 on Army problem solving.)

IDENTIFY, MITIGATE, AND ACCEPT RISK

1-29. Risk—the exposure of someone or something valued to danger, harm, or loss—is inherent in all operations. Because risk is part of all military operations, it cannot be avoided. Risk may range for resource shortfall or a course of actions that exposed a friendly force's flank. Identifying, mitigating, and accepting risk is a function of command and a key consideration during planning.

1-30. During planning, commanders and staffs analyze risk in collaboration with subordinates and their higher-level headquarters to help determine what level of risk exists and how to mitigate it. When considering how much risk to accept with a course of action, commanders consider risk to the force and risk to the mission against the perceived benefit. They apply judgment with regards to the importance of an objective, time available, and anticipated cost. Commanders balance the tension between protecting the force and accepting and managing risks that must be taken to accomplish their mission. (See Chapter 2 for a discussion of risk as an element of operational art.)

DIRECT, COORDINATE, AND SYNCHRONIZE ACTIONS

1-31. Plans and orders are the principal means commanders use to direct, coordinate, and synchronize actions. They also inform those outside the unit how to cooperate and provide support. Effective plans and orders direct subordinates by stating what is required (the task) and why (the purpose). They leave much of the how (the method) up to subordinates.

1-32. Plans and orders contain control measures to coordinate and synchronize action. A *control measure* is a means of regulating forces or warfighting functions (ADP 6-0). Control measures aid in coordinating forces without imposing needless restrictions on their freedom of action. Commanders use control measures to assign responsibilities, coordinate fire and maneuver, and control operations. Control measures assign responsibilities, coordinate actions between forces, establish guidelines to regulate freedom of action, and impose only necessary restrictions. Control measures are essential to coordinating subordinates' actions and are located throughout the plan. (See FM 1-02.2 for a list of control measure symbols.)

1-33. *Synchronization* is the arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time (JP 2-0). Plans and orders synchronize the warfighting functions to mass the effects of combat power at a chosen place and time. Plans achieve synchronization by clearly establishing appropriate sequencing of events, units or actions; conditions to be set prior to action; and establishing the necessary triggers for action. Synchronization is a means of control, not an end. Commanders balance necessary synchronization against desired agility and initiative. Over emphasizing the direction, coordination, and synchronization functions of planning may result in detailed and rigid plans that stifle initiative. Mission command encourages the use of mission orders to avoid creating overly restrictive instructions to subordinates. Mission orders direct, coordinate, and synchronize actions while allowing subordinates the maximum freedom of action to accomplish missions within the commander's intent as discussed in paragraphs 1-64 to 1-65.

TASK-ORGANIZE THE FORCE AND PRIORITIZE EFFORTS

1-34. When developing their concept of operations, commanders, assisted by their staffs, first identify the unit's essential task. An ***essential task*** **is a specified or implied task that must be executed to accomplish the mission.** The essential task becomes the basis of the unit's mission statement. The designation of the essential task prioritizes effort and provides the focal point for which the commander and staff develop additional tasks that set conditions for the successful execution of the essential task. When assigning tasks to subordinate units, commanders ensure subordinate units have the capabilities and resources to accomplish their assigned tasks. They do this by task-organizing the force, prioritizing efforts, and establishing priorities of support.

1-35. *Task-organizing* is the act of designing a force, support staff, or sustainment package of specific size and composition to meet a unique task or mission (ADP 3-0). It includes providing forces and assets to subordinate commanders and establishing their command and support relationships. When task organizing their force, commanders visualize capabilities of units two echelons below them, based on their visualization of tasks to subordinates one echelon below them. Some assets are retained under the commander's immediate control to retain flexibility to exploit opportunities or counter threats.

1-36. Task organizing includes establishing command or support relationships among subordinate commanders. Army command relationships define command responsibility and authority. Army support relationships define the purpose, scope, and effect desired when one capability supports another. Establishing clear command and support relationships is fundamental to task-organizing for any operation. (See FM 3-0 for a detailed discussion of joint, multinational, and Army command and support relationships.)

1-37. Task-organizing results in a *task organization*—a temporary grouping of forces designed to accomplish a particular mission (ADP 5-0). The unit's task organization is stipulated in the base plan or order or addressed in Annex A (Task Organization) to the base plan or order. The operation plan (OPLAN) or operation order (OPORD) also stipulates changes in the task organization by phase. During execution, commanders modify the task organization as required based on the situation through fragmentary orders (FRAGORDs). (See Appendix E for task organization format and instructions.)

1-38. Commanders prioritize efforts by designating a main effort, supporting efforts, and a reserve. The *main effort* is a designated subordinate unit whose mission at a given point in time is most critical to overall mission success (ADP 3-0). A *supporting effort* is a designated subordinate unit with a mission that supports the success of the main effort (ADP 3-0). A *reserve* is that portion of a body of troops that is withheld from action at the beginning of an engagement to be available for a decisive movement (ADP 3-90).

1-39. The main effort is weighted with the preponderance of *combat power*—the total means of destructive and disruptive force that a military unit/formation can apply against an enemy at a given time (JP 3-0). Designating a main effort temporarily gives that unit priority for support. Commanders shift resources and priorities to the main effort as circumstances require. Commanders may shift the main effort several times during an operation based on which subordinate unit is most critical to overall mission success at the time.

1-40. Commanders resource supporting efforts with the minimum assets necessary to accomplish the mission. Forces often realize success of the main effort through success of supporting efforts. A main effort in an earlier phase can be a supporting effort for a main effort in a later phase.

1-41. Commanders constitute a reserve and base the size of the reserve on the level of uncertainty in the current tactical situation. Commanders consider survivability, mobility, and the most likely mission when positioning their reserve. While commanders can assign their reserve a wide variety of tasks, through planning priorities, to perform on commitment, a reserve remains prepared to accomplish other missions.

1-42. Commanders also establish priorities of support during planning and shift priorities during execution as the situation requires. A *priority of support* is a priority set by the commander to ensure a subordinate unit has support in accordance with its relative importance to accomplish the mission (ADP 5-0). Priorities of movement, fires, sustainment, and protection all illustrate priorities of support that commanders may use to weight the main effort.

ANTICIPATE EVENTS

1-43. A fundamental tension exists between the desire to plan far into the future to facilitate preparation and coordination and the fact that the farther into the future the commander plans, the greater the associated uncertainty and potentially less relevant the plan will likely remain. Given the fundamentally uncertain nature of operations, the object of planning is not to eliminate uncertainty but to develop a flexible plan that enables the force to adapt to changing circumstances. Planning provides an informed forecast of how future events may unfold and anticipates transitions. It entails identifying and evaluating potential decisions and actions in advance, to include thinking through consequences of certain actions and the potential second- and third-order effects that may result. Planning involves thinking about ways to respond to potential opportunities and threats.

1-44. Planning keeps the force oriented on future objectives despite the requirements of current operations. Planning is essential for seizing and retaining the initiative by allowing commanders and staffs to consider potential decisions and actions in advance. Planning reduces the time between decisions and actions during execution, especially at higher echelons. While some actions are implemented immediately, others require forethought and preparation. For example, changing the direction of attack may be a relatively simple and immediate matter for a battalion; however, changing the scheme of maneuver for a division, including all its support, is complicated and time consuming. Changing the priority of fires at division level may take considerable time if artillery units must reposition. If leaders wait until an event occurs to begin planning and preparing for a response, units may not be able to react quickly enough, ceding the initiative to enemy forces.

1-45. During execution planners continue to develop or refine options for potential enemy action and friendly opportunities. By anticipating potential events and transitions beforehand, planning promotes flexibility and rapid decision making during execution. As a result, the force anticipates events and acts purposefully and effectively before the enemy can act or before situations deteriorate. Several tools are available to the commander and planners to assist in adapting to changing circumstances. These tools include—

- Decision points.
- Branches.
- Sequels.

1-46. A *decision point* is a point in space and the latest time when the commander or staff anticipates making a key decision concerning a specific course of action (JP 5-0). A decision point is associated to actions by the enemy, the friendly force, or the population, and it is tied to a commander's critical information requirement (CCIR). Examples of friendly actions associated with a decision point range from a single task to a subordinate unit to the force as a whole in executing a branch or sequel. Decision points and associated CCIRs, conditions, and friendly actions are recorded graphically and in narrative form in a combined decision support template (DST) and decision support matrix (DSM). Both the DST and DSM are key tools used to assist the commander in decision making during execution. (See Appendix G for a sample DST and DSM.)

1-47. Plans and orders often require adjustment beyond the initial stages of the operations through branches and sequels. A *branch* is the contingency options built into the base plan used for changing the mission, orientation, or direction of movement of a force to aid success of the operation based on anticipated events, opportunities, or disruptions caused by enemy actions and reactions (JP 5-0). Branches anticipate situations that require changes to the basic plan. These situations could result from enemy, friendly, or neutral action, or weather. Commanders build flexibility into their plans and orders by developing branches to preserve freedom of action in rapidly changing conditions.

1-48. A *sequel* is the subsequent operation or phase based on the possible outcomes of the current operation or phase (JP 5-0). Sequels are based on outcomes of current operations, including success, stalemate, or defeat. A counteroffensive, for example, is a logical sequel to a defense; exploitation and pursuit follow successful attacks. Executing a sequel normally begins another phase of an operation, if not a new operation. Commanders consider and develop sequels during planning and revisit them throughout an operation.

INTEGRATED PLANNING

1-49. Planning activities range in level from conceptual to detailed, as shown in figure 1-2. Understanding an OE and its problems, determining the operation's end state, establishing objectives, and sequencing the operation in broad terms all illustrate conceptual planning. Conceptual planning generally corresponds to operational art, and it is the focus of a commander with staff support. (See Chapter 2 for more information on operational art.)

1-50. Detailed planning translates the broad operational approach into a complete and practical plan. Generally, detailed planning is associated with aspects of science, such as movement tables, fuel consumption, target lists, weapon effects, and time-distance factors. Detailed planning falls under the purview of staff officers, who focus on specifics of execution. Detailed planning works out the scheduling, coordination, or technical problems involved with moving, sustaining, synchronizing, and directing the force.

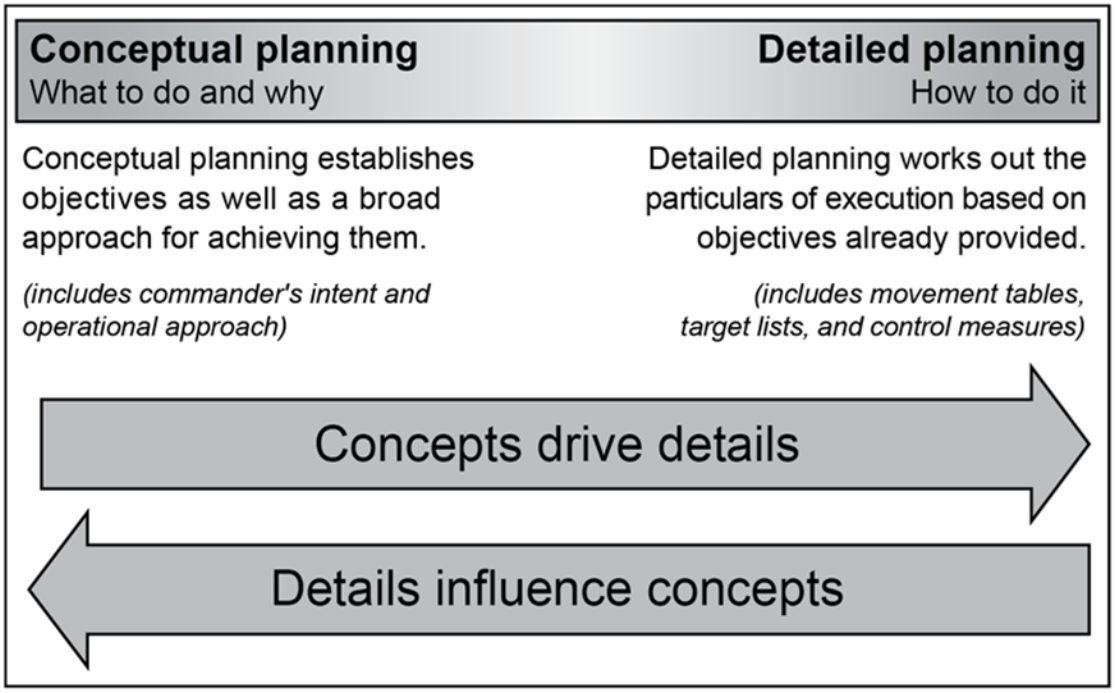

Figure 1-2. Integrated planning

1-51. The commander personally leads the conceptual component of planning. While commanders are engaged in parts of detailed planning, they leave most specifics to staff officers. Conceptual planning provides the basis for subsequent planning. The commander's intent and operational approach provide the framework for the entire plan. This framework leads to a concept of operations and associated schemes of support, such as schemes of maneuver, intelligence, fires, protection, engineer operations, information, and sustainment. In turn, the schemes of support lead to the specifics of execution, including tasks to subordinate units and attachments (including annexes, appendices, tabs, and exhibits) to the base OPLAN or OPORD. However, this dynamic does not operate in only one direction. Conceptual planning must respond to detailed constraints. For example, the realities of a deployment schedule (a detailed concern) influence the operational approach (a conceptual concern).

1-52. Planning requires the integration of both conceptual thinking and detailed analysis. Army leaders employ several methodologies for planning, determining the appropriate mix based on the scope and understanding of the problem, time available, and availability of a staff. Army planning methodologies include—

- Army problem solving.
- Army design methodology (ADM).
- The military decision-making process (MDMP).
- Rapid decision-making and synchronization process (RDSP).
- Troop leading procedures (TLP).

ARMY PROBLEM SOLVING

1-53. The ability to recognize and effectively solve problems is an essential skill for Army leaders. Army problem solving forms the base logic of other planning methodologies. Where other methodologies are designed for planning operations, Army problem solving is a methodology available for leaders to use to identify and solve a variety of problems both in garrison and in operations. Army problem solving is an analytical approach to defining a problem, developing possible solutions to solve the problem, arriving at the best solution, developing a plan, and implementing that plan to solve the problem. The steps to Army problem solving are—

- Step 1 - Gather information.
- Step 2 - Identify the problem.
- Step 3 - Develop criteria.
- Step 4 - Generate possible solutions.
- Step 5 - Analyze possible solutions.
- Step 6 - Compare possible solutions.
- Step 7 - Make and implement the decision.

(See Chapter 3 more information on conducting Army problem solving.)

ARMY DESIGN METHODOLOGY

1-54. When problems are difficult to identify, the operation's end state is unclear, or a course of action (COA) is not self-evident, commanders employ ADM. This is often the case when developing long-range plans for extended operations. ADM is a methodology for applying critical and creative thinking to understand, visualize, and describe problems and approaches to solving them. ADM is particularly useful as an aid to conceptual planning, but it must be integrated with the detailed planning typically associated with the MDMP to produce executable plans and orders. ADM may be conducted before, concurrent with, or after the MDMP. There is no one way or prescribed set of steps to employ the ADM. There are, however, several activities associated with ADM including—

- Framing an OE.
- Framing problems.
- Developing an operational approach.
- Reframing (as required).

1-55. While planners complete some activities before others, the understanding and learning within one activity may require revisiting the learning from another activity. Based on their understanding and learning gained during ADM, commanders issue planning guidance—including an operational approach—to guide more detailed planning using the MDMP. (See Chapter 4 for information on employing ADM.)

THE MILITARY DECISION-MAKING PROCESS

1-56. The MDMP is an iterative planning methodology used to understand the problem or problems, understand the situation and mission, develop COAs, decide on a COA, and produce an OPLAN or order. It is an orderly, analytical process that integrates the activities of the commander, staff, and subordinate headquarters in the development of a plan or order. The MDMP helps leaders apply thoroughness, clarity, sound judgement, logic, and professional knowledge to develop situational understanding and produce a plan or order that accomplishes the mission.

Note. Depending on the situation, including the time available for planning, commanders may initiate the MDMP without the benefits of conducting ADM beforehand.

1-57. The MDMP consists of seven steps. Each step has inputs, a series of subsets, and outputs. The outputs lead to an increased understanding of the situation facilitating the next step of the MDMP. Commanders and staffs generally perform these steps sequentially. However, before producing the plan or order, they may revisit several steps in an iterative fashion as they learn more about the situation. The seven steps are—

- Step 1 - Receipt of mission.
- Step 2 - Mission analysis.
- Step 3 - COA development.
- Step 4 - COA analysis.
- Step 5 - COA comparison.
- Step 6 - COA approval.
- Step 7 - Orders production, dissemination, and transition.

(See Chapter 5 for more information on conducting the MDMP.)

1-58. Commanders and staffs often begin the MDMP in the absence of an approved higher echelon headquarters' OPLAN or OPORD. In some instances, they initiate planning based on a warning order

(WARNORD), a planning order, or an alert order from higher headquarters. This requires active collaboration with the higher headquarters and parallel planning among echelons as the plan or order is developed. In other instances, the commander recognizes an opportunity or problem to solve and initiates planning in the absence of higher direction. Due to the high tempo of large-scale combat operations and the need to disperse staffs for survivability, commanders may choose to abbreviate the MDMP to ensure timely decisions for subordinate units.

1-59. Commanders and staffs use several integrating processes to synchronize forces and the warfighting functions within the MDMP. An integrating process consists of a series of steps that incorporate multiple disciplines to achieve a specific end. Key integrating processes that occur within the MDMP include—

- Intelligence preparation of the operational environment (IPOE).
- Information collection.
- Targeting.
- Risk management.
- Knowledge management.

(See Appendix G for a detailed discussion of conducting the integrating processes within the steps of the MDMP.)

RAPID DECISION-MAKING AND SYNCHRONIZATION PROCESS

1-60. The RDSP is a planning methodology that commanders and staffs may use during execution. The RDSP is not a replacement planning methodology for the MDMP, but a decision making and planning technique based on an existing order. Using the RDSP lets leaders avoid the time-consuming requirements of developing decision criteria and multiple COAs. Leaders combine their experiences and intuition to quickly understand the situation and develop a COA. The RDSP is based on an existing order and includes five steps:

- Step 1 - Compare the current situation to the order.
- Step 2 - Determine that a decision, and what type, is required.
- Step 3 - Develop a course of action.
- Step 4 - Refine and validate the course of action.
- Step 5 - Issue and implement the order.

(See Chapter 6 for information on conducting the RDSP.)

TROOP LEADING PROCEDURES

1-61. TLP are a dynamic process used by small-unit leaders to analyze a mission, develop a plan, and prepare for an operation. Company, platoon, and squad leaders lack formal staffs and use TLP to plan and prepare for operations. This places the responsibility for planning primarily on the commander or small-unit leader with assistance from key leaders such as executive officers (XOs), first sergeants, forward observers, supply sergeants, and other specialists in the unit.

1-62. TLP enable small-unit leaders to maximize available planning time while developing plans and preparing their units for an operation. TLP consist of eight steps. The sequence of the steps of TLP is not rigid. Leaders modify the sequence to meet the mission, situation, and available time. The eight steps are—

- Step 1 - Receive the mission.
- Step 2 - Issue a WARORD.
- Step 3 - Make a tentative plan.
- Step 4 - Initiate movement.
- Step 5 - Conduct reconnaissance.
- Step 6 - Complete the plan.
- Step 7 - Issue the order.
- Step 8 - Supervise and refine.

(See Chapter 7 for information on conducting TLP.)

PLANS AND ORDERS

1-63. A key output of planning is a plan or order. Plans and orders come in many forms and vary in scope, complexity, and length of planning horizon. Strategic plans establish national and multinational military

objectives, and they include ways, and they may include the means, to achieve those objectives. Operational level plans and orders cover a series of related military operations aimed at accomplishing strategic and operational objectives within a given time and space. Tactical plans and orders cover the employment of units in operations, including the ordered arrangement and maneuver of units in relation to each other and enemy forces within the framework of a higher operational-level plan or order. (See Chapter 2 for a detailed discussion of planning and the levels of warfare. See Appendix D for types of Army plans and orders and their associated formats.)

MISSION ORDERS

1-64. *Mission orders* are directives that emphasize to subordinates the results to be attained, not how they are to achieve them (ADP 6-0). Mission orders direct subordinates on what to do and why to do it without prescribing exactly how to do it. Mission orders clearly convey the unit's mission and commander's intent. They summarize the situation, describe the operation's objectives and end state, and provide a clear concept of operations to accomplish the mission. When assigning tasks to subordinate units, mission orders include all components of a mission statement: who, what, when, where, and why. However, a mission statement emphasizes the purpose (why) of the tasks to guide (along with the commander's intent) subordinates' initiative.

Note. A mission order is not a separate type of plan or order; rather, it is a technique for writing plans and orders that allows subordinates maximum freedom of action in accomplishing missions.

1-65. Mission orders contain the proper level of detail; they are neither so detailed that they stifle initiative nor so general that they provide insufficient direction. The proper level of detail is situationally dependent. Some phases of operations require tighter control over subordinate elements than others require. An air assault's air movement and landing phases, for example, require precise synchronization. Its ground maneuver plan requires less detail. As a rule, the base plan or order contains only the specific information required to provide the guidance to synchronize capabilities at the decisive place and time while allowing subordinates as much freedom of action as possible. Commanders rely on subordinate initiative and coordination to act within the commander's intent and concept of operations. Detailed instructions for aspects of an operation or to synchronize specific warfighting functions are addressed in attachments to the base plan or order.

KEY COMPONENTS OF A PLAN OR ORDER

1-66. The mission statement, commander's intent, and concept of operations are key components of a plan or order that serve as the framework for an operation. Commanders ensure their mission and commander's intent nest with those of their higher echelon headquarters. While the commander's intent focuses on the end state, the concept of operations focuses on the way or sequence of actions by which the force will achieve the end state.

Mission Statement

1-67. The *mission* is the essential task or tasks, together with the purpose, that clearly indicates the action to be taken and reason for the action (JP 3-0). Commanders analyze a mission based on their higher commander's intent, concept of operations, specified tasks, and implied tasks. Results of that analysis yield the essential task—a specified or implied task that must be executed to accomplish the mission. The essential task, or in some cases tasks, becomes the "what" of the mission statement—a clear statement of the action to be taken and the reason for taking it. The five elements of a mission statement answer these questions:

- Who will execute the operation (unit or organization)?
- What is the unit's essential task (normally a tactical mission task or tactical enabling task)?
- Where will the operation occur (assigned area, objective, engagement areas, or grid coordinates)?
- When will the operation begin (by time or event)?
- Why will the force conduct the operation (for what purpose)?

1-68. The "who," "where," and "when" of a mission statement are straightforward. The "what" and "why" are more challenging to write and can confuse subordinates if not stated clearly. The "what" is a task and is expressed in terms of action verbs. (See ADP 3-90 for a list of tactical tasks.) The "why" puts the task into context by describing the reason (purpose) for performing the task.

Commander's Intent

1-69. The *commander's intent* is a clear and concise expression of the purpose of the operation and the desired objective and military end state (JP 3-0). The higher echelon commander's intent provides the basis for unity of effort throughout the force. Each commander's intent nests within the commanders' intent one and two echelons above that commander. During planning, the initial commander's intent drives COA development and then is finalized in the order. During execution, the commander's intent establishes the limits within which a subordinate may exercise initiative.

1-70. The commander's intent succinctly describes what constitutes success for the operation. Commanders convey their intent in a format they determine most suitable to the situation. It may include the operation's purpose, key tasks, and conditions that define the end state. When describing the purpose of the operation, the commander's intent does not restate the "why" of the mission statement. Rather, it describes the broader purpose of the unit's operation in relationship to the higher commander's intent and concept of operations.

1-71. *Key tasks* are those significant activities the force must perform as a whole to achieve the desired end state (ADP 6-0). Key tasks are not specified tasks for any subordinate unit; however, they may be sources of implied tasks. During execution-when significant opportunities present themselves or the concept of operations no longer fits the situation-subordinates use key tasks to keep their efforts focused on achieving the desired end state. Examples of key tasks include terrain the force must control or an effect the force must have on enemy forces. Commanders often include the purpose of each associated key task to facilitate subordinate decision making and initiative.

1-72. The end state is a set of desired future conditions the commander wants to exist when an operation ends. Commanders may describe the operation's end state by stating the desired conditions of the friendly force in relationship to desired conditions of the enemy, terrain, and civil considerations. A clearly defined end state promotes unity of effort among the force and with unified action partners.

Concept of Operations

1-73. The *concept of operations* is a statement that directs the manner in which subordinate units cooperate to accomplish the mission and establishes the sequence of actions the force will use to achieve the end state (ADP 5-0). In the concept of operations, the commander describes how the actions of subordinate units fit together to accomplish the overall mission (essential task and purpose) within the assigned area. At a minimum the description should include the scheme of maneuver and the scheme of fires. Commanders and their staffs use components of the operational framework and integrate elements of operational art as appropriate to describe the concept of operations by—

- Time. This refers to the sequencing and synchronization of tasks or operations to attain end state conditions with the least cost in personnel and resources.
- Space. This refers to the establishing of an assigned area: area of operations (AO), zones, and sectors.
- Purpose. This refers to the "why" a unit or organization is conducting a particular action or task.
- Resources. This refers to designating the priority and allocation of resourcing based on the assignment of the main effort, supporting efforts, and reserve.

1-74. In developing the concept of operations, commanders and staffs ensure their concept nests with that of their higher echelon headquarters. Nesting a concept is a planning technique to achieve unity of purpose whereby each succeeding echelon's concept of operations is aligned by purpose with the higher echelons' concept of operations. An effective concept of operations describes how forces will support a mission of their higher headquarters and how the actions of subordinate units fit together to accomplish a mission. (See FM 3-0 for a detailed description of the operational framework and its components. See Chapter 2 for further discussion on elements of operational art.)

PLANNING CELLS AND TEAMS

1-75. Coordinating, special, and personal staff sections are the building blocks for organizing a headquarters into command posts (CPs) for the conduct of operations. Within CPs, staff sections are cross-functionally organized into CP cells—groupings of personnel and equipment organized by warfighting function or by planning horizon. Functional cells group personnel and equipment by warfighting function (movement and maneuver, intelligence, fires, sustainment, and protection). Integrating cells group personnel and equipment by planning horizons. The three planning horizons are long-, mid-, and short-range and are associated with the plans cell, future operations cell, and current operations integrating cell, as shown in figure 1-3. (For more information on planning horizons see paragraph 1-114.)

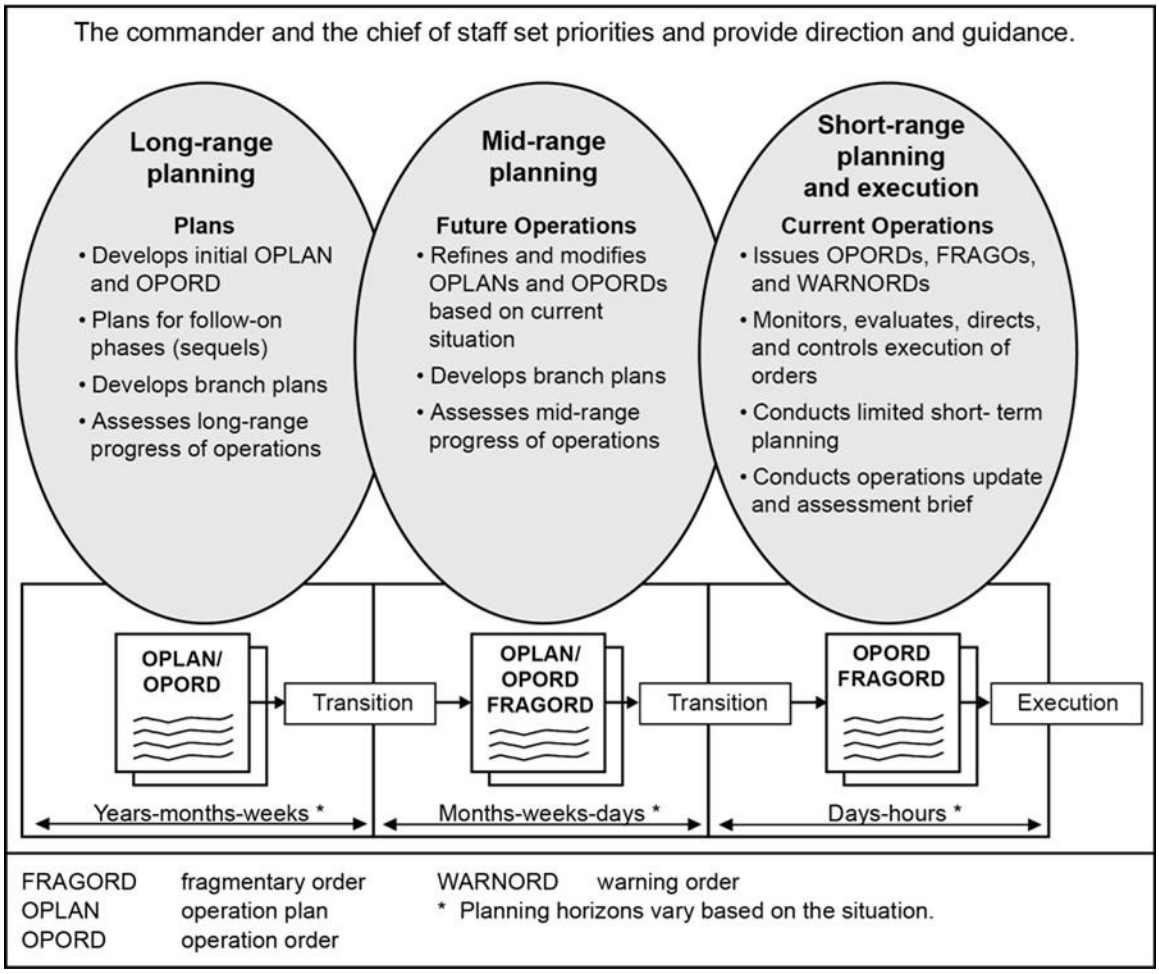

Figure 1-3. Integrating cells

Note. Not all echelons and types of units are resourced for all three integrating cells. Battalions, for example, combine planning and operations into one integrating cell in the main CP. The brigade combat team has a small and dedicated plans cell, but it is not resourced for a future operations cell. Divisions, corps, field armies, and theater armies are resourced for all three integrating cells. (See FM 6-0 for a more detailed discussion of the duties and responsibilities of the staff and CP organization, overall planning requirements, and operations.)

PLANS CELL

1-76. The plans cell is responsible for planning operations in the long-range planning horizon (See paragraphs 1-122 through 1-124 for further discussion on planning horizons.) It develops the initial OPORD and prepares

for operations beyond the scope of the current order, including developing branch plans and sequels. The plans cell also oversees military deception planning. At division echelon and above, the plans cell consists of a core group of planners led by the assistant chief of staff, plans (G-5). At brigade the plans cell is led by the brigade operations officer (S-3). Staff sections support the plans cell with representatives as required. Battalions are not resourced with a dedicated plans cell.

FUTURE OPERATIONS CELL

1-77. The future operations cell is responsible for planning operations in the mid-range planning horizon. This cell focuses on adjustments to current operations and branch planning. The cell consists of a core group of planners led by a deputy assistant chief of staff, operations (G-3), chief of future operations. Staff sections support the future operations cell with representatives as required. Divisions and higher echelon headquarters are resourced a future operations cell to ensure that the plans cell remains focused on long-range planning activities in support of the commander's shaping and condition setting aims, and either the next phase of the operation or a subsequent operation, while brigades and battalions are not.

1-78. The future operations cell serves as a bridge between the plans and current operations integrating cells. The future operations cell monitors current operations and determines implications for operations within the mid-range planning horizon. In coordination with the current operations integrating cell, the future operations cell assesses ongoing operations and whether they require modification to achieve the current phase's objectives. The commander directs adjustments to operations, or the cell may also recommend options to the commander.

1-79. Once the commander decides to adjust operations, the cell develops the FRAGORDs necessary to implement the change. The future operations cell also participates in the targeting working group, since the same planning horizons normally concern them both, including setting conditions in the deep area.

CURRENT OPERATIONS INTEGRATING CELL

1-80. The current operations integrating cell is the focal point for controlling the execution of operations and short-range planning. This involves assessing the current situation and the status of conditions required to achieve objectives, execute critical events, and the completion of directed tasks and missions while regulating forces and warfighting functions in accordance with the mission, commander's intent, and concept of operations. A deputy G-3, chief of operations, or an assistant S-3 leads this cell. Elements or watch officers from each staff section and liaison officers from subordinate and adjacent units form this cell. All staff sections are represented in the current operations integrating cell, either permanently or on call. Staff members in the current operations cell normally employ the RDSP when conducting short-range planning.

PLANNING TEAMS

1-81. A planning team is a task-organized planning element established to solve problems, and it typically develops long and mid-range plans for future operations. A planning team consists of a lead planner (normally from the G-5, G-3, or S-3 staff sections), a representative for each warfighting function, additional subject matter experts and liaison officers as required, and administrative support. Integrating functional expertise ensures planners consider all relevant factors, reduce omissions, and share information, resulting in a planning effort that is systematic, coordinated, and thorough. Planning teams are not enduring. They dissolve on completion of their assigned planning tasks.

1-82. Most planning occurs in the plans or future operations cells. Planners in these cells form the core of a planning team. For major planning requirements, such as the development of a new OPORD, core planners from the plans cells, representatives from across the staff, liaison officers, and subject matter experts external to the headquarters form a planning team. For lesser planning requirements, smaller teams are established with membership decided based on the mission or specific planning requirements. Unit standard operating procedures (SOPs) should identify standard planning teams based on common planning requirements to rapidly facilitate alerting and forming planning teams.

1-83. Planning teams must prepare for and recognize indicators to transition a plan between the cells. Since not all headquarters are resourced the same, the timing for transitioning of plans is not always the same, and units should develop procedures to aid in this handoff. Plans transition is a preparation activity that occurs within the headquarters. It ensures members of a cell understand the current plan, assumptions, and relevant

planning guidance provided during plan development. (See ADP 5-0 for further discussion on plans to operations transition.)

GUIDES TO EFFECTIVE PLANNING

1-84. Planning is an inherent and fundamental part of command and control, and commanders are the single most important factor in effective planning. Effective planning requires dedication, study, and practice. Planners must be technically and tactically competent within their areas of expertise and understand basic planning concepts. The following guides aid in effective planning:

- Commanders focus planning.
- Incorporate tenets and imperatives of Army operations.
- Apply critical thinking.
- Apply creative thinking.
- Encourage collaboration and dialogue.
- Optimize available planning time.
- Focus on the right planning horizon.
- Develop and maintain accurate running estimates.
- Develop simple, flexible plans and orders.
- Develop a unit planning SOP (PSOP).

COMMANDERS FOCUS PLANNING

1-85. The responsibility for planning is inherent in command. Commanders are planners—they are the central figures to effective planning. Commanders often have the most planning experience, and they are ultimately responsible for the development and execution of the plan. As such, the plan must reflect how commanders intend to conduct operations. Commanders ensure the approaches to planning meet the requirements of time, planning horizons, level of detail, and desired outcomes. Commanders ensure that all plans and orders comply with domestic and international laws and the Army ethic. They confirm that the plan or order is relevant and suitable for subordinates.

1-86. Generally, the more involved commanders are in planning, the faster staffs can plan. Through personal involvement, commanders learn from the staff members and others about a situation and ensure the plan reflects their commander's intent. While staffs perform essential functions that amplify the effectiveness of operations, commanders drive the operations process through understanding, visualizing, describing, directing, leading, and assessing operations as shown in figure 1-4. While depicted sequentially, the activities of understanding and visualizing are iterative.

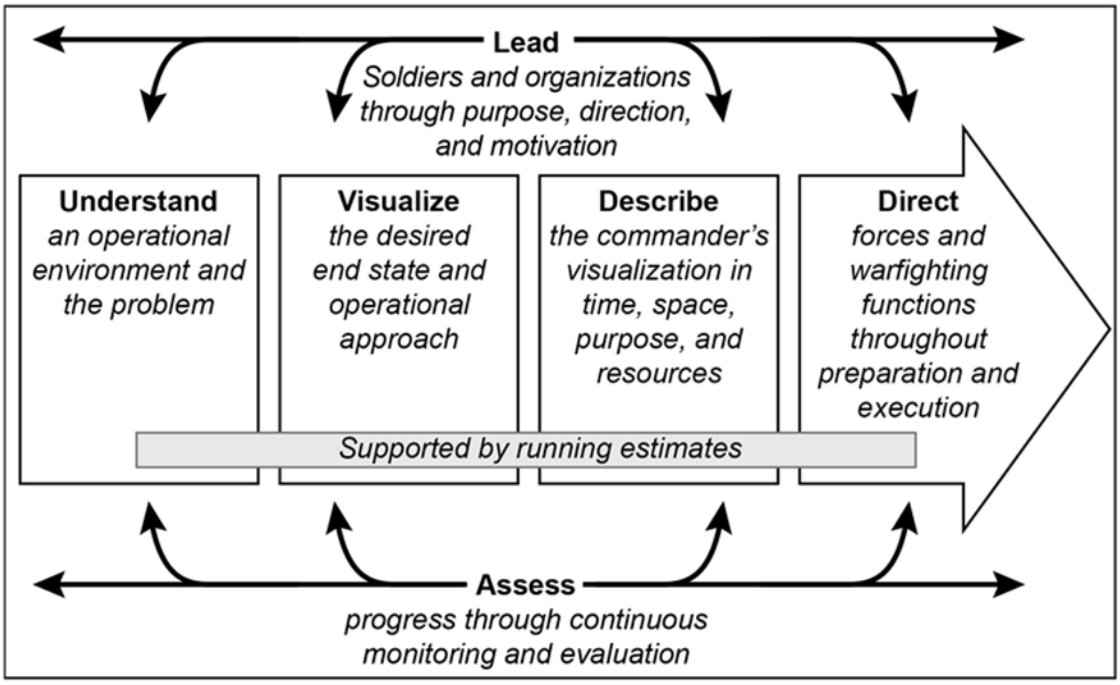

Figure 1-4. Commander's role in the operations process

Understand

1-87. To understand something is to grasp its nature and significance. Understanding includes establishing context—the set of circumstances that surround a particular event or situation. Understanding an OE and its associated problems is fundamental to establishing a situation's context and visualizing operations. Planning, the integrating processes, and running estimates all help commanders develop situational understanding. During planning and throughout the operations process, commanders collaborate with their staffs, other commanders, and unified action partners to build a shared understanding of their OEs and associated problems. Commanders also have a unique understanding of the capabilities of subordinate units that is relayed to the staff at various times throughout planning.

Visualize

1-88. As commanders build understanding of their OEs and identify problems, commanders start to visualize solutions to solve identified problems. Collectively, this is known as *commander's visualization*—the mental process of developing situational understanding, determining a desired end state, and envisioning an operational approach by which the force will achieve that end state (ADP 6-0).

1-89. In building their visualization, commanders first seek to understand those conditions that represent the current situation. Next, commanders envision a set of desired future conditions that represents the operation's end state. Commanders complete their visualization by conceptualizing an *operational approach*—a broad description of the mission, operational concepts, tasks, and actions required to accomplish the mission (JP 5-0). Figure 1-5 on page 18 depicts activities associated with developing the commander's visualization.

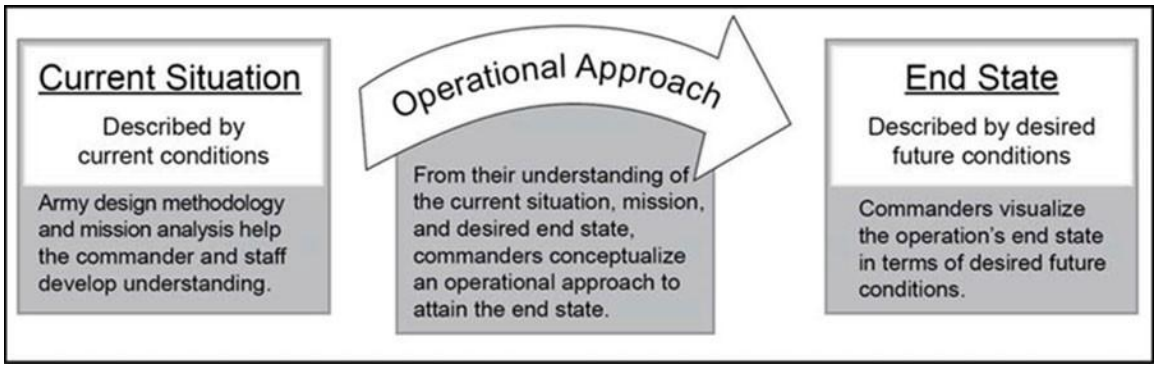

Figure 1-5. Commander's visualization

Describe

1-90. Commanders describe their visualization to their staffs and subordinate commanders to facilitate shared understanding and purpose throughout the force. During planning, commanders ensure subordinates understand their visualization well enough to begin COA development. Commanders describe their visualization in graphic or narrative form, using doctrinal terms and refining and clarifying it, as circumstances require. During execution, commanders describe modifications to their visualization in updated planning guidance and directives resulting in FRAGORDs that adjust the original OPORD. Commanders describe their visualization in terms of—

- Commander's intent (discussed in paragraphs 1-69 through 1-72).
- Planning guidance, including an operational approach.
- CCIRs.

Commander's Planning Guidance

1-91. Commanders provide planning guidance to the staff based upon their visualization. Planning guidance conveys the essence of the commander's visualization, including a description of the operational approach. Effective planning guidance reflects how the commander sees the operation unfolding. The commander's planning guidance broadly describes when, where, and how the commander intends to employ combat power to accomplish the mission within the higher echelon commander's intent. Broad and general guidance gives the staff and subordinate leaders maximum latitude; it enables proficient staffs to develop flexible and effective options. Commanders revise planning guidance based on staff and subordinate input and changing conditions during different stages of planning and throughout the operations process. (See paragraphs 5-25 and 5-68 through 5-71 for examples of planning guidance.)

Commander's Critical Information Requirements

1-92. A *commander's critical information requirement* is specific information identified by the commander as being essential to facilitate timely decision making (JP 3-0). A CCIR is directly tied to a decision and establishes a reporting requirement. Commanders decide to designate an information requirement as a CCIR based on likely decisions and their visualization of the operation. A CCIR may support one or more decisions. During planning, staffs recommend information requirements for commanders to designate as CCIRs. Refinement of CCIRs is continuous throughout an operation. During preparation and execution, staffs recommend changes to CCIRs based on their assessments of the operation.

1-93. Promulgated by a plan or order, commanders limit the number of CCIRs to focus the efforts of limited collection assets. The fewer the CCIRs, the easier it is for staffs to remember, recognize, and act on each one. CCIRs constantly change. Commanders add and delete them throughout an operation based on the information needed for specific decisions. They determine their own CCIRs and select some from staff nominations. Once approved, a CCIR falls into one of two categories: priority intelligence requirements (PIRs) and friendly force information requirements (FFIRs).

1-94. A *priority intelligence requirement* is the intelligence component of commander's critical information requirements used to focus the employment of limited intelligence assets and resources against competing demands for intelligence support (JP 2-0). PIRs identify the information about the enemy and other aspects of an OE that the commander considers most important. Intelligence about civil considerations may be as critical as intelligence about the enemy. For example, this may include information that confirms an enemy capability.

1-95. A *friendly force information requirement* is information the commander and staff need to understand the status of friendly force and supporting capabilities (JP 3-0). FFIRs identify the information about the mission, troops and support available, and time available for friendly forces that the commander considers most important to mission accomplishment. (See ADP 6-0 for more information on FFIR.)

1-96. Commanders also describe information they want protected as essential elements of friendly information (EEFIs). An *essential element of friendly information* is a critical aspect of a friendly operation that, if known by a threat, would subsequently compromise, lead to failure, or limit success of the operation and therefore should be protected from enemy detection (ADP 6-0). Although EEFIs are not CCIRs, they have the same priority. EEFIs establish elements of information to protect rather than elements to collect. (See ADP 6-0 for further discussion on information requirements.)

Note. Joint doctrine describes an EEFI as critical information. *Critical information* includes specific facts about friendly intentions, capabilities, and activities needed by an enemy or adversary for them to plan and act effectively so as to guarantee failure or unacceptable consequences for friendly mission accomplishment (JP 2-0).

INCORPORATE TENETS AND IMPERATIVES OF ARMY OPERATIONS

1-97. Doctrine emphasizes the consideration of tenets and imperatives throughout the conduct of operations to improve the probability of success without dictating how to solve a tactical or operational problem. The tenets of operations are desirable attributes that should be built into all plans and operations. Imperatives are actions Army forces must take to defeat enemy forces and achieve objectives at acceptable cost. As with all things in warfare, they are not absolutes, but they are applied based on the best information available at that time.

Tenets

1-98. Tenets of operations directly relate to how the Army's operational concept should be employed. Army forces employ capabilities, to achieve desirable characteristics, in a combined arms approach that creates complementary and reinforcing effects through multiple domains, while preserving combat power to maintain options for the joint force commander (JFC). The degree to which an operation exhibits the tenets provides insight into the probability or success. The tenets of operations are—

- Agility.
- Convergence.
- Endurance.
- Depth.

Agility

1-99. *Agility* is the ability to move forces and adjust their dispositions and activities more rapidly than the enemy (FM 3-0). The more agile a force is, the better it counters enemy actions and exploits windows of opportunity. Planners build agility into plans through shared understanding of the environment, use of predetermined decision points, graphic control measures, execution matrices, branch and sequel plans, and deliberate assessment processes. The better the force can act and react, the better it can influence the tempo of the operation and control the threat's decision cycle.

Convergence

1-100. Convergence is an outcome created by the concerted employment of capabilities against combinations of decisive points in any domain to create effects against a system, formation, or decision maker, or in a

specific geographic area. Planning for convergence requires detailed analysis, parallel planning, and orders that integrate capabilities and synchronize actions across the echelons. Air, space, and cyberspace tasking cycles operate on different time horizons. However, these cycles provide effects across all domains and operational areas. They can provide planners with the visibility of other planned actions, so they can integrate and synchronize decisive points with others during execution. Anticipating effects during planning and executing those actions during the delivery of other effects can overwhelm enemy forces and allow friendly forces to gain the advantage.

Endurance

1-101. *Endurance* is the ability to persevere over time throughout the depth of an operational environment (FM 3-0). This includes the ability to absorb the enemy's attacks and press operations over the time and space necessary to accomplish the mission. Leadership and tactics contribute to endurance. Plans and decision making that allow for different units to be the main effort using follow and support or follow and assume techniques prevent early culmination of the units first committed to close combat. Realistically planning for and assessing what tempo friendly forces can maintain given enemy resistance, weather, and physical distances and the impact they have on Soldiers, leaders, and equipment increases endurance over time. Developing schemes of maneuver that avoid enemy strengths and preserve combat power are less likely to negatively affect morale and maintain endurance.

1-102. Planning and synchronizing sustainment operations are essential to endurance. Using all methods for continuously delivering sustainment through land, maritime, and air capabilities at the correct time, place, and amounts improves endurance. Endurance requires planning and synchronization across warfighting functions.

Depth

1-103. *Depth* is the extension of operations in time, space, or purpose to achieve definitive results (ADP 3-0). While the focus of endurance is on friendly combat power, the focus of depth is on enemy locations and dispositions across all domains. Commanders achieve depth by understanding the strengths and vulnerabilities of the enemy's echeloned capabilities, then attacking them throughout their dispositions in a simultaneous and sequential fashion. Although simultaneous attacks through all domains and in depth are not possible in every situation, leaders seek to expand their advantages and limit enemy opportunities for sanctuary and regeneration. To achieve depth, planners design plans that apply combat power throughout the enemy's formations and the OE, for the purpose of securing successive operational objectives and consolidating gains as they achieve the objectives.

1-104. Planners use depth when developing COAs that create simultaneous effects across the operational area. For example, they may plan simultaneous enabling operations in the deep area and operations in the close area while securing and building sustainment capability in the rear area. Planners also enhance the depth of their operations by orchestrating effects in one dimension to amplify effects in others. For example, they may use information operations to deter enemy actions or airstrikes to destroy enemy reinforcements. (For more information on the tenets of operations, see FM 3-0.)

Imperatives

1-105. Imperatives are actions Army forces must take to defeat enemy forces and achieve objectives at acceptable costs. Imperatives are applicable across all planning methodologies. They are informed by the OE and the characteristics of the most capable threats Army forces can encounter. The imperatives are—

- See yourself, see the enemy, and understand the OE.
- Account for being under constant observation and all forms of enemy contact.
- Create and exploit relative physical, information, and human advantages in pursuit of decision dominance.
- Make initial contact with the smallest element possible.
- Impose multiple dilemmas on the enemy.
- Anticipate, plan, and execute transitions.
- Designate, weight, and sustain the main effort.

- Consolidate gains continuously.
- Understand and manage the effects of operations on units and Soldiers.

1-106. Commanders and staffs use imperatives to develop an understanding of an OE by examining the environment from both a friendly and enemy perspective during mission analysis and through the IPOE process. This helps inform current and potential future advantages relative to enemy forces, allowing staffs to develop and adapt courses of action that exploit advantages and mitigate disadvantages.

1-107. When developing courses of action, imperatives can be used to reinforce required actions at critical points in the operation, such as weighting efforts or planning for transitions. When analyzing COAs, imperatives can be used as evaluation criteria. Incorporating these actions throughout planning has historically increased the likelihood of success during execution. (See FM 3-0 for more information on the imperatives of operations.)

APPLY CRITICAL THINKING

1-108. Thinking includes awareness, perception, reasoning, and intuition. Thinking, however, may be faulty and biased. When information is lacking, individuals tend to rely on prior beliefs and assumptions about how and why events came to be and would normally transpire. In essence, these mindsets are a distillation of all that planners think they know about a subject. As planners evaluate information, they need to be aware that mindset and cognitive biases influence their thinking. They practice critical thinking to guard against faulty reasoning.

1-109. Critical thinking is purposeful and reflective thought about what to believe or what to do in response to observations, experiences, verbal or written expressions, or arguments. By thinking critically, individuals formulate judgments about whether the information they encounter is true or false, or if it falls somewhere along a scale of plausibility between true or false. Critical thinking involves questioning information, assumptions, conclusions, and points of view to evaluate evidence, develop understanding, and clarify goals. Critical thinking helps commanders and staffs identify causes of problems, arrive at justifiable conclusions, and make good judgments. Critical thinking helps leaders counter their biases and avoid logic errors.

Cognitive Bias

1-110. A cognitive bias is an unconscious belief that conditions govern or compel human behavior. Just as planners must know their own mindset and its influence on conscious thought, they must also know other cognitive biases that influence their thinking. Some of the more common cognitive biases include—

- Confirmation bias.
- Status quo bias.
- Sunk cost bias.
- Sample size bias.
- Anchoring bias.

(See ATP 5-0.1 for additional discussion of common cognitive biases and logic errors.)

Logical Fallacy

1-111. A logical fallacy is an error in logic. When analyzing information, the goal of analysis is to ascribe and validate meaning. When individuals make an argument, they offer reasons why others should accept their view or judgment. These reasons are premises (sometimes evidence) and the assertion that they support is called the conclusion. A sound argument meets the following conditions: the premises are acceptable and consistent, the premises are relevant to the conclusion and provide sufficient support for the conclusion, and missing components have been considered and are judged consistent with the conclusion. If the premises are dubious or if they do not warrant the conclusion, then the argument is fallacious. Common logic fallacies include—

- Arguments against the person.
- Appeal to unqualified authority.
- Red herring.
- Weak analogy.

(For more information on logical fallacy, see ATP 5-0.1.)

APPLY CREATIVE THINKING

1-112. There are no planning checklists or set solutions that adequately apply to every military problem. The operational and mission variables always combine to form a different set of circumstances. Creative thinking helps planners examine problems for a fresh perspective to develop innovative solutions. Creative thinking helps generate new and useful ideas, and it reevaluates or combines old ideas to solve new problems. Creative thinking involves breaking old habits of thought, questioning the status quo, visualizing a better future, and devising unique responses to problems. There are numerous creative thinking tools available to commanders and staffs, such as brainstorming, mind mapping, and the four ways of seeing as described in ATP 5-0.1.

ENCOURAGE COLLABORATION AND DIALOGUE

1-113. Collaboration and dialogue facilitate critical and creative thinking and help to develop shared understanding within the headquarters and externally with other commands and unified action partners. Collaboration is two or more people or organizations working together toward common goals by sharing knowledge and building consensus. Dialogue is a way to collaborate that involves the candid exchange of ideas or opinions among participants and encourages frank discussions in areas of disagreement. Throughout the operations process, commanders, subordinate commanders, staffs, and unified action partners collaborate and dialogue by sharing and questioning information, perceptions, and ideas to understand situations and make decisions.

1-114. Through collaboration and dialogue, leaders create a learning environment by allowing participants to think critically and creatively and share their ideas, opinions, and recommendations without fear of retribution. Effective dialogue requires candor and a free, yet mutually respectful, competition of ideas. Participants must feel free to make viewpoints based on their expertise, experience, and insight; this includes sharing ideas that contradict the opinions held by those of higher rank. Successful commanders listen to novel ideas and counterarguments concerning any problem.

1-115. Dialogue is the catalyst that drives planning teams to develop new ways of thinking about problems and identify innovative solutions. Effective dialogue ensures team members may question one another about ideas, discuss alternatives, and refine the team's thinking. When done well, dialogue helps—

- Reveal assumptions that underlie an argument or concept and reveal individual biases.
- Reveal what members are not thinking about the situation.
- Display diversity of ideas and expose a range of viewpoints.
- Avoid group think and explore concepts from different perspectives.
- Reveal areas where the team lacks diversity or experience and where external subject matter experts are valuable.
- Develop shared mental models-individual beliefs about cause-effect relationships and assumptions and biases about how the world works-concerning problems and solutions.
- Build trust in the team and the planning effort.

1-116. Effective collaboration and dialogue are not possible unless the commander ensures it. Commanders establish a culture of collaboration and dialogue in the organization. They recognize that they do not know everything, they can be wrong, and they have something to learn from even the most junior Soldier or unified action partner. Throughout the operations process, commanders demonstrate humility to learn and understand from others to make better decisions. Commanders establish a command climate where collaboration and dialogue routinely occur throughout the organization through personal example, coaching, and mentorship.

OPTIMIZE AVAILABLE PLANNING TIME

1-117. Time is a critical variable in all operations. Therefore, time management is important in planning. Whether done deliberately or rapidly, all planning requires the skillful use of available time to optimize planning and preparation throughout the unit. Taking more time to plan often results in greater synchronization; however, any delay in execution risks yielding the initiative to the enemy.

1-118. When allocating planning time to staffs, commanders must ensure subordinates have enough time to plan and prepare their own actions prior to execution. Commanders follow the "one-third, two-thirds rule" as a guide to allocate time available. They use one-third of the time available before execution for their

planning, and they allocate the remaining two-thirds of the time available before execution to their subordinates for planning and preparation.

1-119. Both collaborative planning and parallel planning help optimize available planning time. *Collaborative planning* is two or more echelons planning together in real time, sharing information, perceptions, and ideas to develop their respective plans simultaneously (ADP 5-0). This type of planning speeds planning efforts as organizations share their understanding of the situation, participate in COA development and decision making together, and develop their respective plans or orders as opposed to waiting for a higher echelon to complete the plan prior to beginning planning.

1-120. *Parallel planning* is two or more echelons planning for the same operations nearly simultaneously facilitated by the use of warning orders by the higher headquarters (ADP 5-0). In this type of planning, several echelons developing their plans in parallel shorten planning time across the force. The higher-level headquarters shares information concerning future operations with subordinate units through WARNORDs and other means. Frequent communication between commanders and staffs and sharing of information (such as IPOE products) helps subordinate headquarters plan.

1-121. Commanders are careful not to burden subordinates with planning requirements too far into the future. Generally, the higher the echelon of the headquarters, the more time and resources staffs have available to plan and explore options. Higher headquarters involve subordinates with developing those options that have the highest likelihood of being adopted.

FOCUS ON THE RIGHT PLANNING HORIZON

1-122. The defining challenges to effective planning are uncertainty and time. Tension exists when commanders determine how far ahead to plan effectively, but without adequate preparation and coordination planning becomes irrelevant. Planning too far into the future may overwhelm the capabilities of planning staffs, especially subordinate staffs. Not planning far enough ahead may result in losing the initiative and being unprepared. Understanding this tension is key to ensuring that the command focuses on the right planning horizon. Planning horizons are critical to maintaining the initiative by staying ahead of enemy decision making.

1-123. A *planning horizon* is a point in time commanders use to focus the organization's planning efforts to shape future events (ADP 5-0). Planning horizons may be measured in weeks, months, or years or in hours and days, depending on the echelon and situation. Organizations often plan simultaneously in several different horizons, especially at division and higher echelons. To guide their planning efforts, commanders use three planning horizons—short-range, mid-range, and long-range.

1-124. The range of planning directly correlates with the certainty commanders have of attaining the end state. Short-range planning is conducted under conditions of relative certainty when commanders believe they can reasonably forecast events, assign resources, and commit to a particular plan. Short-range planning normally results in an OPORD or FRAGORD for execution. In conditions of moderate certainty, mid-range planning focuses on developing several options to the base plan, normally resulting in a branch plan or sequel. Beyond the mid-range planning horizon, the situation normally involves significant uncertainty. Long-range planning focuses on situations with high uncertainty and ambiguous problems, and it involves planning for specific contingencies, campaigns, strategies, and the development of initial plans and orders for major operations. Commanders use the long-range planning horizon to develop broad concepts (for example, an OPLAN in concept form) addressing several different circumstances over a longer time period. If significant uncertainty exists, the commander may direct the staff to develop branch plans to reduce the risks associated with an uncertain future.

DEVELOP AND MAINTAIN ACCURATE RUNNING ESTIMATES

1-125. Developing and maintaining accurate running estimates is critical to effective planning. A *running estimate* is the continuous assessment of the current situation used to determine if the current operation is proceeding according to the commander's intent and if planned future operations are supportable (ADP 5-0). Running estimates assist commanders and staffs with understanding situations, assessing progress, and making decisions throughout an operation. Effective plans and successful execution hinge on current and accurate running estimates.

1-126. Because a commander may need an estimate at any time, staffs develop, update, and continuously revise running estimates while in garrison and during operations. At a minimum, staffs maintain a running estimate on friendly capabilities while in garrison or when not actively engaged in operations. Commanders and staff sections immediately begin updating their running estimates upon receipt of a mission. They continue to build and maintain their running estimates throughout the operations process in planning, preparation, execution, and assessment.

1-127. Each staff section maintains a running estimate within its specified area of expertise (for example, intelligence, fires, sustainment, or personnel). Upon receipt of a new mission or in anticipation of one, staff members immediately begin to update their running estimates. When building and maintaining a running estimate, staff sections monitor current operations and continuously consider the following items in the context of operations:

- Facts.
- Assumptions.
- Friendly considerations, including location, activity, and combat power of subordinate units from two echelons below them.
- Enemy considerations, including composition, disposition, and strength.
- Civil considerations.
- Conclusions and recommendations with associated risk.

(See Appendix C for a more detailed discussion of running estimates.)

Note. Informational considerations should be accounted for in the friendly, enemy, and civil considerations. They are the aspects of how humans and automated systems derive meaning from, use, act upon, and are impacted by information.

1-128. Running estimates cover essential facts and assumptions, including a summary of the current situation. A fact is something known to exist or have happened—a statement known to be true. Facts concerning the operational and mission variables serve as the basis for developing situational understanding during planning. When listing facts, planners ensure they are directly relevant to a COA or help commanders make a decision. Any captured, recorded, and, most importantly, briefed fact must add value to the planning conversation.

1-129. An assumption provides a supposition about the current situation or future course of events, presumed to be true in the absence of facts. Assumptions must be valid (logical and realistic) and necessary for planning to continue. Assumptions address gaps in knowledge that are critical for the planning process to continue. Assumptions may be validated by submitting requests for information to the higher echelon headquarters and receiving information that confirms those assumptions. Information collection assets are also directed to confirm or deny assumptions. Staffs continually review assumptions to ensure validity and to challenge them if they appear unrealistic.

1-130. Commanders and staffs use care with assumptions to ensure they are not based on preconceptions; bias; false historical analogies; or simple, wishful thinking. Accepting a broad assumption without understanding its sublevel components often leads to other faulty assumptions. Key points concerning the use of assumptions include—

- Assumptions must be necessary, logical, realistic, and considered likely to be true.
- Too many assumptions result in a higher probability that the plan or proposed solution may be invalid.
- The use of assumptions requires the staff to develop branches to execute if one or more key assumptions prove false.

1-131. Running estimates include recommendations and associated risks for anticipated decisions. During planning, commanders use these recommendations to select valid (meaning feasible, acceptable, suitable, distinguishable, and complete) COAs for further analysis. During preparation and execution, commanders use recommendations from running estimates to inform their decision making.

DEVELOP SIMPLE, FLEXIBLE PLANS AND ORDERS

1-132. Commanders stress the importance of developing simple, flexible plans and orders. Simplicity is a principle of war; it is critical to effective planning. Staffs prepare clear, concise plans and orders to ensure thorough understanding of the commander's intent and concept of operations. Planners promote simplicity by minimizing details where possible and by limiting the actions or tasks to what the situation requires. Subordinates can then develop specifics within the commander's intent. For example, instead of assigning a route, planners can designate an axis of advance. Developing shorter plans helps maintain simplicity. Shorter plans are easier to disseminate, read, and remember.

1-133. Flexible plans help units adapt quickly to changing circumstances. Commanders and planners build opportunities for initiative into plans by anticipating events. This allows them to operate inside of the enemy's decision cycle or to react promptly to deteriorating situations. Incorporating options to reduce risk, such as designating a large mobile reserve, adds flexibility to a plan. Identifying decision points and designing branches and sequels (with requisite graphics) ahead of time—combined with a clear commander's intent—helps create flexible plans.

DEVELOP A UNIT PLANNING STANDARD OPERATING PROCEDURE

1-134. Developing and using a PSOP assists in more effectively and efficiently developing complete plans and orders. PSOPs should include example decision making products that are validated by the commander, staff, and subordinate units in training to ensure that the orders produced by the staff are useful. Staffs develop PSOPs to standardize planning duties, responsibilities, and procedures. PSOPs can decrease the time spent preparing for a planning event and increase the efficiency and effectiveness of the planning conducted during an operation. Staffs generally use training events to exercise their PSOPs and make any necessary adjustments or refinements at the conclusion of the event. Changes in personnel, equipment, types of operations being conducted, or the environment in which they are conducted may change the way a unit approaches and conducts planning. Things commonly listed in a PSOP include, but are not limited to—

- Personnel designated to form the planning team or teams.
- Planning team member duties and responsibilities.
- Planning sequences and timelines.
- Planning methods used and criteria for selecting each.
- Planning and briefing areas and set-ups.
- Briefing formats and instructions.
- Orders formats and dissemination instructions.

PLANNING PITFALLS

1-135. Commanders and staffs recognize the value of planning and avoid common planning pitfalls. These pitfalls generally stem from a common cause: the failure to appreciate the unpredictability and uncertainty of military operations. Pointing these out is not a criticism of planning, but of planning improperly. Common planning pitfalls include—

- Lacking commander involvement.
- Failing of the commander to make timely decisions.
- Attempting to forecast and dictate events too far into the future.
- Trying to plan in too much detail.
- Using the plan as a script for execution.
- Institutionalizing rigid planning methods.
- Lacking a sufficient level of planning detail.

1-136. The first pitfall is the lack of commander involvement in the development of the plan. As discussed in paragraphs 1-84 through 1-96, the responsibility for planning is inherent in command. Commanders are the central figures in effective planning. Since the plan describes their visualization of the end state and how the force will achieve that end state, commanders must devote significant time and effort to the development of plans and orders. In the absence of the commander, key planning staff members must continually review progress and resolve questions and concerns with the commander at opportune times.

1-137. The second pitfall is a lack of timely decisions by the commander necessary to continue effective planning. Pending or missing decisions can hinder the planning process and reduce developing a flexible and timely plan. In a rapidly changing and fluid environment, a lack of timely decisions can result in a loss of agility, initiative, or opportunities. The lack of timely decisions and timely plan development also inhibits subordinate planning and may unintentionally increase risk to the mission and force.

1-138. The third pitfall, attempting to forecast and dictate events too far into the future, may result from believing a plan can control the future. Planners tend to plan based on assumptions that the future will be a linear continuation of the present. These plans often underestimate the scope of changes in directions that may occur and the results of second- and third-order effects. Even the most effective plans cannot anticipate all the unexpected events. Often, events overcome plans much sooner than anticipated. The best analysis could simply be an understanding of what transition is most likely to occur, from which the most likely branches or sequels can be identified. Effective plans include sufficient branches and sequels to account for the nonlinear nature of events.

1-139. The fourth pitfall consists of trying to plan in too much detail. Sound plans include necessary details; however, planning in unnecessary detail consumes limited time and resources that subordinates need. This pitfall often stems from the desire to leave as little as possible to chance. In general, the less certain the situation, the fewer details a plan should include. However, planners often respond to uncertainty by planning in more detail to try to account for every possibility. Often this overplanning results in an extremely detailed plan that does not survive the friction of the situation and constricts effective action. A good plan only includes details needed to coordinate or synchronize actions of two or more subordinate units and accomplish the mission, achieve the objective, or produce the desired effect.

1-140. The fifth pitfall, using the plan as a script for execution, tries to prescribe the course of events with precision. When planners fail to recognize the limits of foresight and control, the plan can become a coercive and overly regulatory mechanism. Commanders, staffs, and subordinates mistakenly focus on meeting the requirements of the plan rather than deciding and acting effectively.

1-141. The sixth pitfall is the danger of institutionalizing rigid planning methods that lead to inflexible or overly structured thinking. This pitfall tends to make planning rigidly focused on the process and produces plans that overly emphasize detailed procedures. Effective planning provides a disciplined framework for approaching and solving complex problems. Taking that discipline to the extreme often results in subordinates not getting plans on time or getting overly detailed plans instead of using mission-type orders.

1-142. The seventh pitfall is the danger of insufficient planning detail. While planning with too much detail may consume too much time, and result in plans which are overly constraining to subordinates, plans with too little detail result in unsynchronized and uncoordinated actions of subordinate units. Some operations, for example a gap crossing, air assault, or obstacle breach, require detailed planning to synchronize the coordinated actions of subordinate units to ensure success. Determining the right balance of detail and permissiveness requires a trained and experienced staff with commander involvement.

MULTINATIONAL OPERATIONS PLANNING

1-143. *Multinational operations* is a collective term to describe military actions conducted by forces of two or more nations, usually undertaken within the structure of a coalition or alliance (JP 3-16). These operations are driven by common agreement among nations participating in an alliance or as coalition partners. While each nation has its own interests and often participates within the limitations of national caveats, all nations bring value to an operation. Each nation's force has unique capabilities, and each usually contributes to the operation's legitimacy in terms of international or local acceptability. Army forces should anticipate that most operations will be multinational operations and plan accordingly.

1-144. Key to any multinational operation is unity of effort among national and military leaders of participating nations emphasizing common objectives and shared interests, as well as mutual support and respect. For missions known or anticipated to involve unified action partners, collaboration should occur as early as possible to begin concurrent or parallel planning. Liaison exchange should also be considered when permissible to enable future planning efforts. Agreement on clearly identified strategic and military end states for the multinational force is essential to guide all multinational coordination, planning, and execution. Three

types of multinational planning efforts U.S. Army forces commonly participate in are bilateral, joint, and North Atlantic Treaty Organization (NATO) planning efforts.

BILATERAL PLANNING EFFORTS

1-145. When directed, designated U.S. commanders participate directly with the armed forces of other nations in preparing bilateral plans. Commanders and their staffs assess the potential constraints, opportunities, security risks, and any additional vulnerabilities resulting from bilateral planning and how these plans impact the ability of the United States to achieve its objectives. Bilateral planning involves the preparation of combined, mutually developed, and approved plans governing the employment of the forces of two nations for a common contingency. Bilateral planning may be accomplished within the framework of a treaty or alliance, or it may be accomplished in the absence of such arrangements. Bilateral planning is accomplished in accordance with specific guidance provided by the President, Secretary of Defense, or Chairman of the Joint Chiefs of Staff (CJCS) and captured in bilateral strategic guidance signed by the leadership of both countries. (For more information on bilateral planning, see FM 3-16.)

JOINT PLANNING EFFORTS

1-146. Joint planning will frequently be accomplished within the context of multinational planning. Multinational force commanders develop multinational strategies and plans in multinational channels. Supporting U.S. JFCs perform planning for multinational operations in U.S. national channels using joint planning. Coordination for these separate planning channels occurs at the national level through established multinational bodies or member nations. Coordination at the theater strategic and operational levels is conducted by JFCs who are responsible within both channels for planning matters.

1-147. U.S. doctrine and procedures for joint planning are applicable to multinational challenges. The general considerations for interaction with international organizations and partner-nation organizations are similar to those for interaction with U.S. Government departments and agencies. (For more information on joint planning see JP-5-0.)

NATO PLANNING EFFORTS

1-148. For NATO's operations, the United States and other NATO countries have developed and ratified an Allied joint doctrine hierarchy of publications outlining the doctrine and tactics, techniques, and procedures that should be used during NATO operations. JFCs, their staffs, and subordinate forces should review and train with these publications prior to participating in NATO operations. For more information on NATO planning doctrine see AJP-5, *Allied Joint Doctrine for the Planning of Operations*, or APP-28, *Tactical Planning for Land Forces*.

MULTINATIONAL PLANNING CONSIDERATIONS

1-149. Multinational operations present unique challenges and demands throughout the planning process. Commanders and staffs should account for these considerations when participating in multinational operations. The following are some of the considerations when planning multinational operations—

- Cultural and language issues.
- Interoperability challenges.
- National caveats on the use of respective forces.
- The sharing of information and intelligence.
- Rules of engagement.
- Domestic and international laws.
- Operational limitations on the use of contributed forces.
- Weapons capabilities of participating nations.
- Tactics of participating nations.

(For more information on multinational operations planning, see FM 3-16.)

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Chapter 2

Planning and Operational Art

This chapter begins with a description of planning and the levels of warfare. A discussion of operational art follows. The chapter concludes with a discussion of the elements of operational art and the tools available to commanders and staffs in the application of operational art.

PLANNING AND THE LEVELS OF WARFARE

2-1. Operational art spans a continuum—from strategic direction to concrete tactical actions. Bridging the continuum requires creative vision coupled with broad experience and knowledge. As such, it is important that Army commanders and staffs appreciate how planning (and associated planning products) nest among the levels of warfare. Without this context, tactical operations become disconnected from operational end states and strategic objectives.

2-2. The *levels of warfare* is a framework for defining and clarifying the relationship among national objectives, the operational approach, and tactical tasks (ADP 1-01). The four levels are national strategic, theater strategic, operational, and tactical. The levels of warfare focus organizations on one of three broad roles-creating strategy and providing strategic direction (strategic); planning and conducting campaigns and major operations (operational); or planning and executing battles, engagements, and actions (tactical), as shown in figure 2-1.

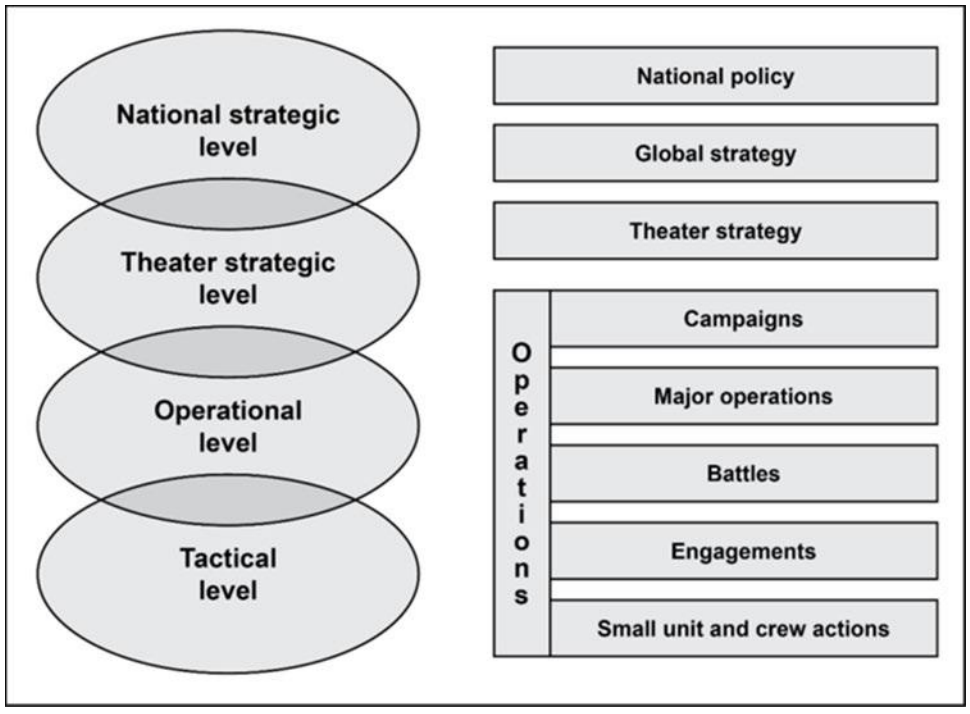

Figure 2-1. Levels of warfare

2-3. The levels of warfare are conceptual, and they do not have finite limits or boundaries. They do, however, correlate to specific levels of responsibility and planning with decisions at one level affecting other levels. They help commanders visualize the relationships and actions required to link strategic objectives, military operations at scale, and tactical actions. Planning horizons, methods, and products can differ greatly among the levels of warfare.

2-4. The levels of warfare distinguish four broad overlapping activities: providing national direction and creating national strategy (national strategic), conducting continuous theater campaigning (theater strategic); planning and conducting campaigns and major operations (operational); or planning and executing operations, battles, engagements, and actions (tactical). Different commanders act at more than one level of war, depending on the echelon of command. For example, a combatant commander (CCDR) formulates theater strategy and designs the campaign plan. A land component commander assists a CCDR in campaign design and may lead a field army during major operations. The levels of warfare are conceptual, without finite limits or boundaries. They do, however, correlate to specific activities and responsibilities. They help commanders visualize the relationships and actions required to link strategic objectives, military operations at various echelons, and tactical actions. Among the levels of warfare, planning horizons, methods, and products differ greatly. Without this context, tactical operations become disconnected from operational end states and strategic objectives. There are skills and practices related to strategic, theater strategic, operational, and tactical level that differ from each other and are enhanced by specific training and education.

NATIONAL STRATEGIC LEVEL

2-5. The *national strategic level of warfare* is the level of warfare at which the U.S. government formulates policy goals and ways to achieve them by synchronizing action across government and unified action partners and employing the instruments of national power (FM 3-0). The instruments of national power are the means available to the government in its pursuit of national objectives, expressed as diplomatic, information, military, and economic. The national strategic level of warfare focuses on developing global strategy and providing global strategic direction. Strategic direction provides context, tasks, and purpose for the employment of the instruments of national power.

2-6. United States federal law and policy provide the legal framework for strategic direction among the branches of government and their departments. Strategic direction provides context, tasks, and purpose for the employment of the instruments of national power. The specifics of strategic direction address long-term, emergent, and anticipatory issues or concerns that may quickly evolve due to rapidly changing circumstances. Rather, strategic direction is always evolving and adapting.

2-7. The President, the Secretary of Defense, and the Chairman of the Joint Chiefs of Staff (CJCS) provide their orders, intent, strategy, direction, and guidance via strategic direction to the military to pursue national interests. The President's decisions drive the Secretary of Defense's strategic guidance, which the CJCS operationalizes. These leaders generally communicate strategic direction to the Armed Forces through key documents known as strategic guidance. Strategic guidance comes in the form of national strategies (such as the *National Security Strategy of the United States of America* [NSS]), presidential directives, and strategic plans (such as the Unified Command Plan). Figure 2-2 shows several key strategic guidance documents that provide direction to the Armed Forces to promote *unified action*—the synchronization, coordination, or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort (JP 1, Volume 1). (See JP 5-0 for a detailed discussion of strategic guidance and joint planning.)

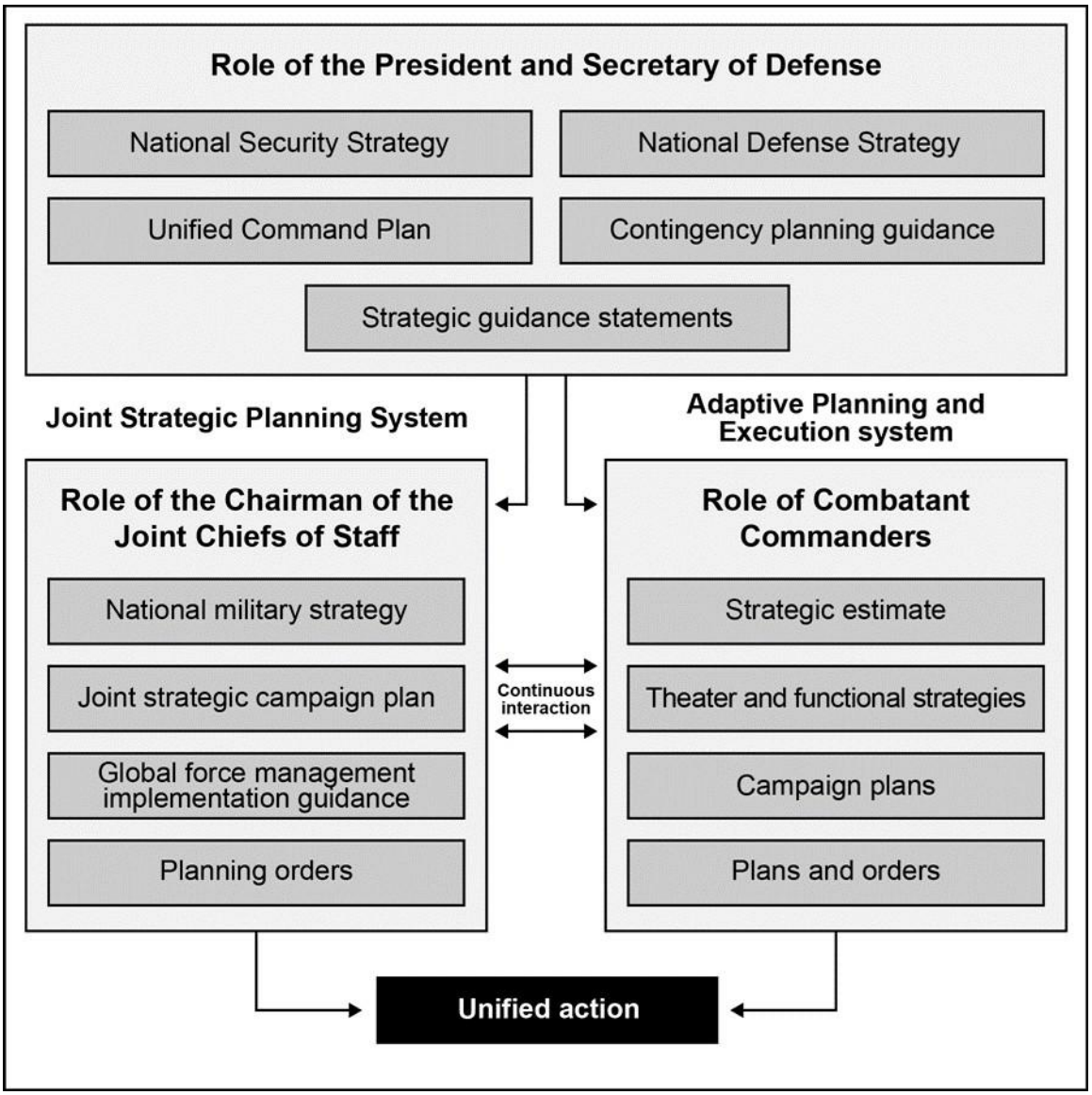

Figure 2-2. Strategic direction

National Strategies

2-8. There are numerous national-level strategies that address areas ranging from immigration to public health. Overarching strategies that address national security and defense include—

- National Security Strategy of the United States of America (NSS).
- The National Defense Strategy (NDS).
- The National Military Strategy of the United States (NMS).

National Security Strategy

2-9. Approved by the President, the NSS is prepared by the Executive Branch for Congress, and it outlines the major national security concerns of the United States and how the administration plans to address them using all instruments of national power to accomplish national goals. Title 50, U.S. Code directs the President to submit an annual report on the national security strategy of the United States on the date on which the President submits to Congress the budget for the next fiscal year or not later than 150 days after the new

President takes office. This document frames the strategic context by defining national interest and goals, the capabilities necessary to implement the strategy, and the short-term and long-term use of the military as an instrument of national power to protect and promote interests and achieve goals and objectives. The President, in conjunction with the National Security Council and Homeland Security Council, provides additional amplifying guidance in Presidential policy directives, executive orders, and strategic guidance statements.

National Defense Strategy

2-10. Approved by the Secretary of Defense, the NDS outlines the national approach to the defense of the nation and its interest. Generally prepared every four years, the NDS translates and refines the NSS into broad military guidance for military strategy, planning, force posturing, force structure, and force modernization. The NDS establishes a set of overarching defense objectives that guide Department of Defense (DOD) security activities and provides the foundation for the NMS development. The NDS objectives serve as links between military activities and those of other U.S. Government departments and DOD agencies in pursuit of national goals.

National Military Strategy

2-11. The CJCS, in coordination with other members of the Joint Chiefs of Staff, CCDRs, the Joint Staff, and the Office of the Secretary of Defense, prepares the NMS. The NMS expands upon the NSS and NDS by defining national military objectives (ends) and how to achieve these objectives (ways), and it addresses the military capabilities (means) required to execute the strategy. The NMS provides the strategic framework to prioritize planning, resource allocation, and distribution of risk. It provides the CJCS amplifying guidance for planning, force employment, posture, and future force development of the Armed Forces.

2-12. The NMS is the CJCS's central strategy and planning document. Title 10, U.S. Code directs the CJCS to determine for each even numbered year whether to prepare a new NMS or update an existing strategy. The NMS serves as the starting point for all other joint strategic planning system actions.

Note. The joint strategic planning system is the primary system by which the CJCS, in coordination with other members of the Joint Chiefs of Staff and CCDRs, conducts deliberate planning and provides military advice to the President and Secretary of Defense. (See CJCSI 3100.01F for information on the joint strategic planning system.)

Key Strategic Plans and Directives

2-13. In addition to national security, defense, and military strategies, several documents provide strategic direction to the Armed Forces. Key documents include—

- Unified Command Plan (UCP).
- Contingency planning guidance (CPG).
- Joint strategic campaign plan (JSCP).
- Global Force Management Implementation Guidance (GFMIG).

Unified Command Plan

2-14. Prepared by DOD and approved by the President, the UCP establishes combatant commands (CCMDs) and responsibilities and missions of the CCDRs. The unified command structure identified in the UCP is flexible and changes as required to accommodate evolving U.S. national security needs. Title 10, United States Code (USC), Section 161, tasks the Chairman of the Joint Chiefs of Staff (CJCS) to conduct a review of the UCP "not less often than every two years and submit recommended changes to the President through the Secretary of Defense. This document provides broad guidance from which CCDRs and planners can derive tasks and missions during CCMD plan development and modification.

Contingency Planning Guidance

2-15. Prepared by DOD and approved by the President, the CPG fulfills the statutory requirement in Title 10, USC, Section 113 and provides written policy guidance on the preparation and review of campaign and contingency plans (including prioritization) to the CJCS and CCDRs for contingency planning. Contingency

plans are branches of combatant command campaign plans. The CPG focuses the guidance given in the NSS and NDS and is the principal source document for the JSCP. (See paragraphs 2-31 through 2-33 for more information on contingency planning.)

Joint Strategic Campaign Plan

2-16. The JSCP fulfills the CJCS's statutory responsibilities in Title 10, USC, Section 153, to assist the President and Secretary of Defense in providing for strategic direction to the joint force and implementing the strategic guidance in the NSS, NDS, NMS, and CPG. The JSCP provides this guidance to CCDRs, Service chiefs, combat support agencies and applicable DOD agencies for preparation of plans based on current military capabilities, strategic guidance and contingency planning guidance identified to the CJCS in the CPG.

2-17. In addition to communicating to the CCMDs' specific planning guidance, the JSCP operationalizes the strategic vision described in the NMS and nests with the strategic direction delineated by the NSS, NDS, and GFMIG. The JSCP also provides integrated planning guidance and direction for planners to fulfill the CJCS's role as the global integrator.

Global Campaign Plans

2-18. A global campaign plan is the primary means by which the CJCS or designated CCDRs arrange for unity of effort through which they guide the planning, integration, and coordination of joint operations across CCMD areas of responsibility (AORs) and functional responsibilities. Global campaign plans address the most pressing transregional and multifunctional strategic challenges across all domains. Each global campaign plan has an assigned coordinating authority which is a CCDR with the primary responsibility for a global campaign plan. Contingency plans to a global campaign plan are called integrated contingency plans.

Functional Campaign Plans

2-19. Functional campaign plans address functional threats or challenges that are not geographically constrained and require coordination across multiple combatant commands. The CJCS directs functional campaign planning through the JSCP or a planning order to combatant commands.

Combatant Command Campaign Plans

2-20. Combatant command campaign plans (CCPs) are the primary planning documents that CCDRs use when campaigning to specifically fulfill their UCP-assigned AOR or functional responsibilities. CCPs incorporate applicable objectives established in global, regional, and functional campaign plans.

2-21. Global campaign plans and functional campaign plans are generally problem-focused plans that focus the efforts of multiple organizations on specific problem sets that span organizational and geographic boundaries. Global campaign plans focus on competing with a single priority challenge, while functional campaign plans focus on addressing multiple related challenges, not necessarily one priority challenge. Global campaign plans are generally organization-focused and serve to guide day-to-day campaigning (incorporating requirements from global campaign plans and functional campaign plans) and operational execution to achieve U.S. strategic objectives short of war.

2-22. Although no longer directed in the JSCP, another type of campaign plan is a regional campaign plan. Regional planning guidance addresses regional threats or challenges that require coordination across multiple combatant commands. Generally, issues that require regional campaign plans are not as significant a threat to U.S. interests as global campaign plans, but they require attention to ensure they do not evolve into a more significant crisis. If necessary, the Secretary of Defense, through the CJCS, could direct a regional campaign plan with a designated coordinating authority.

Global Force Management Implementation Guidance

2-23. The GFMIG, approved by the Secretary of Defense, integrates complementary policy and guidance on and specifies procedures for the directed readiness, assignment, allocation, apportionment, and assessment of global forces into a single authoritative global force management document in support of the strategic

guidance. Published during even numbered years, the GFMIG provides Secretary of Defense guidance and assigns responsibilities for performing all aspects of global force management, including the allocation of forces in the global force management allocation process. It provides procedures to assign and allocate forces to support resource-informed planning and enable the force to be dynamically employed.

Note. The Department of the Army and the United States Army Forces Command play a key role in global force management by providing ready, trained, and equipped Army forces to CCDRs as directed. They routinely coordinate with the Joint Staff, CCDRs, Army components (theater Armies and Army Service component commands), and others, in the sourcing of Army forces for ongoing operations and Army force requirements identified in joint campaign and contingency plans. (For further discussion on global force management see JP 5-0.)

THEATER STRATEGIC LEVEL

2-24. The *theater strategic level of warfare* is the level of warfare at which combatant commanders synchronize with unified action partners and employ all elements of national power to fulfill policy aims within the assigned theater in support of the national strategy (FM 3-0). Based on strategic guidance, CCDRs with assigned areas of responsibility and staffs—with input from subordinate commands, including theater armies and supporting commands and agencies—update their strategic estimates and develop theater strategies. A theater strategy is an overarching construct outlining a CCDR's vision for integrating and synchronizing military activities and operations with the other instruments of national power to achieve national strategic objectives. The theater strategy prioritizes the ends, ways, and means within the limitations established by the budget, global force management processes, and strategic guidance. The theater strategy serves as the basis for development of the CCP.

2-25. The Department of State and the United States Agency for International Development also provide direction to CCDRs through various strategies (including joint, regional, integrated country, and country development cooperation). Establishing and maintaining unity of effort with the Department of State and chiefs of mission requires CCDRs and planners to stay abreast of these products in the development of their theater strategies and plans. This includes applicable country specific security cooperation plans.

OPERATIONAL LEVEL

2-26. The *operational level of warfare* is the level of warfare in which campaigns and operations are planned, conducted, and sustained to achieve operational objectives to support achievement of strategic objectives (JP 3-0). Actions at the operational level of warfare usually involve broader aspects of time and space than tactical actions. The theater army's activities continuously support the CCDR in shaping the operational and strategic situation. Operational-level commanders need to understand the complexities of the operational environment (OE) and look beyond the immediate situation. Operational-level commanders seek to create the most favorable conditions possible for subordinate commanders by preparing for future events.

2-27. The operational level of warfare demands leaders with a unique set of skills. Because the operational level is fundamentally about linking tactical actions to strategic objectives, leaders must understand both strategy and tactics. They must have some expertise in the capabilities and operations of all Services and components and those of allies and partners. Leaders at the operational level must be able to assess large, complex OE's and be expert planners. They must understand the application of warfighting functions on a large scale and how this application differs from application at the tactical level. The elements of operational art help operational leaders understand, visualize, and describe their campaigns and major operations. (See ADP 3-0 for details on the elements of operational art.)

2-28. Planning at this level employs operational art—the cognitive approach by commanders and staffs to organize and employ military forces by integrating ends, ways, and means. The operational level of warfare is generally the purview of combatant commands and their components (both Service and functional), sub-unified commands and their components, and subordinate joint task forces and their components. Within a joint headquarters, planners employ operational art and use operational design and the joint planning process to develop campaign plans, operation plans (OPLANS), and operation orders (OPORDs) for the conduct of joint operations. (See JP 5-0 for details on operational design and the joint planning process.)

2-29. The headquarters, commands, and agencies involved in joint planning at this level are collectively termed the joint planning and execution community. Not a standing or regularly meeting entity, the joint planning and execution community consists of the stakeholders shown in figure 2-3. The supported CCDR has primary responsibility for all aspects of a task assigned by the CPG, the JSCP, or other planning directives. The supported commander can initiate planning at any time based on command authority or in response to direction or orders from the President, Secretary of Defense, or CJCS. The designated supporting commanders provide planning assistance, forces, or other resources to a supported commander, as directed.

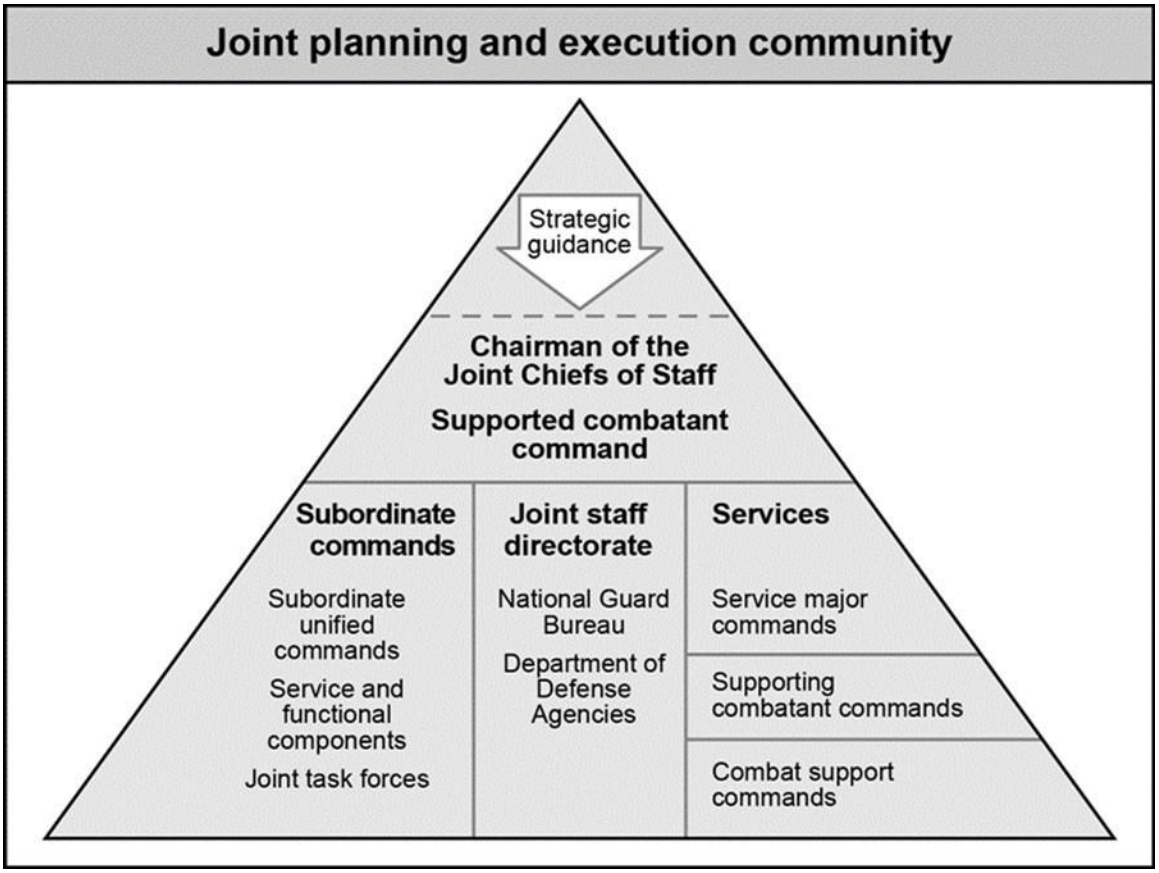

Figure 2-3. Joint integrated planning

Combatant Command Campaign Plan

2-30. The centerpiece for operational-level planning within a combatant command is the CCP. Formally known as the theater campaign plan, the CCP operationalizes the CCDR's strategy by organizing and aligning operations and activities with planned and available resources to achieve strategic and operational objectives in an AOR. The CCP establishes objectives, conditions, and tasks under which the combatant command and its component (Service and functional) plan operations, activities, and investments to achieve theater objectives in support of national policy and objectives. The CCP organizes the day-to-day operations of the joint force and provides a framework within which a combatant command conducts security cooperation activities and military engagement with regional partners.

Note. The theater army commander and staff assist the CCDR and staff in development of the CCP. They provide advice on Army capabilities and resources, force and resource posturing, and the conduct of operations from a land perspective. In addition, the theater army develops a theater support plan to the CCP. This plan includes methods to achieve security cooperation, training and exercise programs, and ongoing Army activities within the theater, including intelligence, air and missile defense, sustainment, and communications. (See FM 3-94 and ATP 3-93 for a detailed discussion of the roles, responsibilities, and organization of theater armies.)

Contingency Plans

2-31. A key aspect of combatant command planning is the development of contingency plans. A *contingency plan* is a branch of a campaign plan that is planned based on hypothetical situations for designated threats, catastrophic events, and contingent missions outside of crisis conditions (JP 5-0). Contingency plans are branches to global, regional, functional, and combatant campaign plans that address potential threats that put one or more national interests at risk in ways that warrant military operations. Contingency plans are built to account for the possibility that campaign activities could fail to prevent aggression, fail to preclude large scale instability in a key state or region, or fail to adequately respond to a natural disaster. The UCP, CPG, and JSCP assign CCDRs responsibilities for developing specific contingency plans. CCDRs also develop contingency plans to their CCPs based on theater estimates.

2-32. Contingency plans address an anticipated crisis, and they must be modified during execution to respond to conditions at the time of execution. If an approved contingency plan exists that closely resembles the emerging scenario, that plan can be refined or adapted as necessary and executed. Contingency plans are often phased, and they have specified end states. Contingency plans seek to re-establish conditions favorable to the United States. Contingency plans have an identified military objective and termination criteria. They address military operations ranging from humanitarian assistance to large-scale combat operations.

2-33. Planning for a contingency encompasses the activities associated with the development of plans for the deployment, employment, sustainment, and redeployment of forces and resources in response to potential crises identified in joint strategic planning documents. The level of planning detail of contingency plans varies based on guidance and changes in the security environment. Planning details range from level 1 to level 4 as discussed in paragraphs 2-34 through 2-37. Although listed sequentially, during a crisis they may be conducted concurrently or compressed depending on the situation and conditions. (See JP 5-0 for more information on contingency planning and associated levels of planning detail.)

Level 1-Commander's Estimate

2-34. The *commander's estimate* is the commander's initial assessment in which options are provided in a concise statement that defines who, what, when, where, why, and how the course of action will be implemented (JP 5-0). The commander's estimate, at planning level 1, involves the least amount of detail and focuses on producing multiple courses of action (COAs) to address a contingency. The product for this level can be a COA briefing, command directive, commander's estimate, or a memorandum with a required force list. The commander's estimate provides the Secretary of Defense with military COAs to meet a potential contingency.

Level 2-Base Plan

2-35. A base plan, at planning level 2, describes the concept of operations, major forces, schemes of support, and anticipated timelines for completing the mission. It normally does not include annexes. A base plan may contain alternatives, including flexible deterrent operations, to provide flexibility in addressing a contingency as it develops or to aid in developing the situation.

Level 3-Concept Plan

2-36. A concept plan, at planning level 3, is an OPLAN in an abbreviated format that may require considerable expansion or alteration to convert it into a complete and detailed level 4 OPLAN or an OPORD.

It includes a plan summary, a base plan, and selected annexes. If the development of a time-phased force deployment data (TPFDD) is directed for the concept plan, the planning level is described as a 3T, and it requires consideration of intelligence community-assessed, contested-environment impacts on deployment and distribution operations. In this case a troop list and TPFDD would also require the addition of a joint Annex E (Personnel) and Annex W (Operational Contract Support) be prepared in addition to all others as part of the level 3 concept plan.

Level 4-Operation Plan

2-37. An OPLAN is a complete and detailed plan. The OPLAN identifies the force requirements, functional support, and resources to execute the plan. It contains a full description of the concept of operations, all applicable annexes, a phased force and deployment list (known as a TPFDL), a transportation-feasible notional TPFDD, and an analysis of the impact of a potentially contested environment on the joint deployment and distribution enterprise. A TPFDD phases unit requirements into the theater of operations to support the concept of operations and provide closure estimates.

Note. The theater army commander and staff assist the geographic combatant commander in developing contingency plans, including developing subordinate contingency plans as required. Theater army planners routinely review and update contingency plans to ensure they remain feasible. This includes a review of Army force structure and TPFDD. Army corps and divisions aligned to a specific contingency plan (normally those addressing large-scale combat operations) develop subordinate plans as directed. Army corps and divisions train on and rehearse these plans in Joint Chief of Staff exercises, Army Mission Command Training Program exercises, and other training events.

Subordinate Joint Operation Plans and Orders

2-38. Operational-level planning also includes the development of subordinate campaign plans, OPLANs, and OPORDs for specific joint operations within an AOR. This may include refining an already developed contingency plan or developing a new plan based on the situation. In this context, a *campaign plan* is a joint operation plan for a series of related major operations aimed at achieving strategic or operational objectives within a given time and space (JP 5-0). Subordinate joint campaign plans are often phased and have specified end states that seek to re-establish conditions favorable to the United States.

2-39. Planning joint campaigns and operations includes organizing the joint force, organizing the joint force headquarters, and organizing the operational area. In other instances, the geographic combatant commander may establish a subordinate joint task force for the conduct of military operations within an operational area (typically a joint operations area). For limited contingencies and crisis response operations, Army corps and division headquarters often serve as the base of a joint task force headquarters or as the joint force land component to a joint task force. While augmented with joint personnel, it is important that Army staff members in these headquarters are familiar with adaptive planning and the joint planning process. (See JP 3-33 for doctrine on joint task force headquarters. See JP 3-31 for doctrine on joint land component headquarters.)

2-40. Corps or divisions headquarters serving as the joint force land component headquarters may also be designated the ARFOR headquarters. In addition to planning major ground operations, these headquarters must also plan and coordinate with the theater army headquarters for administrative and logistic support to Army forces and for Army support to other services in the operational area. (See FM 3-94 for a detailed discussion of the role of corps and division headquarters, including roles and responsibilities of the ARFOR.)

TACTICAL LEVEL

2-41. The *tactical level of warfare* is the level of warfare at which forces plan and execute battles and engagements to achieve military objectives (JP 3-0). A *battle* is a set of related engagements that lasts longer and involves larger forces than an engagement (ADP 3-90). Battles affect the course of a campaign or major operation, as they determine the outcome of a division or corps echelon achieving one or more significant objectives. An *engagement* is a tactical conflict, usually between opposing lower echelon maneuver forces (JP 3-0). Engagements are typically conducted at brigade echelons and below.

2-42. Tactical planning focuses on *tactics*—the employment, ordered arrangement, and directed actions of forces in relation to each other (ADP 3-90). Operational-level headquarters determine objectives and provide resources for tactical operations. In turn, tactical commanders and staffs develop plans and orders to achieve assigned objectives through the ordered arrangement, movement, and maneuver of forces in relation to each other and to the enemy force. Tactical leaders employ both operational art and the art of tactics to solve tactical problems within their higher commander's intent. (See ADP 3-90 for a detailed discussion of tactics.)

2-43. Operational- and tactical-level planning complement each other, but they have different aims. Operational-level planning involves broader dimensions of time, space, and purpose than tactical-level planning involves. Operational-level planners need to define an operational area, estimate required forces, and evaluate requirements. In contrast, tactical-level planning proceeds from an existing operational approach. Normally, assigned areas are prescribed, objectives and available forces are identified, and a general sequence of activities is specified for tactical-level commanders.

2-44. Tactical-level planning revolves around how best to achieve objectives and accomplish tasks assigned by higher echelon headquarters. Planning horizons for tactical-level planning are relatively shorter than planning horizons for operational-level planning. Tactical-level planning works within the framework of an operational-level plan, and it is addressed in Service doctrine or, in the case of multinational operations, allied or the lead-nation's doctrine. For units with a staff, Army tactical planners employ Army design methodology (ADM) (described in Chapter 4) and the military decision-making process (MDMP) (described in Chapter 5). For units without a staff, Army leaders use troop leading procedures (TLP) (described in Chapter 7) to plan and prepare for operations.

OPERATIONAL ART

2-45. Military operations require integrating ends, ways, means, and risks across the levels of warfare. Joint and Army commanders and staffs do this through operational art. In the context of planning, *operational art* is the cognitive approach by commanders and staffs—supported by their skill, knowledge, experience, creativity, and judgment—to develop strategies, campaigns, and operations to organize and employ military forces by integrating ends, ways, and means (JP 3-0). Operational art applies to all types and aspects of operations, and it serves two main functions—

- To ensure that military actions are aligned with and directly support strategy.
- To ensure that tactical actions occur under the most advantageous conditions possible.

2-46. Operational art spans a continuum—from strategic direction to concrete tactical actions. As such, operational art is not limited to a specific echelon (combatant command, theater army, or corps) or role (joint task force headquarters, joint force land component headquarters, or tactical Army headquarters). Rather, multiple echelons performing joint and Service roles within the scope of operational art all contribute to the arrangement of tactical actions in time, space, and purpose to pursue strategic and operational objectives.

2-47. For Army forces, operational art seeks to ensure that commanders employ forces, material, and time effectively to achieve objectives. It requires a broad vision, the ability to anticipate, a careful understanding of means to ends, and an understanding of inherent risk. Always within the context of a higher echelon joint plan or order, using operational art helps Army commanders and staffs understand, visualize, and describe operations, as shown in figure 2-4 on page 39.

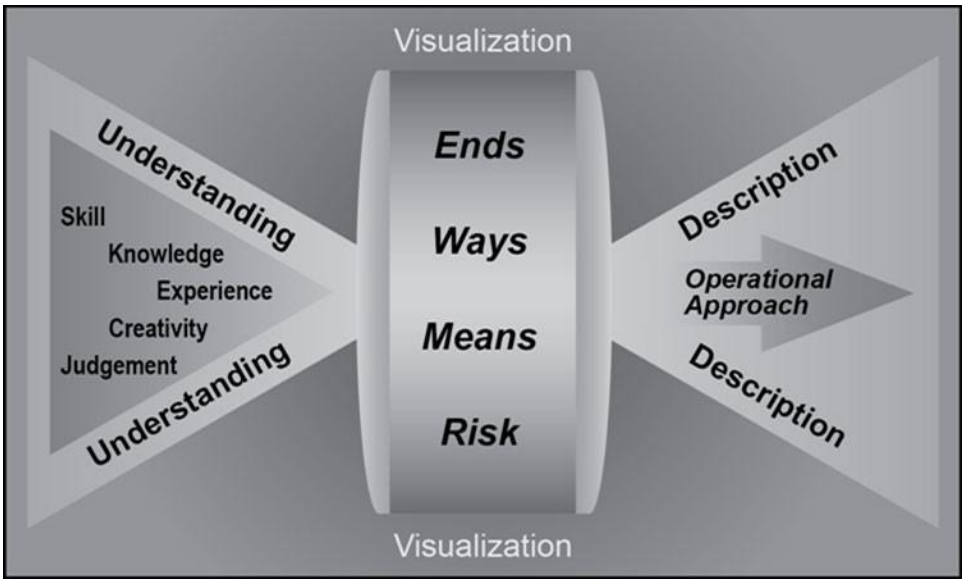

Figure 2-4. Operational art

2-48. Operational art helps commanders to determine when, where, and for what purpose to employ forces and to determine the sequence of those forces in major operations and battles. It requires commanders and staffs to answer these questions:

- What conditions, when established, constitute the desired end state (ends)?
- How will the force achieve these desired conditions (ways)?
- What sequence of actions helps attain these conditions (ways)?
- What resources are required to accomplish that sequence of actions (means)?
- What is the chance of failure or unacceptable consequences in performing that sequence of actions (risk)?

2-49. Both ADM (described in Chapter 4) and the MDMP (described in Chapter 5) are tools used by Army commanders and their staffs in the application of operational art. ADM supports operational art as a methodology for applying critical and creative thinking to understand, visualize, and describe problems and approaches to solving them. ADM is associated with conceptual planning that helps commanders and staffs frame an OE, frame ill-defined problems, and develop an operational approach to resolve identified problems. The understanding gained by both the process and specific outputs of ADM inform the more detailed planning conducted during the MDMP.

2-50. A key output of ADM is an operational approach. It is a broad description of the mission, operational concepts, tasks, and actions required to accomplish the mission. The operational approach provides the framework for operations, serves as the basis for detailed planning, and facilitates unity of purpose across the force. Operational art never occurs in a vacuum. An echelon's operational approach—and the context that informs it—is always based on the operational approach of its higher headquarters, and that informs subordinates' development of their operational approaches.

ELEMENTS OF OPERATIONAL ART

2-51. The elements of operational design and the elements of operational art listed in figure 2-5 on page 40 assist commanders and staffs in employing operational art. During planning, these tools help commanders understand, visualize, and describe operations and develop their commander's intent, operational approach, and planning guidance.

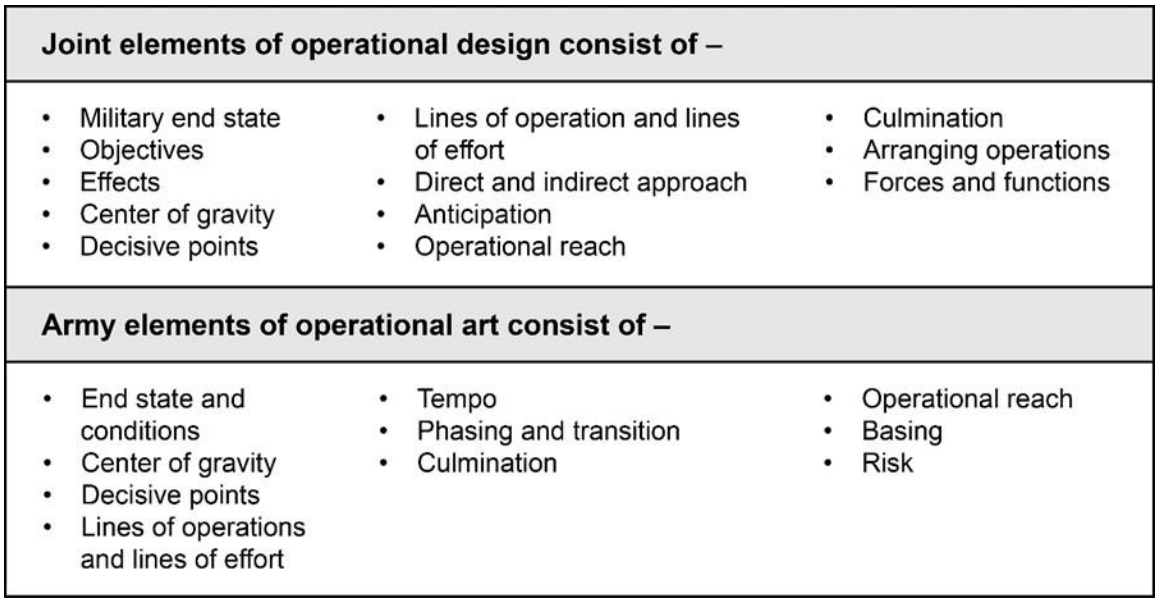

Figure 2-5. Elements of operational art

2-52. Joint force commanders (JFCs) and staffs use the elements of operational design when developing plans for campaigns and operations. As some elements of operational design only apply to JFCs (for example, military end state), the Army modifies the elements of operational design into elements of operational art as shown in figure 2-5. Echelons above brigade headquarters frequently participate in joint planning and receive joint OPLANs and OPORDs. As such, they must be knowledgeable with both the elements of operational design and the elements of operational art. JP 5-0 discusses each element of operational design in detail. Paragraphs 2-53 through 2-82 describe the Army's elements of operational art used in the development of Army plans and orders.

End State and Conditions

2-53. A military end state is the set of required conditions that defines achievement of all military objectives. It normally represents a point in time and circumstances beyond which the President does not require the military instrument of national power as the primary means to achieve remaining national objectives. Determining the military end state of a campaign or joint operation links the operational and strategic levels of warfare, and it is the purview of the JFC, not functional commanders or those of Service echelons.

2-54. Army commanders must clearly understand the military end state when developing the end states for their supporting operations. An operation's *end state* is the set of required conditions that defines achievement of the commander's objectives (JP 3-0). A condition is a reflection of the existing state of an OE. Thus, a desired condition is a sought-after change to an OE. Since every operation should focus on a clearly defined and attainable end state, accurately describing conditions that represent success is essential. Commanders explicitly describe end state conditions which guide the development of their operational approach. Commanders summarize the operation's end state in their commander's intent. A clearly defined end state promotes unity of effort, facilitates integration and synchronization of the force, and guides subordinate initiative during execution.

Center of Gravity

2-55. A *center of gravity* is the source of power that provides moral or physical strength, freedom of action, or will to act (JP 5-0). Centers of gravity may change over time. They may be different at the operational and strategic level, and they could be different from location to location. A way to think about the center of gravity is that it is the primary entity that possesses the inherent capability to achieve the objective. Thus, a center of gravity is always linked to the objective. If the objective changes, the center of gravity may also change. There may be different centers of gravity at different echelons of warfare. At the strategic level, a center of gravity may be an alliance, political or military leaders, or national will. At the operational level, a

center of gravity is often associated with a threat's military capabilities such as a powerful element of its armed forces. The loss of a center of gravity forces a change in the ends, ways, or means, and it often results in defeat.

2-56. As an element of operational art, a center of gravity analysis helps commanders and staffs understand friendly and enemy strengths, weaknesses, and vulnerabilities. This understanding helps to determine ways to undermine enemy strengths by exploiting enemy vulnerabilities while protecting friendly vulnerabilities from enemies attempting to do the same. Understanding the critical factors of a center of gravity helps commanders and staffs identify decisive points and determine an operational approach. (See Chapter 4 for more information on center of gravity analysis in ADM.)

DECISIVE POINTS

2-57. A *decisive point* is key terrain, key event, critical factor, or function that, when acted upon, enables commanders to gain a marked advantage over an enemy or contribute materially to achieving success (JP 5-0). Key terrain decisive points can include port facilities, distribution networks and nodes, and bases of operation. Key events and elements of an enemy force may also be decisive points. Identifying decisive points helps commanders to select clear, conclusive, attainable objectives that directly contribute to achieving the end state.

Note. Decision tools assist commanders and staffs in leading and executing operations to reach decisive points. Among some of the most important tools are the decision support template (DST) and associated decision support matrix (DSM), execution matrix, and execution checklist. These tools help control operations and determine when anticipated decisions are required for execution. For more information on decision tools see Appendix F.

2-58. Decisive points are often derived from the center of gravity analysis. A common characteristic of decisive points is their importance to a center of gravity. Decisive points are not centers of gravity; they are often critical requirements and critical vulnerabilities. Thus, they are critical to attacking or protecting centers of gravity. A decisive point's importance may cause enemy forces to commit significant resources to defend it. The loss of a decisive point weakens a center of gravity and may expose more decisive points, eventually leading to an attack on the center of gravity itself.

2-59. Generally, more decisive points exist in an operational area than available forces and capabilities can attack, seize, retain, control, or protect. Accordingly, planners study and analyze decisive points and determine which offer the best opportunity to attack the enemy force's center of gravity, extend friendly operational reach, or enable the application of friendly forces and capabilities. Operational art includes selecting decisive points that best lead to establishing end state conditions in a sequence that most quickly and efficiently leads to mission success.

2-60. Decisive points identified for action become objectives. An objective can be physical (for example, an enemy force or a terrain feature) or conceptual (the established rule of law). In the physical sense, an objective is a location on the ground used to orient operations, phase operations, facilitate changes of direction, and provide for unity of effort. In the conceptual sense, an *objective* is the clearly defined, decisive, and attainable goal toward which an operation is directed (JP 5-0). Objectives provide the basis for determining tasks to subordinate units. The most important objective forms the basis for developing the essential task. Combined with end state conditions, objectives form the building blocks for developing lines of operations and lines of effort.

LINES OF OPERATIONS AND LINES OF EFFORT

2-61. Lines of operations and lines of effort link objectives in time, space, purpose, and resources to achieve end state conditions as shown in figure 2-6 on page 42. A line of operation links a base of operations to a physical objective. A line of effort links tasks with goal-oriented objectives. Commanders describe an operation along lines of operations, lines of effort, or a combination of both in their operational approach.

2-62. A *line of operations* is a line that defines the directional orientation of a force in time and space in relation to the enemy and links the force with its base of operations and objectives (ADP 3-0). Lines of operations connect a series of intermediate objectives that lead to control of a geographic or force-oriented

objective. Operations designed using lines of operations generally consist of a series of actions executed according to a well-defined sequence.

2-63. Lines of operations can be categorized as interior and exterior. The choice of using interior or exterior lines supports a concept based on the length of movement and the supporting lines of sustainment and their associated lines of communications. *Interior lines* are lines on which a force operates when its operations diverge from a central point (ADP 3-0). Commanders choose interior lines because lines of movement and sustainment within an enclosed area are shorter than those lines outside the enclosed area. Interior lines allow commanders to move quickly against enemy forces along shorter lines of operations.

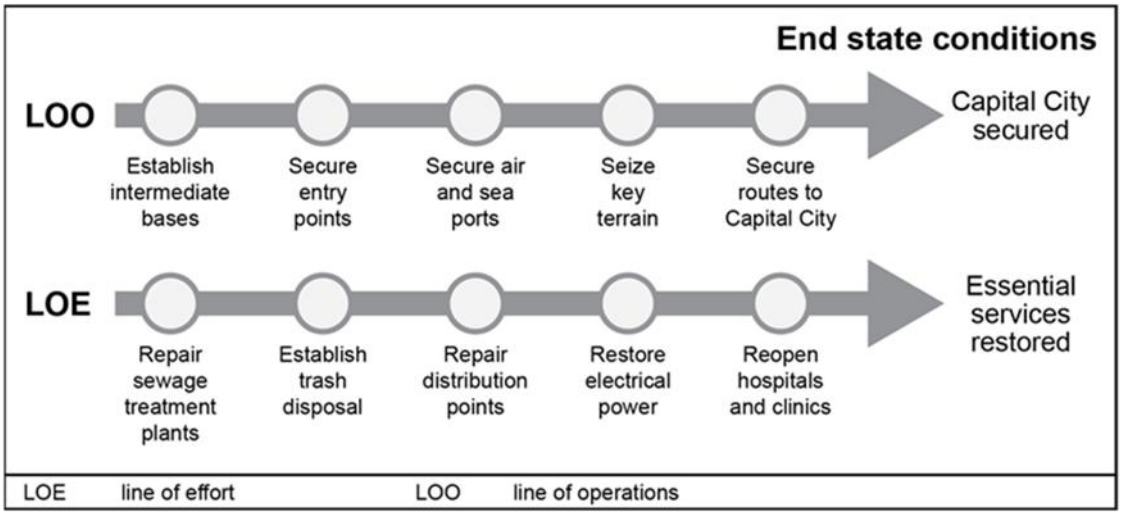

Figure 2-6. Sample line of operations and line of effort

2-64. *Exterior lines* are lines on which a force operates when its operations converge on the enemy (ADP 3-0). Exterior lines require the attacking friendly force to be stronger or more mobile than the enemy force. Exterior lines allow commanders to concentrate forces against multiple positions on the ground, thus presenting multiple dilemmas to enemy forces. Exterior lines facilitate seizing opportunities to encircle and destroy the weaker or less mobile enemy forces.

2-65. A line of effort is a line that links multiple tasks using the logic of purpose to focus efforts toward establishing a desired end state. Lines of effort are essential to long-term planning when positional references to an enemy or adversary have little relevance. In operations involving many nonmilitary factors, lines of effort may be the only way to link tasks to the end state.

TEMPO

2-66. Commanders and staffs consider tempo both when planning and when executing operations. *Tempo* is the relative speed and rhythm of military operations over time with respect to the enemy (ADP 3-0). It reflects the rate of military action. Controlling tempo helps commanders maintain the initiative during operations. Commanders seek to maintain a higher tempo than the enemy to disrupt the enemy's decision making, create multiple dilemmas, and overwhelm the enemy's ability to counter friendly actions.

2-67. There is more to tempo than speed. While speed can be important, commanders balance speed with endurance and reach. Army forces expend more energy and resources when operating at a high tempo. Commanders assess the force's capacity to operate at a high tempo based on its performance and available resources. An effective operational approach varies tempo throughout an operation to increase endurance while maintaining speed and momentum.

2-68. Several factors affect tempo, including sustainment and decisions on when and where to consolidate gains. Having adequate forces to simultaneously consolidate gains while maintaining the offense enables greater tempo. This is a key consideration for theater level planning when determining force allocation and tailoring. Planning can also accelerate tempo by anticipating decisions and actions in advance. This emphasis

on increased tempo, while a guiding principle, is not an unbending rule. Commanders weigh the advantages of acting more quickly against the advantages of preparing more thoroughly.

PHASING AND TRANSITIONS

2-69. Planning determines the sequence of actions—including the phases and transitions—that best accomplishes the mission and achieves the desired end state. Ideally, commanders plan to accomplish a mission with simultaneous and synchronized actions throughout their assigned area. However, operational reach, resource constraints, and the size of the friendly force limits what units can do at one time. In these cases, commanders phase operations. Phasing provides a way to view and conduct operations in manageable parts.

2-70. A *phase* is a planning and execution tool used to divide an operation in duration or activity (ADP 3-0). Within a phase, a large portion of the force executes similar or mutually supporting activities. Achieving a specified condition or set of conditions typically marks the end of a phase. Commanders phase operations as required by the specific circumstances of the problem they are trying to solve. A change in phase usually involves a change of task organization and a new task to subordinate units. Phasing may be indicated by time, distance, terrain, or an event. Well-designed phases—

- Focus effort.
- Concentrate combat power in time and space.

2-71. Transitions mark a change of focus between phases or between the ongoing operation and execution of a branch or sequel. Shifting priorities among the offense, defense, and stability operations also involves transitions. Transitions require planning and preparation so the force can maintain the initiative and tempo of operations. Transitions normally occur whenever there is an abrupt change to an OE, threat, or friendly forces. Transitions can be planned or unplanned, but any transition creates a period of vulnerability for the side in transition, such as during a wet gap crossing or forward passage of lines.

2-72. Unplanned transitions present forces with the most danger. Whenever possible, leaders must anticipate transitions through effective planning, preparation, and assessment, and mitigate or exploit their effects accordingly. However, since some transitions are not anticipated, leaders build flexibility into their plans. Maintaining an adequate reserve is one way of doing so successfully.

2-73. When commanders anticipate a transition, such as when developing branches and sequels, they, their staffs, and subordinate leaders carefully consider these items to ensure success:

- Forecasting in advance the conditions necessary, when, where, and how to transition.
- Arranging tasks to facilitate transitions.
- Creating a task organization that anticipates transitions.
- Rehearsing certain transitions such as from defense to counterattack or from offense to consolidating gains.
- Developing branch plans or sequels as necessary.

2-74. Forces are vulnerable during transitions, so commanders establish clear conditions for their execution. Planning identifies potential transitions and accounts for them throughout execution. Effective commanders consider the time required to plan for and execute transitions. Assessments help commanders measure progress toward such transitions and take appropriate actions to execute them. Each echelon has the responsibility to anticipate and facilitate transitions for subordinate echelons.

OPERATIONAL REACH

2-75. While designing operations, it is critical to consider *operational reach*—the distance and duration across which a force can successfully employ military capabilities (JP 3-0). The limit of a unit's operational reach is its culminating point. The concept of operational reach is inextricably tied to the concept of basing and lines of operations. Reach may be constrained by the geography, threats, and civil and diplomatic considerations. Reach may be extended through forward positioning of capabilities and resources, leveraging host-nation support and contracted support, and maximizing the efficiency of the distribution system.

CULMINATION

2-76. The *culminating point* is the point at which a force no longer has the capability to continue its form of operations, offense or defense (JP 5-0). Culmination represents a crucial shift in relative combat power. It is relevant to both attackers and defenders at each level of warfare. On the offense, the culminating point occurs when the force cannot continue the attack, and it must assume the defensive or execute an operational pause. While conducting defensive operations, the culminating point occurs when the force can no longer defend itself and must withdraw or risk destruction. The culminating point is more difficult to identify when Army forces conduct stability tasks. Examples of conditions that may result in culmination include a unit being too dispersed to achieve security and units lacking required resources to achieve the end state.

2-77. Commanders ensure forces and assets arrive at the right times and places to support the operation and that sufficient resources will be available when needed in the later phases. Integration and synchronization of sustainment with the concept of operations can forestall culmination and help commanders control tempo. At both tactical and operational levels, planners forecast the expenditure of resources associated with conducting operations over extended distances and times. They respond by generating enough resources at the right times and places to enable their commanders to achieve objectives before reaching their culminating points.

BASING

2-78. Basing is an indispensable part of operational art that enables lines of operations and operational reach. Determining the location and sequence of establishing bases and base camps is essential for projecting power and sustaining the force. Basing may be joint or single Service, and bases will routinely support U.S. forces, multinational forces, and interagency partners. Commanders designate a specific area as a base or base camp and assign responsibility to a single commander for protection, terrain management, and day-to-day operations. A base is a locality from which operations are projected or supported. Basing is always a critical consideration when arranging operations at any echelon, because bases directly support or determine—

- The force's proximity to an operational area.
- Its reach and endurance.
- The depth it can achieve.
- How quickly it can generate, apply, converge, and reconstitute combat power.

2-79. Bases exist both in the United States and in foreign nations, and they may be permanent or temporary. Types of bases include installations, base camps, intermediate staging bases, forward operating bases, and lodgments. Units located within a base or base camp are under the tactical control of the base or base camp commander for base security and defense. In large support areas or joint security areas, controlling commanders may designate base clusters for mutual protection and to exercise command and control. When a base camp expands to include clusters of sustainment, headquarters, and other supporting units, commanders may designate a support area. These specific assigned areas facilitate the positioning, employment, and protection of resources required to sustain, enable, and control operations. (See JP 3-34 and ATP 3-37.10 for more information on basing.)

RISK

2-80. Risk, uncertainty, and chance are inherent in all military operations. Success during operations depends on a willingness to identify, mitigate, and accept risk to create opportunities and counter threats. When considering how much risk to accept, commanders consider risk to the mission and risk to the force. Commanders need to balance the tension between protecting the force and accepting risks that must be taken to accomplish their mission. They apply judgment when considering the importance of an objective, time available, and anticipated cost.

2-81. Inadequate planning and preparation put forces at risk, as does delaying action while waiting for perfect intelligence and synchronization. Reasonably estimating and intentionally accepting risk is fundamental to successful operations. Effective commanders balance imagination against uncertainty to strike in a manner, location, and time unexpected by enemy forces. This is the essence of surprise.

2-82. Part of developing an operational approach includes answering the question, "What is the chance of success or are there unacceptable consequences in employing the operational approach?" Risk decisions

range from ways to address resource shortfalls to when to transition the force or parts of the force to the consolidation of gains. Identified risks are communicated to higher echelon headquarters, and risk mitigation guidance is provided in the commander's planning guidance. (For more information on risk management see ATP 5-19.)

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Chapter 3
Army Problem Solving

This chapter describes a systematic approach to solving problems. The chapter begins by discussing problem solving as related to decision making. This chapter establishes the base logic for all other problem-solving planning processes. The chapter concludes by discussing the seven-step process used in Army problem solving.

PROBLEM SOLVING AND DECISION MAKING

3-1. The ability to recognize and effectively solve problems is an essential skill for leaders. A problem is an issue or obstacle that makes it difficult to achieve a desired goal, objective, or end state. Army problem solving is a form of decision making. It is a systematic approach to defining a problem, developing possible solutions to solve the problem, arriving at the best solution, and implementing it. The object of problem solving is not just to solve near-term problems, but to also do so in a way that forms the basis for long-term success.

3-2. Not all problems require lengthy analysis to solve. For simple problems, leaders often make decisions quickly—sometimes on the spot. However, for complicated problems involving a variety of factors, a systematic problem-solving approach is essential. How much analysis is required to effectively solve a problem depends on the problem's complexity, the leader's experience, and amount of time available.

3-3. Army problem solving supports a single leader working alone or a group of leaders working together. Commanders normally direct their staffs or subordinate leaders to work together to recommend solutions to problems. In formal situations, they present their recommendations as staff studies, decision papers, and decision briefings. At lower echelons, recommendations are normally presented orally. (See FM 6-0 for more information on staff studies, decision papers, and decision briefings.)

3-4. Problem solving is an art and science. It is a structured analytic process designed to ensure that all critical factors relevant to the problem are considered, and the relationships between variables are anticipated and accounted for in the solution. This ensures that the desired objective or end state is achieved in the most effective and efficient manner.

3-5. The art of problem solving involves subjective analysis of variables that, in many cases, cannot be easily measured. Leadership and morale, for example, are difficult to measure, but they may play a critical role in developing solutions to solve the problem. Problem solvers and decision makers make subjective assessments of such variables based on facts and assumptions and their likely effects on the outcome. Leader judgments are enhanced by their professional experience.

3-6. The science of problem solving involves the use of quantitative and analytical tools available to the staff. Quantitative analysis seeks to define and evaluate relevant factors or variables that can be measured or counted. Quantitative analysis can be useful for identifying trends in data sets and sharp departures from expected norms or measurements. The results are often organized and displayed in the form of charts and graphs. Quantitative analysis requires measuring or counting the values of relevant variables and calculating changes in the observed effects on the problem or variables. It is possible to predict the effects on dependent variables when changes occur in the value of the independent variables.

3-7. The structured nature of the Army problem-solving process, as depicted in figure 3-1 on page 48, assists staff officers in identifying and considering key factors relevant to a problem. It also provides other officers with a framework for analyzing and solving problems. The Army problem-solving process helps to ensure that no key piece of information is overlooked in the analysis, thereby minimizing the risk of unforeseen developments or unintended consequences.

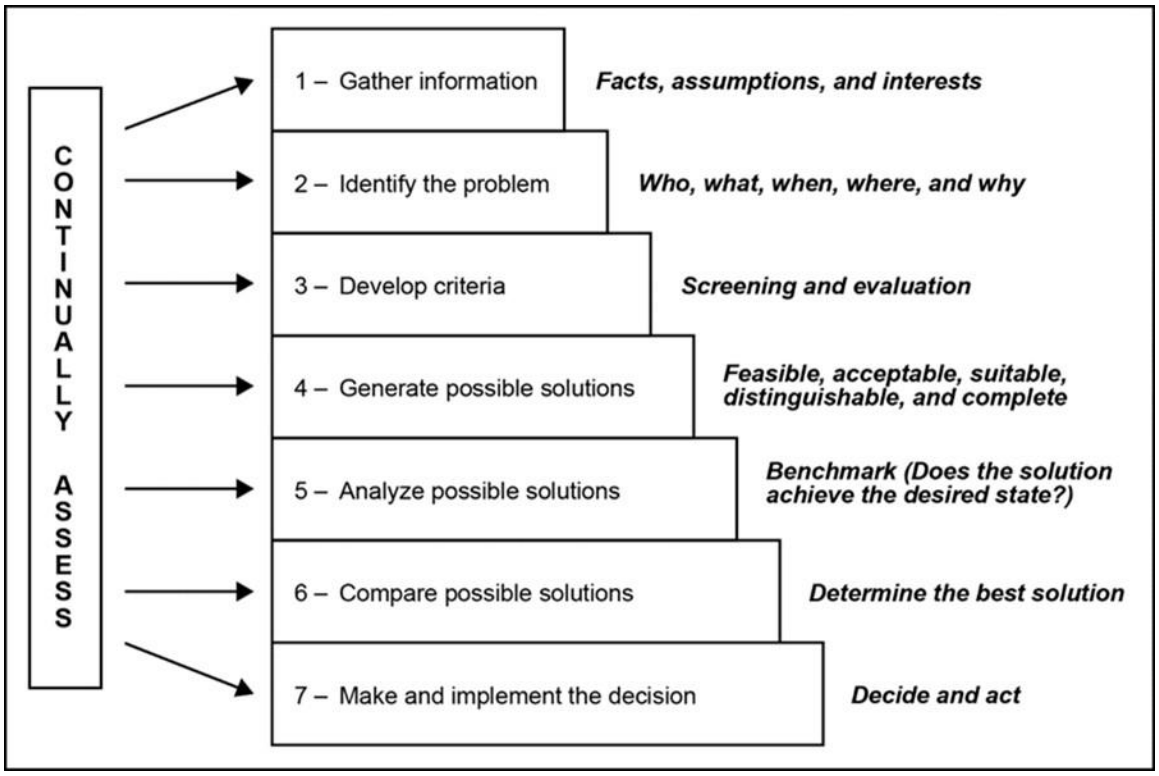


Figure 3-1. Seven step problem-solving process

3-8. Problem solving is a daily activity for Army leaders, and it is often done intuitively. The Army problem-solving process is a systematic way to arrive at the best solution to a problem not easily solved intuitively. It applies at all echelons, and it involves the steps needed to develop well-reasoned, supportable actions. It incorporates risk discussion and risk management techniques appropriate to the situation. Army leaders remain as objective as possible when solving problems. The goal is to prepare an unbiased solution or recommendation for the decision maker, based on the facts. Problem solving is an important Army leadership action. It is essential to good staff work and command.

CRITICAL AND CREATIVE THINKING

3-9. Thinking includes awareness, perception, reasoning, and intuition. Thinking is naturally influenced by emotion, experience, and bias. As such, commanders and staffs apply critical and creative thinking to assist them in understanding situations, making decisions, directing actions, and assessing.

3-10. Critical thinking is purposeful and reflective thought about what to believe or what to do in response to observations, experiences, verbal or written expressions, or arguments. By thinking critically, individuals formulate judgments about whether the information they encounter is true or false, or if it falls somewhere along a scale of plausibility between true and false. Critical thinking involves questioning information, assumptions, conclusions, and points of view to evaluate evidence, develop understanding, and clarify goals. Critical thinking helps commanders and staffs identify causes of problems, arrive at justifiable conclusions, and make good judgments. Critical thinking helps commanders counter their biases and avoid logic errors.

3-11. Creative thinking examines problems from a different perspective to develop innovative solutions. Creative thinking creates new and useful ideas and reevaluates or combines old ideas to solve problems. Leaders face unfamiliar problems that require new or original approaches to solve them. This requires creativity and a willingness to accept and embrace change and a flexible outlook of new ideas and possibilities.

3-12. Breaking old habits of thought, questioning the status quo, visualizing a better future, and devising responses to new problems require creative thinking. Leaders routinely face unfamiliar problems or old

problems under new conditions. Leaders apply creative thinking to gain new insights, novel approaches, fresh perspectives, and new ways of understanding problems and conceiving ways to solve them.

3-13. Both critical and creative thinking must intentionally include ethical reasoning-the deliberate evaluation that decisions and actions conform to accepted standards of conduct. Ethical reasoning within critical and creative thinking helps commanders and staffs anticipate ethical hazards and consider options to prevent or mitigate the hazards within their proposed solutions. (See ADP 6-22 for a detailed discussion of ethical reasoning.)

STRUCTURE OF PROBLEMS

3-14. In terms of structure, there are three types of problems: well structured, medium structured, and ill structured. The degree of interactive complexity is the primary factor that determines a problem's structure. Another factor determining problem structure is an individual perception of a problem. Perception of whether a problem is well, medium, or ill structured depends on the perceived familiarity and understanding of the problem. (See ATP 5-0.1 for more information on the structure of problems.)

3-15. Well-structured problems are generally the easiest to solve. This is because with a well-structured problem—

- All or almost all required information is available.
- The problem is generally self-evident.
- Known methods are available to solve the problem.
- The problem displays little interactive complexity.
- The problem is generally easy to recognize and place in categories.
- There is typically a correct, verifiable answer.

3-16. Medium-structured problems are most of the problems Army leaders and problem solvers face. These types of problems fall between the extremes of well- and ill-structured problems. In partially structured problems, problem solvers may find that—

- Leaders generally agree on its structure.
- There may be more than one "right" answer.
- Leaders may disagree on the best solution.
- The problems require some creative skills to solve.

3-17. Ill-structured problems are the most challenging to understand and solve. With ill-structured problems—

- Leaders often disagree on what the true problem is or cannot agree on a shared hypothesis.
- Leaders often disagree on how to solve the problem.
- The problems are complex and involve many variables, making them difficult to accurately analyze.
- Leaders may disagree on the desired end state.
- Leaders may disagree on whether an end state is achievable.
- They may require multiple solutions applied concurrently or sequentially. Problem solvers must sometimes reduce complex ill-structured problems into smaller problems.

THE PROBLEM-SOLVING PROCESS

3-18. Army problem solving provides a standard, systematic approach to define and analyze a problem, develop and analyze possible solutions, choose the best solutions, and implement a plan of action that solves the problem. MDMP and TLP are typically used for planning and problem solving related to operations. Army problem solving can aid in understanding the operational problem as described in the MDMP, or TLP, or used as a separate process to understand and solve problems. For these types of situations, the Army's approach to problem solving involves the following steps:

- Gather information and knowledge.
- Identify the problem.
- Develop criteria.
- Generate possible solutions.
- Analyze possible solutions.

- Compare possible solutions.
- Make and implement the decision.

GATHER INFORMATION AND KNOWLEDGE

3-19. Gathering information and knowledge is an important first step in problem solving. Leaders cannot understand or identify a problem without first gathering information and knowledge. While described as a step, gathering information and knowledge continues throughout the problem-solving process. It helps leaders understand the situation and determine what the problem is by defining its limitations and scope. Leaders never stop acquiring and assessing the impact of new or additional information relevant to the problem.

3-20. Leaders require facts and assumptions to solve problems. Understanding facts and assumptions is critical to understanding problem solving. In addition, leaders need to know how to handle opinions and organize information.

Facts

3-21. Facts are verifiable pieces of information or information that has objective reality. They form the foundation on which leaders base solutions to problems. Regulations, policies, doctrinal publications, commander's guidance, plans and orders, and personal experiences are just a few sources of facts.

Assumptions

3-22. Assumptions are specific suppositions of an OE or problem that are assumed to be true, in the absence of positive proof. Planners and commanders only use assumptions that are essential for the continuation of planning. In other words, an assumption is information that is accepted as true in the absence of facts, but at the time of planning cannot be verified. Appropriate assumptions used in decision making have two characteristics:

- They are valid; that is, they are likely to be true.
- They are necessary; that is, they are essential to continuing the problem-solving process.

3-23. If the process can continue without making a particular assumption, the assumption is unnecessary and not used. So long as an assumption is both valid and necessary, leaders treat it as a fact. Leaders continually seek to confirm or deny the validity of their assumptions. The confirmation or denial of an assumption may require the problem and plan to be reassessed.

Opinions

3-24. When gathering information, leaders evaluate opinions carefully. An opinion is a personal judgment that the leader or another individual makes. Opinions cannot be totally discounted. They are often the result of years of experience. Leaders objectively evaluate opinions to determine whether to accept them as facts, include them as opinions, or reject them.

Organizing Information

3-25. Organizing information includes coordination with units and agencies that may be affected by the problem or its solution. Leaders determine these requirements as they gather information. They coordinate with other leaders as they solve problems, both to obtain assistance and to keep others informed of situations that may affect them. Such coordination may be informal and routine. For an informal example, a squad leader checks with the squad to the right to make sure the squads' fields of fire overlap. For a formal example, a corps action officer staffs a decision paper with the major subordinate commands. As a minimum, leaders always coordinate with units or agencies that might be affected by a solution they propose before they present it to the decision maker.

IDENTIFY THE PROBLEM

3-26. The next step in problem solving is recognizing and defining a problem. This step is crucial, as the problem may not be obvious. Therefore, leaders determine what the problem is by clearly defining its scope

and limitations. Leaders should allow sufficient time and resources to clearly define the problem before moving on to other steps in the process.

3-27. A problem exists when the current state or condition differs from or impedes achieving the desired end state or condition. Leaders identify problems from a variety of sources. These include—

- Higher echelon headquarters' directives or guidance.
- Decision maker's guidance.
- Subordinates.
- Personal observations.

3-28. When identifying a problem, leaders actively seek to identify its root cause, not merely the symptoms on the surface. Symptoms may be the reason that the problem became visible. They are often the first things noticed and frequently require attention. However, focusing on the symptoms of a problem may lead to false conclusions or inappropriate solutions. Using a systematic approach to identifying the real problem helps avoid the "solving symptoms" pitfall. Leaders do the following to identify the root cause of a problem:

- Compare the current situation to the desired end state.
- Define the problem's scope or boundaries.
- Answer the following questions:
  - Who does the problem affect?
  - What does the problem affect?
  - When did the problem occur?
  - Where is the problem?
  - Why did the problem occur?
- Determine the cause of obstacles between current and desired end state.
- Write a draft problem statement.
- Redefine the problem as necessary as the staff acquires and assesses new knowledge and information.
- Update facts and assumptions.

3-29. After identifying the root causes, leaders develop a problem statement-a statement that clearly describes the problem to be solved. When the leaders base the problem upon a directive from a higher authority, it is best to submit the problem statement to the decision maker for approval. This ensures the problem solver and decision maker agree on the problem to solve with updated guidance provided as necessary before continuing.

3-30. Once leaders develop a problem statement, they make a plan to solve the problem. Leaders make the best possible use of available time and allocate time for each problem-solving step. This allocation provides a series of deadlines to meet in solving the problem. Leaders use reverse planning to prepare their problem-solving timeline. They use this timeline to periodically assess progress. They do not let real or perceived pressure cause them to abandon solving the problem systematically. They change time allocations as necessary, but they do not omit steps.

DEVELOP CRITERIA

3-31. The third step in the problem-solving process is developing criteria. A criterion is a standard, rule, or test by which something can be judged—a measure of value. Problem solvers develop criteria to assist them in formulating and evaluating possible solutions to a problem. Criteria are based on facts or assumptions. Problem solvers develop two types of criteria: screening and evaluation.

SCREENING CRITERIA

3-32. Leaders use screening criteria to ensure that the solutions they consider can solve the problem. Screening criteria defines the limits of an acceptable solution. They are tools to establish the baseline products for analysis. Leaders may reject a solution based solely on the application of screening criteria. Leaders apply five categories of screening criteria to test a possible solution:

- **Feasible**—fits within available resources.
- **Acceptable**—worth the cost or risk.
- **Suitable**—solves the problem and is legal and ethical.

- **Distinguishable**—differs significantly from other solutions.
- **Complete**—contains the critical aspects of solving the problem from start to finish.

EVALUATION CRITERIA

3-33. After developing screening criteria, a problem solver develops the evaluation criteria to differentiate among possible solutions. (See figure 3-2 for sample evaluation criteria.) Well-defined evaluation criteria have five elements:

- **Short Title**—the criterion name.
- **Definition**—a clear description of the feature being evaluated.
- **Unit of Measure**—a standard element used to quantify the criterion. Examples of units of measure are U.S. dollars, miles per gallon, and feet.
- **Benchmark**—a value that defines the desired state or "good" for a solution in terms of a particular criterion.
- **Formula**—an expression of how changes in the value of the criterion affect the desirability of the possible solution. The problem solver states the formula in comparative terms (for example, less is better) or absolute terms (for example, a night movement is better than a day movement).

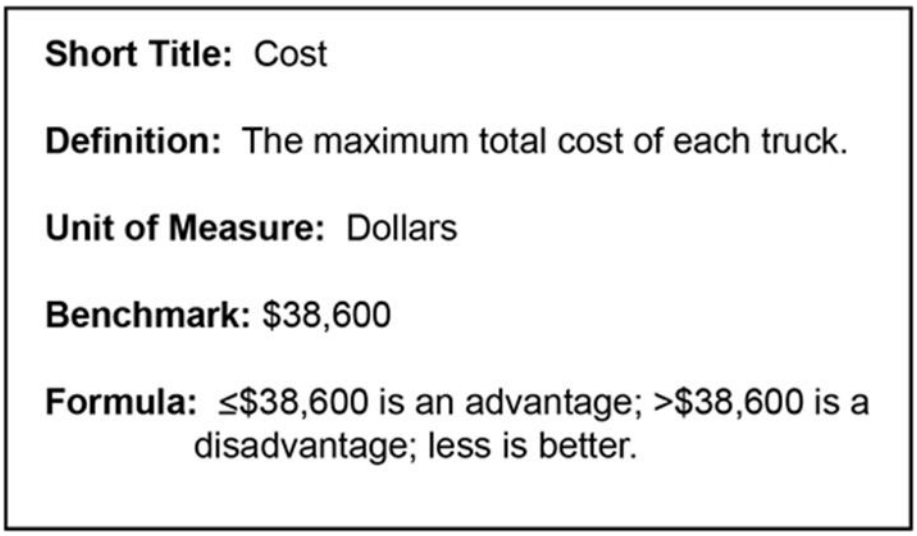


Figure 3-2. Sample evaluation criterion

3-34. A well-thought-out benchmark is critical for meaningful analysis. Decision makers employ analysis to judge a solution against a standard, determining whether that solution is good in an objective sense. It differs from comparison, in which a decision maker judges possible solutions against each other, determining whether a solution is better or worse in a relative sense. Benchmarks are the standards used in such analysis. They may be prescribed by regulations or guidance from the decision maker. Sometimes, a decision maker can infer the benchmark by the tangible return expected from the problem's solution. Often, however, leaders establish benchmarks themselves. Four common methods for doing this are—

- **Reasoning**—based on personal experience and judgment as to what is good.
- **Historical precedent**—based on relevant examples of prior success.
- **Current example**—based on an existing condition, which is considered desirable.
- **Averaging**—based on the mathematical average of the solutions being considered. Averaging is the least preferred of all methods because it essentially duplicates the process of comparison.

3-35. In practice, the criteria by which choices are made are almost never of equal importance. Because of this, it is often convenient to assign weights to each evaluation criterion. Weighting criteria establishes the relative importance of each one with respect to the others. Weighting should reflect the judgment of the decision maker or acknowledged experts as closely as possible. For example, a decision maker or expert might judge that two criteria are *equal* in importance, or that one criterion is *slightly favored* in importance,

or *moderately* or *strongly favored*. If decision makers assign these verbal assessments numerical values, from 1 to 4 respectively, they can use mathematical techniques to produce meaningful numerical criteria weights.

GENERATE POSSIBLE SOLUTIONS

3-36. After gathering information relevant to the problem and developing criteria, leaders formulate possible solutions. They carefully consider the guidance provided by the commander or their superiors, and they develop several alternatives to solve the problem. Too many possible solutions may result in time wasted on similar options. Experience and time available determine how many solutions leaders consider. Leaders should consider at least two solutions. Limiting solutions enables a problem solver to use both analysis and comparison as problem-solving tools. Developing only one solution to "save time" may produce a faster solution, but this may create more problems from factors not considered. When developing solutions, leaders generate options. They then summarize solutions in writing, sketches, or both.

GENERATE OPTIONS

3-37. Leaders generate options by developing various solutions to the identified problem. Each solution should generally address the following:

- Does the solution achieve the desired end state?
- What actions are required or what objectives must be achieved to reach the desired end state?
- What resources are required for the solution?
- What are the risks associated with the solution?

3-38. Leaders must use creativity to develop effective solutions. Often, groups can be far more creative than individuals. However, those working on solutions should have some knowledge of or background in the problem area.

3-39. The basic technique for developing new ideas in a group setting is brainstorming. Brainstorming is characterized by unrestrained participation in discussion. While brainstorming, leaders—

- State the problem and ensure it is understood.
- Appoint a recorder to capture ideas.
- Encourage independent thoughts.
- Withhold and suspend judgment of ideas.
- Aim for quantity, not quality.
- Group ideas—combine one person's thoughts with those of others.

3-40. At the conclusion of brainstorming, leaders may discard potential solutions that clearly miss the standards described by the screening criteria. If this informal screening leaves only one or no solution, then leaders need to generate additional options.

SUMMARIZE THE SOLUTION IN WRITING AND SKETCHES

3-41. After generating options, a recorder accurately records each possible solution. The solution statement clearly portrays how the action or actions solve the problem. In some circumstances, the solution statement may be a single sentence. For example, it might be "Provide tribal leader with the means to dig a well." In other circumstances, the solution statement may require more detail, including sketches or concept diagrams. For example, if the problem is to develop a multipurpose small-arms range, leaders may choose to portray each solution with a narrative and a separate sketch or blueprint of each proposed range.

ANALYZE POSSIBLE SOLUTIONS

3-42. Having identified possible solutions, leaders analyze each one to determine its merits and drawbacks. If criteria are well defined, including a careful selection of benchmarks, analysis is greatly simplified.

3-43. Leaders use screening criteria and benchmarks to analyze possible solutions. They apply screening criteria to judge whether a solution meets minimum requirements. For quantitative criteria, they measure, compute, or estimate the raw data values for each solution and each criterion. In analyzing solutions that involve predicting future events, they use war gaming, models, and simulations to visualize events and estimate raw data values for use in analysis. Once raw data values have been determined, leaders judge them

against applicable screening criteria to determine if a possible solution merits further consideration. Leaders screen out any solution that fails to meet or exceeds the set threshold of one or more screening criteria.

3-44. After applying the screening criteria to all possible solutions, leaders use benchmarks to judge them with respect to the desired end state. Data values that meet or exceed the benchmark indicate that the possible solution achieves the desired end state. Data values that fail to meet the benchmark indicate a poor solution that fails to achieve the desired end state. For each solution, leaders list the areas in which analysis reveals it to be good or not good. Sometimes the considered solutions fail to reach the benchmark. When this occurs, the leader points out the failure to the decision maker.

3-45. Leaders carefully avoid comparing solutions during analysis. Comparing solutions during analysis undermines the integrity of the process and tempts problem solvers to jump to conclusions. They examine each possible solution independently to identify its strengths and weaknesses. They are also careful not to introduce new criteria.

COMPARE POSSIBLE SOLUTIONS

3-46. During this step, leaders compare each solution against the others to determine the optimum one. Comparing solutions identifies which solution best solves the problem based on the evaluation criteria. Leaders use any comparison technique that helps reach the best recommendation. The most common technique is a decision matrix. (See Appendix F for more information on decision matrices.)

3-47. Quantitative techniques (such as decision matrices, select weights, and sensitivity analyses) may be used to support comparisons. However, these are the tools to support the analysis and comparison. They are not the analysis and comparison themselves. The quantitative techniques should be summarized clearly so the reader need not refer to an attachment for the results.

MAKE AND IMPLEMENT THE DECISION

3-48. After completing their analysis and comparison, leaders identify the preferred solution. If a superior assigned the problem, leaders prepare the required products (verbal, written, or digital) needed to present the recommendation to the decision maker. Before presenting the findings and a recommendation, leaders coordinate their recommendation with those affected by the problem or the solutions. In formal situations, leaders present their findings and recommendations to the decision maker as staff studies, decision papers, or decision briefings.

3-49. A good solution can be lost if the leader cannot persuade the audience and decision maker that it is correct. Every problem requires both a solution and the ability to communicate the solution clearly and effectively. The writing and briefing skills a leader possesses may ultimately be as important as good problem-solving skills.

3-50. Based on the decision and final guidance, leaders refine the solution and prepare necessary implementing instructions. Formal implementing instructions can be issued as a memorandum of instruction, policy letter, or command directive. Once leaders have given instructions, they monitor their implementation and compare results to the measure of success and the desired end state established in the approved solution. When necessary, they issue additional instructions.

3-51. A feedback system that provides timely and accurate information, periodic review, and the flexibility to adjust must also be built into the implementation plan. Leaders stay involved and carefully avoid creating new problems because of uncoordinated implementation of the solution. Army problem solving does not end with identifying the best solution or obtaining approval of a recommendation. It ends when the problem is solved.

Chapter 4

Army Design Methodology

This chapter begins by defining Army design methodology (ADM) and describing its key concepts. Considerations for employing ADM and forming a planning team follow. Next, the chapter describes framing an operational environment (OE), framing problems, and developing an operational approach. The chapter concludes with a description of transitioning to detailed planning and reframing. (See ATP 5-0.1 for more details and techniques for employing ADM.)

FUNDAMENTALS OF ARMY DESIGN METHODOLOGY

4-1. Successful planning requires the integration of both conceptual thinking and detailed analysis as discussed in Chapter 1. Understanding an OE, determining the operation's end state, establishing objectives, and sequencing an operation in broad terms all illustrate conceptual planning. Conceptual planning generally corresponds to operational art, as discussed in Chapter 2, and it is the focus of a commander with staff support. ADM assists commanders and staffs with conceptual planning and the application of operational art.

4-2. *Army design methodology* is a methodology for applying critical and creative thinking to understand, visualize, and describe problems and approaches to solving them (ADP 5-0). It entails framing an OE, framing problems, and developing an operational approach to solve or manage identified problems. ADM results in an improved understanding of an OE, a problem statement, and an operational approach that serves as the link between conceptual and detailed planning.

4-3. During execution, assessment helps measure the effectiveness of operations and determine if the operational approach remains feasible and acceptable within the context of the higher echelon commander's intent and concept of operations. If the current operational approach fails to meet these criteria, or if aspects of an OE change significantly, the commander may decide to reframe. Reframing involves revisiting earlier hypotheses, conclusions, and decisions that underpin the current operational approach. Reframing can lead to a new problem statement and operational approach, resulting in an entirely new planning effort.

4-4. ADM is an interdisciplinary approach to planning and problem solving. It combines military theory, writings on the nature of problems, and the challenges of critical and creative thinking. Some of these concepts, such as operational art, have long been associated with planning. Other concepts such as systems thinking and framing have taken on increased emphasis. Key concepts associated with ADM include—

- Operational art.
- Critical thinking.
- Creative thinking.
- Systems thinking.
- Collaboration and dialogue.
- Framing.
- Narrative construction.
- Visual modeling.

OPERATIONAL ART

4-5. Operational art is a cognitive approach to planning in which commanders and staffs design operations that organize and employ military forces by integrating ends, ways, means, and risk. ADM assists commanders in the application of operational art through the development of products that describe how (ways) the force will employ its abilities (means) to achieve objectives (ends), given an understanding of unacceptable consequences (risk).

Elements of Operational Art

- End state and conditions
- Centers of gravity
- Decisive points
- Lines of operations and lines of effort
- Tempo
- Phasing and transitions
- Operational reach
- Culmination
- Basing
- Risk

4-6. Within ADM, commanders and their staffs use the elements of operational art to understand an OE, frame problems, and visualize an operational approach. For example, end state and conditions help frame the desired state of an OE. Decisive points, lines of operations, lines of effort, phasing, and operational reach help commanders and planning teams formulate operational approaches. (See Chapter 2 for a detailed discussion of operational art and its elements.)

CRITICAL THINKING

4-7. Critical thinking is central to ADM, helping commanders and staffs understand situations, identify causes of problems, arrive at justifiable conclusions, and make good judgments. Critical thinking is purposeful and reflective thought about what to believe or what to do in response to observations, experience, verbal or written expressions, or arguments. Critical thinking involves questioning information, assumptions, conclusions, and points of view to interpret data and information, evaluate evidence, and clarify goals. (See ATP 5-0.1 for more information on critical thinking.)

CREATIVE THINKING

4-8. ADM helps identify problems that often require new or original approaches to solve them. This requires creativity and a willingness to accept change, newness, and a flexible outlook of new ideas and possibilities. Creative thinking seeks to examine problems from a fresh perspective to develop innovative solutions. Creative thinking helps generate new and useful ideas, and it reevaluates or combines old ideas to solve problems. Creative thinking involves breaking old habits of thought, questioning the status quo, visualizing a better future, and devising unique responses to problems. There are many creative thinking tools available to commanders and staffs, including brainstorming, mind mapping, and the four ways of seeing explained in ATP 5-0.1.

SYSTEMS THINKING

4-9. A *system* is a functionally, physically, and/or behaviorally related group of regularly interacting or interdependent elements; that group of elements forming a unified whole (JP 3-0). Systems have a purpose with their parts arranged in a way (or structure) to carry out their purpose. Understanding why a system exists, how the parts of the system serve that purpose, and appreciating how that system interacts with its broader environment helps develop ways to change that system.

4-10. Systems thinking is a process of understanding how elements of a system work and influence each other within a greater whole. It is an approach to problem solving that views problems as part of the greater system and that these problems are interrelated. By understanding components and problems in a system in relation with each other (as opposed to in isolation), problem solvers are better equipped to develop a holistic approach to solving or managing identified problems.

4-11. In applying systems thinking, planning teams view an OE as a system of interrelated systems and subsystems. A planning team reflects on how elements of the system relate to each other from an internal perspective to understand the system's purpose, structure, and processes (internal logic) operate together. A planning team also seeks to understand how a system interacts with, and is influenced by, its surrounding environment (using external logic) as shown in figure 4-1. Systems thinking helps planners understand how a system receives inputs, adapts to those inputs according to its internal logic, and provides outputs to the surrounding environment.

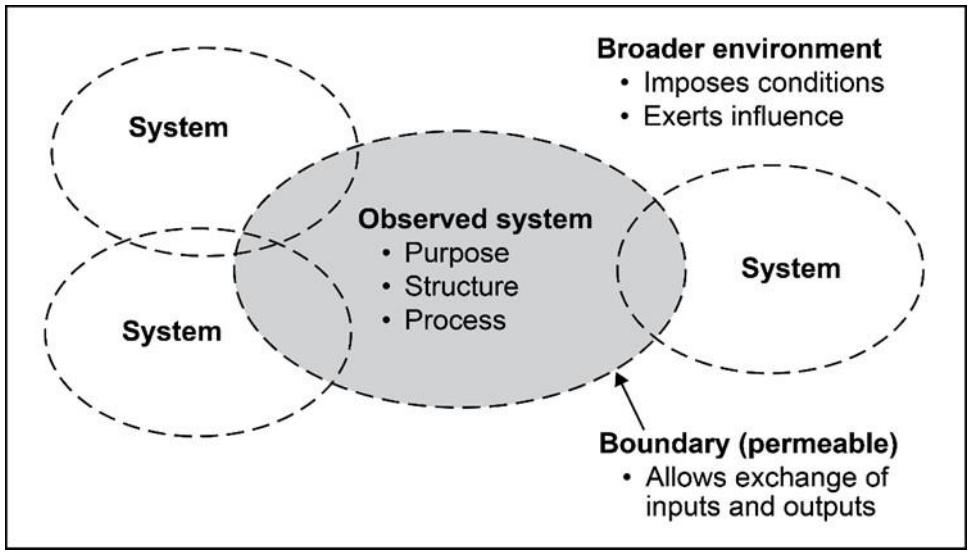


Figure 4-1. Systems thinking

4-12. A systems thinking approach is also useful during execution as commanders and staffs assess changes in their OE. Military, economic, political, and social systems are not static, and they adapt based on inputs. Collecting feedback from actions through assessment helps commanders reinforce successful action while altering actions not leading to intended results. Examining events and studying patterns and trends in a system among systems enable commanders and staffs to develop actions which create desired changes in an OE.

COLLABORATION AND DIALOGUE

4-13. ADM is a team-based approach to understand, visualize, and describe operations. It includes considering diverse perspectives through collaboration and dialogue. Collaboration is two or more people or organizations working together toward common goals by sharing knowledge and building consensus. Dialogue is a way to collaborate that involves the candid exchange of ideas or opinions among participants and encourages frank discussions of areas of disagreement. Collaboration and dialogue help develop shared understanding internally between the commanders and staffs and externally with other commanders and unified action partners.

4-14. During ADM, and throughout the operations process, commanders promote and encourage collaboration and dialogue to encourage new ideas rather than group think. They recognize that they do not know everything, and they can be wrong. They also recognize that they have something to learn from even the most junior Soldier. Commanders establish a command climate where collaboration and dialogue routinely occur throughout the organization through personal example, coaching, and mentorship. The most effective organizations are those who collaborate on problems and have an open dialogue for solutions. (See paragraphs 1-113 through 1-116 for more details on collaboration and dialogue.)

FRAMING

4-15. + Framing is the act of building mental models to help individuals understand situations and respond to events. Framing involves selecting, organizing, interpreting, and making sense of an OE and a problem by establishing context. How individuals or groups (religious, sex, or socio-economic) frame a problem will influence potential solutions. For example, a group that frames an organization as “freedom fighters” will approach solving a conflict differently from a group that frames that organization as “terrorists.”

4-16. ADM involves deliberately framing an OE and problem through critical thinking, creative thinking, systems thinking, and dialogue by a group. A planning group considers the perspective and world views of others to fully understand a situation. This contextual understanding of an OE serves as a frame of reference for developing solutions to solve problems. Framing facilitates constructing hypotheses or modeling that focuses on the part of an OE or problem under consideration. Framing provides a perspective from which

commanders and staffs can understand and act on a problem. Narrative construction and visual modeling facilitate framing.

NARRATIVE CONSTRUCTION

4-17. In a broad sense, a narrative is a story constructed to give meaning to things and events. Individuals, groups, organizations, and countries all have narratives with many components that reflect and reveal how they define themselves. For example, political parties, social organizations, and government institutions all have stories chronologically and spatially bound to them. They incorporate symbols, historical events, and artifacts tied together with a logic that explains their reason for being. Critical to the ADM process is understanding and reconciling the many different narratives that might simultaneously be true within an OE. If planners fail to understand and account for competing narratives, it is likely that the ADM outputs will be fundamentally flawed. To narrate is to engage in the production of a story—an explanation of things and events—by proposing a question or questions. Questions to help understand narratives may include—

- What is the meaning of what is seen?
- Where does the story begin and end?
- What happened, what is happening, and why?
- What information is missing?

4-18. Planners seek to understand the narratives of relevant actors within an OE and construct their own narrative to help understand and explain an OE, the problem, and the solutions. Not only is the narrative useful in communicating to others, the act of constructing the narrative itself is a key learning event for the command.

VISUAL MODELING

4-19. ADM relies heavily on forming and presenting ideas in both narrative and visual form. Visual information tends to be stimulating; therefore, creativity can be enhanced by using visual models and constructs. A visual model, based on logical inference from evidence, helps creative thought to develop into understanding. A graphic can often point to hidden relationships that were not considered through conversation alone. In other words, seeing something drawn graphically helps individuals think through challenging problems, especially when examining abstract concepts. Planners must revisit the elements of the visual model to ensure their assumptions remain valid or update the model as necessary. Graphic modeling techniques include—

- Rich picture diagrams that use symbols and sketches that graphically tell the story of a situation.
- Influence diagrams that use symbols and words to show relationships among variables in a system.
- Mind maps that use symbols and words to show relationships to an idea or a thing.
- Causal loop diagrams that use symbols and words to show reinforcing and balancing loops among actors and things to show cause and effect between variables.

(See ATP 5-0.1 for techniques for using these tools.)

WHEN TO EMPLOY ARMY DESIGN METHODOLOGY

4-20. Planning begins upon receipt of or in anticipation of a mission or as directed by the commander. Upon receipt of mission, commanders, supported by their staffs, determine available time for planning and preparation and decide on a planning approach. An important consideration for commanders is how best to integrate the conceptual and detailed components of planning. When problems are difficult to identify, the operation's end state is unclear, or a course of action (COA) is not self-evident, commanders may choose to conduct ADM. Some questions commanders consider when assessing whether conducting ADM is appropriate include—

- Is there enough information about the situation to conduct detailed planning?
- Are problems and solutions generally self-evident?
- Is there a clear desired end state?
- Is a COA evident?
- Are the known unknowns significant enough to distort detailed planning?
- Are means (resources and force structure) undetermined?

- Are there unexpected effects to actions?
- Are actions falling short of achieving the expected impact?

4-21. When problems are intuitively hard to identify or an operation's end state is unclear, commanders may initiate ADM before their headquarters engages in detailed planning. This is often the case when developing long-range plans or orders for an operation or a new phase of an operation. When using this approach, a complete evolution of ADM is employed with the resulting products (environmental frame, problem frame, and operational approach) informing the development of a plan or order using the military decision-making process (MDMP). This approach is time consuming, but it provides the greatest understanding of an OE and its associated problems.

4-22. Commanders may also conduct ADM concurrently with the MDMP. This technique allows both planning efforts to inform each other. In this instance, the commander forms separate planning teams. One team performs ADM while the other team leads the staff through the mission analysis step of the MDMP. Results from both ADM and mission analysis inform the efforts of each team and help the commander develop the initial commander's intent and planning guidance. Smaller headquarters, such as brigades and battalions, may not have enough personnel to execute this approach.

4-23. During operations, commanders may initiate ADM to help reframe their understanding and visualization of an operation. They may also initiate ADM to address specific problems within an operation or to help them think through follow-on phases and possible transitions.

FORMING THE PLANNING TEAM

4-24. Commanders form a planning team (sometimes referred to as a design team) to perform ADM. The team normally consists of a lead planner, functional planners (for example, fires, protection, or sustainment), and other subject matter experts as required. Teams offer advantages over individuals. The interaction of personalities can lead to a set of team dynamics that requires attention and energy to manage for a quality outcome. Selecting the right individuals to serve on a planning team is important to successful ADM. Some considerations when forming the planning team include—

- Skills and characteristics of team members.
- Diversity of team members.
- Size of the team.
- Team roles.

TEAM MEMBER SKILLS AND CHARACTERISTICS

4-25. A key aspect of assembling the team is considering the knowledge, skills, abilities, work styles, and personality characteristics needed for the team's tasks. Commanders consider the scope of the problem and personnel resources when forming a planning team. While individuals are often selected for a team based on their expertise associated to the problem (for example, functional or regional knowledge), individuals should also possess these characteristics—

- Having an open mind for new ideas.
- Having an inquisitive mindset and being curious and eager for knowledge.
- Being comfortable with ambiguity.
- Possessing critical thinking and creative thinking skills.
- Being willing to listen to others and valuing differing points of view.
- Being able to take and offer different perspectives.
- Possessing an investigative mindset and research skills.
- Being able to communicate complex ideas in simple words.
- Being not afraid of having own ideas critiqued by others.
- Being able to think visually and effectively use visual graphics.

TEAM DIVERSITY

4-26. Commanders and team leaders strive for a variety of skill sets, knowledge levels, and personalities among individuals when forming a planning team. Planning teams comprised of people with widely varying backgrounds and experiences have more perspectives to draw on for their work. Teams that are more diverse

can be more creative, engage in higher quality dialogue, and develop more innovative solutions. Commanders and team leaders assemble a team with a mix of—

- Education levels, training, credentials, and qualifications.
- Ranks.
- Assignments, deployments, and career histories.
- Functional areas of expertise (such as planning, intelligence, logistics, or special operations).
- Personality characteristics.
- Thinking styles and preferences (for example, abstract thinkers and detailed thinkers).
- Social backgrounds.

TEAM SIZE

4-27. Team size is an additional consideration when forming a team. Determining the size of a team requires a fine balance between a team big enough to provide diversity of perspective but small enough to be productive. A core team of six to nine people, with other subject matter experts participating as needed, is an effective size. Larger teams manage their work by dividing into smaller sub teams to complete tasks (for example, conducting research) and then coming together to discuss their findings.

4-28. The optimal team composition depends on the nature of the problems facing the command and the gaps in knowledge attributed to those problems. In many cases, it is not fully apparent what the required areas of expertise needed on a planning team are. It may only be after engaging in framing an OE that the commander and planning team recognize the need for a particular area of expertise.

ROLES IN A TEAM

4-29. As a team forms, commanders and team leaders consider the roles of each team member. Roles assigned to team members may include, but are not limited to—

- Team leader.
- Subject matter experts.
- Red team members.
- Note takers.
- Graphic artists.

Team Leader

4-30. The team leader is an active facilitator of the team and its methodology. Team leaders are experienced with performing the activities of ADM, and they are skilled in leading group work among peers, subordinates, and superiors. Team leaders create an environment of learning among team members by encouraging wide participation among all members of the team, and they avoid over relying on any individual. Team leaders engage individuals on the team to think creatively. The team leader controls the planning timeline and oversees the quality of products. Team leader duties include—

- Working with the commander to define the team's purpose and set expectations.
- Building and maintaining trust and cohesion within the team.
- Managing personalities and team dynamics.
- Minimizing unproductive (interpersonal) conflicts.
- Organizing the work of the team.
- Managing the team's work pace and workflow.
- Encouraging and guiding team members to exchange, discuss, and integrate information.
- Helping the team avoid quick opinions that match the group consensus (for example, groupthink).

Subject Matter Experts

4-31. Various subject matter experts help form a team. Routinely, members of a team engaging in ADM are internal to the headquarters. This includes members of the assistant chief of staff, intelligence (G-2) or battalion or brigade intelligence staff officer (S-2), and assistant chief of staff, civil affairs operations (G-9) or battalion or brigade civil affairs operations staff officer (S-9) staff sections. Not only do these individuals

have expertise in their fields, but they also use the analytical and research capabilities of their respective staff sections.

4-32. + As team members learn more about the situation, they recognize what they do not know. Areas and topics under consideration may require individuals from outside the existing staff who have different perspectives or specialized knowledge and expertise. Examples include sex advisors, political advisors, economic advisors, and historians. Requests for support from subject matter experts range from requesting individuals physically present at the headquarters to requesting and integrating individuals not present using electronic means. Reception and orientation of new members to the team is vital to their integration into the core group.

Red Team Members

4-33. Red team qualified individuals are typically part of the commander's staff at higher echelon headquarters. Trained and educated to think critically and creatively, red team members help commanders and staffs think from different perspectives. They help commanders and staffs explore alternatives in plans and orders and see things from the perspective of others. Red team members help—

- Broaden the understanding of an OE.
- Identify problems and clarify end-state conditions.
- Challenge assumptions.
- Ensure the perspectives of the enemies, adversaries, and others are considered.
- Identify friendly and enemy vulnerabilities and opportunities.
- Identify areas for assessment.
- Anticipate cultural perceptions of partners, adversaries, and others.

Note Takers

4-34. As a team works together, the team's knowledge base expands, and its understanding of the various problems deepens and evolves. A consideration for planning and problem-solving teams throughout the process is how to document the knowledge, the evolving logic, and the insights that emerge during the team's work. In part, dealing with knowledge capture is a resource issue. The team leader considers how much time the team spends thinking and talking and how much time the team spends documenting thoughts and discussion. While it is important that all members of the team keep diligent notes, the team leader should assign a dedicated note taker.

Graphic Artists

4-35. Thinking visually is a skill, and some members of the team may have difficulty thinking visually. It is important for team leaders to seek out members of the team who are good visual thinkers and graphic artists. These visual thinkers capture team thought and develop clear visual models for presentation to others outside the group.

ACTIVITIES OF ARMY DESIGN METHODOLOGY

4-36. ADM includes interconnected activities that aid in conceptual planning and the application of operational art. There is no one way or prescribed set of steps to employ ADM. However, several activities associated with ADM include—

- Framing an OE.
- Framing problems.
- Developing an operational approach.
- Transitioning to detailed planning.
- Reframing.

4-37. While planners can complete some activities before others, the understanding and learning in one activity may require revisiting previous learning. Thus, ADM is iterative. Based on their understanding gained during ADM, commanders issue planning guidance—including an operational approach—to guide more detailed planning using the MDMP.

FRAMING AN OPERATIONAL ENVIRONMENT

4-38. Military operations occur within a context larger than a single unit's mission. As such, staffs support commanders in developing a contextual understanding of an OE through framing. An OE is the composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. It includes portions of each of the five domains (land, maritime, air, space, and cyberspace) understood through three dimensions (human, physical, and information). Included within the domains and dimensions areas are the enemy, friendly, and neutral systems and actors who are relevant to a specific operation. Understanding an OE helps commanders better identify problems; anticipate potential outcomes; and understand the results of various friendly, adversary, and neutral actions and how these actions affect attaining the end state.

4-39. An OE is not bounded by the physical boundaries of an operational area. It is a cognitive tool that helps commanders and staff account for those things that affect their operations within and outside of their assigned area. When framing an OE, the commander and planning team seek to answer questions such as—

- What is going on in the OE?
- Why has this situation developed?
- Who are the relevant actors?
- What are the strengths and weaknesses of the relevant actors?
- What are the relationships among relevant actors?
- What is causing conflict or tensions among relevant actors?
- Why is the situation (or the projected future situation) undesirable?
- What future conditions need to exist for success?

4-40. A product of framing an OE is an environmental frame. The environmental frame describes and depicts current conditions of the OE (current state) and desired conditions of the OE that represent the desired end state (or future state). There is no "one way" or set of steps for framing an OE. There are, however, several activities that help commanders and staffs develop an environmental frame. Commanders and staffs—

- Understand higher echelon guidance and direction.
- Understand the current state of an OE.
- Project how an OE may trend in the future.
- Discern desired future states of other actors.
- Envision a desired end state.

Understand Higher Guidance and Direction

4-41. Framing an OE involves understanding higher echelon guidance and appreciating how higher headquarters view the current state and desired end state of an OE. Army forces always operate within the context of a higher echelon headquarters, either a higher Army, Joint, or multinational headquarters. As such, it is essential commanders and staffs understand how their higher headquarters perceives an OE, its problems, and the operational approach.

4-42. To understand higher echelon guidance and direction, the planning team reviews relevant orders, directives, policy documents, written and oral guidance, and estimates of its higher and next higher headquarters. The team also studies strategic directives and guidance (described in paragraphs 2-4 through 2-18), international mandates, bilateral and multilateral standards and agreements, and other products that influence its OE. As the commander and planning team frame their own OE, they may see the OE, its problems, and approaches to solve problems differently than their higher echelon headquarters. Commanders question contradictory or ambiguous guidance and directives. Dialogue up and down the echelons and with unified action partners helps work out these differences and helps build shared understanding throughout the planning effort.

Understand the Current State of an Operational Environment

4-43. To help identify problems, commanders and planners must understand those conditions, systems, and relevant actors who make up the current state of an OE. A condition is a state of something essential in an OE. Insurgent control of a certain province is an example. Not only does the team identify current conditions

of the OE as informed from their running estimates, but the team also understands how those conditions came to be from a historical and cultural perspective. Relevant actors include individuals and organizations such as leaders (including military, religious, economic, or political), enemy forces, states and governments, coalitions, corporations, terrorist networks, and criminal organizations.

4-44. One way to develop an understanding of an OE is from a systems perspective. To develop this systems perspective, the planning team identifies and discerns the relationships among relevant systems and actors in an OE. Once identified, further research and analysis by the team helps clarify the roles and functions of each actor and how actors relate to other systems and actors in an OE.

4-45. Building a diagram (with a supporting narrative) illustrating relevant actor functions, relationships, and tensions helps commanders and staffs understand an OE. Often relationships among actors have many facets, and these relationships differ depending on the scale of interaction and temporal aspects (including history, duration, type, and frequency) of them. Clarifying the relationships among actors requires intense effort, since these relationships require examination from multiple perspectives. Effective analysis requires identifying potential biases in both team members and the subjects of analysis, and the examination of all actors from multiple perspectives.

4-46. Figure 4-2 is an example influence diagram of relevant actors followed by a supporting narrative. This example includes relevant actors and the influences between them. This influence diagram is also a presentation diagram. The purpose of a presentation diagram is to convey the main ideas to individuals outside of the planning team. Detailed supporting diagrams, backed up by in-depth research, accompany a presentation diagram when it is distributed.

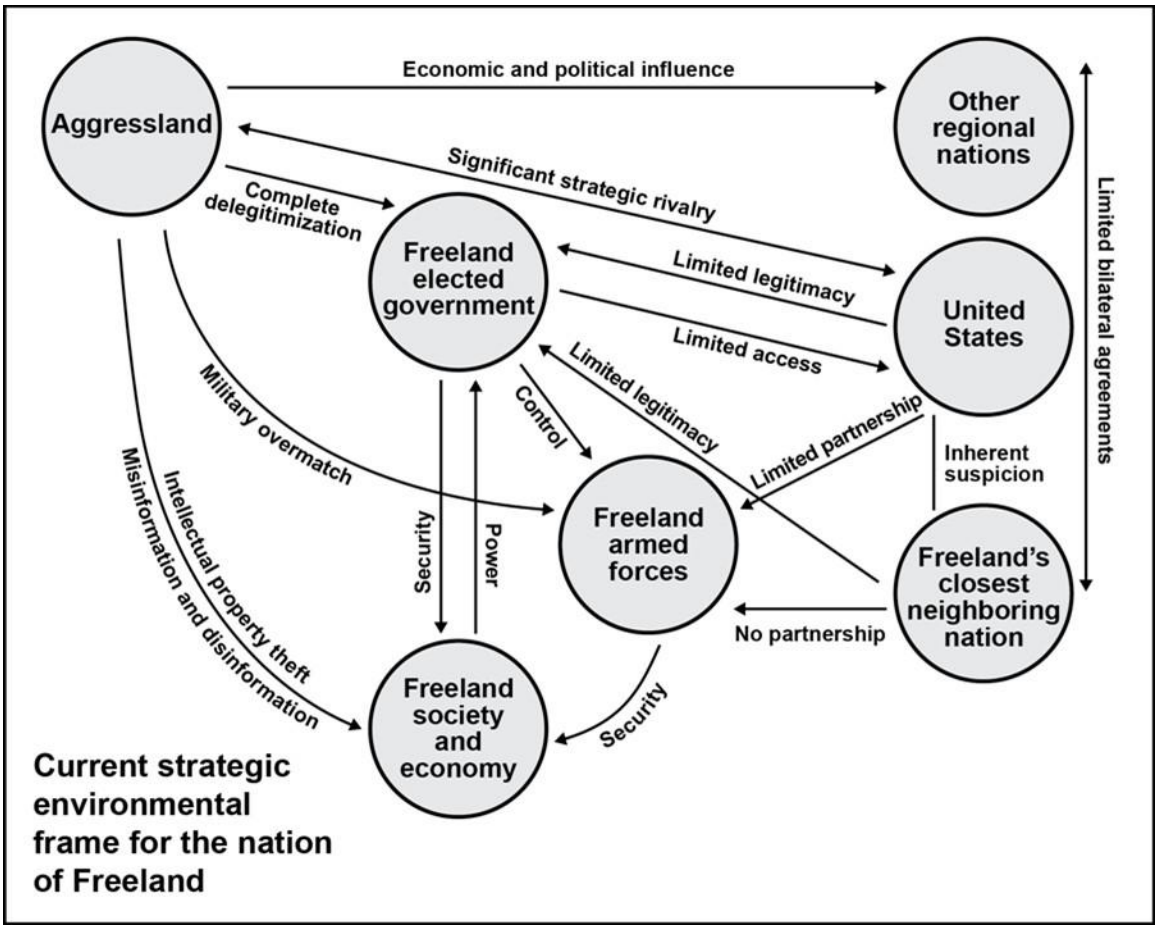


Figure 4-2. Current state of the strategic operational environment

Narrative. The legitimately elected government of Freeland has been a target for delegitimation, destabilization, and eventual expansion by their neighboring nation, Aggressland. Aggressland has routinely engaged in economic and information actions to undermine Freeland's regional and global diplomacy efforts. The authoritarian Aggressland regime maintains a strict anti-U.S. policy stance. The antidemocratic Aggressland oppresses its people, encourages instability in the region, and supports criminal and expansionist geopolitical activities unacceptable to peaceful allied and regional interests.

Freeland's closest democratic neighbor has been interested in both economic trade expansion and increased military partnership to strengthen their mutual defense against Aggressland, which has a large and relatively modern standing military and has begun increasing their antiaccess and area denial capabilities over the last two decades. Other regional nations have experienced varying degrees of information, economic, and political influences from Aggressland. Most regional partnerships are bilateral agreements based on self-defense, deterring economic interference, and preventing physical expansion by Aggressland into their economic zones or territorial border regions.

Over the last six months, Freeland has experienced several incursions by Aggressland forces into its economic zones and territorial border regions. Freeland has also experienced a significant increase in threat information warfare and attacks in cyberspace from both Aggressland and likely proxies. Most notably, the Freeland coastal defense forces have been routinely engaged from commercial vessels baring Aggressland flags and markings.

4-47. The understanding of an OE evolves as the commander and planning team discuss and debate their findings. For example, several questions may arise after the commander and team discuss their understanding of the current state of an OE. These questions may include—

- What are the other sources of security for Freeland, Aggressland, and other regional nations?
- What is the status of antiaccess and area denial capabilities for Aggressland and other regional nations?
- Has there been a change in military readiness or activation of specific units within Aggressland's military forces?
- What are some of the other key international relationships or interests with Freeland?
- Are there limits to military partnerships in the region?
- What are the various interrelationships between the government, military, civil police, and various ethnic populations in Freeland? Are they supportive or dismissive of the Freeland government and armed forces?

Project How an Operational Environment May Trend

4-48. Framing an OE includes an appreciation of how an OE may trend into the future. An OE evolves even in the absence of friendly intervention. If no outside actors influence an OE, that OE will change due to inherent tendencies in the system. Tendencies reflect an inclination to think or behave in a certain manner. Tendencies are not deterministic, but they are models describing the thoughts or behaviors of relevant actors. Tendencies identify likely patterns of relationships between actors without external influences. The natural tendencies in an OE have the most momentum, and therefore they are difficult to change. Tendencies can be positive and encouraged or viewed as obstacles that become the focus for change. Friendly actions or activities that reinforce (or at least do not conflict with) natural trends may have the best chance to succeed. Appreciating the natural tendencies in an OE assists commanders and staffs in better defining the desired end state and development of an operational approach to promote or alter identified tendencies.

Discern Desired Future States of Other Actors

4-49. The planning team describes alternative future states of relevant actors. Other actors affect an OE and have different desired end states. For example, enemy forces have a desired set of conditions for the future. These conditions describe their desired end state. Friendly or neutral actors may not have opposing mindsets, but some of their desired conditions may be different from some of the command's desired end state

conditions. The team's understanding of the differences between alternative future states and the command's desired end state help in problem framing. The team captures its understanding of alternative future states of relevant actors in various visual models and narratives.

Envision a Desired End State

4-50. The commander and planning team envision the desired end state based on higher echelon guidance, the current state of an OE, and alternative future states of an OE. The operation's end state is a set of desired conditions that, if achieved, meet the objectives of policy, orders, guidance, and directives issued to the commander. A desired condition is a sought-after future state of an OE. Conditions are tangible or intangible, military or nonmilitary, or physical or psychological. When determining desired end-state conditions, the team also considers available resources to ensure end-state conditions are feasible.

4-51. Time is important when determining desired end-state conditions. How time relates to the desired end state influences the expectation of higher authorities and influences how commanders use forces and capabilities to achieve desired conditions. The commander and planning team use diligence during the planning effort to account for the time expected to achieve desired conditions. They qualify whether the desired conditions are intended to be lasting or transient. This temporal dimension helps commanders and staffs develop an effective operational approach and manage expectations.

4-52. Commanders describe the operation's end state by stating the desired conditions of the friendly force in relationship to desired conditions of enemy forces, terrain, and civil considerations. Commanders share and discuss their desired end state with their higher echelon commander to ensure unity of effort. Commanders may elect to discuss several proposed end states, and their respective costs, for the higher commander to consider. Planners develop visual models with supporting narratives to capture the desired end state. Figure 4-3 is an example influence diagram of a desired end state followed by a supporting narrative.

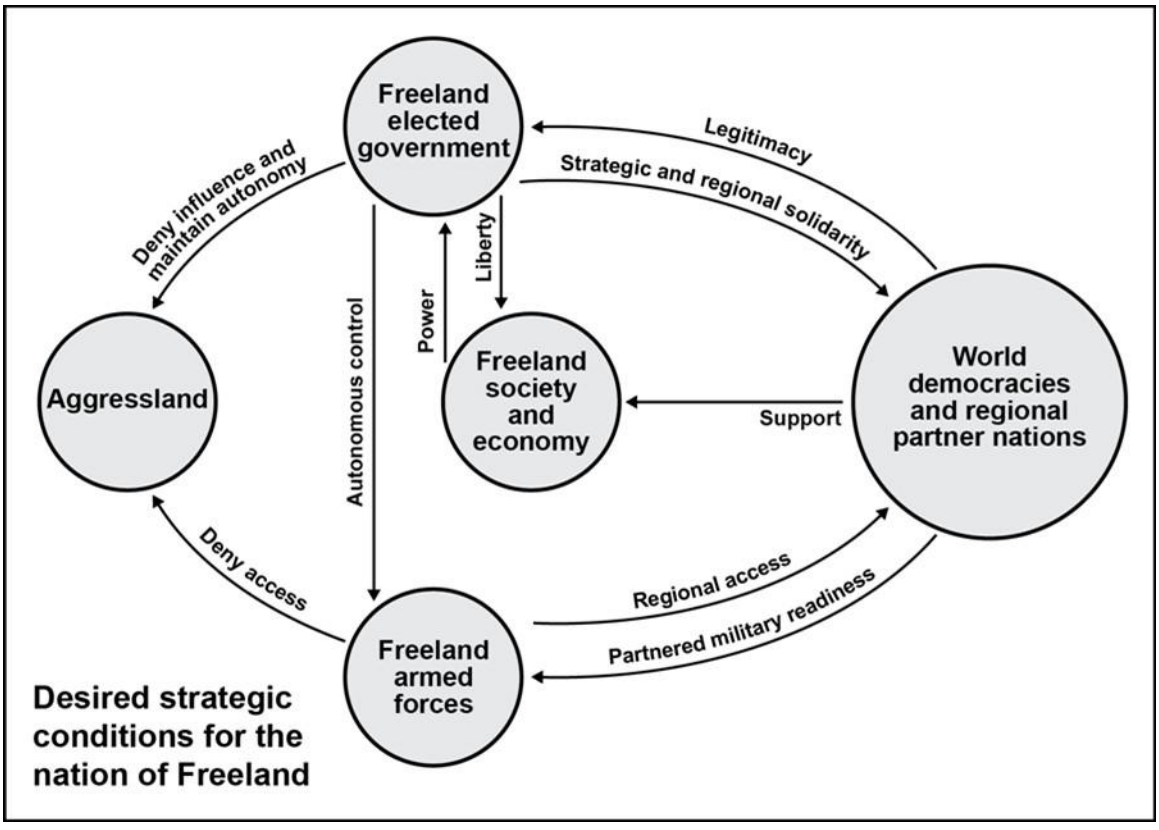


Figure 4-3. Desired strategic end state

Narrative. The country of Freeland remains a friendly democracy that is not threatened by Aggressland and engages in partnered alliances that foster military readiness, adversary deterrence, and regional stability. The society and economy of Freeland are free to continue democratic elections and global engagement without malign economic or informational influence from Aggressland. The Freeland defense forces continue to serve their society and protect the country from external aggression. The defense forces routinely partner with regional allies to increase readiness, communicate a strong regional partnership to potential adversaries, and prepare for conflict. World democracies support the elected Freeland government, increasing the democratically elected government's legitimacy. The elected government of Freeland supports the rule of law and human rights among all world nations. Freeland participates in routine U.S. military partnership events and enables regional access to temporary basing and ports when needed.

FRAMING THE PROBLEM

4-53. Identifying and understanding problems is essential to solving them. A problem is an issue or obstacle that makes it difficult to achieve a desired goal or objective. In a broad sense, a problem exists when there is a significant difference between what is desired and the current state. In the context of operations, an operational problem is the issue or set of issues that impede commanders from achieving their desired end state. Problem framing involves identifying and understanding those issues that impede progress toward the desired end state. The problem frame is an extension of the environment frame.

4-54. The planning team frames the problem to ensure that it is solving the right problem, instead of solving the symptoms of the problem. The planning team closely examines the symptoms, the underlying tensions, and the root causes of conflict. Tension is the resistance or friction among and between actors. From this perspective, the planning team can identify the fundamental problem with greater clarity and consider more accurately how to solve it. During problem framing, commanders and staffs answer questions such as—

- What is the difference between the current state of an OE and the desired end state?
- What is the difference between the natural tendency of an OE and the desired end state?
- What is the difference between the desired end state of other actors and the commander's desired end state?
- What is preventing the command from reaching the desired end state?
- What needs to change?
- What needs to be preserved?
- What are the opportunities and threats from a friendly perspective?
- What are the opportunities and threats from an enemy's and other actors' perspectives?

4-55. The planning team captures its work in a problem frame that describes the set of interrelated problems or system of problems in a narrative supported by visual models. The problem frame supports the commander's dialogue with higher echelon commanders and unified action partners in defining problems and developing common expectations regarding resolutions. This is vital to develop an effective operational approach to solve or manage identified problems.

4-56. Just as there is not a singular way to framing an OE, there is no "one way" or set of steps for framing problems. Some activities that may help commanders and staffs develop a problem frame include—

- Reviewing the environmental frame.
- Identifying problems and mapping out their relationships.
- Capturing the problem frame in text and graphics.

Review the Environmental Frame

4-57. The problem frame is an extension of the environmental frame. As such, the planning team begins framing the problem by reviewing the environmental frame. The team reviews the—

- Current state of the OE.
- Projections on how the OE may trend in the future.
- Desired future states of other actors.

- Desired end state.
- Problems identified during earlier ADM sessions.

Identify Problems and Map Out Their Relationships

4-58. A technique for identifying problems begins with two questions:

- What is the difference between the current state of the OE and the desired end state?
- What is preventing the force from reaching the desired end state?

4-59. The team also identifies the differences between the desired end state and alternative future states (the natural tendency of an OE and desired end state conditions of other actors). These differences are tensions—resistance or friction among and between actors. Combined, these tensions represent the system of problems requiring resolution. In addition to identifying differences, the planning team identifies any shared desired conditions among alternative future states and the friendly end state. Shared desired conditions represent opportunities to leverage and consider when developing the operational approach.

4-60. To help understand the system of problems, it is helpful to map the relationships of the identified problems. Part of this mapping is explaining the causes or contributors to the problem. For example, team members identify that a certain population group has a history of not participating in the election process. While knowing that a group does not participate is useful, the planning team understands and explains why the group does not participate. As the planning team maps out the various problems and related causes, it sees that some of the issues are symptoms of a bigger issue. In addition, the team discerns that some problems are outside the scope of their mission. Mapping helps isolate the root cause of problems that the operational approach must address. Figure 4-4 on page 68 is an example of relationship mapping that focuses on the military problems that could be used to further describe a problem frame.

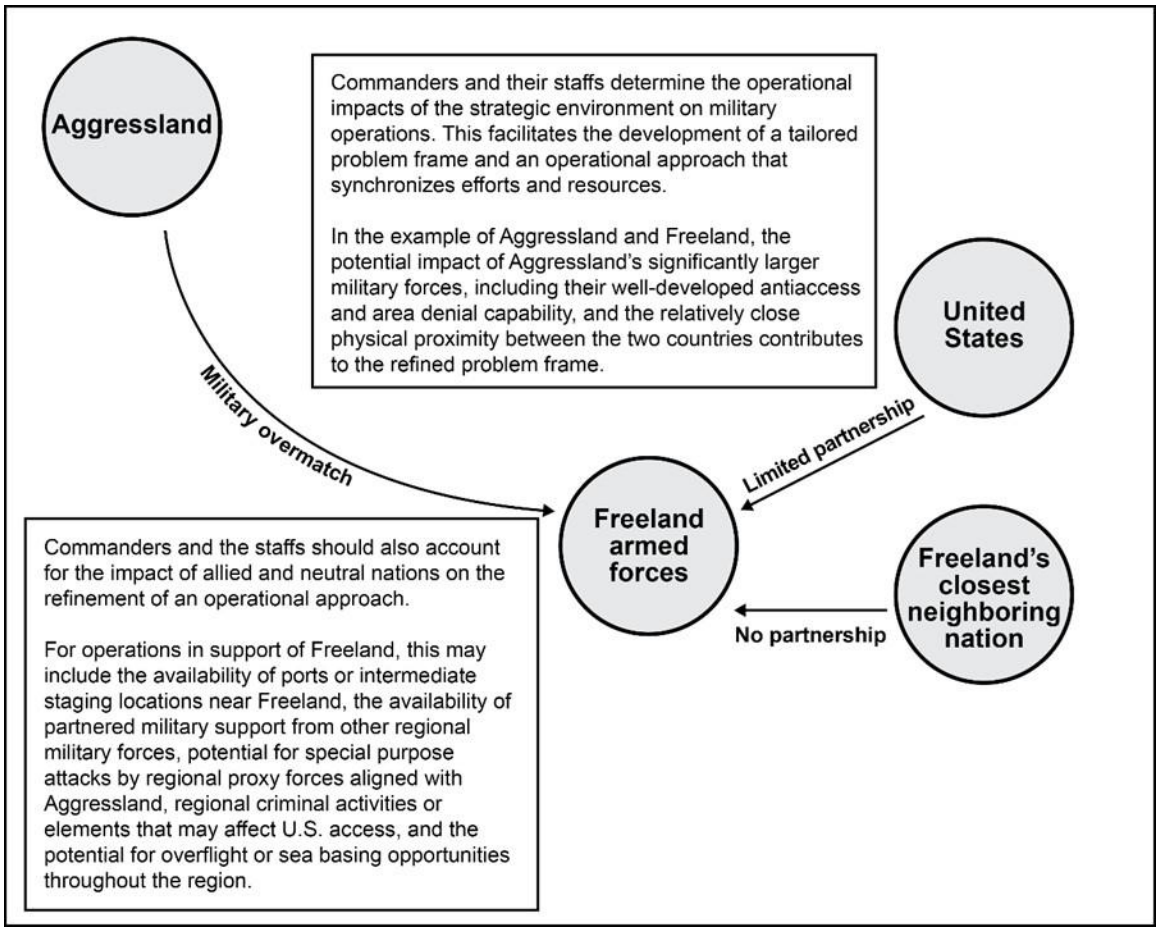


Figure 4-4. Refined operational frame based on strategic frame

4-61. The goal of problem framing is to identify obstacles impeding progress toward achieving the desired end state. Effective commanders and planning teams recognize that few problems are solved in isolation, but most are set in relation to other problems within an OE. Rarely is there a single problem facing a command. For example, a unit tasked to neutralize insurgents, enable the host-nation government to expand its influence, and create a capable security force within an assigned area may be faced with the following interrelated problems:

- Lack of sufficient military capabilities to deter armed conflict.
- Host-nation security force systems (including training, logistics, personnel, and pay) are insufficient.
- Host-nation military leaders lack capacity to plan or execute missions.
- Effective insurgent resistance.
- Effective external information campaign.
- Lack of accurate intelligence.
- Civilian casualties.
- The population lacks trust in the host-nation or partner military forces.
- Lack of commitment of regional allies or partner military forces.
- Corruption at the national, district, or provincial level.
- Security along main and alternate supply routes, support area, or intermediate staging bases outside the area of responsibility (AOR).
- The size of the assigned area.
- Tasks assigned versus troops available.
- Limited unity of effort among some unified action partners.

Develop a Problem Frame

4-62. The planning team captures its work in a problem frame that describes the set of interrelated problems or system of problems in a narrative supported by visual models. The problem frame supports the commander's dialogue with higher echelon commanders and unified action partners in defining problems and developing common expectations regarding resolution. This is vital to develop an effective operational approach to solve or manage identified problems. Here is an example of an initial problem statement based on the Freeland scenario.

> ***Problem statement:*** Aggressland forces are escalating their offensive activities against Freeland to destabilize the democratic government in Freeland and expand their regional hegemony. For more than fifty years, Freeland has maintained diplomatic, information, military, and economic autonomy. Other regional nations and world democracies have provided limited diplomatic and military support to Freeland, but these efforts have been insufficient to deter border incursions from Aggressland. Freeland is a diplomatic and economic partner to the U.S., but military partnership has been limited due to potentially negative international policy impacts. Freeland's military and civil defense forces are limited in size but are relatively modern. Aggressland has maintained a long-standing strategic rivalry with the U.S. To maintain deterrence and regional access, prevent crisis in Freeland, and bolster regional stability, the U.S. must be prepared for armed conflict in support of the defense of Freeland.

4-63. Commanders and planners continue to develop the problem narrative as they learn more about an OE and develop an operational approach. For example, the small size of the Freeland defense force is a significant issue, but not the only one. After discussing the problem narrative with the commander and others, the planning team may expand the narrative by including problems associated with—

- Availability of potential ports or intermediate staging locations for military forces.
- Potential for special purpose attacks against regional partners, forward deployed military forces, or sustainment nodes.
- Reinforcement of Freeland armed forces.
- Influence of the adversary on other regional neighbors of Freeland.
- Established adversary anti-access and area denial capabilities surrounding Freeland.

DEVELOP AN OPERATIONAL APPROACH

4-64. Once commanders and planners agree on the problem or set of problems, they develop ways to address them. They do this by developing an operational approach—a description of the broad actions the force must take to transform current conditions into those desired at end state. An operational approach is the commander's visualization of what needs to be done to solve or manage identified problems. It is the main idea that informs detailed planning. The operational approach promotes mutual understanding and unity of effort between the force and unified action partners on the way ahead.

4-65. The operational approach reflects understanding of the OE and the problem while describing the commander's visualization of ways to achieve the desired end state. The operational approach accounts for higher direction, describes required resources in general terms, and accounts for risk. Commanders, supported by their planning teams, describe their operational approach in a narrative supported by visual models.

4-66. An operational approach is not a *course of action*—a scheme developed to accomplish a mission (JP 5-0). An operational approach provides focus and boundaries for the development of COAs during the MDMP. A COA is more detailed than an operational approach, including details such as task organization, unit boundaries, and tasks to accomplish. (See Chapter 5 for more details on developing a COA.)

4-67. Like the other activities of ADM, commanders collaborate and dialogue with their staffs, other commanders, and unified action partners as they formulate their operational approach. In developing their operational approach, commanders and planning teams synthesize early work concerning the OE, the problem, and the desired end state and seek to answer questions such as—

- How to go from the existing conditions to the desired end state?
- What obstacles or tensions exist between the two?

- What broad actions help attain these conditions?
- What type of resources are required?
- What are the risks?

4-68. While there is no prescribed set of steps to develop an operational approach, the commander and planning team use the elements of operational art to formulate their operational approach. Earlier in ADM, the planning team considered end-state conditions. When formulating an operational approach, the commander and planning team consider centers of gravity, decisive points, objectives, lines of operations, and phasing. The following activities help commanders and staffs apply the elements of operational art when formulating an operational approach:

- Determine enemy and friendly center of gravity.
- Identify decisive points.
- Determine a direct or indirect approach.
- Establish objectives and devise lines of operations and lines of effort.
- Refine the operational approach.
- Document results.

(See paragraphs 2-45 through 2-82 for a detailed discussion of each element of operational art.)

Determine Enemy and Friendly Centers of Gravity

4-69. Commanders and staffs rely on an understanding of sufficient breadth and depth of friendly and enemy systems, the OE, and the interrelationships among the systems to permit them to understand how actors in the environment ultimately derive their physical strength, or what they use as their primary entity, with the capability to achieve their objective. Armed with this understanding, commanders and staffs attempt to identify a center of gravity by—

- Identifying a friendly, threat, or other actor's end state or goal.
- Listing the primary way used to achieve that end state.
- Listing the resources or means required to execute the way.
- Selecting from the list of means the entity (person, organization, or force) that inherently possesses the capability to execute the way.

4-70. Once identified, planners further analyze centers of gravity within a framework of three critical factors—capabilities, requirements, and vulnerabilities:

- Critical capabilities are the primary capabilities essential to the achievement of the objective.
- Critical requirements are essential conditions, resources, and means the center of gravity requires to perform the critical capability.
- Critical vulnerabilities are those aspects or components of critical requirements that are deficient or vulnerable to direct or indirect attack in a manner achieving decisive or significant results.

4-71. Center of gravity analysis helps commanders and staffs understand friendly and enemy strengths, weaknesses, and vulnerabilities. This understanding helps to determine ways to undermine enemy strengths by exploiting enemy vulnerabilities while protecting friendly vulnerabilities from enemies attempting to do the same. Understanding the critical factors of a center of gravity helps commanders and staffs identify decisive points. (See JP 5-0 for a more detailed discussion of center of gravity analysis.)

Identify Decisive Points

4-72. Decisive points are not centers of gravity; they are keys to attacking or protecting them. Some decisive points are geographic. Some examples of decisive points include port facilities, distribution networks and nodes, and bases of operations. Events and elements of an enemy force are decisive points. An example of an enemy element might be the commitment of the enemy operational reserve. An example of an event is the reopening of a major oil refinery. A common characteristic of decisive points is their importance to a center of gravity. A decisive point's importance requires the enemy to commit significant resources to defend it. The loss of a decisive point weakens a center of gravity and may expose more decisive points.

Determine a Direct or Indirect Approach

4-73. Based on an understanding of centers of gravity and decisive points, commanders and staffs consider an approach to contend with a center of gravity. There are two approaches: direct or indirect. The direct approach attacks the enemy's center of gravity or principal strength by applying combat power directly against it. However, centers of gravity are well protected and are not normally vulnerable to a direct approach. Thus, commanders often choose an indirect approach. The indirect approach attacks the enemy's center of gravity by applying combat power against a series of decisive points while avoiding enemy strength. Both approaches use combinations of defeat or stability mechanisms, depending on the situation. Defeat and stability mechanisms are not tactical missions; rather, these mechanisms describe broad operational and tactical effects.

Defeat Mechanisms

4-74. A *defeat mechanism* is the method through which friendly forces accomplish their mission against enemy opposition (ADP 3-0). A defeat mechanism is described in terms of the physical or psychological effects it produces. Physical defeat deprives enemy forces of the ability to achieve their aims; psychological defeat deprives them of the will to do so. Army forces are most successful when applying focused combinations of defeat mechanisms. This produces complementary and reinforcing effects not attainable with a single mechanism. Used individually, a defeat mechanism achieves results proportional to the effort expended. Used in combination, the effects are synergistic and lasting.

4-75. Army forces at all echelons use combinations of four defeat mechanisms:

- Destroy.
- Dislocate.
- Disintegrate.
- Isolate.

Destroy means to apply lethal force on an enemy capability so that it no longer performs its functions and cannot be restored to a usable condition without rebuilding. Destruction may not cause enemy forces to surrender; well-disciplined forces and those able to reconstitute can endure heavy losses without giving up. Defeat cannot be measured by terms of destruction. Dislocate means to employ forces to obtain significant positional advantage, in one or more domains, rendering the enemy's disposition less valuable, perhaps even irrelevant. To disintegrate is to attack the cohesion of the whole and involves preventing components of an enemy formation or capability from fulfilling their role as part of the overall effort. Disintegration causes the formation or capability to function less effectively, creating vulnerabilities that the friendly force can exploit. *Isolate* means to separate a force from its sources of support in order to reduce its effectiveness and increase its vulnerability to defeat (ADP 3-0). Isolation can encompass multiple domains and can have both physical and psychological effects detrimental to accomplishing a mission. (See FM 3-0 for more details on the four defeat mechanisms.)

Stability Mechanisms

4-76. A *stability mechanism* is the primary method through which friendly forces affect civilians in order to attain conditions that support establishing a lasting, stable peace (ADP 3-0). As with defeat mechanisms, combinations of stability mechanisms produce complementary and reinforcing effects that accomplish the mission more effectively and efficiently than single mechanisms do alone. The four stability mechanisms are—

- Compel.
- Control.
- Influence.
- Support.

4-77. Compel means to use, or threaten to use, lethal force to establish control and dominance, affect behavioral change, or enforce compliance with mandates, agreements, or civil authority. Control involves imposing civil order. Influence means to alter the opinions, attitudes, and ultimately the behavior of foreign friendly, neutral, adversary, and enemy audiences through messages, presence, and actions. Support

establishes, reinforces, or sets the conditions necessary for the instruments of national power to function effectively.

4-78. Normally, there are more decisive points in an operational area than can be attacked, seized, retained, controlled, or protected by available forces and capabilities. Accordingly, planners study and analyze decisive points and determine which offer the best opportunities to attack the adversary's centers of gravity, extend friendly operational reach, or enable the application of friendly forces and capabilities. The art of planning includes selecting decisive points that best lead to creating end-state conditions in a sequence that most quickly and efficiently leads to mission success. Once identified for action, decisive points become objectives. An objective can be physical (an enemy force or a terrain feature) or conceptual (a goal, such as, rule of law established). Combined with end-state conditions, objectives form the building blocks for developing lines of operation and lines of effort.

4-79. Commanders and planning teams devise lines of operations and lines of effort to link objectives in time, space, and purpose to attaining desired end-state conditions. Commanders describe their operational approach along lines of operations, lines of effort, or a combination of both. Commanders at all levels may use lines of operations and lines of effort to develop tasks to subordinate units and allocate resources. Commanders synchronize and sequence related actions along multiple lines. Seeing these relationships helps commanders assess progress toward achieving the end state as forces perform tasks and accomplish missions. (See ADP 3-0 for more information on stability mechanisms.)

Refine the Operational Approach

4-80. While an operational approach is broad, it describes the commander's visualization in time, space, and purpose. It also addresses resources required to support the operational approach and accounts for risk. After forming a framework for the operational approach using lines of operations and lines of effort, commanders and planning teams consider additional elements of operational art to refine the operational approach. Additional elements of operational art to consider include—

- Operational reach, basing, and culmination.
- Tempo.
- Phasing and transitions.
- Risk.

Operational Reach, Basing, and Culmination

4-81. Operational reach is the distance and duration across which a force can successfully employ its capabilities. The skillful positioning of forces, reserves, bases, and equipment extend operational reach. Although reach might be constrained or limited by the geography, enemy forces, and adversaries in and around an operational area, reach is extended by—

- Forward positioning of capabilities and resources.
- Increasing the range and effectiveness of weapons systems.
- Leveraging host-nation support and contract support.

4-82. Basing, in the broadest sense, is an indispensable part of operational art. It is tied to lines of operations, and it affects operational reach. In particular, the arrangement and positioning of bases in an operational area underwrites the ability of the force to protect its components from enemy action while expanding the distance and duration of its capabilities. Commanders consider bases and base camps as intermediate staging bases, lodgments (subsequently developed into base camps or potentially bases), and forward operating bases as part of the operational approach.

4-83. Commanders consider culmination when developing their operational approach and visualizing resources to support it. Culmination is that point in time and space at which a force no longer possesses the capability to continue its current form of operations. Culmination means a shift in relative combat power. It is relevant to both attackers and defenders at each level of warfare. While conducting offensive tasks, the culminating point occurs when the force cannot continue the attack, and it assumes a defensive posture or executes an operational pause. While conducting defensive tasks, it occurs when the force cannot defend itself and withdraws or risks destruction. The culminating point is difficult to identify when forces conduct

stability tasks. Two conditions result in culmination: units being too dispersed to secure an assigned area or units lacking resources to achieve the end state.

Tempo

4-84. Tempo is another element to consider when developing an operational approach. Tempo is the relative speed and rhythm of military operations over time with respect to the enemy. Tempo reflects the rate of military action. Controlling tempo helps commanders keep the initiative during combat operations or establish a sense of normalcy during humanitarian crises. During operations dominated by offensive and defensive tasks, commanders maintain a higher tempo than the enemy does; a rapid tempo overwhelms an enemy's ability to counter friendly actions. Higher tempo is the key to achieving a temporal advantage during operations. During operations dominated by stability tasks, commanders control events and deny enemy forces positions of advantage. By acting faster than the situation deteriorates, commanders change the dynamics of a crisis and restore stability.

4-85. Army forces expend more energy and resources when operating at a high tempo. Commanders assess the force's capacity to operate at a higher tempo based on its performance and available resources. An effective operational approach varies tempo throughout an operation to increase endurance while maintaining appropriate speed and momentum.

Phasing and Transition

4-86. The ability of Army forces to extend operations in time and space, coupled with a desire to dictate tempo, presents commanders with more objectives than the force can simultaneously engage. This requires commanders and staffs to consider sequencing operations. Commanders do this by phasing an operation. A phase is a planning and execution tool used to divide an operation in duration or activity. A change in phase involves a change of mission, task organization, or rules of engagement.

4-87. Phasing extends operational reach. Only when the force lacks the capability to accomplish the mission in a single action do commanders phase the operation. Each phase should—

- Focus effort.
- Concentrate combat power in time and space at a decisive point.
- Accomplish its objectives deliberately and logically.

4-88. Transitions mark a change of focus between phases or between the ongoing operation and execution of a branch or sequel. Shifting priorities between the core competencies or among offensive, defensive, stability, and defense support of civil authorities tasks involve a transition. Transitions require planning and preparation before execution to maintain the momentum and tempo of operations. Forces are vulnerable during transitions and commanders establish clear conditions for execution.

Risk

4-89. Risk, uncertainty, and chance are inherent in all military operations. During ADM, it is important to identify and communicate risks to mission accomplishment. Part of developing an operational approach includes answering the question, "What is the chance of failure or unacceptable consequences in employing the operational approach?" Risks range from resource shortfalls to an approach that alienates a potential friendly actor. Commanders and staffs evaluate assumptions to develop an OE and determine potential areas of risk. Identified risks are communicated to higher echelon headquarters, and risk mitigation guidance is provided in the commander's planning guidance.

Document Results

4-90. Similar to an environmental frame and a problem frame, commanders and staffs use graphics and text to describe the operational approach. Figure 4-5 on page 74 is an example of an operational approach using lines of effort, defeat and stability mechanisms, objectives, and end-state conditions.

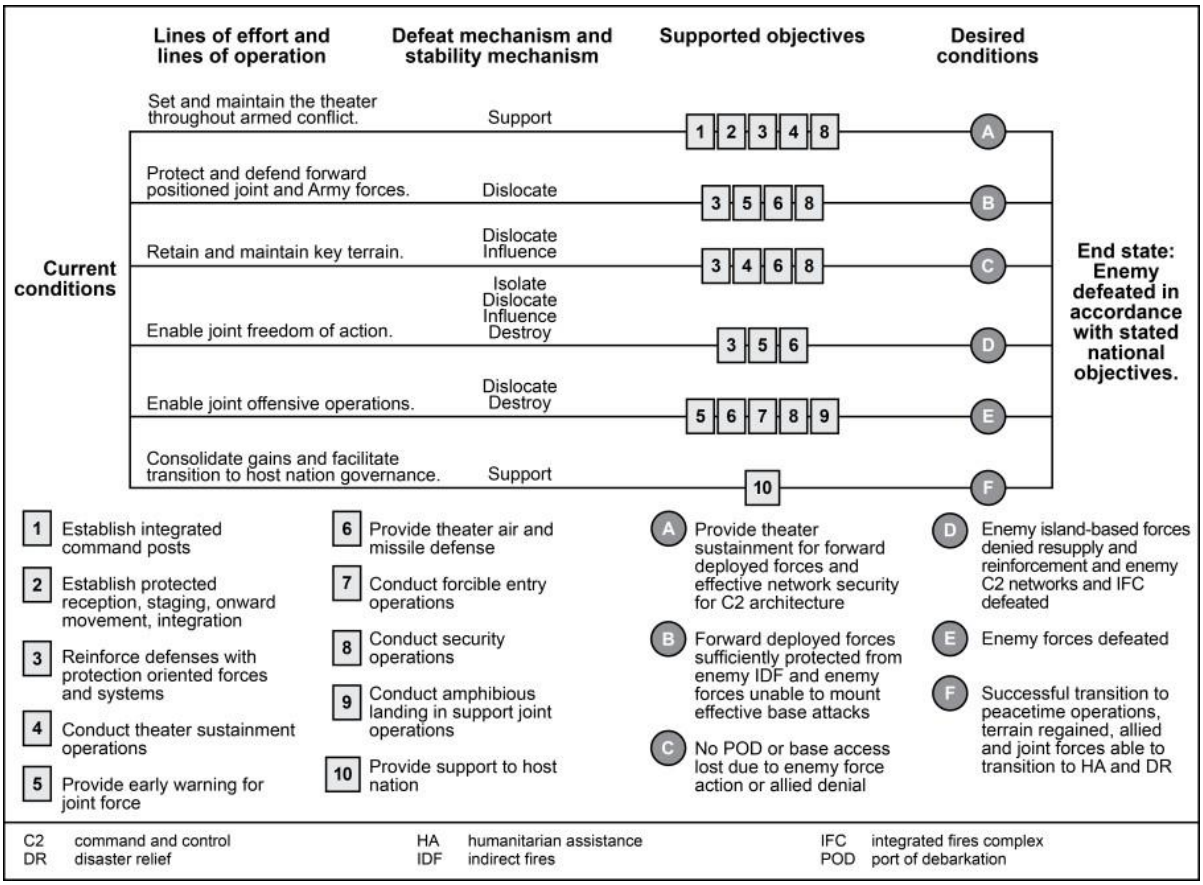


Figure 4-5. Sample operational approach

TRANSITIONING TO DETAILED PLANNING

4-91. A critical aspect of ADM is transferring the understanding and knowledge developed during ADM to others on the staff; subordinate, adjacent, and higher echelon commanders; and unified action partners. The goal of documenting the results of ADM is to capture the tacit knowledge gained during ADM and convert it into explicit knowledge for others to apply. Tacit knowledge resides in an individual's mind, while explicit knowledge consists of written or otherwise documented information. Explicit knowledge products of ADM include—

- Environmental frame.
- Problem frame.
- Operational approach.
- Initial commander's intent.
- Planning guidance including operational timings, resources requirements in broad terms, and risk.
- Reframing criteria.

4-92. The products of ADM support the development of a detailed plan or order using the MDMP. The transition between ADM and the MDMP is important to convey the understanding and logic developed by the planning team to those developing the detailed plan. Briefing the results of ADM and handing over associated products to another planning team is not an effective approach. Often the same planning team that led the design effort leads the staff through the MDMP. If not, key members of the planning team are part of the core element of the planning team performing the MDMP.

4-93. During the mission analysis step of the MDMP, products of ADM are refined as the commander and staff learn more about the situation. The planning team rechecks and validates assumptions developed during

ADM. Commanders consider new information and modify their visualization as required before issuing planning guidance for the development of COAs.

REFRAMING

4-94. During execution, the commander and staff monitor the OE and assess progress toward setting conditions and achieving objectives. Assessments help commanders measure the overall effectiveness of employing forces and capabilities to ensure that the operational approach remains feasible and acceptable in the context of the higher commander's intent and concept of operations. If the current operational approach is failing to meet these criteria, or if aspects of the OE or problem change significantly, the commander may decide to begin reframing efforts.

4-95. A reframe is a shift in understanding that leads to a new perspective on the problem or its resolution. Reframing is the activity of revisiting earlier design hypotheses, conclusions, and decisions that underpin the current operational approach. In essence, reframing reviews what the commander and staff believe they understand about the OE, the problem, and the desired end state. At any time during the operations process, the decision to reframe may be triggered by factors such as—

- Assessment reveals a lack of progress or regression.
- Key assumptions prove invalid.
- Unanticipated success or failure.
- A major event that causes "catastrophic change" in the OE.
- A scheduled periodic review that shows a problem.
- A change in mission, objectives, or end state issued by higher echelon authority.

4-96. During operations, commanders decide to reframe after realizing the desired conditions have changed, are not achievable, cannot be attained through the current operational approach, or because of change of mission or end state. Reframing provides the freedom to operate beyond the limits of any single perspective. Conditions will change during execution, and such changes are expected because forces interact within an OE. Recognizing and anticipating these changes is fundamental to ADM and essential to an organization's ability to learn.

4-97. During execution, it is important that commanders, supported by their staffs and subordinate commanders, question their original understanding and visualization of operations. Commanders question early assumptions, hypotheses, and conclusions that underpin the current plan during design sessions, commander's conferences, or long-range assessment meetings. This may lead to the commander directing an effort to reframe an OE and problems and develop a new operational approach.

REFRAMING CRITERIA

4-98. It is helpful to think in advance about what circumstances, events, or changes require the command to reframe. As such, commanders and planning teams develop reframing indicators. A reframing indicator helps identify a condition in an OE that has changed or that could cause a shift in the problem such that a current operational approach may no longer be valid. Although many reframing indicators will not meet the requirement for the commander's critical information requirement (CCIRs), some reframing indicators could be included in the CCIRs if they represent something that would cause the commander to consider near-term reframing and potential redesign. An example of such information could be the impending alliance of a regional nation with the enemy that shifts the balance of power, even though an earlier assumption was that this alliance would not occur. Reframing indicators support the commander's ability to understand, learn, adapt, and reframe as necessary. Examples of such information include—

- Changes in the original problem statement.
- Significant changes in threat composition.
- Significant changes in the threat's approach.
- Significant changes in friendly capability.
- Higher echelon headquarters' policy changes or directives that change the desired end state.
- Unexpected lack of friendly progress toward objectives.
- Shifts in international support or domestic will.
- Key assumptions prove to be invalid.

ASSESSMENT PLAN

4-99. The assessment plan incorporates reframing criteria in the form of measures of effectiveness (MOEs) and measures of performance (MOPs) that are used to evaluate completed tasks, achieved objectives, and obtained end-state conditions. An effective assessment plan incorporates the logic used to build the plan. The logic as to why the commander believes the actions in the plan will produce the desired results is an important consideration when developing the assessment plan. Recording and understanding this logic during ADM helps the staff recommend the appropriate indicators for assessing the operation. It also helps the commander and staff determine if they need to reframe the problem if assumptions prove false or the logic behind the plan appears flawed as operations progress. (See Chapter 8 for details on building an assessment plan.)

Chapter 5

The Military Decision-Making Process

This chapter defines and describes the military decision-making process (MDMP). It provides an overview of the process followed by a detailed explanation for conducting each step of the MDMP. The chapter concludes with techniques for modifying the MDMP in a time-constrained environment.

OVERVIEW OF THE MILITARY DECISION-MAKING PROCESS

5-1. The *military decision-making process* is an iterative planning methodology to understand the situation and mission, develop a course of action, and produce an operation plan or order (ADP 5-0). Commanders with an assigned staff use the MDMP to organize and conduct their planning activities. The process helps leaders apply critical and creative thinking to analyze a mission; develop, analyze, and compare alternative courses of action (COAs); select the best COA; and produce an operation plan (OPLAN) or operation order (OPORD). The MDMP is applicable across the range of military operations. The seven steps of the MDMP are—

- Step 1 - Receipt of mission.
- Step 2 - Mission analysis.
- Step 3 - COA development.
- Step 4 - COA analysis.
- Step 5 - COA comparison.
- Step 6 - COA approval.
- Step 7 - Orders production, dissemination, and transition.

Note. Joint force headquarters use the joint planning process described in JP 5-0. Marine Corps headquarters use the Marine Corps planning process described in MCWP 5-10. North Atlantic Treaty Organization (NATO) allied headquarters uses the operational planning process described in AJP-5 or the tactical planning process described in APP-28. Army commanders and staffs should be familiar with these planning processes because they frequently interact with joint, Marine Corps, and Allied forces in the development of plans and orders.

5-2. The goal of the MDMP is not to produce a perfect plan or order. Rather, the MDMP helps ensure plans contain a sufficient level of detail and direction for subordinates to effectively accomplish their assigned mission. Depending on the situation and the complexity of the planning effort, commanders can initiate Army design methodology (ADM) before conducting the MDMP. ADM assists commanders and staffs in understanding an operational environment (OE), framing the problem, and developing an operational approach to solve or manage the problem. The increased understanding and products resulting from ADM can then guide more detailed planning during the MDMP. (See Chapter 4 or refer to ATP 5-0.1 for more information on ADM.)

5-3. Commanders and staffs use several integrating processes, which run concurrently with the MDMP, to synchronize specific functions and incorporate warfighting functions into the concept of operations. These integrating processes are intelligence preparation of the operational environment (IPOE), information collection, targeting, risk management, and knowledge management. For example, the steps of the targeting process, when aligned with the steps of the MDMP, ensure target selection and prioritization meet the commander's planning guidance and support the concept of operation. (See Appendix G for more information on the integrating processes.)

5-4. The MDMP facilitates collaborative and parallel planning as the higher echelon headquarters solicits input and continuously shares information concerning future operations with subordinate, adjacent, supporting and supported units, and with unified action partners through planning meetings, warning orders (WARNORDs), and other means. Commanders encourage active collaboration among all organizations

affected by a pending operation to build a shared understanding of the situation, participate in COA development and decision making, and resolve conflicts before publication of a plan or order.

5-5. The MDMP also drives preparation. Since time is a factor in all operations, commanders and staffs conduct a time analysis early in the planning process. This analysis helps them determine what actions are required and when those actions must begin to ensure forces are ready and in position before execution. This may require commanders to direct subordinates to start necessary movements, conduct task organization changes, begin information collection, and execute other preparation activities before completing the plan. These tasks are directed in a series of WARNORDs as the commander and staff conduct the MDMP. WARNORDs facilitate collaborative and parallel planning by providing critical information to allow subordinates to start necessary planning and preparation activities.

COMMANDER, STAFF, AND SUBORDINATE HEADQUARTERS INTERACTION

5-6. The MDMP is designed to develop shared understanding through interaction between the commander, staff, and subordinate headquarters. This iterative interaction allows for a concurrent, coordinated effort that fosters flexibility, efficiently uses available time, and facilitates continuous information sharing. Internally, this interaction allows the staff to receive guidance from the commander and resolve issues as they arise. Additionally, it provides a structure and framework for the staff to work collectively and produce a coordinated plan. Externally, the MDMP facilitates information sharing among headquarters. As decisions, information, and staff products become available, the higher headquarters sends them to subordinates in WARNORDs. WARNORDs facilitate parallel planning by providing critical information to allow subordinates to start necessary planning and preparation activities.

Role of the Commander

5-7. Commanders are the most important participants in the MDMP. Through their presence and actions, commanders actively drive this portion of the operations process. More than simply decision makers, commanders use their experience, knowledge, and judgment to guide staff planning efforts. During the MDMP, commanders focus their activities on understanding and visualizing the OE and describing their commander's visualization. While unable to devote all their time to the MDMP, commanders follow the status of the planning effort, participate during critical points of the process, provide guidance, and make decisions based on the detailed work of their staff. The commander issues guidance throughout the MDMP including, but not limited, to the following:

- Upon receipt of or in anticipation of a mission (initial planning guidance).
- Following mission analysis (planning guidance for COA development, the desired end state and commander's intent).
- Following COA development (revised planning guidance for COA analysis).
- During COA approval (revised planning guidance to complete the plan).
- Upon receipt of new information that invalidates assumptions or changes understanding of the OE.

5-8. Commanders use their experience and judgment to add depth and clarity to their planning guidance. They ensure staffs understand the broad outline of their visualization while allowing the latitude necessary to explore different options. This guidance provides the basis for a detailed concept of operations without dictating the specifics of the final plan. As with their intent, the commander may modify planning guidance based on staff and subordinate input and changing conditions.

5-9. Figure 5-1 lists several interactions between the commander and staff to discuss, assess, and approve or disapprove planning products or efforts. The left side of the figure shows key commander actions. However, experience has shown that optimal planning results when the commander meets informally at frequent intervals in addition to identified briefings with the staff throughout the MDMP. Such informal interactions between the commander and staff can improve the staff's understanding of the situation and ensure the staff's planning efforts adequately reflect the commander's visualization of the operation. Informal interactions can also provide answers to concerns prior to briefings, ensuring the best use of available time.

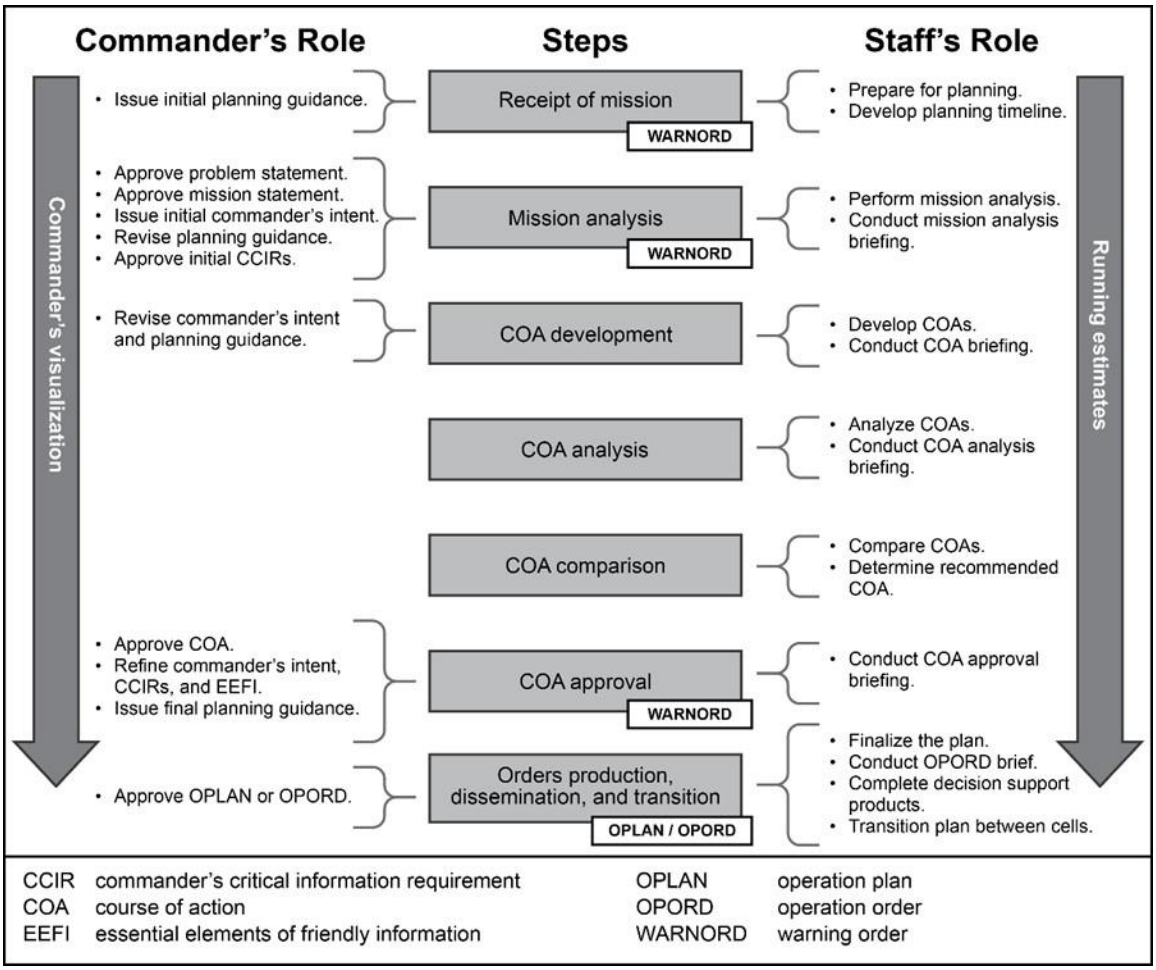


Figure 5-1. Commander and staff interaction

Role of the Staff

5-10. The staff's effort during the MDMP focuses on assisting the commander in understanding the situation, making decisions, and synchronizing those decisions into a fully developed plan or order. The chief of staff (COS) or executive officer (XO) coordinates the staff's work and performs quality control during the MDMP. To effectively supervise the entire process, this officer must clearly understand the commander's intent and planning guidance. The COS or XO generally approves planning timelines, establishes briefing times and locations, and provides instructions necessary to complete the plan. A lead planner, normally from the assistant chief of staff, plans (G-5), or assistant chief of staff, operations (G-3) or battalion or brigade operations staff officer (S-3) assists the COS or XO and is responsible for detailed coordination and synchronizing the staff's work throughout the MDMP. (See paragraphs 1-75 through 1-83 for a discussion of planning cells and teams.)

5-11. Throughout the planning process, staff officers prepare recommendations informed by updated running estimates with accurate information and assessments within their functional areas of expertise. Staffs must seek clarification and guidance as necessary to ensure planning time is not wasted. Staff activities during planning initially focus on mission analysis which is informed by updated and accurate running estimates brought to planning. (See Appendix C for a detailed discussion of running estimates.) The products that staffs develop during mission analysis often help commanders better understand the situation and develop or refine their visualization. During COA development staffs create options for commanders to review based on the planning guidance provided to them. During COA comparison staffs conduct detailed analysis and provide recommendations to commanders in selecting a COA. After the commander approves a COA, the staff

prepares the plan or order to direct subordinate action that reflects the commander's intent, coordinating all necessary details. Key staff activities during the MDMP are listed on the right side of figure 5-1.

STEPS OF THE MILITARY DECISION-MAKING PROCESS

5-12. The MDMP consists of seven steps. Each step of the MDMP has a purpose, inputs, substeps, and outputs. The outputs of each step lead to an increased understanding of the situation and facilitate the next step of the MDMP. Commanders and staffs generally perform these steps sequentially, and they may revisit steps as necessary. Commanders and staffs consider and apply the fundamentals of planning (discussed in Chapter 1) and operational art (discussed in Chapter 2) as they conduct the MDMP. (Refer to ATP 5-0.2-1 for further information on detailed planning factors, offensive considerations, and defensive considerations.)

STEP 1-RECEIPT OF MISSION

5-13. The MDMP begins upon receipt of a mission from higher echelon headquarters or in anticipation of a new mission. Commanders often initiate a planning effort based on their visualization and changes to the situation without a formal directive from their higher headquarters. Even with a higher headquarters' directive, commanders and staffs often begin the MDMP in the absence of a complete higher echelon OPLAN or OPORD. In these instances, they start planning based on a WARNORD, a planning order, an alert order from higher headquarters, or guidance from their commander. This requires active collaboration with the higher headquarters as the plan or order is developed.

5-14. The purpose of this step is to establish conditions for successful planning. This step focuses on alerting the staff, forming the planning team, assessing available time for planning, and deciding on a planning approach. Figure 5-2 lists the key inputs, substeps, and key outputs for receipt of mission.

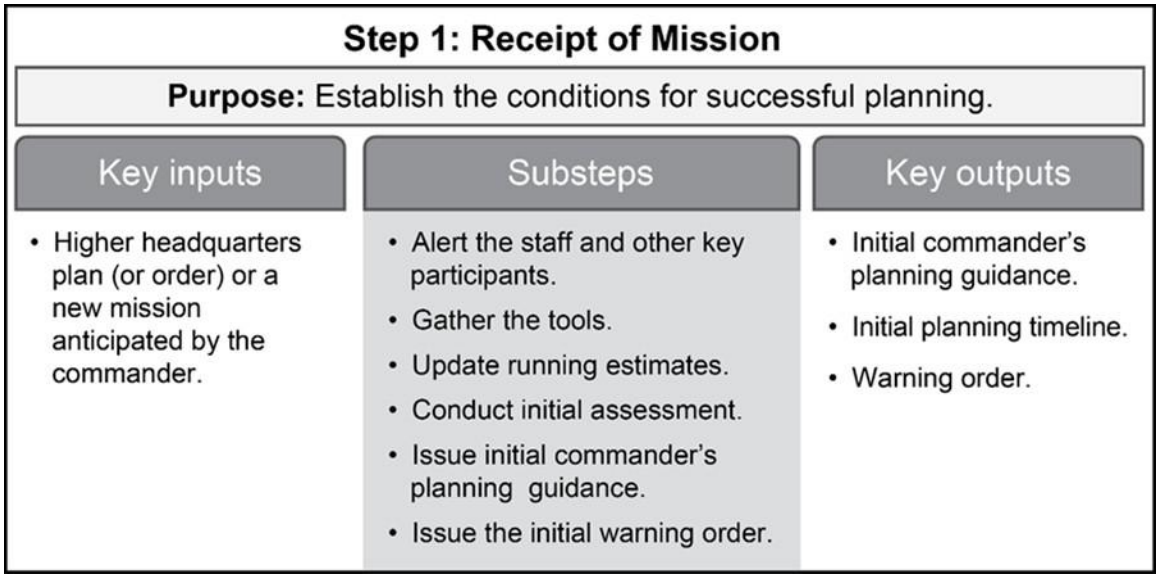


Figure 5-2. Receipt of mission

Note. While step 1 (receipt of mission) and step 2 (mission analysis) are listed as two distinct steps of the MDMP, staff members need not wait until all activities of receipt of mission are complete before starting activities associated with mission analysis. Initiating IPOE, for example, should begin as early as possible.

Alert the Staff and Other Key Participants

5-15. When the unit receives a new mission or a planning requirement is identified, the staff is alerted and begins necessary preparation. There are times when staff members will need to alert the commander to an order. When the commander is alerted, staffs often conduct a backbrief to the commander to share

understanding and enable the commander to more quickly develop a visualization. Unit standard operating procedures (SOPs) should establish notification procedures and identify standard planning teams based on the anticipated planning effort. A planning team normally consists of a lead planner from the G-5, G-3, or S-3 sections and representatives from each warfighting function. Additional staff members by area of expertise, liaison officers, and unified action partners are added to the team as required. When trying to plan collaboratively, those organizations or subordinate units must be notified to ensure the right personnel are identified to support the planning effort. Typically, for new missions or large planning efforts, the planning team may consist of representatives from all staff sections and unit liaison officers. For development of a branch plan, the planning team may consist of the core planners from the future operations cell. Notification may prove more difficult when planning team members are not geographically co-located. Network limitations must also be considered if a distributed planning effort becomes necessary. (See Chapter 1 for a discussion of planning teams.)

Gather the Tools

5-16. Once notified of the new planning requirement, the staff prepares for mission analysis by gathering the needed tools for planning. These tools include, but are not limited to—

- Documents related to the mission and assigned area, including the higher headquarters' plans and orders, maps and terrain products, and operational graphics.
- Higher headquarters' and other organizations' intelligence and assessment products.
- Estimates and products of other military and civilian agencies and organizations.
- The unit's and higher headquarters' SOPs which at a minimum includes the planning SOP.
- Current running estimates.
- ADM products, including products describing the OE, problem, and operational approach (if applicable).
- Appropriate doctrinal publications.

5-17. Planners carefully review the reference section (located before paragraph 1. Situation) of the higher headquarters' OPLANs and OPORDs to identify documents (such as theater policies and memoranda) related to the upcoming operation. If the pending operation includes relieving or replacing another unit, the staff begins collecting relevant documents—such as the current OPORD, branch plans, current assessments, operations and intelligence summaries, and SOPs—from that unit.

Update Running Estimates

5-18. Upon receipt of mission, each staff section verifies and updates its running estimate—especially the status of friendly units and resources that affect each functional area. Running estimates not only compile critical facts and necessary assumptions from the perspective of each staff section, but they also include related information from other military and civilian organizations. All staff sections should also pay particular attention during planning to those aspects of information-related activities or capabilities that impact their functional areas. The information and assessments on running estimates constantly change, and staffs must ensure they remain updated and relevant. Running estimates often form the basis for commanders to make timely and informed decisions throughout the operations process, and they are critical for development of a plan or an order. While listed at the beginning of the MDMP, updating running estimates continues throughout the planning and operations processes. (See Appendix C for more information on running estimates.)

Conduct Initial Assessment

5-19. The commander and staff conduct an initial assessment of time and resources available to plan, prepare, and begin execution of an operation. Typically, the assessment is done with a small group from the planning team. Ideally the initial assessment is done collaboratively with the commander and staff, but there are times when the staff conducts the initial assessment and then later informs the commander. This initial assessment helps commanders determine—

- Time available from mission receipt to mission execution.
- The time needed to plan and prepare for the mission for both headquarters and subordinate units.
- The staff's experience, cohesiveness, and level of rest or stress.

- Whether or not to conduct ADM.
- How to abbreviate the MDMP if under a time constraint.
- Guidance on when to use the rapid decision-making and synchronization process (RDSP) during execution.
- Planning team composition.
- Time required to position critical elements, including command and control nodes for upcoming operations.
- Which outside agencies and organizations to contact and incorporate into the planning process.
- Other preparations the commander, staff, or subordinate units need to conduct before beginning planning.

5-20. The initial assessment also helps determine when to begin certain actions to ensure forces are ready and in position before execution. This may require the commander to direct subordinates to start necessary movements, conduct task organization changes, begin information collection, and execute other preparation activities before completing the plan.

5-21. Commanders and staffs allocate available planning time to prioritize different steps of the MDMP based on the given situation. For example, when conducting initial planning for a new operation, more time may be allocated to mission analysis than the other steps to develop a better understanding of the problem and OE. Time allocations will vary based on a variety of factors such as experience of the planning staff, products already available, and commander involvement. Table 5-1 depicts an example planning time allocation.

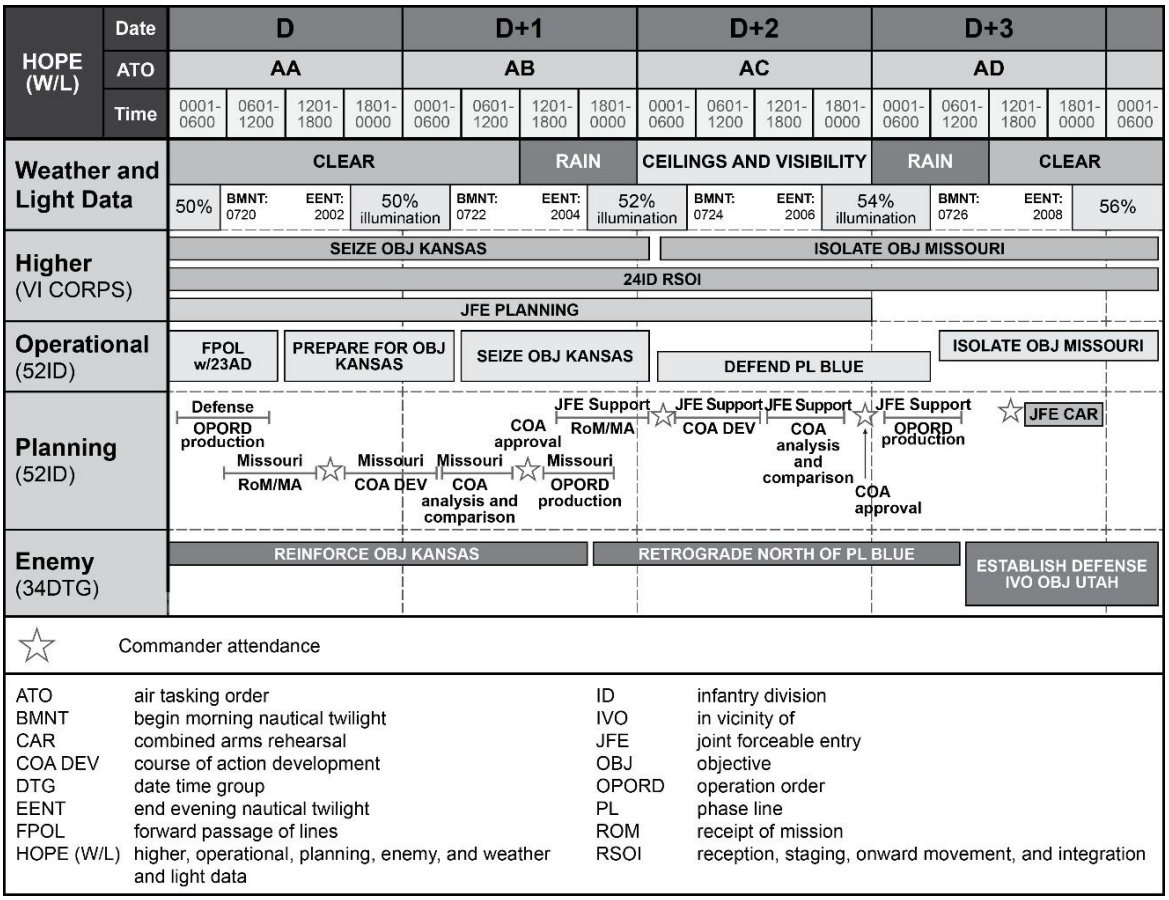
Table 5-1. Planning time allocation

<table>
<tr><th>MDMP step</th><th>General time allocation</th><th>Refined time allocation</th></tr>
<tr><td>Receipt of mission</td><td rowspan="3">50 percent</td><td rowspan="2">30-35 percent</td></tr>
<tr><td>Mission analysis</td></tr>
<tr><td>COA development</td><td>15-20 percent</td></tr>
<tr><td>COA analysis</td><td rowspan="3">50 percent</td><td rowspan="3">30-35 percent</td></tr>
<tr><td>COA comparison</td></tr>
<tr><td>COA approval</td></tr>
<tr><td>Orders production</td><td>15-20 percent</td></tr>
<tr><td colspan="3">COA course of action</td></tr>
</table>

Note. The initial time allocation is made during Step 1 to guide initial planning efforts. The commander and staff continue to adjust it as they gain a better understanding of time available during the following steps of the MDMP.

5-22. Commanders and staffs balance a desire for detailed planning against a need for more immediate action. Time, more than any other factor, determines the detail to which the commander and staff can plan. The commander provides guidance to subordinate units as early as possible to allow subordinates the maximum time for their own planning and preparation of operations. As a rule, commanders allocate a minimum of two-thirds of available time for subordinate units to conduct their planning and preparation. This leaves one-third of the time for commanders and their staffs to do their planning and publish an order. They use the other two-thirds for their own preparation. Commanders should consider when an order is issued to subordinate units. For example, an order transmitted at 0300 to meet the one-third, two-thirds rule may not give subordinate units adequate time to effectively plan.

5-23. Commanders and staffs also consider their higher echelon headquarters' timeline, their operational timeline, their planning timeline, anticipated enemy timelines, light and weather, and other essential factors. A useful technique to help the commander and staff visualize the relationships and synchronization between these timelines is to build a higher, operational, planning, enemy, and weather and light data timeline (also known as a HOPE[W/L] timeline). Figure 5-3 depicts a sample higher, operational, planning, enemy, and weather and light data timeline.



ATO	air tasking order	ID	infantry division
BMNT	begin morning nautical twilight	IVO	in vicinity of
CAR	combined arms rehearsal	JFE	joint forceable entry
COA DEV	course of action development	OBJ	objective
DTG	date time group	OPORD	operation order
EENT	end evening nautical twilight	PL	phase line
FPOL	forward passage of lines	ROM	receipt of mission
HOPE (W/L)	higher, operational, planning, enemy, and weather and light data	RSOI	reception, staging, onward movement, and integration

Figure 5-3. Sample higher, operational, planning, enemy, and weather and light data timeline

5-24. Based on the commander's initial allocation of time, the COS or XO approves a detailed staff planning timeline that outlines how long the headquarters can spend on each step of the MDMP. The staff planning timeline indicates what products are due, when they are due, who is responsible for them, and who receives them. It includes times and locations for meetings and briefings. It serves as a benchmark for the commander and staff throughout the MDMP.

Issue Initial Commander's Planning Guidance

5-25. After doing the initial substeps of receipt of mission, commanders issue their initial planning guidance. Although brief, the initial guidance includes—

- Initial time allocations.
- Guidance on the planning approach (initiate ADM, conduct the full MDMP, or abbreviate the MDMP).
- Necessary coordination to perform, including liaison officers to exchange.
- Authorized movements to initiate.
- Focus areas during mission analysis.
- Information collection guidance, including reconnaissance and surveillance instructions.
- Initial information requirements.
- Additional staff tasks.

Note. If the situation permits, the commander and staff may choose to conduct a receipt of mission briefing. This optional briefing would usually include a review of running estimates, a summary of the initial assessment, an overview of the planning timeline, and allow the commander to personally issue initial commander's planning guidance prior to beginning mission analysis.

5-26. The last substep in receipt of mission is to issue a WARNORD to subordinate and supporting units. This order includes as much relevant information as the staff knows, and at a minimum it includes the type of operation, the general location of the operation, the initial timeline, and any movement or information collection to initiate. The WARNORD may be written or verbal, depending on time available. (See Appendix D for the WARNORD format.) This WARNORD generally contains—

- The type of operation.
- The general location of the operation.
- The initial operational timeline.
- Any movements necessary to initiate.
- Any collaborative planning sessions directed by the commander.
- Commander's critical information requirement (CCIRs).
- Initial information collection tasks.

STEP 2-MISSION ANALYSIS

5-27. The MDMP continues with an assessment of the situation called mission analysis. The commander and staff conduct mission analysis to better understand the situation and problem, and identify *what* the command must accomplish, *when* and *where* it must be done, and most importantly *why*—the purpose of the operation. Based on this understanding, commanders issue their initial commander's intent and planning guidance to guide the staff in COA development. Figure 5-4 lists the key inputs, activities, and key outputs for this step.

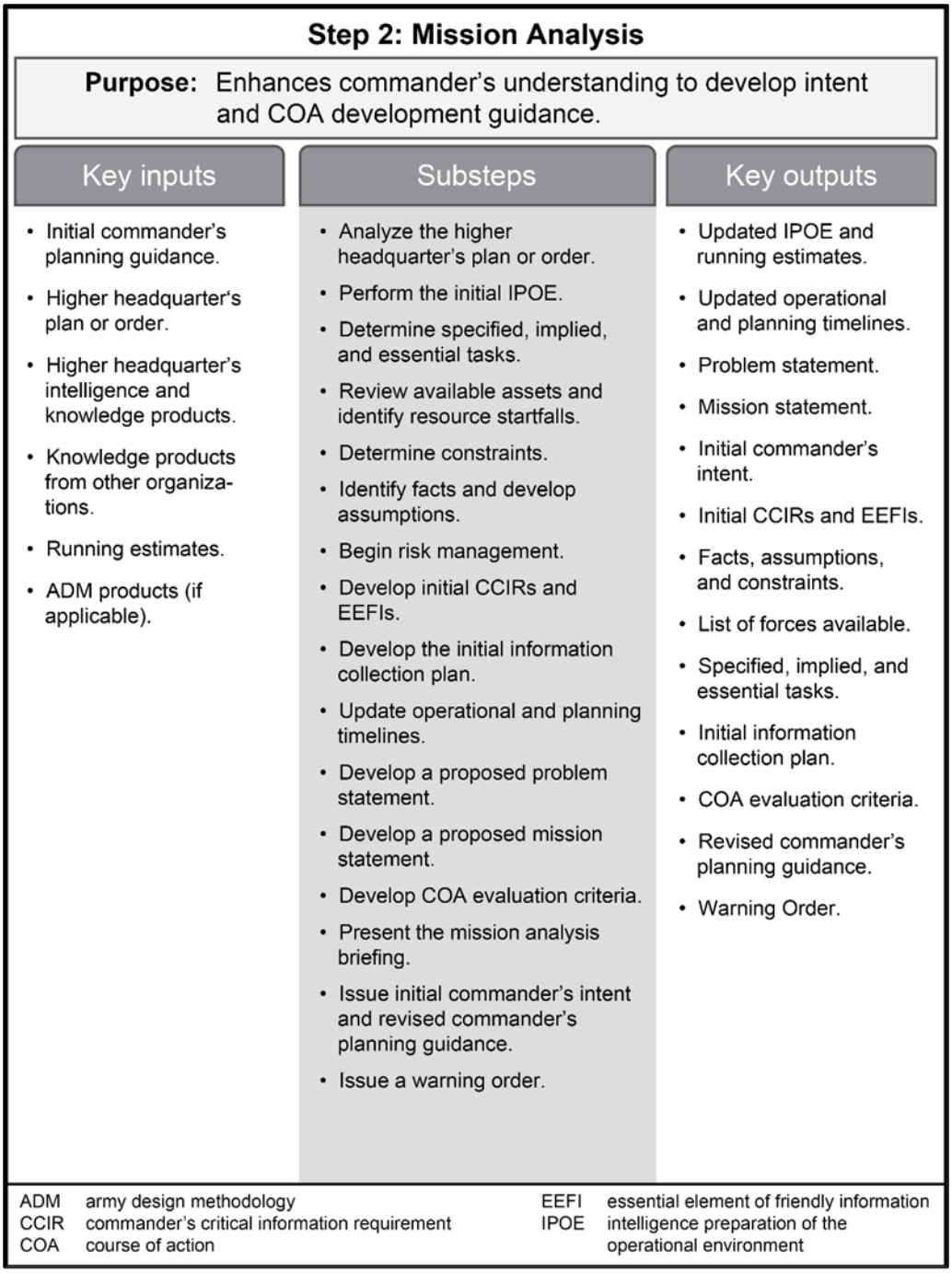


Figure 5-4. Mission analysis

Analyze the Higher Headquarters' Plan or Order

5-28. Commanders and staffs thoroughly analyze the higher headquarters' plan or order. They determine how their unit-by task and purpose-contributes to the mission, commander's intent, and concept of operations of the higher headquarters. The commander and staff seek to completely understand—

- The commander's intent and mission of the higher headquarters' two echelons above the unit.
- The higher headquarters'—

- Commander's intent.
- Mission.
- Concept of operations.
- Available assets.
- Timeline.

- Their assigned areas.
- The missions of adjacent, supporting, and supported units and their relationships to the higher headquarters' plan.
- The missions or goals of unified action partners that work in the operational areas.

5-29. When developing the concept of operations, commanders ensure their concept is nested in that of their higher headquarters. A way for commanders and staffs to understand their unit's contribution to the higher headquarters' concept is to develop a nesting diagram. The nesting diagram assists the staff in reviewing the vertical and horizontal relationships of units within the higher echelon commander's concept. A nesting diagram provides a snapshot of the relationship between the main effort and its supporting efforts. In the diagram the main effort of each echelon nests vertically, demonstrating how each main effort directly contributes to accomplishing the next higher headquarters' mission. Supporting efforts branch out horizontally at each echelon, demonstrating how they set conditions and support the main effort at that echelon. (See figure 5-5 for an example of a nesting diagram.)

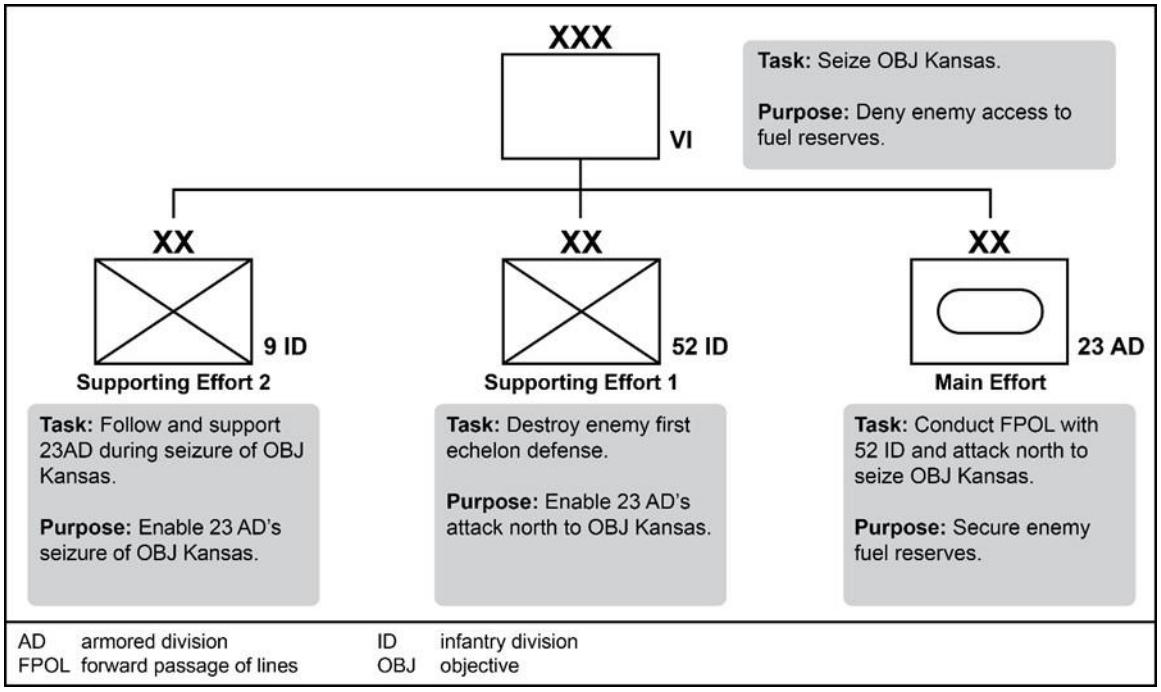


Figure 5-5. Example nesting diagram 1

Perform Initial Intelligence Preparation of the Operational Environment

5-30. *Intelligence preparation of the operational environment* is the systematic process of analyzing the mission variables of enemy, terrain, weather, and civil considerations in an area of interest to determine their effect on operations (ATP 2-01.3). The IPOE process provides numerous outputs used throughout the MDMP, and it consists of four steps:

- Define the OE.
- Describe environmental effects on operations.
- Evaluate the threat.
- Determine threat COAs.

5-31. In addition to developing understanding, IPOE identifies critical gaps in the commander's knowledge of an OE. As a part of the initial planning guidance, commanders use these gaps as a guide to establish their initial CCIRs and intelligence requirements. IPOE products enable the commander to assess facts about the OE and make assumptions about how friendly and threat forces will interact in the OE. The description of the OE's effects identifies constraints on potential friendly COAs. It also identifies key aspects of the OE, such as avenues of approach, engagement areas, and landing zones, which the staff integrates into potential friendly COAs and their running estimates. For mission analysis, the intelligence staff, along with the other staff elements, use IPOE to develop detailed threat COA models, which depict COAs available to the threat. The threat COA models provide a basis for formulating friendly COAs and completing the intelligence estimate.

5-32. The intelligence staff, in collaboration with the rest of the staff, develops IPOE products during mission analysis and uses them throughout the MDMP. These products should include—

- Draft initial priority intelligence requirements (PIRs).
- Complete modified combined obstacle overlay (MCOO).
- High-value target (HVT) list.
- Unrefined event templates and matrices.

5-33. IPOE should also provide an understanding of the threat's center of gravity. Oftentimes, a discussion and better understanding of the center of gravity, relationships, and critical vulnerabilities can then be exploited by friendly forces. (See Appendix G for more information on IPOE or refer to ATP 2-01.3 for details on conducting IPOE.)

Determine Specified, Implied, and Essential Tasks

5-34. The staff members analyze their higher echelon headquarters' order and their higher commander's guidance to determine their specified and implied tasks. In the context of operations, a *task* is a clearly defined action or activity specifically assigned by an appropriate authority to an individual or organization, or derived during mission analysis, that must be accomplished (JP 1, Volume 1). The staff's analysis of each task must be sufficiently detailed to advance the commander's understanding of what is required and inform future COA development. From the list of specified and implied tasks, the staff selects one or two essential tasks for inclusion in the recommended mission statement.

5-35. A ***specified task*** **is a task specifically assigned to a unit by its higher headquarters**. Paragraphs 2 and 3 of the higher headquarters' OPLAN or OPORD state specified tasks. Some tasks may be in paragraphs 4 and 5, with additional specified tasks listed in annexes and overlays. They may also be assigned verbally during collaborative planning sessions or in WARNORDs from the higher echelon unit.

5-36. An ***implied task*** **is a task that must be performed to accomplish a specified task or mission but is not stated in the higher headquarters' order.** Implied tasks are derived from a detailed analysis of the higher headquarters' order, the enemy situation, the terrain, and civil considerations. Additionally, analysis of doctrinal requirements for each specified task might disclose implied tasks.

5-37. When analyzing the higher echelon order for specified and implied tasks, the staff also identifies any on-order or be prepared missions. An ***on-order mission*** **is a mission to be executed at an unspecified time**. A unit with an on-order mission is a committed force. Commanders envision task execution in the concept of operations; however, they may not know the exact time or place of execution. Subordinate commanders develop plans and orders and allocate resources, task-organize, and position forces for execution. A ***be-prepared mission*** **is a mission assigned to a unit that might be executed.** A unit with a be-prepared mission is not a committed force. Generally a contingency mission, commanders execute it because something planned has or has not been successful. In planning priorities, commanders plan a be-prepared mission after any on-order mission.

5-38. Once staff members have identified specified and implied tasks, they ensure understanding of each task's requirements and purpose. The staff then identifies one or two essential tasks. An essential task is a specified or implied task that must be executed to accomplish the mission. Essential tasks are always included in the unit's mission statement.

Review Available Assets and Identify Resource Shortfalls

5-39. The commander and staff analyze the current task organization, command and support relationships, and status (including current capabilities and limitations) of all units, specifically identifying changes. This analysis also includes capabilities of civilian and military organizations (including joint and multinational) that operate within their unit's assigned area or are otherwise designated to support. They consider relationships among specified, implied, and essential tasks and available assets. Staff officers use the capabilities and resources recorded in their running estimates as a starting point for their analysis. From this analysis, staffs conduct an initial assessment to determine if they have the resources needed to complete all tasks. Staffs may also conduct a preliminary relative combat power assessment to give commanders a rough comparison of friendly and enemy maneuver units. If obvious shortages are identified in any area, they may request from higher headquarters any additional resources or units believed necessary for mission success. Staffs also identify any deviations from the normal task organization and provide them to commanders to understand and consider when developing the planning guidance. A more detailed analysis of available assets and relative combat power occurs during COA development.

Determine Constraints

5-40. The commander and staff identify any constraints placed on their command. A ***constraint*** **is a restriction placed on the command by a higher command.** A constraint dictates an action or inaction, thus restricting the freedom of action of a subordinate commander. Constraints are found in paragraph 3 of the OPLAN or OPORD. Annexes to the order may also include constraints. The operation overlay, for example, may contain a restrictive fire line or a no-fire area. Constraints may also be issued verbally, in WARNORDs, or in policy memoranda. Staff officers may use relevant constraints recorded in their running estimates as a starting point to their analysis.

5-41. Constraints could also be based on resource limitations in the command, information release restrictions, or legal constraints. Resource limitations may include the number of capabilities provided or the availability of collection capabilities to support an operation. The staff judge advocate provides review of legal constraints. The constraints may include rules of engagement or authorities in the OPLAN, OPORD, or related documents.

Identify Facts and Develop Assumptions

5-42. Plans and orders are based on facts and assumptions. Commanders and staffs gather facts and develop assumptions as they build their plan. Staff officers capture relevant facts and assumptions in their running estimates. A fact is a statement of truth or a statement thought to be true at the time. Facts concerning the operational and mission variables serve as the basis for developing situational understanding, for continued planning, and when assessing progress during preparation and execution.

5-43. Assumptions address gaps in knowledge that are critical for the planning process to continue and allow commanders to make the best COA decision. Assumptions must be continually reviewed to ensure validity, and they must be challenged if they appear unrealistic. Staffs continually review and collect information on assumptions to turn into facts as quickly as possible. This includes directing reconnaissance and surveillance activities in the unit's information collection plan to help validate assumptions. Key points concerning the use of assumptions include—

- List and understand all assumptions received from higher headquarters.
- State expected conditions over which the commander has no control but are relevant to the plan.
- Assumptions must be logical, realistic, and considered likely to be true.
- Assumptions are necessary for continued planning.
- Too many assumptions result in a higher probability that the plan or proposed solution may be invalid.
- Using assumptions initiates development of branches to plans and orders.
- Often, an unstated assumption or an assumption mislabeled as a fact may prove more dangerous than a stated assumption proven wrong.

5-44. Having assumptions requires commanders and staffs to continually attempt to replace those assumptions with facts. Assumptions are not stagnant, and all efforts should be made as early as identified

and possible to confirm or deny the validity of assumptions. The commander and staff should list and review the key assumptions on which fundamental judgments rest throughout the MDMP. Rechecking assumptions is valuable at any time during the operations process prior to rendering judgments and making decisions.

Begin Risk Management

5-45. Risk is the exposure of someone or something valued to danger, harm, or loss, and it is inherent in all operations. Because risk is part of all military operations, it cannot be avoided. Success during operations depends on a willingness to identify, mitigate, and accept risk to create opportunities and counter threats. Identifying, mitigating, and accepting risk is a function of command, supported by staff members, and it is a key consideration during planning. (See paragraphs 2-80 through 2-82 for a discussion of risk as an element of operational art.)

5-46. *Risk management* is the process to identify, assess, and mitigate risks and make decisions that balance risk cost with mission benefits (JP 3-0). During mission analysis, commanders and staffs focus on identifying and assessing risks to the mission and risks to force. When considering how much risk to accept, commanders need to balance the tension between protecting the force and accepting risks that must be taken to accomplish their mission. They develop specific control measures to mitigate those hazards during COA development. The risk management process, typically done by the operations officer, planner, or safety officer consists of the following steps:

- Identify hazards.
- Assess hazards.
- Develop controls and make risk decisions.
- Implement controls.
- Supervise and evaluate.

(See Appendix G for more information on risk management during planning.)

Develop Initial CCIRs and EEFIs

5-47. A CCIR is an information requirement the commander identifies as being critical to facilitating timely decision making. CCIRs are situation-dependent and specified by the commander for each operation. During mission analysis, the staff identifies gaps in information required for further planning and decision making during preparation and execution. These gaps may become information requirements. Some information requirements are of such importance that staffs recommend them to the commander to become a CCIR. All staff sections can recommend CCIRs to the commander. The intelligence officer consolidates and manages PIRs for the commander, and the operations officer consolidates and manages friendly force information requirements (FFIRs). All remaining information requirements which are not CCIRs are managed by the appropriate staff section.

5-48. Commanders continuously review CCIRs and adjust them as the situation changes. The initial CCIRs developed during mission analysis focus on information gaps a commander needs to understand to assist in planning. Once a COA is selected, CCIRs generally shift to identifying and informing decision points during operations. Typically, commanders seek to minimize the number of CCIRs to assist in prioritizing the allocation of limited resources. A CCIR is—

- Specified by a commander for a specific operation.
- Applicable only to the commander who specifies it.
- Situation dependent and directly linked to a current or future mission.
- Time sensitive.
- A critical input to the decision support template (DST) and decision support matrix (DSM).

5-49. In addition to recommending CCIRs to the commander, the staff also identifies and recommends essential elements of friendly information (EEFIs). EEFIs identify those elements of friendly force information that, if compromised, would jeopardize mission success and therefore need to be protected. Their identification is the first step in the operations security (OPSEC) process which is used to develop measures to protect EEFIs from compromise. Although EEFIs are not CCIRs, they have the same priority as CCIRs, and they require approval by the commander. Like CCIRs, EEFIs may change as an operation progresses.

5-50. Depending on the situation, the commander and select staff members may meet prior to the mission analysis brief to review and approve the initial CCIRs and EEFIs. This is especially important if the commander intends to conduct information collection early in the planning process. The approval of the initial CCIRs early during planning assists the staff in developing the initial information collection plan. Approval of an EEFI allows the staff to begin planning and implementing measures to protect friendly force information, such as military deceptions and OPSEC measures.

Develop the Initial Information Collection Plan

5-51. *Information collection* is an activity that synchronizes and integrates the planning and employment of sensors and assets as well as the processing, exploitation, and dissemination systems in direct support of current and future operations (FM 3-55). An initial information collection plan relies on information gaps identified during IPOE to identify information collection requirements. Initial collection efforts are prioritized to answer initial CCIRs before answering the remaining information requirements.

5-52. The initial information collection plan is crucial to help answer CCIRs and other information requirements necessary in developing effective plans and orders to execute operations. The intelligence staff evaluates significant characteristics to identify gaps and initiate information collection efforts. The initial information collection plan sets reconnaissance, surveillance, security, and intelligence operations in motion. The initial information collected and analyzed is then incorporated into COA development to further refine and develop the plan. As more information is analyzed, and CCIRs are updated, a fully developed and complete information collection plan (Annex L) is incorporated into the order or plan.

5-53. The intelligence staff creates the requirements management tools for the information collection plan. During this step, the operations and intelligence staff work closely to ensure they fully synchronize and integrate information collection activities into the overall plan.

5-54. The operations and intelligence staff consider several factors when developing the initial information collection plan. These include—

- Prioritization of CCIRs.
- Requirements for collection assets in subsequent missions.
- The time available to develop and refine the initial plan.
- The risk the commander is willing to accept if information collection missions are initiated before the information collection plan is fully integrated into the scheme of maneuver.
- Insertion and extraction methods for reconnaissance, security, surveillance, and intelligence collection assets.
- Contingencies for inclement weather to ensure coverage of key named areas of interest (NAIs) or target areas of interest (TAIs).
- The communication plan between command posts and the collection asset.
- The inclusion of collection asset locations and movements into the fire support plan.
- The reconnaissance handover with higher or subordinate echelons.
- The sustainment support.
- Legal support requirements.

FM 3-55 and ATP 2-01 contain additional information on information collection, planning requirements, and assessing collection. (See Appendix G for further discussion on information collection throughout the MDMP.)

Update Operational and Planning Timeline

5-55. As more information becomes available, the commander and staff refine their initial plan for the use of available time. They update the operational timeline by comparing the time needed to accomplish tasks to the higher headquarters' timeline to ensure mission accomplishment is possible in the allotted time. They compare the operational timeline to the assumed enemy timeline with how they anticipate conditions will unfold. From this, they determine windows of opportunity for exploitation, times when the unit will be at increased risk for enemy activity, or when action to reduce deterioration in the local civilian population may be required.

5-56. The commander and COS, XO, or planning lead also refine the planning timeline. The refined timeline reflects an understanding of time available and the battle rhythm of the commander to ensure briefings and updates are planned effectively. The updated planning timeline should also consider and nest whenever possible with external processes, such as the air tasking order, that are likely to impact the plan. At division echelons and higher, ensuring the plan has the details and decisions to support target nominations is an important consideration in developing the refined timeline. The refined timeline includes the—

- Subject, time, and location of briefings the commander requires.
- Times of collaborative planning sessions and the medium over which they will occur.
- Times, locations, and forms of rehearsals.

Develop a Proposed Problem Statement

5-57. A problem is an issue or obstacle that makes it difficult to achieve a desired goal, assigned mission, or task. The problem statement is the description of the primary issue or issues that may impede commanders from achieving their desired end states. How much time is spent defining the problem is generally proportional to the necessity of developing further understanding of an OE as it relates to the mission and perceived complexity.

Note. If a problem statement was developed during ADM, it is reviewed during mission analysis and revised as necessary based on the increased understanding of the situation.

5-58. How the problem is formulated leads to particular solutions. It is important that commanders dedicate the time to identify the right problem to solve and describe it clearly in a problem statement. Ideally, the commander and staff meet to share their analysis of the situation. They talk with each other, synthesize the results of the current mission analysis, and determine the problem. If the commander is not available, the planning staff members discuss the problem among themselves. As part of the discussion to help identify and understand the problem, the staff—

- Compares the current situation to the desired end state.
- Brainstorms and lists issues that impede the commander from achieving the desired end state.
- Analyzes and provides a proposed or revised problem statement.

Note. The problem statement is not simply a re-statement of the objective. Rather, it is what the commander and staff believe to be the most significant challenges to achieving the objective. This helps focus the planning staff on what challenges or limiting conditions must be overcome to achieve the commander's desired end state.

Develop a Proposed Mission Statement

5-59. A *mission statement* is a short sentence or paragraph that describes the organization's essential task(s), purpose, and action containing the elements of who, what, when, where, and why (JP 5-0). The unit mission statement, along with the commander's intent, provide the primary focus for subordinate actions during planning, preparing, executing, and assessing. The commander either directs or receives and approves, modifies, or rejects the staff's proposed mission statement. Generally, the mission statement is approved during the mission analysis brief or shortly after the brief prior to moving forward in the process.

5-60. The *who*, *where*, and *when* of a mission statement are straightforward. The *what* and *why* are more challenging to write and can confuse subordinates if not stated clearly. The *what* of a mission statement is always a task and expressed in terms of action verbs. The task within a mission statement is not required to be a tactical mission task. It may be any task deemed essential to the mission. The *why* puts the task into context by describing the reason it is performed. The *why* provides the mission's purpose—the reason the unit is to perform the task and how it is intended to contribute to the higher echelon headquarters' success. It is integral to mission command and mission orders. With discussion and coordination from higher headquarters, subordinate commands may adjust the task, but not the purpose. The five elements of a mission statement answer these questions:

- Who will execute the operation (unit or organization)?
- What is the unit's essential task?
- When will the operation begin (by time or event) or what is the duration of the operation?
- Where will the operation occur (assigned areas, objective, or graphic control measure)?
- Why will the force conduct the operations (for what purpose)?

Example 1. 1-505th Parachute Infantry Regiment (**who**) seizes (**what or task**) AREA NOTIONAL INTERNATIONAL AIRPORT (**where**) not later than D-day, H+3 (**when**) to allow follow-on forces to air-land into AO SPARTAN (**why or purpose**).

Example 2. Not later than 220400 August 19 (**when**), 1st Brigade (**who**) secures ROUTE SOUTH DAKOTA (**what or task**) in AO JACKRABBIT (**where**) to enable the movement of humanitarian assistance materials (**why or purpose**).

5-61. The following example shows a mission statement for a phased operation with a different essential task for each phase.

Example. 1-509th Parachute Infantry Regiment (**who**) seizes (what or task) AREA INTERNATIONAL AIRPORT (**where**) not later than D-day, H+3 (**when**) to allow follow-on forces to air-land into AO SPARTAN (**why or purpose**). On order (**when**), secures (**what or task**) OBJECTIVE GOLD (**where**) to prevent the 2nd Guards Brigade from crossing the BLUE RIVER and disrupting operations in AO SPARTAN (**why or purpose**).

5-62. A *tactical mission task* is the specific activity a unit performs while executing a tactical operation or form of maneuver (FM 3-90). When a tactical mission task is used in a mission statement, planners should ensure they use doctrinally approved tasks and confirm current definitions contained in doctrinal publications. These tasks often have specific military definitions that differ from standard dictionary definitions.

Develop Course of Action Evaluation Criteria

5-63. Evaluation criteria are standards the commander and staff will later use to measure the relative effectiveness and efficiency of one COA relative to other COAs. Developing these criteria during mission analysis to eliminate a source of bias prior to COA analysis and comparison and identifies what data needs to be captured in COA analysis. These criteria address factors that affect success and those that can cause failure. Criteria change from mission to mission, and they must be clearly defined and understood by all staff members before proceeding with COA analysis. Examples of evaluation criteria may include—

- Limitations on casualties.
- Speed.
- Opportunity to maneuver.
- Risk.
- Logistic supportability.
- Force protection.
- Time available and timing of the operation.
- Political considerations.

5-64. Normally, the COS or XO initially determines each proposed criterion with weights based on the assessment of its relative importance and the commander's guidance. Commanders adjust criteria selection and weighting according to their own experience and vision. Higher weights are assigned to more important criteria. The staff presents the proposed evaluation criteria to the commander during the mission analysis brief for approval. Evaluation criteria must be measurable and easily and clearly defined. Well-defined evaluation criteria have five elements:

- Short title—the criterion name.
- Definition—a clear description of the feature being evaluated.
- Unit of measure—a standard element used to quantify the criterion.

- Benchmark—a value that defines the desired state, or "good" for a solution in terms of a particular criterion.
- Formula—an expression of how changes in the value of the criterion affect the desirability of the possible solution. Planners state the formula in comparative terms (for example, more is better) or absolute terms (for example, a night movement is better than a day movement).

(See table 5-2 for an example of evaluation criteria.)

Table 5-2. Example evaluation criteria

Short Title	*Definition*	*Unit of Measure*	*Benchmark*	*Formula*
Casualties	Casualties taken during the entire operation	Number of casualties	136 casualties	Less than 136 is an advantage. Greater than 136 is a disadvantage. Less is better.
Tempo	How long it will take the enemy forces to reach PL RED	Hours	3 hours	Less than 3 hours is an advantage. Greater than 3 hours is a disadvantage. Longer is better.
Complexity	Number of task organization changes required	Number of task organization changes	7 task organization changes	Less than 7 is an advantage. Greater than 7 is a disadvantage. Less is better.

5-65. The process used does not in any way diminish the importance of the decision maker's judgment. Rather, it enables leaders to bring judgment to bear with greater precision and in problems of greater complexity than might otherwise be possible. Regardless of the method used to assign criteria weights, leaders state the rationale for each when recommending a solution to the decision maker.

Present the Mission Analysis Briefing

5-66. The mission analysis briefing informs the commander and staff of the results of the planning staff's analysis of the situation. It helps the commander further understand and visualize the operation and increases shared understanding throughout the unit. Throughout the mission analysis briefing, the commander, staff, and other partners discuss the various facts and assumptions about the situation. During the briefing, staff members present a summary of their running estimates from their specific functional areas and discuss how their findings impact, or are impacted by, other areas. This helps commanders and staffs to focus on the interrelationships among the mission variables and to develop a deeper understanding of the situation. During the mission analysis briefing or shortly thereafter, the commander approves the proposed mission statement, problem statement, initial information collection plan, and CCIRs. The commander then issues guidance to the staff for continued planning based on situational understanding gained from the mission analysis briefing, experience, and communication with other commanders and staff members.

5-67. The mission analysis briefing may include many different topics. It may include—

- Mission and commander's intent of the headquarters two echelons higher than the unit.
- Mission, commander's intent, and concept of operations of the headquarters one echelon higher than the unit.
- Review of the commander's initial guidance.
- Initial IPOE products that impact the conduct of operations.
- Specified, implied, and essential tasks.
- Pertinent facts and assumptions.
- Constraints.
- Forces available, including known command and support relationships and resource shortfalls.

- A proposed problem statement.
- A proposed mission statement.
- Proposed CCIRs and EEFIs.
- Initial information collection plan.
- Initial risk assessment.
- Recommended collaborative planning sessions.
- Updated operational and planning timelines.
- If ready, review or issue initial commander's intent and revised commander's planning guidance.

Issue Initial Commander's Intent and Revised Commander's Planning Guidance

5-68. Commanders provide their initial commander's intent and revised planning guidance either during or shortly after the mission analysis briefing. When able, commanders issue their intent and revised planning guidance in person to reinforce their importance to the staff and subordinate commanders. Both the items are vital inputs to COA development.

5-69. Based on their situational understanding, commanders describe and direct their visualization in their initial commander's intent statement and planning guidance. When ADM is conducted prior to, or simultaneously with, the MDMP, the initial intent produced with the operational approach is a starting point for the development of initial commander's intent. The commander's intent must be easy to remember and clearly understood by leaders two echelons lower in the chain of command. The shorter the commander's intent, the better it serves these purposes. During planning, the initial commander's intent drives COA development and may be general in nature. As planning progresses, commanders should evolve their intent to provide increased specificity as more information becomes available. During execution, the commander's intent establishes the overall measure of success for the unit and the limits within which a subordinate may exercise initiative. (See Chapter 1, or refer to ADP 5-0, for more information on commander's intent.)

5-70. The revised planning guidance outlines an operational approach which is a description of the mission, operational concepts, tasks, and actions required to accomplish it. This guidance may be broad or detailed, depending on the situation. It may outline specific COAs the commander directs the staff to analyze, or it identifies COAs the commander will not accept. Clear planning guidance allows the staff to develop several COAs without wasting effort on things that the commander will not consider. It also reflects how the commander sees the operation unfolding, and it broadly describes when, where, and how the commander intends to employ combat power to accomplish the mission.

5-71. Table 5-3 lists example commander's planning guidance by warfighting function. This list is neither intended to meet the needs of all situations, nor be all-inclusive. Providing guidance by warfighting function is not the only method. Commanders tailor planning guidance to meet specific needs based on the situation rather than address each item. Each item may not always fit neatly in a particular warfighting function, as it may be shared by multiple functions.

Table 5-3. Examples of commander's planning guidance by warfighting function

Command and Control	Communications guidance Emission control and status Commander's intent Course of action development guidance Number of courses of action to consider or not consider Phasing considerations Operational framework considerations Commander's critical information requirements Friendly decision points Critical events Task organization Rules of engagement Decisive points	Any condition that affects achievement of the end state Risk acceptance guidance Planning and operational timeline guidance Type of order and rehearsal Branches and sequels Commander's location Succession of command Command post positioning, survivability, and displacement Liaison officer guidance Civil affairs operations Emission control and status Requests for information Public affairs guidance
Intelligence	Information collection guidance Information gaps Most likely and most dangerous enemy courses of action	Scheme of intelligence Critical terrain and weather factors Critical local environment and civil considerations Intelligence focus during phased operations
Movement and Maneuver	Deception objectives and goals Task and purpose of maneuver units Scheme of maneuver including forms of maneuver Reserve composition, priorities, and control measures	Passage of lines Reconnaissance and security Collateral damage or civilian casualties Mobility and countermobility
Fires	Cyberspace electromagnetic activities and electromagnetic warfare Priority of fires Task and purpose of fires Synchronization and focus of fires with maneuver High-value targets High-payoff targets Special munitions guidance Target acquisition zones	Observer plan Air and missile defense positioning Scheme of fires Suppression of enemy air defenses Fire support coordination measures Attack guidance No strike list Restricted target list Desired threat perception of friendly forces Initial themes and messages
Protection	Network protection measures Protection priorities Scheme of protection development Prioritized protection list Air and missile defense positioning Operations security measures Terrain and weather factors Intelligence focus and limitations for security Protected persons and places Anti-fratricide measures and friendly force recognition	Personnel recovery Detention operations Protection and control of civilians Vehicle and equipment safety or security constraints Environmental considerations Unexploded ordnance Acceptable risk and risk management Escalation of force and nonlethal weapons Counterintelligence Chemical, biological, radiological, and nuclear, guidance Explosive hazards guidance Force health protection measures
Sustainment	Sustainment priorities Health service support measures Medical treatment (including chemical, biological, radiological, or nuclear [CBRN] patients) Medical evacuation (including medical regulating) Sustainment of detention and dislocated civilian operations	Controlled supply rates Construction and provision of facilities and installations Detainee movement Anticipated requirements of Classes III, IV, V, and VIII

Issue a Warning Order

5-72. Immediately after the commander gives the planning guidance, the staff sends subordinate and supporting units a WARNORD. (See Appendix D for a sample WARNORD.) It generally contains—

- Updated situation.
- Initial IPOE products.
- The approved mission statement.

- The commander's intent.
- Initial changes to task organization.
- The unit assigned areas (using a sketch, higher echelon headquarters graphic control measures, or some other description).
- Tasks to subordinate units as applicable.
- CCIRs and EEFIs.
- Risk guidance.
- Deception guidance.
- Initial information collection plan.
- Specific planning priorities.
- Updated planning and operational timelines.
- Required initial movements.

STEP 3-COURSE OF ACTION DEVELOPMENT

5-73. A COA is a broad potential solution to an identified problem. After receiving the restated mission, commander's intent, and updated commander's planning guidance, the staff develops COAs for the commander's approval. The COA development step generates options for subsequent analysis and comparison that satisfy the commander's intent and planning guidance. During COA development, planners use the problem statement, mission statement, commander's intent, planning guidance, and products developed during mission analysis. The COA begins conceptually, but by the end of the step the COA develops many of the details necessary for subordinates to act. (See figure 5-6 for a depiction of COA development.)

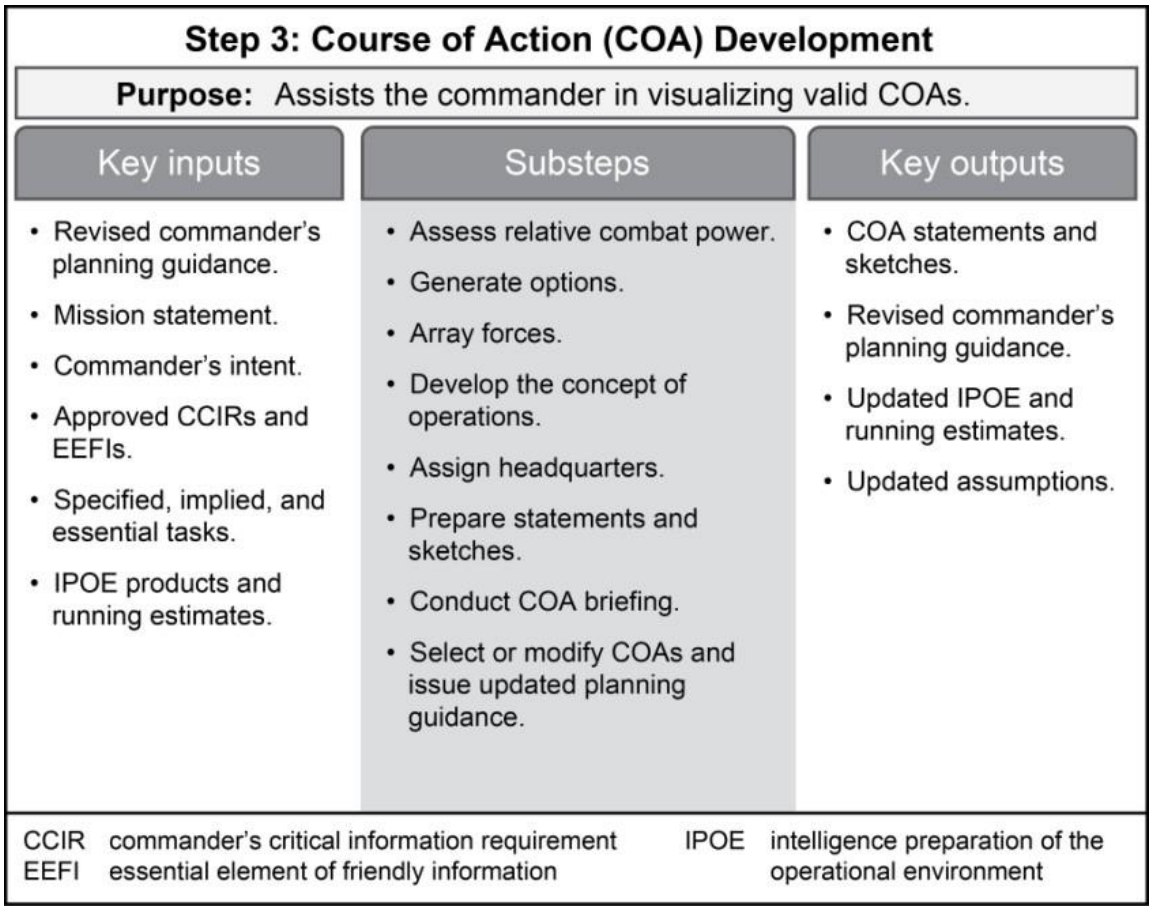


Figure 5-6. Step 3-course of action development depiction

5-74. The commander's direct involvement in COA development greatly aids in producing comprehensive and flexible COAs in the time available. To save time, the commander may also limit the number of COAs staffs develop or specify particular COAs not to explore. Planners examine each prospective COA for validity and the following screening criteria:

- Feasible. The COA can accomplish the mission within the established time, space, and resources available.
- Acceptable. The COA must balance cost and risk with the advantage gained.
- Suitable. The COA can accomplish the mission within the commander's intent and planning guidance.
- Distinguishable. Each COA must differ significantly from the others (such as scheme of maneuver, lines of effort, phasing, use of the reserve, or task organization).
- Complete. A COA incorporates—
  - How the main effort contributes to mission accomplishment.
  - All units and capabilities are accounted for the entire duration of the operation.
  - How supporting efforts set and preserve conditions for success of the main effort.
  - How available resources enable main and supporting efforts.
  - How actions transform current conditions to the desired end-state.

5-75. The COA includes the tasks to be performed and the conditions to be achieved. It is important in COA development that commanders and staffs appreciate the unpredictable, uncertain, and ambiguous nature of the OE. The unpredictable and uncertain nature of an OE should not in itself result in temporary paralysis or hesitancy in military operations. By focusing COA development around known information, staffs can better develop COAs that provide maximum flexibility and viable options for the commander in the execution of military operations.

5-76. Commanders and staffs tend to focus on specific COAs for specific sets of circumstances, though it is usually best to focus on flexible COAs that provide the greatest options to account for the widest range of circumstances. They must also be cautious not to attempt to identify and resolve every perceived possible outcome to military operations. The interaction of multiple variables within an OE can and will lead to countless possible options and outcomes. Commanders and staffs should focus their efforts around known variables and assumptions and analyze COAs that provide flexible options to the commander during execution. If commanders and staffs focus on what is known about a situation, it often becomes clear that the known information provides sufficient information to develop flexible COAs. It is important to clearly identify which variables the unit can control, which it does not control, and the implications of those that it does not control. It is also important not to see facts as constraining flexibility, but to seek to use them to generate flexibility. Staffs work to confirm or deny facts and as many assumptions as possible before developing options.

5-77. Known information can also apply to friendly actions, such as an established time for crossing a line of departure or transition to a subsequent phase of an operation. COAs should allow for variances in timelines and resources as additional information on enemy and friendly forces becomes available. The initial collection plan developed during mission analysis attempts to fill key information gaps which could prove useful in developing COAs. Variances may also occur as changes in guidance from the higher echelon headquarters arrives, or significant national policy decisions are made. Staffs identify risks associated with both friendly and enemy actions, who is accepting the risk, and what resources should be allocated to mitigate the risks.

5-78. To provide the commander with additional time before making a decision, COA development should also identify decision points, the authority responsible for making decisions, actions to take, and when to make the decision. These decisions are then captured in a DST and DSM. Good COAs provide commanders with options based on anticipated and unanticipated changes in the situation, particularly in terms of emerging threats or opportunities. Staffs should highlight to the commander those options which may be critical to mission success. Staffs should also identify points in time when options may no longer be viable while working to keep options open to the commander as long as possible. Staffs also assess how possible options may impact on a commander's options at a higher echelon. (See Chapter 1 for a discussion of decision points. See Chapter 6 for further discussion on decision making during execution.)

5-79. The primary output from COA development is a completed statement and sketch for each COA. Holistically, the statement and sketch aid the planning team and commander in understanding and visualizing the concept of operations and application of combat power. Planners begin building their COA statement and sketch products at the beginning of this step using the information developed during mission analysis as a starting point. They update the products as they progress through COA development to prevent a surge in product creation at the end of the step.

Assess Relative Combat Power

5-80. Combat power is the total means of destructive and disruptive force that a military unit or formation can apply against an enemy force at a given time. All warfighting functions contribute to generating and applying combat power. It is the ability to fight. The complementary and reinforcing effects that result from synchronized operations yield a powerful blow that overwhelms enemy forces and creates friendly momentum. Army forces deliver that blow through a combination of five dynamics: leadership, firepower, information, mobility, and survivability. To assess relative combat power, staffs compare friendly and enemy forces using the dynamics of combat power as a framework to determine advantages and disadvantages for each force.

5-81. Assessing relative combat power is difficult; it requires applying both military art and science. Relative combat power analysis involves assessing tangible factors (such as equipment, weapons systems, and units) and intangible factors (such as morale and training levels). It also considers the mission variables of METT-TC (I) (mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations) that directly or indirectly affect the potential outcome of an operation. It is also important to consider external planning processes and cycles and joint capabilities when assessing relative combat power. Incorporating an understanding of these additional capabilities can have a significant impact when developing a unit's assumed combat power. While numerical relationships are the basis, assessing relative combat power is more than just the mathematical correlation of forces. Rather, relative combat power is an estimate that incorporates both objective and subjective factors. Comparing the significant strengths and weaknesses of each force in terms of combat power gives planners insight into—

- Friendly capabilities that pertain to the operation.
- The types of operations possible from both friendly and enemy perspectives.
- How and where enemy forces may be vulnerable.
- How and where friendly forces may be vulnerable.
- Additional resources not previously identified that may be required to execute the mission.
- How to recommend the allocation of existing resources.

5-82. Planners initially make a rough estimate of force ratios of combat maneuver units two levels below their echelon. For example, division level planners compare friendly maneuver battalions and squadrons with equivalent enemy maneuver battalions and squadrons. Functional and multifunctional units such as field artillery, air defense, aviation, enablers, and sustainment may be broken down further. For example, division level planners may compare friendly and enemy combat aviation units at the company or troop level.

5-83. Planners must not develop and recommend COAs based solely on mathematical analysis of force ratios. Although the process uses some numerical relationships, the assessment is also largely subjective. Planners may also consider time and space when developing force ratios to more accurately assess where and when engagements could occur and how to determine appropriate force ratios.

5-84. Planners first compare tangible factors of friendly strengths against enemy weaknesses, and vice versa, for combat maneuver units and functional and multifunctional units, as necessary. From this objective analysis, planners produce force ratios which highlight advantages or vulnerabilities for each force that may be exploited or may need additional considerations or protection. These comparisons provide planners insight into effective force employment recommendations. (Refer to FM 3-0 for more information on the dynamics of combat power.)

5-85. After computing force ratios, the staff analyzes the intangible aspects of combat power. A technique for this analysis is conducting a subjective comparison of friendly strengths and enemy weaknesses for each dynamic of combat power. The resulting analysis can be beneficial by either reinforcing or offsetting the advantages and vulnerabilities identified by the objective analysis. Often, the intangible factors are more

important than the number of tanks or tubes of artillery. This can lead to planner's effectively identifying decision points for the effective employment of forces. (See table 5-4 for an example of a relative combat power assessment.)

Table 5-4. Example relative combat power assessment

Combat Units		***Friendly***	***Enemy***	***Advantage***		***Force Ratios***
				Friendly	***Enemy***	
Combat Maneuver (battalion or squadron		12	6	X		2:1
Field Artillery (battalion)		1	3		X	1:3
Attack Aviation (company or troop)		6	2	X		3:1
Dynamics of Combat Power		***Friendly***	***Enemy***	***Advantage***		***Analysis***
				Friendly	***Enemy***	
Leadership	Strength	Training, quick decision cycles	Familiar with terrain	X		Expect to maintain superior command and control system and decision-making
	Weakness	Reliant on digital comms	Situational awareness, command and control systems			
Firepower	Strength	Range, volume, precision, armor, attack aviation	Protection, light armored personnel carriers	X		Friendly firepower advantages will increase as enemy is attritted
	Weakness	Multiple launch rocket system ammunition availability	Reconnaissance			
Information	Strength	Technology	Access, familiarity		X	Focus on countering enemy information warfare
	Weakness	Culture gap and language proficiency	International credibility			
Mobility	Strength	Speed, reliability, air	Volume, familiarity with road network	X		Enemy mobility limited by age of equipment and poor maintenance
	Weakness	Familiarity with road network and terrain	Reliability, speed, limited tracked vehicles, air			
Survivability	Strength	Air and missile defense, dispersion	Improved fighting positions, fixed base operations	X		Friendly firepower advantages offset enemy improved positions
	Weakness	Electromagnetic signature	Consolidation of forces			

5-86. In troop-to-task analysis for stability and defense support of civil authorities, staffs determine relative combat power by comparing available resources to specified or implied stability or defense support of civil authorities tasks. This analysis provides insights into available options and needed resources.

Generate Options

5-87. Based on the commander's guidance and the results of the initial relative combat power assessment, the staff generates options. A good COA can defeat feasible enemy COAs and ensure the unit remains flexible to execute branches or sequels. In an unconstrained planning environment, planners aim to develop several possible COAs. Depending on available time, commanders may limit the planning options, consistent with the commander's guidance. Options focus on enemy COAs arranged in order of their probable adoption.

5-88. Brainstorming can be used for generating options. It requires extra time, imagination, and creativity, but it produces the widest range of options. The staff (and members of organizations outside the headquarters) remains unbiased and open-minded when developing proposed options.

5-89. In developing COAs, planners determine the doctrinal requirements for each proposed operation, including tasks for subordinate units. For example, a penetration requires a breach force, a support force, and an assault force. In addition, the staff considers possibilities created by attachments and other unified action partners.

5-90. Commanders are responsible for describing their visualization of operations. The *operational framework* is a cognitive tool used to assist commanders and staffs in clearly visualizing and describing the application of combat power in time, space, purpose, and resources in the concept of operations (ADP 1-01). Commanders build their operational framework on their assessment of the OE, including all domains and dimensions. They may create new models to fit the circumstances, but they generally apply a combination of common models according to doctrine. The three models commonly used to build an operational framework are—

- Assigned areas.
- Deep, close, and rear operations.
- Main effort, supporting effort, and reserve.

(See FM 3-0 for more information on operational framework models.)

5-91. To develop options, planners begin with the essential task and purpose identified during mission analysis. The essential task must directly support accomplishment of the higher echelon's mission, and the purpose of the essential task must be nested in the higher echelon headquarters' purpose. The staff then considers ways to mass combat power to accomplish the essential task while remaining within the commander's intent. When executed, the unit whose operations are most critical to the overall success of the mission is designated the main effort.

5-92. Next, the staff considers tasks necessary to support and sustain the successful execution of the main effort's operations, such as essential fire support tasks or information collection requirements in support of the main effort. The staff establishes a purpose for each task that is tied to setting or preserving a condition for the main effort's success. Planners connect the purpose of each task to an enemy force, piece of terrain, or other actor on their planning sketch. Units which conduct operations to set or preserve conditions for the success of the main effort are considered supporting efforts. Supporting efforts may execute their tasks before, during, or after the main effort, and they may temporarily receive priorities of support. The commander may redesignate units as supporting efforts and the main effort, depending on what task is deemed most critical during each phase of the operation.

5-93. Planners confirm or adjust the size, composition, and planning priorities of the reserve as received in their planning guidance. While commanders can assign their reserve a wide variety of planning priorities to perform on commitment, a reserve remains prepared to accomplish other missions. Units and capabilities designated in the reserve must be excluded when determining the combat power necessary to accomplish the essential and supporting tasks.

5-94. Once staff members have explored possibilities for each COA, they examine each COA to determine if it satisfies the screening criteria. Planners identify risks inherent in each COA and convey this risk to the commander. In doing so, they change, add, or eliminate COAs as appropriate. Often commanders combine COAs or move elements from one COA to another after development.

Array Forces

5-95. To array forces is to determine the forces necessary to accomplish the mission and to provide a basis for the scheme of maneuver. To do this, planners consider—

- The higher echelon commander's intent and concept of operations.
- The unit mission statement and the commander's intent and planning guidance.
- The air and ground avenues of approach.
- As many possible enemy COAs as time permits, starting with the most likely and including the most dangerous.

5-96. Planners often use planning ratios as a starting point when determining the relative combat power necessary to accomplish each task. For example, historically, defenders have a much higher probability of defeating an attacking force approximately three times their equivalent strength when established in a prepared defense. Therefore, as a starting point, commanders assess and determine acceptable risk when defending an avenue of approach with less than roughly a one-to-three force ratio. (See table 5-5 for a list of recommended planning ratios.)

Table 5-5. Recommended planning ratios

Friendly Mission	*Position*	*Friendly to Enemy Ratios*
Delay	Hasty	1 to 6
Defend	Prepared or fortified	1 to 3
Defend	Hasty	1 to 2.5
Attack	Prepared or fortified	3 to 1
Attack	Hasty	2.5 to 1
Counterattack	Flank	1 to 1
Penetration (lead element)	Prepared or fortified	18 to 1

5-97. Planners assess whether these ratios, and other intangibles, increase the relative combat power of the unit assigned the task to the point that it exceeds the acceptable planning ratio for that task. If it does not, planners determine how to provide additional combat power to the unit. Combat power comparisons are provisional at best. Arraying forces is tricky, inexact work, affected by factors that are often difficult to gauge or quantify. Some examples of these factors are the impact of past engagements, quality of leaders, morale, maintenance of equipment, and time in position. Levels of electromagnetic support, fire support, close air support, and many other factors also affect arraying forces.

5-98. Planners can develop force requirements for counterinsurgency operations by gauging troop density—the ratio of security forces (including host-nation military and police forces and foreign counterinsurgents) to inhabitants. For example, most density recommendations fall within a range of twenty to twenty-five counterinsurgents for every thousand residents in an assigned area. However, as with any fixed ratio, such calculations largely depend on the situation.

5-99. Planners also determine relative combat power with regard to civilian requirements and conditions that require attention, and then they array forces and capabilities for stability tasks. For example, a COA may require a follow-on force to establish civil security, maintain civil control, and restore essential services in a densely populated urban area over an extended period. Planners conduct a troop-to-task analysis to determine the type of units and capabilities needed to accomplish these tasks.

5-100. Planners proceed to initially array friendly forces on the sketch, starting with the forces executing the essential task and planning backwards in time, continuing with those units executing supporting tasks and reserve requirements. The initial array focuses on generic ground maneuver units without regard to specific type or task organization, and then planners consider all appropriate intangible factors. Planners array ground forces two levels below their echelon. For example, at division level, planners array generic battalions. During this step, planners do not assign missions to specific units; they only consider which forces are necessary to accomplish their task.

5-101. The initial array identifies the total number of units needed, including the reserve, and it identifies possible methods of dealing with enemy forces and stability tasks. If the number of units arrayed is less than the number available, planners place additional units in a pool for use when they develop the initial concept of operations. If the number of units arrayed exceeds the number available, and the difference cannot be compensated for with intangible factors, the staff determines whether the COA is feasible or not. Ways to make up shortfalls include requesting additional resources, accepting risk in that portion of the assigned area, having units execute multiple tasks, or executing tasks required for the COA sequentially rather than simultaneously.

Develop the Concept of Operations

5-102. Once forces are arrayed, the staff develops a concept of operations for each COA. The concept of operations describes how arrayed forces will accomplish the mission within the commander's intent. It concisely expresses the "how" of the commander's visualization and governs the design of supporting plans or annexes. The concept of operations summarizes the contributions of all warfighting functions, ensures the holistic application of combat power, and links together the various efforts of subordinate units into a cohesive operation.

5-103. Planners select only the necessary control measures, including graphics, to control subordinate units and enable some degree of flexibility during an operation. A *graphic control measure* is a symbol used on maps and displays to regulate forces and warfighting functions (ADP 6-0). Control measures establish responsibilities and limits that prevent subordinate units' actions from impeding one another. These measures also foster coordination and cooperation between forces without unnecessarily restricting freedom of action. Good control measures enhance decision making and individual initiative. (See FM 3-90 for a discussion of control measures associated with offensive and defensive tasks. See FM 1-02.2 for unit symbols, control measures, and rules for drawing control measures on overlays and maps.)

5-104. Planners may also use both lines of operations and lines of effort to refine their initial concept of operations. Combining lines of operations with lines of effort allows planners to include nonmilitary activities in their broad concept, as necessary. As planning progresses, commanders and staffs may modify lines of operations and effort and add details while war-gaming. (See Chapter 2 or see ADP 3-0 for more information on lines of operations and lines of effort.)

5-105. As the staff develops the concept of operations, it captures the details within a COA statement (narrative) and sketch (graphic). The initial concept of operations includes, but is not limited to, the following:

- The purpose of the operation.
- A statement of where the commander will accept operational or tactical risk.
- Identification of critical friendly events and transitions between phases (if the operation is phased).
- Unit's assigned area.
- Assigned areas of subordinate units (AO, zone, or sector).
- Designation of deep-close-rear operations.
- Designation of the main effort and how its task and purpose are most critical to accomplishment of the unit's mission.
- Designation of supporting efforts, along with their tasks and purposes, linked to how they support the main effort and the accomplishment of the unit's mission.
- Designation of the reserve, including its location and composition.
- Reconnaissance and security activities.
- Identification of maneuver options that may develop during an operation.
- Location of engagement areas, attack objectives, or counterattack objectives.
- Scheme of fires.
- Scheme of sustainment.
- Scheme of protection.
- Integration of obstacle effects with maneuver and fires.
- Priorities for each warfighting function.
- Informational considerations.
- Themes, messages, and means of delivery.

- Military deception operations (on a need-to-know basis).
- Key control measures.
- Essential stability tasks as necessary.

Assign Headquarters

5-106. After refinement of the concept, planners create a task organization by assigning headquarters to groupings of forces. They consider the types of units to be assigned to a headquarters and the ability of that headquarters to control those units. Generally, a headquarters controls at least two subordinate maneuver units and generally no more than five for fast-paced offensive or defensive operations common during large-scale combat operations. (Commanders and planners must also carefully consider the maximum number, ensuring they do not overextend their span of control.) The number and type of units assigned to a headquarters for stability tasks vary based on factors of the mission variables of METT-TC (I). If planners need additional headquarters, they note the shortfall and resolve it later. Planners ensure all headquarters are accounted for and that all headquarters are commanding and controlling troops. If a headquarters does not have any assigned troops, it is given a mission appropriate to its organization. Task organization considers the entire operational organization. It also accounts for the special command requirements for operations, such as a passage of lines or air assault. Once headquarters are assigned, planners add final graphic control measures (usually boundaries).

5-107. After headquarters have been assigned, the staff may choose to generate another nesting diagram to build shared understanding of how subordinate units work together to accomplish the overall mission. This technique can be beneficial for both the preparing staff and for subordinate units. (See paragraph 5-29 for more on generating a nesting diagram and see figure 5-7 for an additional example of a nesting diagram.)

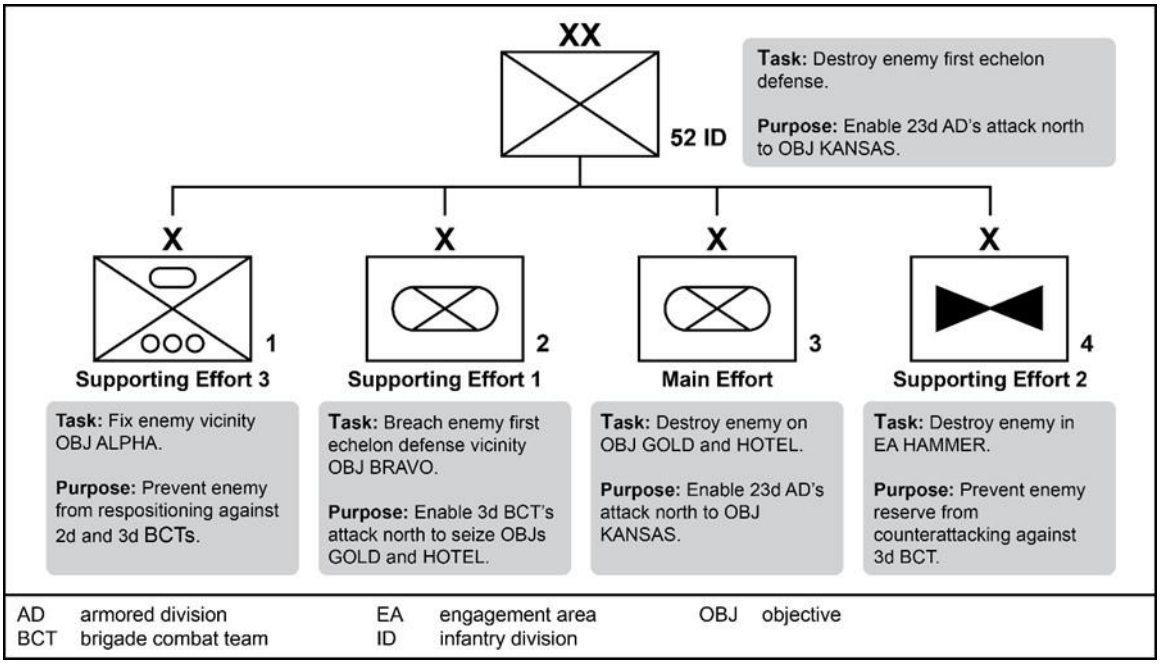


Figure 5-7. Example nesting diagram 2

Prepare Statements and Sketches

5-108. At this point in the process, planners have sufficient information to prepare a COA statement and update supporting sketches that have been built for each COA. The COA statement clearly portrays how the unit accomplishes the mission. The COA sketch provides a picture of the combined arms aspects of the concept, including the positioning of forces. The COA statement clearly and concisely describes the COA sketch. Together, the statement and sketch cover the *who* (task organization), *what* (tasks), *when*, *where*, and

why (purpose) for all subordinate units and synchronizes their actions to accomplish the unit's mission while accounting for associated risk.

5-109. The COA sketch depicts the array of forces and control measures. It generally includes—

- Assigned areas, including unit boundaries and support areas by phase, as necessary.
- Friendly unit and organization symbols (at least one level down).
- The line of departure or line of contact and phase lines, if used.
- Reconnaissance and security graphics.
- Movement and maneuver control measures.
- Ground and air axes of advance.
- Assembly areas, battle positions, strong points, engagement areas, and objectives.
- Obstacle control measures.
- Tactical mission tasks and operation symbols.
- Essential direct fire control measures.
- Fire support coordination and airspace coordination measures.
- Designation of main effort, supporting efforts, and reserve.
- Location of command posts (CPs) and critical communications nodes.
- Known or templated enemy locations.
- Population concentrations.
- Other applicable tactical control measures.

5-110. A finalized COA statement describes the selected COA in detail. It generally includes—

- Mission.
- Commander's intent.
- Concept of operations.
- If the operation is phased, main effort, supporting efforts, and reserve as appropriate, by phase.
- Scheme of maneuver.
- Scheme of intelligence.
- Scheme of information collection.
- Scheme of fires.
- Scheme of air and missile defense.
- Scheme of protection.
- Scheme of engineering.
- Scheme of sustainment.
- Task and purpose of subordinate units, including priorities for employment of the reserve.
- Scheme of command and control.
- Risks to mission with identified mitigation.

5-111. Planners should also ensure that identifying features (such as cities, rivers, and roads) are included to quickly orient users. While the sketch may be on any medium, what it portrays is more important than its form, so the medium must be suited for the intended audience, and it is often part of unit SOPs. (See figure 5-8 for a sample COA sketch and COA statement representing a single phase of a division operation.)

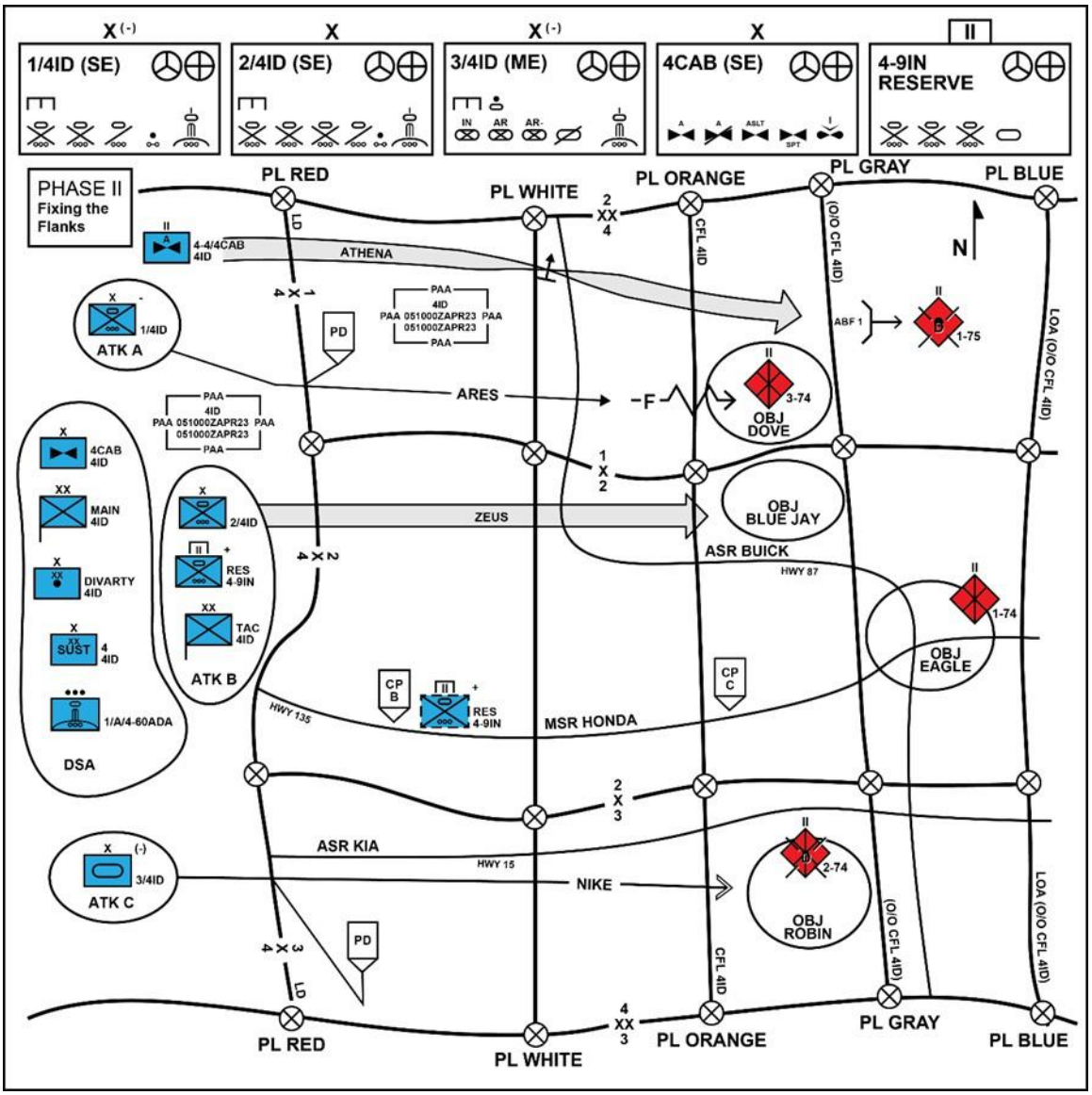


Figure 5-8. Example division course of action sketch and statement

MISSION
4ID seizes OBJ EAGLE (vic AB123456) NLT H+15 in AO TIGER to create a penetration for continued offensive operations east of PL BLUE.

PURPOSE
To remove the enemy's ability to oppose friendly actions in AO TIGER, enable friendly freedom of movement along MSRs and ASRs within 4ID's AO, and build combat power between PL GRAY and PL BLUE.

KEY TASKS
Prevent 74MIB from reinforcing OBJ EAGLE.
Secure MSRs and ASRs within the 4ID AO.
Secure 2ID's southern flank and 3ID's northern flank.

END STATE
(F) 4ID has seized OBJ EAGLE and is arrayed west of PL BLUE in a hasty defense and is able to support corps operations outside our AO, (E) removed the enemy's capability in AO TIGER to affect friendly operations, (T) controls main supply routes through the division's AO, (C) while minimizing civilian casualties and collateral damage.

CONCEPT OF OPERATIONS
The following is phase II of a three-phase operation that creates a penetration for continued offensive operations east of PL BLUE. The division AO is from PL GREEN to the PL BLUE (LOA). The northern adjacent unit is the 2ID. The southern adjacent unit is 3ID.

Phase II: This phase begins with the BCTs crossing PL Red (LD). This phase ends with 1/4ID (-) fixing enemy forces in OBJ DOVE, 2/4ID occupying OBJ BLUE JAY, and 3/4ID has destroyed enemy units in OBJ ROBIN. During this phase the division conducts close operations from PL RED to PL GRAY.
The division conducts deep operations from PL GRAY to PL BLUE.
The division conducts rear and sustainment operations from PL GREEN to PL RED.
The division attacks with three brigades abreast toward OBJ DOVE, OBJ BLUE JAY and OBJ ROBIN. 1/4ID (SE) in the north will fix enemy forces vicinity of OBJ DOVE. 2/4ID (SE) in the center will move to occupy OBJ BLUE JAY to prepare to seize OBJ EAGLE in phase III. 3/4ID (ME) in the south will destroy enemy forces vicinity of OBJ ROBIN and draw 74MIB reserve forces away from OBJ EAGLE. 4CAB(SE) will destroy enemy artillery (1-75) northeast of OBJ DOVE.

SCHEME OF MANEUVER
Actions during this phase will secure the 4ID's northern and southern flanks, enabling the seizure of OBJ EAGLE in the center of the 4ID AO. These actions include fixing 3-74MIB, destroying 1-75FA and 2-74MIB, and positioning forces for follow on operations.
1/4ID (-) (SE) moves along DIRECTION OF ATTACK ARES toward OBJ DOVE. They will FIX the 3-74MIB in the vicinity of OBJ DOVE to ensure that enemy forces cannot reposition forces toward OBJ EAGLE. 2/4ID (SE) maneuvers along AXIS ZEUS to occupy OBJ BLUE JAY in preparation to seize OBJ EAGLE in phase III.
3/4ID (ME) attacks along DIRECTION OF MAIN ATTACK NIKE toward OBJ ROBIN to DESTROY the 2-74MIB and to deceive 74MIB into committing reserve forces to the 4ID's southern flank.
4CAB(SE) moves along ATTACK HELICOPTER AXIS OF ADVANCE ATHENA to ABF-1 to DESTROY 1-75FA to protect 4ID's ME's attack toward OBJ EAGLE.

RESERVE: 4-9IN (Reserve): Move to CP B to support offensive operations. Planning priorities 3/4ID vicinity of OBJ ROBIN then 1/4ID (-) vicinity of OBJ DOVE.

Figure 5-8. Example division course of action sketch and statement (continued)

SCHEME OF INTELLIGENCE
Intelligence priority of effort will be GEOINT, SIGINT and HUMINT to determine the enemy operations between PL GRAY to PL BLUE.
Intelligence priority of support: 3/4ID, 4CAB, 1/4ID (-) and 2/4ID.

SCHEME OF INFORMATION COLLECTION
Priority of information collection during this phase is to identify the location and disposition of enemy forces between PL GRAY and PL BLUE and identify the location and disposition of elements vic OBJ EAGLE.
Gray Eagle Task 1: Identify disposition and composition of enemy units located in OBJ EAGLE, Purpose 1 to gain a better understanding of enemy forces.

SCHEME OF FIRES
Priority of fires: 3/4ID (ME), 4CAB, 1/4ID (-), then 2/4ID.
FSCMs: FSCL PL GOLD. CFL PL ORANGE, shifts to PL GRAY once the BCTs have crossed PL WHITE. O/O shifts to PL BLUE.
Essential Fire Support Tasks:
Task 1: Destroy 1-75FA. Purpose 1: Prevent enemy fires from disrupting the attack.
Task 2: Neutralize enemy forces on OBJ EAGLE. Purpose 2: To support the 2/4ID seizure of OBJ EAGLE.
Airspace considerations: No change.
Unit airspace plan TBP.
Themes and Messages: No change.

SCHEME OF AIR AND MISSILE DEFENSE
Priorities for Air Defense: DMAIN, DSA, 4CAB Airfield, 3/4ID (ME), 2/4ID, then 1/4ID.
ADA Task 1 (M-SHORAD): Defend the 4ID DSA and airfield from aerial threats. Purpose 1: Prevent enemy disruption of 4ID C2, sustainment, and aviation operations.
ADA Task 2 (M-SHORAD): Defend ground maneuver units from aerial threats. Purpose 2: Prevent enemy from disrupting offensive operations.
Airspace considerations: No change.
Unit airspace plan TBP.

SCHEME OF PROTECTION
Priority of Protection: DSA, DMAIN, and Division Q53 radars. CBRN units conduct CBRN recon and develop a decontamination site vicinity ATK Position C, Dirty Route is ASR KIA.

SCHEME OF ENGINEERING
Engineers will conduct engineer recon to obtain information on the types and location of enemy obstacles and potential engineer resources. Engineers will reduce obstacles to provide freedom of maneuver for 4ID. In addition, engineers will maintain MSRs and ASRs to ensure freedom of movement for sustainment forces.
Priority of Support: 3/4ID, 1/4ID (-), 2/4ID, then 4CAB
Priority of Effort: Mobility, then countermobility.
Engineer work line: PL RED.

SCHEME OF SUSTAINMENT
4DSB: Sustain division combat operations in AO TIGER from the DSA and establish FLEs within AO TIGER, as required to support combat operations. In addition, 4DSB will control the movements on MSR HONDA, ASR BUICK and ASR KIA.
Priority of support: 3/4ID, 1/4ID, 4CAB then 2/4ID.
Priority of supply: Class III, V, maintenance, and medical.
Priority of ground movement: DIVARTY, 3/4ID, 2/4ID, then 1/4ID.
Supply Routes: MSR HONDA, ASR BUICK and ASR KIA
Priority of air movement: 4CAB, DIVARTY, 3/4ID, 1/4ID, then 2/4ID.

Figure 5-8. Example division course of action sketch and statement (continued)

SCHEME OF COMMAND AND CONTROL
Location of the Commander: 4ID CG Mobile comm and group located with 2/4ID.
DCG-M: Division TAC phase IIIb-c.
DCG-S: RCP throughout the operation.
CP Locations: DMAIN located vic DSA. Division TAC located vic ATK B.
C2 PACE: JBC-P, 4179 SATCOM, HF, FM.

Risk to Mission
If 74MIB is not deceived, then the division will commit the RES to 2/4ID for its seizure of OBJ EAGLE.

Legend

ADA	air defense artillery	HUMINT	human intelligence
AO	area of operations	ID	infantry division
ABF	attack by fire position	IN	infantry
ASR	alternate supply route	JBC-P	joint battle command-platform
ATK	attack position	LD	line of departure
BCT	brigade combat team	LOA	limit of advance
C2	command and control	ME	main effort
CAB	combat aviation brigade	MSR	main supply route
CBRN	chemical, biological, radiological, or nuclear	MIB	motorized infantry brigade
		M-SHORAD	maneuver-short range air defense
CFL	coordinated fire line	O/O	on order
CG	commanding general	OBJ	objective
CP	command post	PAA	position area for artillery
DCG-M	deputy commanding general-maneuver	PACE	primary, alternate, contingency, emergency
DCG-S	deputy commanding general-support	PL	phase line
DIVARTY	division artillery	RCP	rear command post
DSA	division support area	RES	reserve
DMAIN	division main command post	SATCOM	satellite communications
DSB	division sustainment brigade	SE	supporting effort
FSCL	fire support coordination line	SIGINT	signals intelligence
FSCM	fire support coordination measures	TAC	tactical command post
FA	field artillery	TBP	to be published
FLE	forward logistics element	vic	vicinity
GEOINT	geospatial intelligence		

Figure 5-8. Example division course of action sketch and statement (continued)

Conduct a Course of Action Briefing

5-112. After developing COAs, the staff briefs them to the commander. A collaborative session may facilitate subordinate planning. The COA briefing includes—

- An updated IPOE (if there are significant changes).
- As many threat COAs as necessary (or specified by the commander). Ideally, it includes the most likely and most dangerous threat COAs and highlights those areas where the friendly force can confirm or differentiate between threat COAs.
- The approved problem statement and mission statement.
- The commander's and higher echelon's commander's intents.
- Updated facts and assumptions.
- Results from the relative combat power analysis.
- Each COA statement and sketch includes—
  - Task organization.
  - Concept of operations briefed using selected operational framework models.
  - Scheme of maneuver.
  - Scheme of intelligence.
  - Scheme of information collection.
  - Scheme of fires.
  - Scheme of protection.
  - Scheme of sustainment.
  - Scheme of engineering.

  - Scheme of command and control.
  - Risk to mission.
- The rationale for each COA, including—
  - Considerations that might affect enemy COAs.
  - Critical events for each COA.
  - The reason units are arrayed as shown on the sketch.
  - How the COA accounts for minimum essential stability tasks, as required.
  - COA evaluation criteria.
  - Initial DSM and DST.
- Commander's comments, decisions, or guidance.

Select or Modify Courses of Action for Continued Analysis

5-113. After the COA briefing, the commander selects or modifies selected COAs for continued analysis. The commander further revises and issues planning guidance prior to beginning COA analysis. If a commander rejects all COAs, the staff begins again, unless the commander provides a directed COA. If a commander accepts one or more of the COAs, staff members begin COA analysis. The commander may create a new COA by incorporating elements of one or more COAs developed by the staff. The staff then must create a COA statement and sketch for the commander-directed COA and use that to prepare for COA analysis. The staff incorporates those modifications and ensures that all staff members understand the new COA.

STEP 4-COURSE OF ACTION ANALYSIS

5-114. COA analysis is a method for commanders and staffs to evaluate and refine COAs prior to execution. During the COA analysis step, the staff, with guidance from the commander, analyze COAs to synchronize combat power and resources, identify and mitigate risk, exploit opportunities, reduce friction, and ultimately develop and improve the COA. It is a critical step in the MDMP, and commanders should allocate adequate time to complete it. The COA analysis process allows the staff to synchronize the warfighting functions for each COA to stimulate ideas and provide insights which might not otherwise be discovered. As the quality of each COA is appraised, potential execution problems, decisions, and contingencies which ultimately improve each COA are uncovered. The staff also attempts to identify probable consequences for each COA, which helps them think through the tentative plan and add much needed details to a concept. COA analysis should result in a refined and completed COA, and a synchronization matrix, DST, and DSM for each COA. It also helps the commander and staff to—

- Confirm the COA continues to meet screening criteria.
- Determine how to maximize the effects of combat power while protecting friendly forces and minimizing collateral damage.
- Further develop a shared understanding of the operation.
- Anticipate and record operational events and decisions.
- Refine when and where to apply force capabilities.
- Refine sequencing of actions.
- Refine control and coordination measures.
- Identify coordination needed to produce synchronized results.
- Identify necessary triggers, conditions to be met, and resources required for success.
- Identify previously unforeseen threats and opportunities.
- Identify where the commander can assume risk.

(See figure 5-9 on page 110 for a depiction of Step 4-COA analysis.)

Note. Insufficient time spent in COA analysis usually manifests in the form of challenges to synchronization during execution.

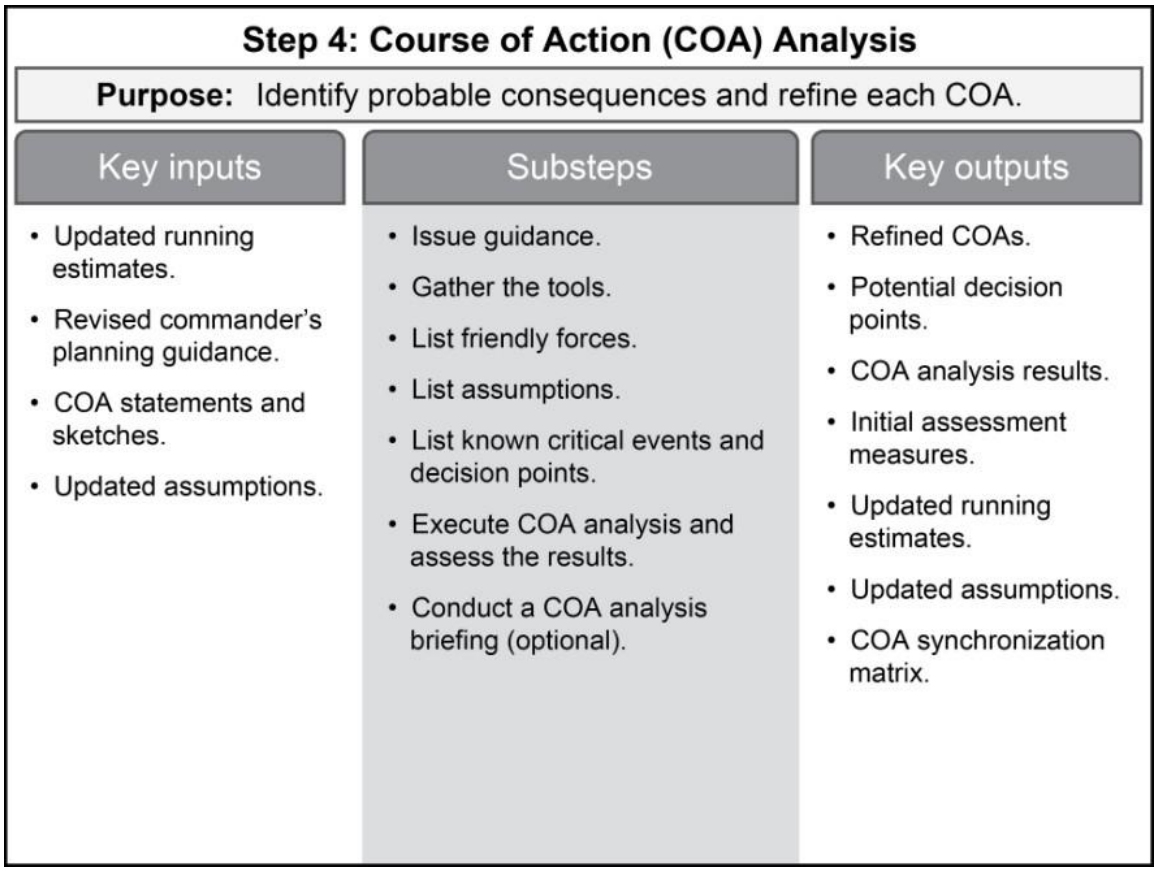


Figure 5-9. Step 4-course of action analysis depiction

5-115. During COA analysis, the staff takes each COA and begins to develop a detailed plan while identifying its strengths or weaknesses. The commander, staff, and other available partners (and subordinate commanders and staffs if COA analysis is conducted collaboratively) may change an existing COA or develop a new COA after identifying previously unforeseen events, tasks, requirements, or problems. Those involved in the war game need to—

- Remain objective, not allowing personality or their sensing of what the commander wants to influence war-gaming.
- Avoid defending a personally developed COA.
- Accurately record advantages and disadvantages of each COA as they emerge.
- Continually assess screening criteria of all COAs and reject them if they fail.
- Avoid drawing premature conclusions and gathering facts to support such conclusions.
- Avoid comparing one COA with another during analysis.

Issue Guidance

5-116. During the first step in COA analysis, the commander issues guidance to the staff that enables them to gather the proper tools and complete preparations. Together, the commander and staff develop a time estimate for COA analysis, as time is a limited resource during the planning process. An analysis of time available helps the commander determine which COAs to analyze, which analysis technique and method to use, and how to record the results. The commander provides additional guidance which may include—

- Expected participants.
- Number of COAs to analyze.
- Objective of the analysis, such as synchronize action at the decisive point, main effort's critical event, decision point, phase of the operation, or as time allow the entire operation.
- Designation and necessary shifting of the main effort.

- Type of visual representation and responsible staff to develop it.
- Method used for analysis.
- Units or capabilities used.
- Roles and responsibilities of participants.
- Initial friendly dispositions.
- COA and COA analysis assumptions.
- Time period covered.
- Turn length, number of turns, and each turn's focus.
- Any other specific guidance necessary for staff members to prepare.

Course of Action Analysis Techniques

5-117. There are three techniques from which to choose when conducting COA analysis: war gaming, key leader discussion, and modeling and simulation. Each technique has its advantages and disadvantages which the commander must consider when choosing which technique to use. Variables commanders should consider when choosing a COA analysis technique include—

- Time available.
- Planning experience of the staff.
- Resources available to the staff.
- Level of synchronization required for the operation.
- Whether the planning effort is in support of a new operation (producing an OPORD) or an ongoing operation (producing a fragmentary order [FRAGORD]).
- Staff's familiarity with the OE and operation.

Wargaming

5-118. Wargaming is a disciplined process with rules and steps that attempt to visualize the flow of the operation, given the force's strengths and dispositions, the threat's capabilities, and possible friendly COAs. This method (modified to fit the specific mission and environment) is applicable to the Army's wide range of military operations and should be used when planning for a new operation (producing an OPORD). A wargame gathers the staff around a visual tool that represents friendly, threat, and relevant terrain and uses an action-reaction-counteraction method to assess friendly and threat interaction. A visual tool can be a paper map, a terrain model, a command and control information system screen, a presentation slide, a white board, or a sketch. Friendly and threat icons are represented by models, cut-outs, or icons drawn on the visual tool. Having a visual representation that everyone can follow and understand is important. The staff then uses an action-reaction-counteraction sequence to refine the COA. Wargaming provides the highest level of analysis and synchronization with commonly available resources. However, it is time and personnel intensive, so it may not be a feasible option in a time-constrained environment.

Key Leader Discussion

5-119. When time is limited, key leaders, staff members, and subject matter experts can gather around a sketch or map with graphics and talk through a COA. This technique is best used when planning in support of ongoing operations (producing a FRAGORD). While key leader discussion is less time consuming than other techniques, the level of detail reached and synchronization across the staff is minimal. The lead planner quickly describes the scheme of maneuver in as much detail as possible followed by the other warfighting functions (typically by phase). As the group discusses the actions, key leaders use their skills, knowledge, and experience to fill in details or provide guidance on how to prevent friction. If time constraints prevent completing these actions, key leaders and subject matter experts discuss actions at critical events.

Modeling and Simulation

5-120. Modeling and simulation can be used to enhance COA analysis. A given COA can be represented in a physical model or computer-aided simulation and evaluated against multiple variables in the OE. An important planning consideration related to modeling and simulation is understanding what exactly needs to be modeled and simulated. The advantages of this technique include the ability of modeling and simulation to provide quantitative data to inform decision making. The disadvantages of this technique include the

limited availability of resident modeling and simulation tools and limited expertise across organizations, installations, and staffs to consult and advise on modeling and simulation options.

Course of Action Analysis Methods

5-121. When conducting COA analysis, there are three methods: belt, avenue-in-depth, and box. Each considers the area of interest and all enemy forces that can affect the outcome of the operation. Planners can use these methods separately or in combination and modify them as appropriate for long-term operations dominated by stability.

Belt

5-122. The belt method divides an assigned area into belts (areas) running the width of the area. The shape of each belt is based on the factors of METT-TC(I). The belt method works best when conducting offensive and defensive tasks on terrain divided into well-defined cross-compartments, during phased operations (such as gap crossings, air assaults, or airborne operations), or when the enemy is deployed in clearly defined belts or echelons. Belts can be adjacent to or overlap each other.

5-123. The belt method is based on a sequential analysis of events in each belt. This method allows the staff to focus simultaneously on all forces affecting a particular belt. A belt might include more than one critical event. Under time-constrained conditions, the commander can use a modified belt method. The modified belt method divides the assigned area into not more than three sequential belts. These belts are not necessarily adjacent or overlapping, but they focus on critical actions throughout the depth of the assigned area. (See figure 5-10 for a depiction of the belt method.)

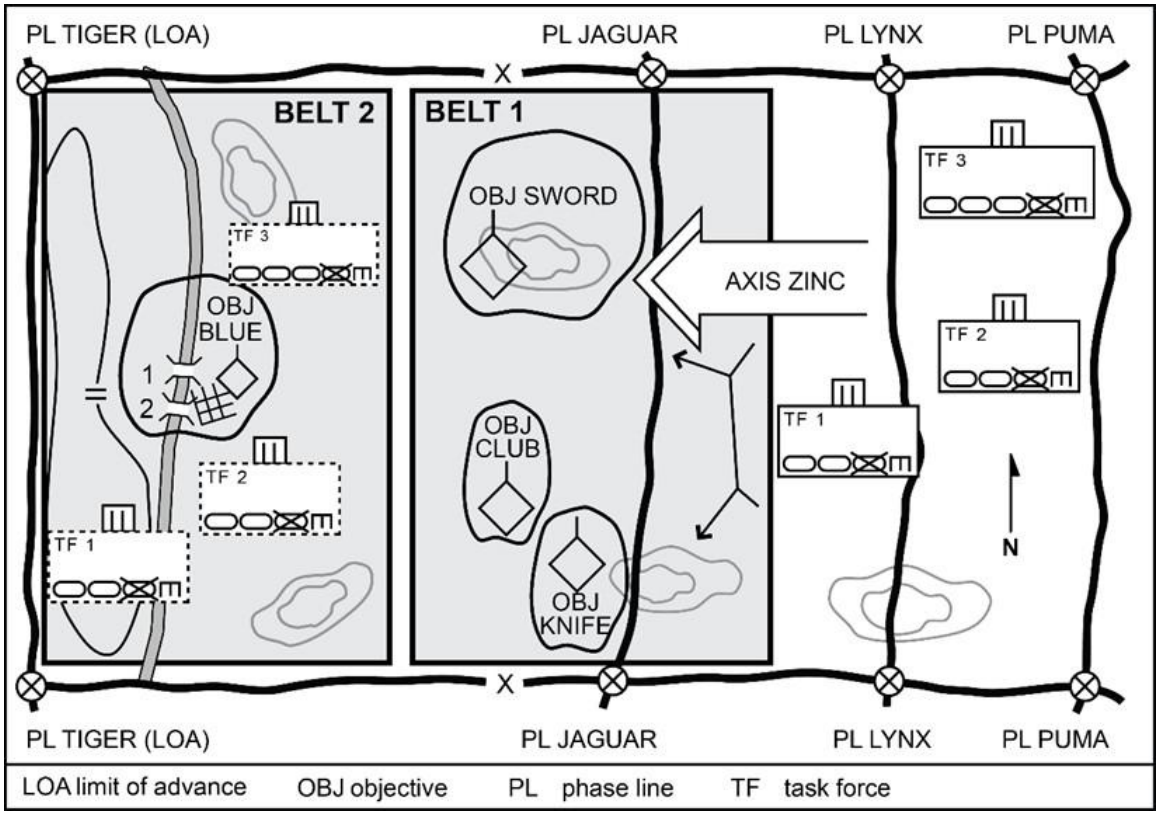


Figure 5-10. Sample belt method

5-124. In stability tasks, the belt method can divide the COA by events, objectives (goals not geographic locations), or events and objectives in a selected belt across all lines of effort. The belt method consists of analyzing relationships among events or objectives on all lines of effort in the belt. (See figure 5-11 for a depiction of a sample modified belt method using lines of effort.)

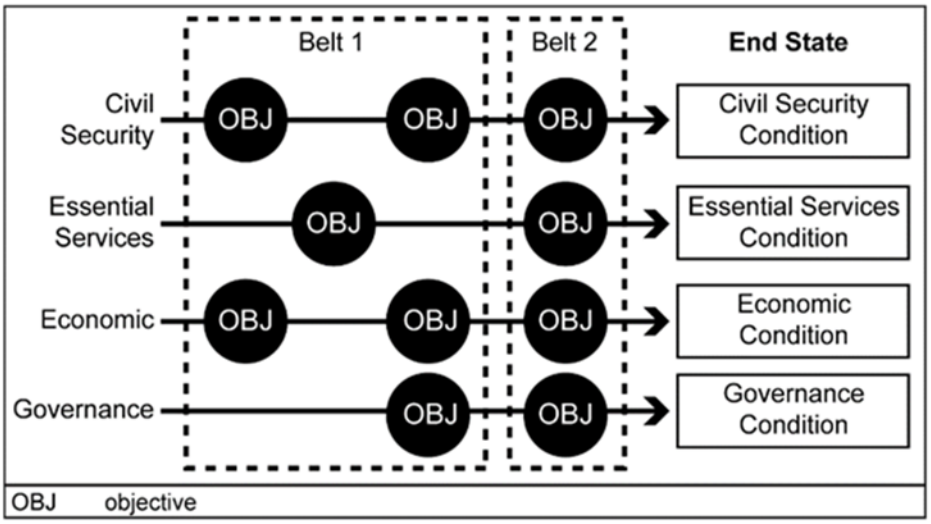


Figure 5-11. Sample modified belt method using lines of effort

Avenue-in-Depth

5-125. The avenue-in-depth method focuses on one avenue of approach at a time, beginning with the avenue most directly tied to accomplishing the main effort's objective. This method is good for offensive COAs or in the defense when canalizing terrain inhibits mutual support. (See figure 5-12 for a depiction of the avenue-in-depth method.)

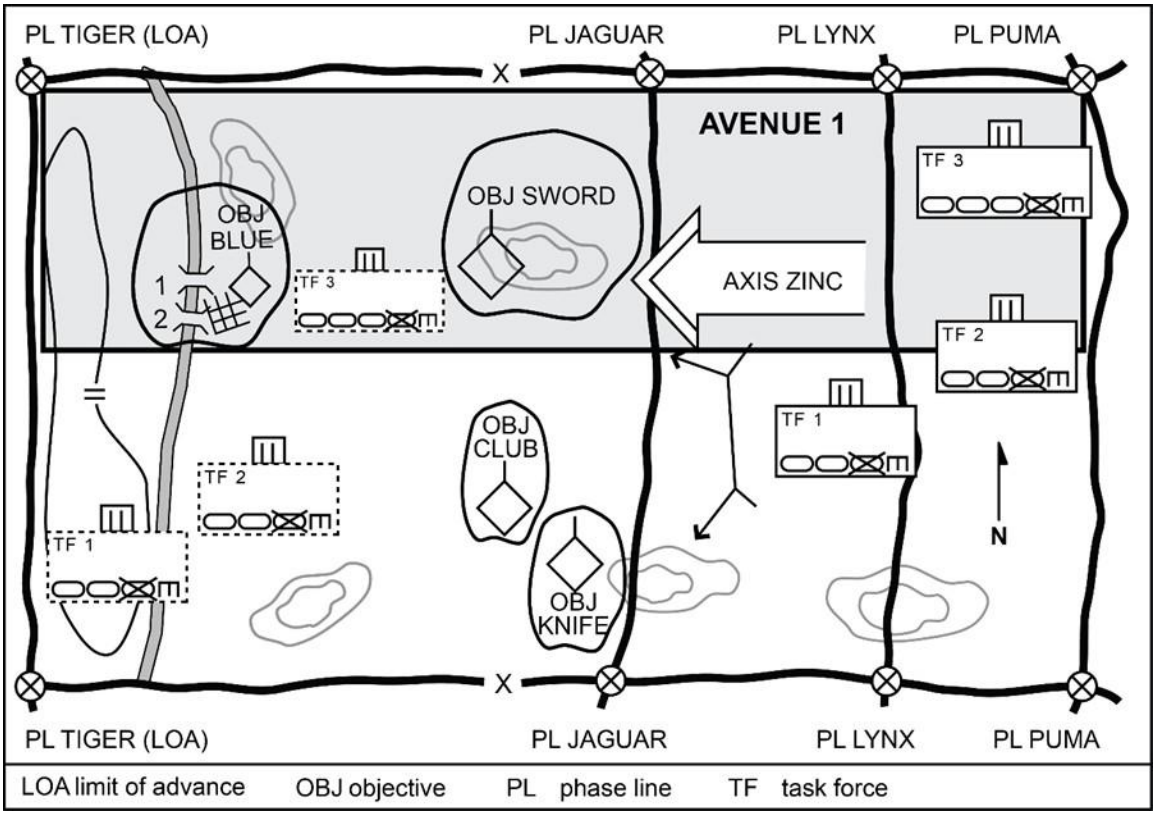


Figure 5-12. Sample avenue-in-depth method

5-126. In stability operations, planners can modify the avenue-in-depth method. Instead of focusing on a geographic avenue, the staff analyzes a single line of effort. This method focuses on one line of effort at a time. (See figure 5-13 for a depiction of the avenue-in-depth method using lines of effort.)

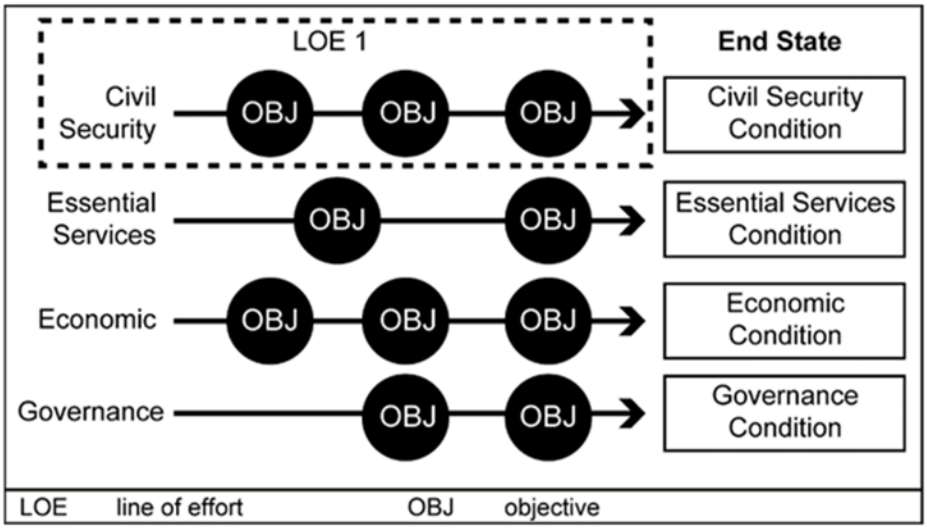


Figure 5-13. Sample modified avenue-in-depth method using lines of effort

Box

5-127. The box method is a detailed analysis of a critical event, such as an engagement area, a wet gap crossing site, or a landing zone. It works best in a time-constrained environment, such as a hasty attack. The box method is particularly useful when planning operations in noncontiguous assigned areas. When using this method, the staff isolates an area and focuses on critical events in it. Staff members assume that friendly units can handle most situations in their assigned areas and focus their attention on the critical event or events. (See figure 5-14 for a depiction of the box method.)

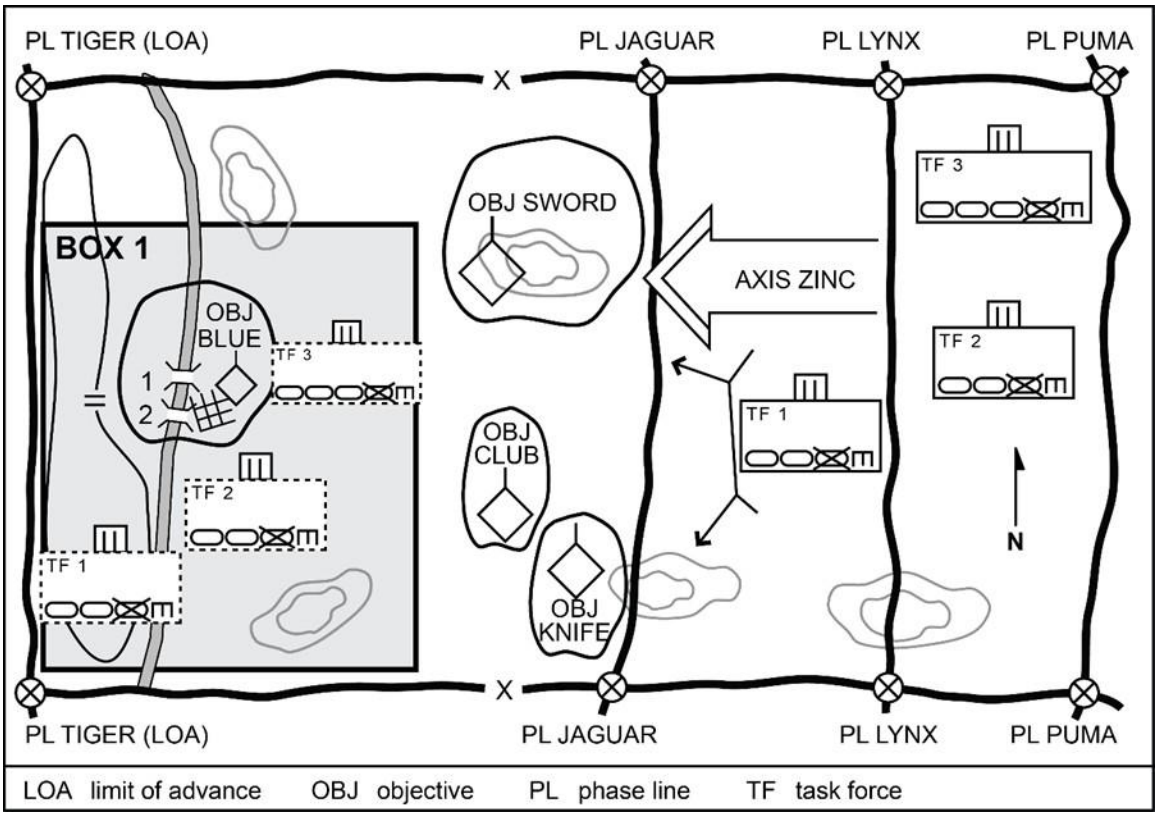


Figure 5-14. Sample box method

5-128. In stability tasks, the box method may focus analysis on a specific objective along a line of effort, such as development of local security forces as part of improving civil security. (See figure 5-15 for a depiction of the modified box method using lines of effort.)

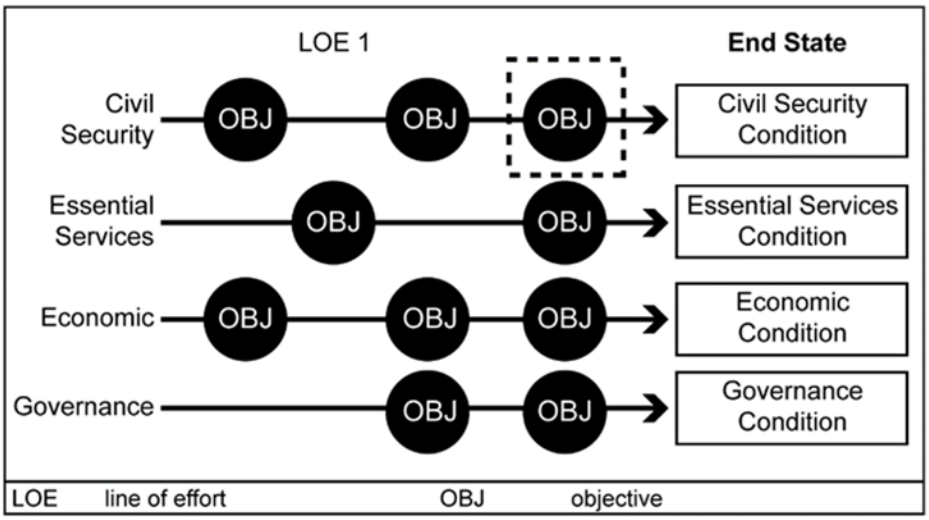


Figure 5-15. Sample modified box method using lines of effort

Select a Method to Record and Display Results

5-129. The COA analysis results provide a record from which to build task organizations, synchronize activities, develop DSTs, confirm and refine event templates, prepare plans or orders, and compare COAs. Two methods commonly used to record and display results are the COA synchronization matrix method and the sketch note method. In both methods, personnel are identified to capture and record results during the wargame so valuable analysis is not lost. The amount of detail depends on the time available. Information recorded during the wargame should include, but is not limited to—

- Enemy actions.
- Friendly warfighting function specific information.
- Wargame actions.
- Decisions.
- Threats and opportunities.
- Discoveries.
- Information relating to specific COA evaluation criteria.

5-130. Unit SOPs should address details and methods of recording and displaying COA analysis results. The results contained in the COA synchronization matrix or sketch notes are later used to produce the execution matrix. (See Appendix F for more information on execution matrix production.)

Course of Action Synchronization Matrix

5-131. The COA synchronization matrix is a tool the staff uses to record the results of COA analysis. It helps them synchronize a COA across time, space, purpose, and resources in relationship to potential enemy and civil actions. The staff should produce a COA synchronization matrix for each COA being analyzed. The COA synchronization matrix typically identifies those pieces of critical information necessary to guide, record, and synchronize the wargame COA analysis, such as—

- Weather and light data.
- Air tasking order cycle (or other joint processes necessary for synchronization).
- Area of influence critical information.
- Enemy actions.
- Friendly actions.
- Population or civilian action when expected to impact operation.
- Decision points.
- Control measures.
- Risk.
- Other organizations or partners potentially impacting a COA when appropriate.

(See table 5-6 for an example of a generic COA synchronization matrix.)

Table 5-6. Example generic course of action synchronization matrix

Time, Event, or Phase		***Initial Set***	***Turn 1***			***Turn 2***		
		H-hour (or event or phase)	**H-24 hours (or event or phase)**			**H+24 to H+36 (or event or phase)**		
***ATO* Day Designator**		***AB***	***AB***			**AC**		
Step		**Initial Set**	**Action**	**Reaction**	**Counter-action**	**Action**	**Reaction**	**Counter-Action**
Weather and Light Data		BMNT – 0635; Sunrise – 0650; Sunset – 1910; EENT – 1935	No change	No change	No change	No change	No change	No change
Area of Interest	Higher Fires	FSCL PL RED; conducts SEAD	Targets ADA at OBJ TOM and OBJ BOB	No change	No change	No change	No change	No change
	USAF	AI, OCA, DCA	No change	No change	No change	No change	No change	No change
	Adjacent units	No change	1 AD establishes in attack position along PL SILVER 1 UK establishes in attack position along PL RED	No change	No change	1 AD attacks in AO STRIKE to seize OBJ ROBIN 1 UK attacks in AO FAST to seize OBJ CARDINAL	No change	No change
	Enemy decision points	Destroy key bridges in corps assigned area	No change	No change	No change	No change	CBRN reserve; Commits reserve to OBJ HENRY	No change
Enemy Action		Prepares defense; targets USAF OCA; conducts disinformation through international media and IDP camps	No change	Destroys key bridges; conducts cyberspace attacks against infrastructure and C2	No change	No change	Conducts disinformation messaging accusing friendly sources of use of chemical munitions	Coordinate with HN, nearest U.S. forces, or OGA on location of chemical strikes; conduct tactical messaging
Population or Civilian Action		Begins displacement to IDP camps	Displaces along routes	No change	No change	No change	No change	No change
Decision Points		No change	Conduct Aviation attack on OBJ IRENE	No change	Conduct Aviation attack on OBJ HENRY	No change	No change	No change
Control Measures		FSCL – PL RED	LD at PL BLUE	No change	No change	No change	No change	No change

Table 5-6. Example generic course of action synchronization matrix (continued)

Time, Event, or Phase		*Initial Set*	*Turn 1*			*Turn 2*		
		H-hour	**H-24 hours (or event or phase)**			**H-hour (or event or phase)**		
ATO Day Designator		**AB**	**AB**			**AC**		
Step		**Initial Set**	**Action**	**Reaction**	**Counter-action**	**Action**	**Reaction**	**Counter-action**
Movement and Maneuver	1/1ID	Set TAA MICHAEL	Moves ROUTE IRISH to assault position	No change	No change	Attacks to seize OBJ HENRY	No change	No change
	2/1ID	Set TAA JOHN	Moves ROUTE WILDCATS to assault position	No change	No change	Attacks to seize OBJ BILL	No change	No change
	3/1ID	Set TAA TIM	Occupies AA GAP	No change	Conducts AASLT to seize OBJ CROSSING	Secures OBJ CROSSING	No change	Conducts AASLT to OBJ TOM
	1 CAB	Set AA SALLY	Conducts reconnaissance and security PL RED to OBJ CROSSING	No change	Conducts reconnaissance and security PL BLUE;	Attacks Reserve vic OBJ EMMA	No change	No change
Reserve		Set TAA DIANA	PL GREEN, Priority OBJ ERMMA, OBJ CROSSING, OBJ HENRY, CP 3	No change	No change	Moves to OBJ CROSSING; priority OBJ HENRY and CP 3	No change	No change
Information Collection		NAI 1, 2, 4, 6	NAI 1, 3, 11	No change	No change	NAI 5, 7, 9	No change	No change
Fires		TAI 1, 3, 7	No change	No change	TAI 1, 2, 3, 7	No change	No change	No change
Close Air Support		No change	No change	No change	No change	No change	No change	No change
Electromagnetic Warfare		No change	No change	No change	No change	No change	No change	No change
Nonlethal Effects		Direct civilians to IDP camp (radio, leaflet and SMS)	No change	No change	No change	O/O civilian shelter in place radio messages	No change	No change
Protection	MEB	Secures DSA OMAHA	No change	No change	No change	O/O quartering party moves to SA Denver	No change	No change
	Engineer	Attach bridging CO to 1/1ID	No change	No change	No change	No change	No change	No change
	PM	No change	Secure MSR TAN	No change	No change	Secures MSR GOLD to crossing	No change	No change
	CBRN	No change	No change	No change	No change	No change	No change	Establish decon at CP 5
	AMD	Set AA SALLY	No change	No change	No change	No change	No change	No change

Table 5-6. Example generic course of action synchronization matrix (continued)

Time, Event, or Phase	***Initial Set***	***Turn 1***			***Turn 2***		
	H-hour	**H - 24 hours (or event or phase)**			**H-hour (or event or phase)**		
ATO Day Designator	**AB**	**AB**			**AC**		
Step	**Initial Set**	**Action**	**Reaction**	**Counter-action**	**Action**	**Reaction**	**Counter-action**
Sustainment	Established DSA OMAHA; move, arm, fuel, fix	No change	No change	No change	No change	No change	Move to DSA DENVER; fuel, arm, fix, move
Command and Control	Main CP behind 1/1ID, TAC w/ 3/1ID, RCP w/ MEB in DSA OMAHA	Main—No change; TAC preps to C2 at OBJ CROSSING	No change	No change	TAC establishes OBJ CROSSING	No change	Main CP to OBJ JOHN
Risk to mission identified	No change	No change	Loss of key bridges delays DIV attack	No change	No change	No change	No change
HN	No change	No change	No change	No change	No change	No change	No change
Interagency	No change	No change	No change	No change	No change	No change	No change
NGOs	No change	No change	No change	No change	No change	No change	No change

AA	assembly area	LD	line of departure
AASLT	air assault	MEB	maneuver enhancement brigade
AD	armored division	MSR	main supply route
ADA	air defense artillery	NAI	named area of interest
AI	air interdiction	NGO	nongovernmental organization
AMD	air and missile defense	OBJ	objective
AO	area of operations	OCA	offensive counterair
ATO	air tasking order	OGA	other government agency
BMNT	begin morning nautical twilight	O/O	on order
C2	command and control	PL	phase line
CAB	combat aviation brigade	PM	provost martial
CBRN	chemical, biological, radiological, or nuclear	RCP	rear command post
CO	company	SA	support area
CP	command post	SEAD	suppression of enemy air defenses
DCA	defensive counterair	SMS	short message service
DIV	division	TAA	tactical assembly area
DSA	division support area	TAC	tactical command post
EENT	end of evening nautical twilight	TAI	targeted area of interest
FSCL	fire support coordination line	UK	United Kingdom
HN	host nation	USAF	United States Air Force
ID	infantry division	vic	vicinity
IDP	internally displaced person		

Sketch Note

5-132. The sketch note method uses brief notes concerning critical locations or tasks and purposes. These notes refer to specific locations or relate to general considerations covering broad areas. The commander and staff mark locations on the map and on a separate worksheet. Staff members use sequential numbers to link the notes to the corresponding locations on the map or overlay. Staff members also identify actions by placing them in sequential action groups, giving each subtask a separate number. They use the worksheet to identify all pertinent data for a critical event. (See table 5-7 on page 120 for an example of the sketch note method.)

They assign each event a number and title and use the columns on the worksheet to identify and list in sequence—

- Sequence of events.
- Units and assigned tasks.
- Expected enemy actions and counteractions or reactions.
- Friendly reactions or actions and counteractions.
- Total assets needed for the task.
- Estimated time to accomplish the task.
- Decision point tied to executing the task.
- CCIRs.
- Control measures.
- Remarks.

Table 5-7. Sample sketch note method

Critical Event	***Seize OBJ Sword***
Sequence number	1
Action	TF 3 attacks to destroy enemy company on OBJ SWORD
Reaction	Enemy company on OBJ CLUB counterattacks
Counteraction	TF 1 suppresses enemy company on OBJ CLUB
Assets	TF 3, TF 1, and TF 2
Time	H+1 to H+4
Decision point	DP 3a and 3b
Commander's critical information requirements	Location of enemy armor reserve west of PL JAGUAR
Control measures	AXIS ZINC and support by fire position 1
Remarks	none
DP objective OBJ decision point	PL phase line TF task force

Gather the Tools

5-133. After the commander issues guidance, the next task for COA analysis is for the staff to gather the necessary tools to conduct the war game. The COS or XO directs the staff to gather tools, materials, and data for the wargame. The COS or XO, assistant chief of staff, intelligence (G-2) or battalion or brigade intelligence staff officer (S-2), G-5, G-3 or S-3, and the fires cell decide on each event (turn) to be wargamed and the start and end date or time. Staff members bring an updated running estimate including facts, assumptions, constraints, limitations, specified tasks, implied tasks, and the status of key capabilities. Staffs should also include additional relevant information for their warfighting function to support the wargame method. Wargaming is done with maps, sand tables, computer simulations, command and control information systems, or other tools that accurately reflect the terrain and enemy forces. The staff posts the COA on a map displaying the assigned area. The tools required include, but are not limited to—

- Sequence of events and briefing order.
- Running estimates.
- Threat templated COAs and models.
- Civil considerations overlays, databases, and data files.
- MCOOs and terrain effects matrices.
- Materials for recording the results.
- Completed COAs, including graphics.
- The problem statement.
- Draft synchronization matrices and DSTs and DSMs.
- A means to post or display enemy and friendly unit symbols and other organizations.

- A map or sketch of the assigned area.
- Relevant warfighting function information specific to each COA.

List Friendly Forces

5-134. The planning team lists all units two levels below its echelon and any critical or key assets and capabilities that can be committed to the operation, paying special attention to support relationships and constraints. This list includes assets from all participants operating in the assigned area.

List Assumptions

5-135. The commander and staff review previous assumptions for continued validity and necessity for each COA. Any changes resulting from this review are captured. It is common for each COA to have assumptions which differ from other COAs.

List Known Critical Events and Decision Points

5-136. A ***critical event*** **is an event that directly influences mission accomplishment**. Critical events include events that trigger significant actions or decisions (such as commitment of an enemy reserve), complicated actions requiring detailed study (such as a passage of lines), and the unit's essential task. The list of critical events includes major events from the unit's current position through mission accomplishment. It includes reactions by civilians that potentially affect operations or require allocation of significant assets to account for essential stability tasks.

5-137. A decision point is a point in time and space when the commander or staff anticipates making a key decision concerning a specific COA. Key decisions are decisions that commanders make. During large-scale combat there may be circumstances, based on the tempo and anticipated OE, where a commander delegates authority to make a decision to a member of the command group. Decision points may be associated with the status of the friendly force or ongoing operations, and they are associated with CCIRs that describe what information the commander needs to make the anticipated decision. Decision points do not dictate what the decision is, only that the commander must make one, and when and where it should be made to maximize impact on friendly or enemy COAs or to accomplish stability tasks.

Execute Course of Action Analysis and Assess the Results

5-138. COA analysis focuses on actors rather than the tools used. Staff members who participate in COA analysis should be the individuals deeply involved in developing COAs. In stability tasks, subject matter experts in areas such as economic or local governance can also help assess the probable results of planned actions, including analytically identifying possible unintended effects.

5-139. The wargame follows an action-reaction-counteraction cycle. Actions are those events initiated by the side with the initiative. Reactions are the opposing side's actions in response. With regard to stability tasks, the wargame tests the effects of actions, including intended and unintended effects, as they stimulate anticipated responses from civilians and civil institutions. Counteractions are how the first side improves its action from the expected responses to reactions. This sequence of action-reaction-counteraction continues until the event to be covered is completed or until the commander decides to use another COA to accomplish the mission.

5-140. The staff considers all possible forces, including templated enemy forces outside the assigned area that can influence the operation. The staff also considers the actions of civilians in the assigned area, especially when fighting in dense urban environments or when conducting consolidation of gains. The staff evaluates each friendly move to determine the assets and actions required to defeat the enemy at that point or to accomplish stability tasks. The staff continually considers branches to the plan that promote success against likely enemy counteractions or unexpected civilian reactions. Lastly, the staff lists assets used in the appropriate columns of the synchronization matrix or sketch note.

5-141. The planning team examines many areas during the COA analysis. These include, but are not limited to—

- All friendly capabilities.
- All enemy capabilities and critical civil considerations that impact operations.
- Informational considerations.
- Movement considerations.
- Closure rates.
- Lengths of columns.
- Formation depths.
- Ranges and capabilities of weapons systems.
- Direct fire control measures and fire support coordination measures.
- Desired effects of fires.
- Templated enemy forces outside the assigned area.
- Sustainment.
- Time and space, to include sequencing, phasing, time distance analysis, and boundaries.
- Branches and sequels.
- Triggers.
- Required conditions.
- Command and control considerations.

5-142. During COA analysis, staff officers continuously assess and mitigate risk for their functional areas for each COA whenever possible. They then propose appropriate control measures. They also continually assess the risk of adverse reactions from the population and media resulting from actions taken by all sides in the operation. Staff officers develop ways to mitigate those risks.

5-143. The staff identifies the required assets of the warfighting functions to support the concept of operations, including those needed to synchronize sustainment. If requirements exceed available assets, the staff recommends priorities based on the situation, commander's intent, and planning guidance. To maintain flexibility, the commander designates a reserve to maintain assets for unforeseen tasks or opportunities.

5-144. An effective COA analysis results in the commander and staff refining, identifying, analyzing, developing, and determining several effects. (See table 5-8 for a sample list of effective COA analysis results.)

Table 5-8. Sample effective course of action analysis results

The commander and staff refine (or modify)—
Each course of action, to include identifying branches and sequels that become on-order or be prepared missions. The locations and times of decisive points. The enemy event template and matrix. The task organization, including forces retained in general support. Control requirements, including control measures and updated operational graphics. Commander's critical information requirements and other information requirements—including the latest time information is of value—and incorporate them into the information collection plan.
The commander and staff identify—
Key or decisive terrain and determining how to use it. Tasks the unit retains and tasks assigned to subordinates. Likely times and locations for enemy use of weapons of mass destruction and friendly chemical, biological, radiological, and nuclear defense requirements. Potential times or locations for committing the reserve. The most dangerous enemy course of action. The most likely enemy course of action. The most dangerous civilian reaction. Locations for the commander and command posts. Critical events. Requirements for support of each warfighting function. Effects of friendly and enemy actions on civilians and infrastructure and on military operations. Locations of named areas of interest, target areas of interest, decision points, and intelligence requirements needed to support them. Analyzing, and evaluating strengths and weaknesses of each course of action. Hazards, assessing their risk, developing control measures for them, and determining residual risk. The coordination required for integrating and synchronizing interagency, host-nation, and nongovernmental organization involvement.
The commander and staff analyze—
Potential civilian reactions to operations. Potential media reaction to operations. Potential impacts on civil security, civil control, and essential services in the assigned area.
The commander and staff develop—
Decision points. A synchronization matrix. A decision support template and matrix. Solutions to achieving minimum essential stability tasks in the assigned area. The information collection plan and graphics. Themes and messages. Fires, protection, and sustainment plans and graphic control measures.
The commander and staff determine—
The requirements for deception and surprise. The timing for concentrating forces and starting the attack or counterattack. The movement times and tables for critical assets, including information systems nodes. The estimated duration of the entire operation and each critical event. The projected percentage of enemy forces defeated in each critical event and overall. The minimum essential tasks that the unit can or must accomplish. The targeting requirements in the operation, to include identifying or confirming high-payoff targets and establishing attack guidance. The allocation of assets to subordinate commanders to accomplish their missions. The media coverage and impact on key audiences.

Conduct a Course of Action Analysis Briefing (Optional)

5-145. Time permitting, the staff conducts an internal briefing to ensure everyone understands the results of the COA analysis. Typically, this briefing is not given to the commander. The staff uses the briefing for review and ensures that it captures all relevant points of the analysis for potential future presentation to the commander. In a collaborative environment, the briefing may include selected subordinate staffs. A COA analysis brief generally includes—

- Higher echelon headquarters' mission, commander's intent, and brief overview of scheme of maneuver.
- Updated IPOE.
- COA analysis method used.

- Friendly and enemy COAs that were analyzed, including—
  - Assumptions used.
  - Critical events.
  - Concept of operations.
  - Analysis results.
  - Modifications made.
- Additional commander's guidance.
- Additional COA analysis responsibilities by warfighting function.

Note. If at any time during COA analysis it is determined a COA no longer meets screening criteria, the commander should be notified immediately.

General Course of Action Analysis Responsibilities

5-146. Paragraphs 5-147 through 5-165 discuss specific individual and staff section responsibilities during COA analysis. Traditionally, certain staff members have key and specific roles. However, unit SOPs or unique circumstances may necessitate deviation from the following list of responsibilities by duty position.

Key Leader Responsibilities

5-147. The commander has overall responsibility for the COA analysis process. The commander can determine the staff members who are involved.

5-148. The COS or XO coordinates actions of the staff during the COA analysis. This officer is the unbiased controller of the process, ensuring the staff stays on a timeline and achieves the goals of the COA analysis session. The COS or XO develops or approves the script to establish the briefing order and ensure the participants understand their briefing requirements. In a time-constrained environment, this officer ensures that, at a minimum, the main effort's critical event is analyzed.

5-149. The G-5, G-3, or S-3 assists the commander with the COA analysis. The G-5, G-3, or S-3—

- Portrays the friendly scheme of maneuver, including the employment of information-related capabilities tasks and activities.
- Ensures subordinate unit actions comply with the commander's intent.
- Normally provides the recorder.

Command and Control Responsibilities

5-150. During COA analysis, the S-3 or G-3 confirms the locations of CPs and adjusts, if required. They control sequencing of CP movements to ensure continuity of command and control during operations. The G-3 or S-3 also ensures the unit's established primary, alternate, contingency, and emergency (PACE) plan remains valid during execution. The S-3 or XO from the headquarters and headquarters battalion, or the commander or first sergeant from the headquarters and headquarters company or troop, is responsible for the sustainment and movement of the unit's CPs. These representatives do not determine or direct CP locations, but rather provide refinement to planned CP movements and sustainment operations.

5-151. The assistant chief of staff, signal (G-6) or battalion or brigade signal staff officer (S-6) assesses network operations, spectrum management operations, network defense, and information protection feasibility of each analyzed COA. The G-6 or S-6 determines communications systems requirements and compares them to available assets, identifies potential shortfalls, and recommends actions to eliminate or reduce their effects. This may include a mission partner network to support the mission partner environment when assigned as a multinational headquarters (Refer to ATP 6-02.61 and ATP 6-02.62 for more information on the mission partner network.)

Intelligence Responsibilities

5-152. During the COA analysis, the G-2 or S-2 role-plays the enemy commander, other threat organizations, and critical civil considerations in the assigned area. This officer develops critical enemy decision points in relation to the friendly COAs, projects enemy reactions to friendly actions, and projects enemy losses. The

intelligence officer assigns different responsibilities to available staff members within the section (such as the enemy commander, friendly intelligence officer, and enemy recorder) during analysis. The intelligence officer captures the results of each enemy, threat group, and civil considerations action and counteraction and the corresponding friendly and enemy strengths and vulnerabilities. By trying to realistically win for the enemy, the intelligence officer ensures that the staff fully addresses friendly responses for each enemy COA. For the friendly force, the intelligence officer—

- Refines intelligence and information requirements and the planning requirements tools.
- Refines the situation and event templates, including NAIs that support decision points.
- Refines the event template with corresponding decision points, TAIs, and HVTs.
- Participates in targeting to select high-payoff targets (HPTs) from HVTs identified during IPOE.
- Recommends PIRs and supporting information requirements that correspond to the decision points.
- Refines civil considerations overlays, databases, and data files.
- Refines the MCOOs and terrain effects matrices.
- Refines weather products that outline the critical weather impacts on operations.

Movement and Maneuver Responsibilities

5-153. During the COA analysis, the G-3 or S-3 and G-5 are responsible for movement and maneuver. The G-3 or S-3 normally selects the technique for the COA analysis and role-plays the friendly maneuver commander. Various staff officers assist the G-3 or S-3, including the aviation officer and engineer officer. The G-3 or S-3 executes friendly maneuver as outlined in the COA sketch and COA statement. The plans officer assesses warfighting function requirements, solutions, and concepts for each COA; develops plans and orders; and determines potential branches and sequels arising from various analyzed COAs. The plans officer also coordinates and synchronizes warfighting functions in all plans and orders. The planning staff ensures that the analysis of each COA covers every operational aspect of the mission. The members of the staff record each event's strengths and weaknesses and the rationale for each action. They complete the DST and DSM for each COA. They annotate the rationales for actions during the COA analysis and use those rationales later with the commander's guidance to compare COAs.

Fires Responsibilities

5-154. The chief of fires, deputy fire support coordinator, or fire support officer assesses the fire support feasibility of each analyzed COA. This officer refines or develops a proposed high-payoff target list (HPTL), target selection standards, and attack guidance matrix (AGM). The chief of fires works with the intelligence officer to identify NAIs and TAIs for enemy indirect fire weapons systems and identify HPTs and additional events that may influence the positioning of field artillery and air defense artillery (ADA) assets. The chief of fires should also offer a list of possible defended assets for ADA forces, make radar employment and coverage recommendations, identify no-fire areas, and assist the commander in making a final determination about asset priority.

Protection Responsibilities

5-155. The chief of protection, or protection coordinator at the brigade level and below, assesses protection element requirements, refines EEFIs, and develops a scheme of protection for each analyzed COA. The chief of protection or protection coordinator—

- Develops then refines the protection prioritization list and revises the critical asset list and the defended asset list.
- Integrates and synchronizes protection capabilities resources.
- Assesses threats and hazards and determines the criticality and vulnerability of critical capabilities, assets, and activities (for example, decontamination, dirty route planning).
- Develops risk control measures and mitigation measures against threats and hazards.
- Integrates and synchronizes protection capabilities and resources.
- Implements area security, including security of lines of communications, antiterrorism measures, and law enforcement operations.
- Modifies protection priorities as transitions occur or changes based on commander's priorities.

Sustainment Responsibilities

5-156. During the COA analysis, the assistant chief of staff, personnel (G-1) or the battalion or brigade personnel staff officer (S-1) assesses the personnel aspect of building and maintaining the combat power of units. This officer identifies potential shortfalls and develops recommendations for each COA to ensure units maintain adequate manning to accomplish their mission. The G-1 or S-1, assisted by the surgeon section, provides casualty estimates using the medical planner's toolkit. As the primary staff officer assessing the human resources planning considerations to support sustainment operations, the G-1 or S-1 provides human resources support for the operation. (Refer to ATP 1-0.1 for additional information on casualty estimates.)

5-157. The assistant chief of staff, logistics (G-4) or battalion or brigade logistics staff officer (S-4) assesses and confirms the logistics feasibility of each analyzed COA. This officer determines critical requirements for each logistics function (supply Classes I through VII, IX, and X) and identifies potential problems and deficiencies. The G-4 or S-4—

- Assesses the status of all logistics functions required to support the COA.
- Identifies support required to provide essential services to civilians.
- Identifies considerations concerning lines of communication and ports of embarkation and debarkation.
- Plans the employment of forward logistics elements and forward arming and refueling points.
- Establishes logistics packages routes and timelines.
- Identifies potential resource shortfalls and recommends actions to eliminate or reduce their effects.
- Ensures available movement times and assets support each COA.

Note. While improvising can contribute to responsiveness, only accurately predicting requirements for each logistics function can ensure continuous sustainment.

5-158. During the COA analysis, the assistant chief of staff, financial management (G-8) or battalion or brigade financial management officer (S-8) assesses the commander's assigned area to determine the best use of resources for each COA. This assessment includes both core functions of finance support and comptroller (resource management) operations. This officer determines unified action partner relationships requirements for special funding and support to the procurement process.

5-159. The surgeon section coordinates, monitors, prioritizes, synchronizes, and assesses the execution of health service support and force health protection activities for the command. The surgeon section uses casualty estimates to inform patient admission computations, patient evacuation calculations, and synchronize Army health system support for each COA.

Other Participant Responsibilities

5-160. + The assistant chief of staff, civil affairs operations (G-9) or battalion or brigade civil affairs operations staff officer (S-9) ensures each analyzed COA effectively integrates civil considerations: the "C" of the operational variables of METT-TC(I). This officer assesses how operations affect civilians and estimates the requirements for essential stability tasks commanders might have to undertake based on the ability of the unified action partners. Host-nation support and care of dislocated civilians are of particular concern. The civil affairs operations officer's analysis considers how operations affect public order and safety, the potential for disaster relief requirements, noncombatant evacuation operations, emergency services, and the protection of culturally significant sites. This officer provides feedback on how the culture in the area affects each COA. For example, conducting a sex analysis can highlight additional OE considerations and how they may impact the operation. If the unit lacks an assigned civil affairs officer, the commander assigns these responsibilities to another staff member.

5-161. The cyber electromagnetic warfare officer provides information on the electromagnetic warfare target list, electromagnetic attack requests, electromagnetic attack taskings, and the electromagnetic warfare portion of the collection matrix and the AGM. Additionally, the cyber electromagnetic warfare officer assesses threat vulnerabilities, friendly electromagnetic warfare capabilities, and friendly actions relative to electromagnetic warfare activities and other cyberspace electromagnetic activities not covered by the G-6 or G-2.

5-162. The staff judge advocate advises the commander on all matters pertaining to law, policy, regulation, good order, and discipline for each analyzed COA. This officer provides legal advice across the range of military operations on law of armed conflict, rules of engagement, international agreements, Geneva and Hague Conventions, treatment and disposition of noncombatants, and the legal aspects of targeting.

5-163. Several other officers have responsibilities regarding COA analysis. For example—

- The safety officer provides input to influence accident and incident reductions by implementing risk management procedures throughout the planning process and during execution.
- The knowledge management officer assesses the effectiveness of the knowledge management plan for each COA.
- The space operations officer, if available, provides and represents friendly, threat, and neutral space capabilities.

Liaisons

5-164. When available, liaisons should attend and participate to gain understanding of on-going planning efforts and provide updates to their headquarters. The involvement of liaisons to support parallel planning is important when planning in a time-constrained environment or when planners between headquarters and different echelons cannot frequently communicate, which is often the case in large-scale combat.

Recorders

5-165. The use of recorders is particularly important. Recorders capture coordinating instructions, subunit tasks and purposes, and information required to synchronize an operation. Recorders allow staff members to write part of the order before they complete the planning. Automated information systems enable recorders to enter information into preformatted formats that represent either briefing charts or appendixes to orders. Each staff section keeps formats available to facilitate networked orders production.

STEP 5-COURSE OF ACTION COMPARISON

5-166. COA comparison is an objective process to evaluate COAs independently and against set evaluation criteria approved by the commander or the commander's designated representative. The goal is to identify the advantages and disadvantages of each COA, compare COAs to determine cost and benefit which enables recommending and selecting a COA with the highest probability of success, and then further developing a COA in an OPLAN or OPORD. The commander and staff perform certain actions and processes that lead to key outputs. (See figure 5-16 on page 128 for a depiction of the COA comparison.)

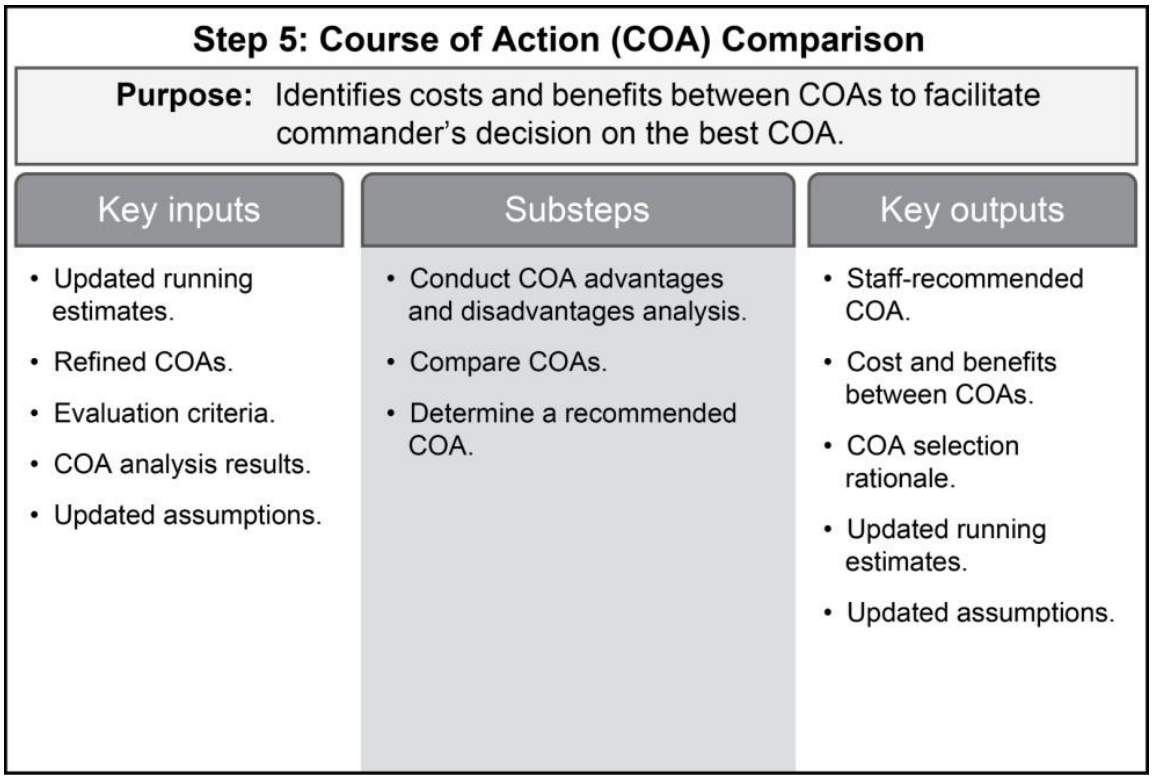


Figure 5-16. Step 5-course of action comparison depiction

Conduct Course of Action Advantages and Disadvantages Analysis

5-167. The COA comparison starts with all staff members analyzing and evaluating the advantages and disadvantages of each COA from their perspectives. Staff members each present their findings to the other staff members for their consideration. Using the evaluation criteria developed during mission analysis, the staff outlines each COA, highlighting its advantages and disadvantages. Comparing the advantages and disadvantages of the COAs identifies their benefits and associated risks with respect to each other. (See table 5-9 for a sample list of COA advantages and disadvantages.)

Table 5-9. Sample course of action advantages and disadvantages

Course of Action	*Advantages*	*Disadvantages*
Course of action 1	Main effort avoids major terrain obstacles. Adequate maneuver space available for units executing the essential task and the reserve.	Main effort faces stronger resistance at the start of the operation. Limited resources available to establishing civil control to town X.
Course of action 2	Supporting efforts provide excellent flank protection of the main effort. Upon completion of the main effort's objective, supporting efforts can quickly transition to establish civil control and provide civil security to the population in town X.	Operation may require the early employment of the division's reserve.

Compare Courses of Action

5-168. A comparison of COAs is critical. The staff uses any technique that helps develop those key outputs and recommendations that assist the commander in making the best decision. A common technique is the decision matrix. This matrix uses evaluation criteria developed during mission analysis and refined during COA development to help assess the effectiveness and efficiency of each COA. (See table 5-10 for a sample decision matrix.)

Table 5-10. Sample decision matrix

Weight[1]	***1***	***2***	***1***	***1***	***2***	
Criteria[2]	Simplicity	Maneuver	Fires	Civil control	Mass	Total[4]
Course of Action (COA) 1[3]	2	2 (4)	2	1	1 (2)	8 (11)
COA 2[3]	1	1 (2)	1	2	2 (4)	7 (10)

Notes.
[1]The chief of staff or executive officer may emphasize one or more criteria by assigning weights to them based on a determination of their relative importance. Higher weights correspond to emphasized or more important criteria.
[2]Criteria are those approved by the commander during mission analysis.
[3]COAs selected for analysis have rankings assigned with regards to each criterion based on relative advantages and disadvantages of each COA. For example, when compared for relative simplicity, COA 2 is simpler than COA 1 and is therefore ranked 1, with COA 1 ranked 2.
[4]For this example a lower score is the better COA.

5-169. The decision matrix is a tool to compare and thoroughly and logically evaluate COAs. However, the process may be based on highly subjective judgments that can change dramatically during the course of evaluation. In table 5-10 the weights reflect the relative importance of each criterion as initially estimated by a COS or XO during mission analysis and adjusted or approved by the commander. During COA comparison, rankings are assigned from 1 to the number of COAs that exist. Lower rankings are preferred. After assigning ranks to COAs, the staff adds the unweighted ranks in each row horizontally and records the sum in the total column on the far right of each COA. The staff then multiplies the same ranks by the weights associated with each criterion and notes the product in parenthesis underneath the unweighted rank. No notation is required if the weight is 1. The staff adds these weighted ranks horizontally and records the sum in parenthesis underneath the unweighted total in the total column to the right of each COA. The staff then compares the totals to determine the most preferred (lowest total) COA based on both unweighted and weighted ranks. Although the lowest total denotes a most preferred solution, the process for estimating relative COA ranks and relative criteria weighting may be highly subjective.

5-170. Commanders and staffs cannot solely rely on the outcome of a decision matrix, as it only provides a partial basis for a solution. A decision matrix is a starting point for dialogue between the commander and staff. During the COA comparison process, planners carefully avoid reaching conclusions from a quantitative analysis of subjective weights. Comparing and evaluating COAs by each criterion is probably more useful than merely comparing totaled ranks. Judgments often change with regard to the relative weighting of criteria during close analysis of COAs, which will change weighted rank totals and possibly the most preferred COA. On review and consideration, the commander-based on personal judgment-may accept the results of the decision matrix, elect to execute one of the other COAs, combine elements of multiple COAs to create a hybrid COA, or direct the staff to begin COA development again with refined COA guidance.

STEP 6-COURSE OF ACTION APPROVAL

5-171. COA approval is a formal step during which the commander receives the results of the COA analysis and comparison and then selects a COA for execution. When time allows, a decision brief from the staff is presented to the commander. The commander selects a COA, makes modifications if necessary, and then issues final updates to the commander's intent and planning guidance. (See figure 5-17 on page 130 for a depiction of COA approval.)

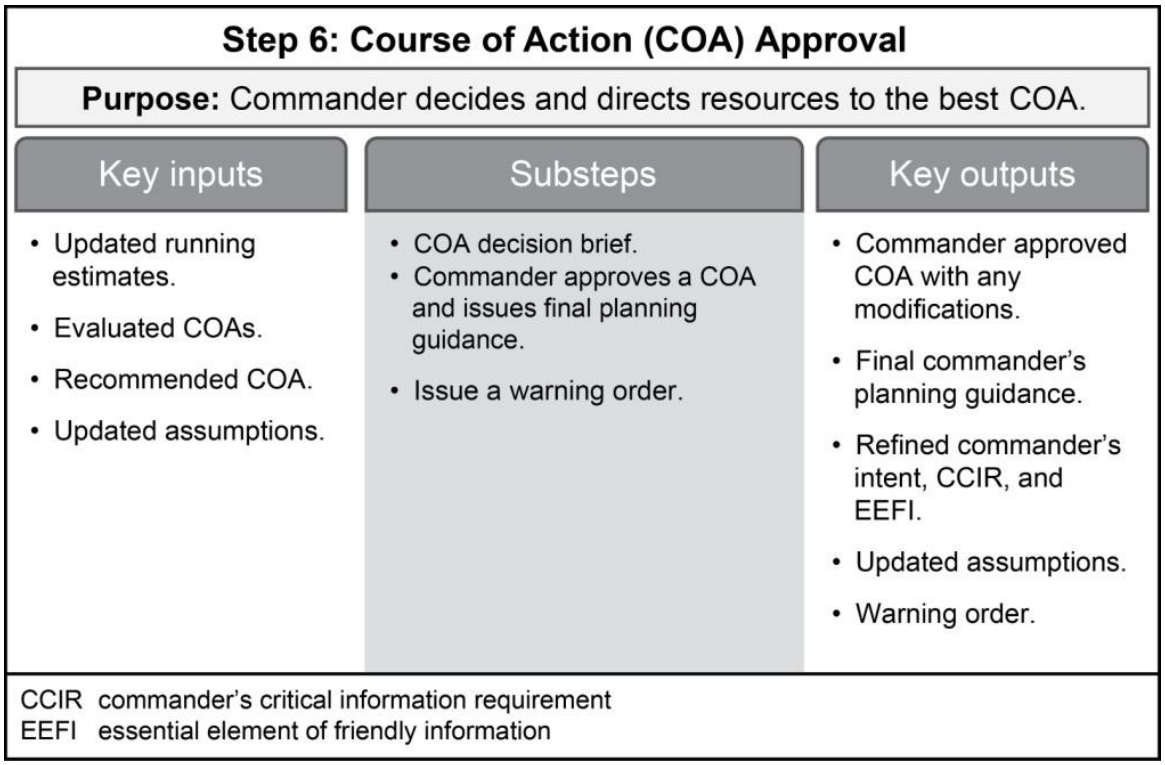


Figure 5-17. Step 6-course of action approval depiction

Conduct a Course of Action Decision Briefing

5-172. After completing its analysis and comparison, the staff identifies its preferred COA and makes a recommendation. If the staff cannot reach a decision, the COS or XO decides which COA to recommend. The staff then delivers a decision briefing to the commander. The COS or XO highlights any changes to each COA resulting from the war game. The decision briefing includes—

- The commander's intent of the higher and next higher echelon commanders.
- The status of the force and its components.
- The current IPOE.
- Each COA considered, including—
  - Assumptions used.
  - Concept of operations brief review.
  - COA analysis results.
  - Modifications to friendly COAs.
  - Evaluation criteria results.
  - Advantages and disadvantages (including risks) of each COA.
- The recommended COA. If a significant disagreement exists, then the staff should inform the commander and discuss, if necessary.

Commander Approves a Course of Action and Issues Final Planning Guidance

5-173. After the decision briefing, the commander selects the COA to best accomplish the mission. If the commander rejects all COAs, the staff starts COA development again. If the commander modifies a proposed COA or gives the staff an entirely different one, the staff develops and analyzes the new COA and presents the results to the commander with a recommendation.

5-174. After approving a COA, the commander issues the final planning guidance. The final planning guidance includes a refined commander's intent which reflects the specificity of the approved COA. The commander also provides guidance on CCIRs, turning them from CCIRs supporting planning into mission

specific CCIRs. It also includes any additional guidance on priorities for the warfighting functions, orders preparation, rehearsal, and preparation. This guidance includes priorities for resources needed to preserve freedom of action and ensure continuous sustainment.

5-175. Commanders include the risk they are willing to accept in the final planning guidance. Commanders discuss acceptable risk with adjacent, subordinate, and senior commanders as time and communications allow. However, commanders still obtain the higher echelon commander's approval to accept any risk that might imperil accomplishing the higher commander's mission.

Issue a Warning Order

5-176. Based on the commander's decision and final planning guidance, the staff issues a WARNORD to subordinate headquarters. This WARNORD contains the information subordinate units need to refine their plans. It confirms guidance issued in person or by video teleconference and expands on details not covered by the commander personally. The WARNORD issued after COA approval normally contains—

- Assigned areas.
- Mission.
- Refined commander's intent.
- Updated CCIRs and EEFIs.
- Concept of operations.
- Principal tasks assigned to subordinate units.
- Preparation and rehearsal instructions not included in SOPs.
- A final timeline for the operations.
- Updated task organization.
- Necessary graphics.

STEP 7-ORDERS PRODUCTION, DISSEMINATION, AND TRANSITION

5-177. The staff turns the selected COA into a clear, concise order with the required supporting information. The COA statement becomes the concept of operations for the plan. The COA sketch becomes the basis for the operation overlay. Planners use their knowledge, experience, skills, and judgement to fill in missing details for any part of the operation not analyzed during COA analysis. If time permits, the staff may conduct a more detailed analysis of the selected COA to more fully synchronize the operation and complete the plan. The staff writes the OPORD or OPLAN following the Army's OPORD format. (See figure 5-18 on page 132 for a depiction of orders production, dissemination, and transition. See Appendix D for more information on the OPORD format.)

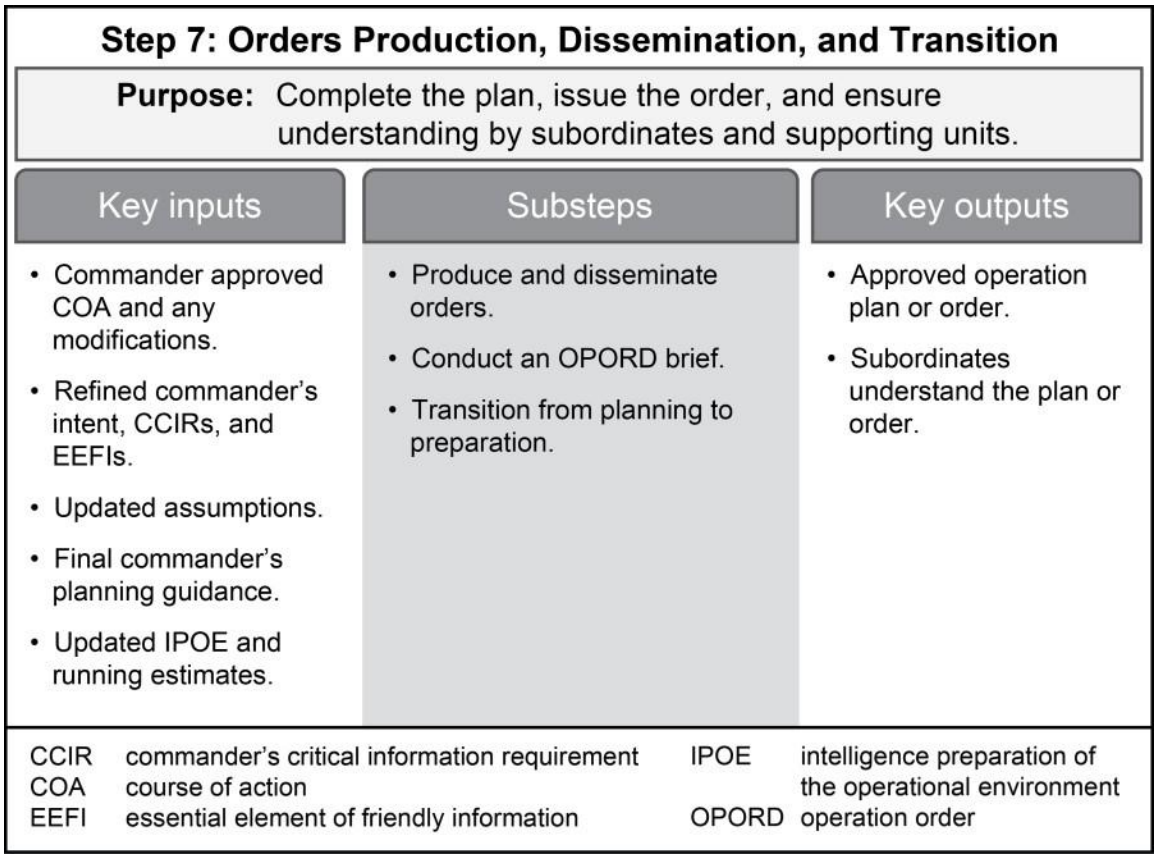


Figure 5-18. Step 7-orders production, dissemination, and transition

5-178. Normally, the COS or XO coordinates with staff principals to assist the G-3 or S-3 in developing the plan or order. Based on the commander's planning guidance, the COS or XO dictates the type of order, sets and enforces the time limits and development sequence, and determines which staff section publishes which attachments as described in Appendix C and D or based on planning SOPs.

5-179. Prior to the commander approving the plan or order, the staff ensures the plan or order is consistent and nested with the higher echelon commander's intent. They do this through—

- Plans and orders reconciliation.
- Plans and orders crosswalk.

Plans and Orders Reconciliation

5-180. Plans and orders reconciliation occurs internally as the staff conducts a detailed review of the entire plan or order. This reconciliation ensures that the base plan or order and all attachments are complete and in agreement. It identifies discrepancies or gaps in planning. If staff members find discrepancies or gaps, they take corrective actions. Specifically, the staff compares the commander's intent, mission, and commander's CCIRs against the concept of operations and the different schemes of support (such as the scheme of fires or scheme of sustainment). The staff ensures attachments are consistent with the information in the base plan or order.

Plans and Orders Crosswalk

5-181. During the plans and orders crosswalk, the staff compares the plan or order with that of the higher and adjacent commanders to achieve unity of effort and ensure the plan meets the superior commander's intent. The crosswalk identifies discrepancies or gaps in planning. If staff members identify discrepancies or gaps, they take necessary corrective action.

Approving the Plan or Order

5-182. The final action in plan and order development is the approval of the plan or order by the commander. Commanders normally do not sign attachments; however, they should review them before signing the base plan or order.

5-183. Commanders review and approve orders before the staff reproduces and disseminates them, unless they have delegated that authority. Subordinates immediately acknowledge receipt of the higher order. If possible, the higher commander and staff brief the order to subordinate commanders in person.

5-184. Time permitting, the commander and staff conduct confirmation briefings with subordinates immediately following the OPORD brief. Confirmation briefings can be conducted collaboratively with several commanders at the same time or with single commanders. These briefings may be conducted in person or by other means including radio, telephone, or video teleconference. Subordinate leaders brief their understanding of the commander's intent, the specific tasks assigned and their purposes, and the relationship of tasks to other elements conducting operations.

5-185. This step also serves as the transition between planning and preparation activities. The plans to operations transition is a preparation activity that occurs in the headquarters. It ensures members of the current operations cell fully understand the plan before execution. During preparation, the responsibility for developing and maintaining the plan shifts from the plans (or future operations) cell to the current operations cell. This transition is the point at which the current operations cell becomes responsible for controlling execution of the OPORD. This responsibility includes answering requests for information concerning the order, participating in rehearsals, and maintaining the order through FRAGORDs. This transition enables the plans cell to focus its planning efforts on sequels, branches, and other planning requirements directed by the commander. (See ADP 5-0 for information on the plans to operations handover and FM 6-0 for information on rehearsals.)

PLANNING IN A TIME-CONSTRAINED ENVIRONMENT

5-186. Any planning process aims to quickly develop a flexible, sound, and fully integrated and synchronized plan. However, fleeting opportunities or unexpected enemy action may require a quick decision to implement a new or modified plan. When this occurs, units often find themselves pressed for time in developing a new plan. To shorten planning times, units can elect to abbreviate or modify an existing planning methodology. However, a unit can only shorten the process if it fully understands the role of each step of the process and the requirements to produce the necessary products. This section describes how units modify the MDMP to conduct planning in a time constrained environment.

MODIFYING THE MILITARY DECISION-MAKING PROCESS

5-187. Before a unit can effectively conduct planning in a time-constrained environment, it must master the steps in the full MDMP. Typically, a commander abbreviates the MDMP when the benefits outweigh the risk. Training on these steps must be thorough and result in a series of staff battle drills and SOPs that can be tailored in the time available.

5-188. Commanders use the full MDMP when they have enough planning time and staff support to thoroughly examine multiple COAs and develop a synchronized plan or order. This typically occurs when planning for a new mission. Commanders may abbreviate the steps of the MDMP to fit time-constrained circumstances and produce a satisfactory plan. In time-constrained conditions, it is critical for commanders to quickly assess the situation, update their visualization, and direct their staffs to perform the MDMP activities that support rapid development of a plan.

5-189. The full MDMP provides the foundation upon which planning in a time-constrained environment is based. A staff should first master the steps of the full MDMP before it can effectively abbreviate the MDMP. The advantages of using the full MDMP are—

- It enables a better understanding of the situation and problem to solve.
- It analyzes and compares multiple friendly and enemy COAs to identify the best possible friendly COA.
- It produces the greatest integration, coordination, and synchronization of forces in plans and orders.

- It minimizes overall risk and the chance of overlooking critical aspects of an operation.
- It best identifies contingencies for branch and sequel development.
- It results in a more thorough OPLAN or OPORD.

5-190. The primary disadvantage of using the full MDMP is that it can be resource intensive for both time and effort. The longer the higher headquarters spends planning, the less time it generally leaves for subordinates to plan and prepare for operations. Additionally, the more time that is devoted to planning versus preparation can allow enemy forces to improve their posture. This may lead to yielding the initiative, resulting in a loss of momentum or lost opportunities for the friendly force.

THE COMMANDER'S RESPONSIBILITY

5-191. The commander decides how to adjust the MDMP, giving specific guidance to the staff to save time. Commanders shorten the MDMP when they lack time to perform each step in detail. The most significant factor to consider is time. It is the only nonrenewable factor, and it is often the most critical resource. Commanders who have access to only a small portion of the staff or no staff at all rely even more than normal on their own expertise, intuition, creativity, and understanding of the environment and of the art and science of war. They may have to select a COA, mentally war-game it, and confirm their decision to the staff in a short time. If so, they base their decision more on experience than on a formal, integrated staff process.

5-192. Commanders avoid changing their guidance unless a significantly changed situation requires major revisions. Making frequent, minor changes to guidance can easily result in lost time as the staff constantly adjusts and re-synchronizes the plan, and this can create an adverse ripple effect throughout the overall planning process.

5-193. Commanders consult with subordinate commanders before making a decision, if possible. Subordinate commanders are often closer to the operation and can more accurately describe enemy, friendly, and civilian situations. Additionally, consulting with subordinates gives commanders insights into an upcoming operation and allows parallel planning. White boards and collaborative digital means of communicating greatly enhance parallel planning.

5-194. In situations where commanders must decide quickly, they advise their higher echelon headquarters of the selected COA, if time is available. However, commanders do not let an opportunity pass just because they cannot report their actions.

THE STAFF'S RESPONSIBILITY

5-195. Staff members keep their running estimates current. When time is significantly constrained, they need to provide accurate, up-to-date assessments quickly and move directly into COA development. Under time-constrained conditions, commanders and staffs use as much of the previously analyzed information and as many of the previously created products as possible. The importance of running estimates increases as time decreases. Decision making in a time-constrained environment usually occurs after a unit has entered the assigned area and begun operations. This means that the IPOE, an updated common operational picture, and some portions of the running estimates should already exist. Civilian and military joint and multinational organizations operating in an assigned area should have well-developed plans and information to add insights to an OE. Detailed planning provides the basis for information that the commander and staff need to make decisions during execution.

TIME-SAVING TECHNIQUES

5-196. Paragraphs 5-197 through 5-202 discuss time-saving techniques. Commanders and staffs can use these techniques to speed the planning process.

Increased Commander's Involvement

5-197. Commanders can often set the conditions for success well before the initiation of a plan. Ensuring that planners understand the way in which the commander generally views operations and plans can assist in the development of more timely and accurate plans with less personal involvement because of an inherent understanding by the planning staff. While commanders cannot spend all their time with their planning staffs, especially in large-scale combat operations, the greater the commander's involvement in planning, the faster

the staff can generally plan. In time-constrained conditions, commanders who participate in the planning process can quickly make decisions (such as COA selection) without waiting for a detailed briefing from the staff. With increased commander involvement the amount of time spent on briefings is significantly reduced as a common understanding already exists between the commander and staff.

Limit the Number of Courses of Action to Develop

5-198. Limiting the number of COAs developed and analyzed can save planning time. If available planning time is extremely limited, the commander can direct development of only one COA. In this case, the goal is an acceptable COA that meets mission requirements in the time available. If time allows, the commander can choose to develop multiple sub-options within the directed COA. For example, this may include developing multiple branches against the most likely enemy COA or developing multiple sub-options for actions surrounding a critical event or decisive point. In such cases, the choice of COA and any sub-options is often intuitive, relying on the commander's experience and judgment. The commander determines which staff officers are essential to assist in COA development. Commanders may also include subordinate commanders, if available, either in person or by video teleconference. This team quickly develops a flexible COA that it feels will accomplish the mission.

Abbreviate Course of Action Analysis

5-199. When time is limited, commanders and staffs should still conduct some level of COA analysis instead of skipping the step altogether. Key leaders, staff members, and subject matter experts can gather around a sketch or map with graphics and talk through a COA to deconflict potential friction points and identify the required level of control to ensure mission success. The lead planner quickly describes the scheme of maneuver in as much detail as possible followed by the other warfighting functions (typically by phase). As the group discusses the actions, key leaders use their skills, knowledge, and experience to fill in details or provide guidance on how to prevent friction. If time constraints prevent completing these actions, key leaders and subject matter experts discuss actions at critical events. This technique is less time consuming than others, but the level of detail reached and synchronization across the staff is minimal, especially if analyzing only a critical event.

Maximize Parallel Planning

5-200. Although parallel planning is the norm, maximizing its use in time-constrained environments is critical to developing and issuing a timely plan. In a time-constrained environment, the importance of WARNORDs increases as available time decreases. A verbal WARNORD now, followed by a written order later, saves more time than a written order one hour from now. The staff issues WARNORDs as necessary to maximize parallel planning when abbreviating the process. For example, when the commander directs the development of a single COA, a WARORD should be issued describing the approved COA before the staff enters COA analysis to give subordinate units maximum planning time. In addition to WARNORDs, units must share all available information with subordinates, especially IPOE products, as early as possible. The staff uses every opportunity to perform parallel planning with the higher headquarters and to share information with subordinates.

Increase Collaborative Planning

5-201. Planning in real time with higher echelon headquarters and subordinates improves the overall planning effort of the organization. Modern information systems and a common operational picture shared electronically can allow collaboration with subordinates from distant locations, can increase information sharing, and can improve the commander's visualization. Additionally, taking advantage of subordinates' input and knowledge of the situation in their assigned areas often results in developing better COAs quickly.

Use Liaison Element

5-202. Liaisons posted to higher echelon headquarters and unified action partners' headquarters allow commanders to have representation in their planning sessions. These Soldiers assist in passing timely information to their parent headquarters and directly to the commander. Effective liaison officers have the

commander's full confidence and the necessary rank and experience for the mission. Commanders may elect to use a single individual or a liaison team. As representatives, liaison officers must—

- Understand how their commander thinks and interpret verbal and written guidance.
- Convey their commander's intent, planning guidance, mission, and concept of operations.
- Represent their commander's position.
- Know the unit's mission; tactics, techniques, and procedures; organization; general capabilities; and communications capabilities.
- Observe the established channels of command and staff functions.
- Be trained in their functional responsibilities.
- Be tactful.
- Possess the necessary language expertise.

(Refer to FM 6-0 for additional discussion on liaisons.)

Chapter 6
Decision Making During Execution

This chapter describes the major activities of execution, to include assessing, decision making, and directing action necessary to support rapid decision making and synchronization. The chapter concludes with a discussion of rapid decision-making and synchronization process (RDSP).

EXECUTION ACTIVITIES

6-1. Planning and preparation accomplish nothing if the command does not execute effectively. Execution is the act of putting a plan into action by applying capabilities to accomplish the mission and adjusting operations based on changes in the situation. In execution, commanders, staffs, and subordinate commanders focus their efforts on translating decisions into actions. They direct action to apply capabilities against enemy forces at decisive points and times to achieve objectives and accomplish missions. Inherent in execution is deciding whether to execute planned actions, such as changing phases or executing a branch plan. Execution also includes adjusting the plan based on changes in the situation and an assessment of the operation's progress. (See ADP 5-0 for a discussion of the fundamentals of execution.)

6-2. Throughout execution, commanders, supported by their staffs, assess the operation's progress, make decisions, and direct the application of combat power to seize, retain, and exploit the initiative or counter threats. Major activities of execution include the following:

- Assessment-monitoring current operations and evaluating progress and variances.
- Decision making-making decisions to exploit opportunities or counter threats.
- Directing action-applying combat power and resources, against enemy forces, at decisive points and times.

ASSESSMENT DURING EXECUTION

6-3. Continuous assessment is essential during execution. Assessment helps commanders visualize probable outcomes and determine whether they need to change the plan to accomplish the mission, take advantage of opportunities, or react to unexpected threats. *Monitoring* is the continuous observation of those conditions relevant to the current operation (ADP 5-0). It allows commanders and staffs to improve their understanding of the situation. *Evaluating* is using indicators to judge progress toward desired conditions and determining why the current degree of progress exists (ADP 5-0). It allows commanders to identify the variances, their significance, and if a decision is required to alter the plan. (See Chapter 8 for details on how to build an assessment plan. See ADP 5-0 for fundamentals of assessment.)

6-4. A variance is a difference between the actual situation and what the plan forecasted the situation would be at that time or event. A variance can be categorized as an opportunity or threat as shown on the vertical lines in figure 6-1 on page 138. The first form of variance are opportunities. Emerging opportunities may provide a more effective way to accomplish the assigned mission (an execution decision), or they may branch into a whole new mission (an adjustment decision). Some opportunities may simply arise, while others may stem from successful execution of the mission. The second form of variance is a threat to mission accomplishment or the survival of the force. When recognizing a threat, commanders adjust the order to eliminate the enemy advantage, restore the friendly advantage, and regain the initiative.

6-5. In some instances, the variance is so extreme that a branch or sequel is not available, or the current plan lacks enough flexibility to respond to the variance. In this situation, the commander and staff may have to reframe the problem to better understand the operational environment (OE). This is depicted in figure 6-1 on page 138 as reframing. (See Chapter 1 for more information on reframing.)

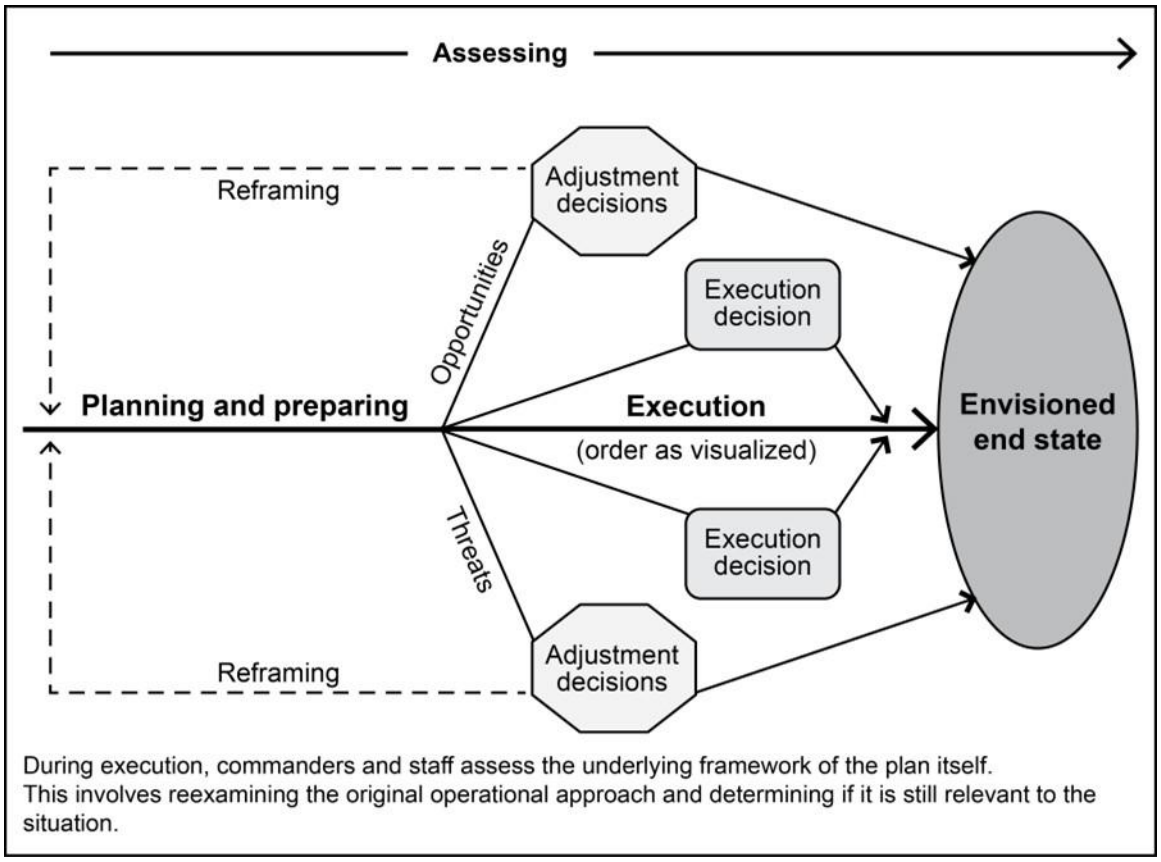


Figure 6-1. Decision making during execution

DECISION MAKING DURING OPERATIONS

6-6. In execution, commanders and staffs are constantly comparing the ongoing operation to the plan and looking for variance. Variance may indicate a necessary change to the operation requiring a decision. Sometimes, those decisions are identified in advance, and the unit may change to a known branch plan. At other times, variance may be in the form of unanticipated threats or opportunities that arise.

6-7. When threats or opportunities appear, the unit must recognize the condition and make two decisions. First, the unit decides whether to take a new action or continue with the planned course of action (COA). An opportunity may or may not be as lucrative as the planned COA, and the decision might be to continue as planned. However, an emerging threat may present a serious threat to the force or to mission accomplishment and require follow up action. Second, if the commander decides to deviate from the planned course of action, the subsequent decision is to determine the level of impact to the ongoing plan.

6-8. An execution decision is the selection of a COA that makes minor modifications to the existing order to respond to threats or opportunities. Execution decisions may be tied to a decision point to implement a planned action under circumstances anticipated in the order (branch plan). Or they may simply reflect a minor change to the plan due to unanticipated—but minor—variance.

6-9. An adjustment decision is more complicated, and it entails modifying the ongoing COA because of substantial variance. When the commander makes or directs an adjustment, the staff pays particular attention to ensuring the operation remains synchronized. The commander may need to describe the visualization that underlines the adjustment decision with guidance on critical and ongoing operations. Commanders and staffs may also pay particular attention to adjustment decisions on targeting and provide appropriate guidance to continue the targeting process. An adjustment decision may include a decision to reframe the problem and develop an entirely new plan.

6-10. Inexperienced units tend to stay wedded to a plan or to fight the plan rather than the enemy, and they are hesitant to execute adjustment decisions. The keys to success in recognizing variance and executing a timely adjustment decision include—

- Build plans with flexibility.
- Complete decision support products.
- Constant comparison of the operation to the course of action as described in the plan (assessment).
- Full understanding of factors of time and distance.
- Account for the enemy's actions and units.
- Inability to rapidly make decisions with minimal information.

6-11. Executing, adjusting, or abandoning the original operation is part of decision making in execution. By fighting the enemy and not the plan, commanders balance the tendency to abandon a well-conceived, rehearsed, and synchronized plan too soon against persisting in a failing effort too long. The issued plan provides the base to start from during an operation. The better developed and rehearsed the plan is with situational understanding gained during planning, preparation, and execution, the faster and more effective the identification, dissemination, and execution of necessary adjustments becomes. Effective decision making during execution—

- Relates all actions to the commander’s intent and concept of operations.
- Is comprehensive, maintaining integration of combined arms rather than dealing with separate functions.
- Relies heavily on intuitive decision making by commanders and staffs to make rapid adjustments.

DIRECTING ACTION

6-12. To implement execution or adjustment decisions, commanders direct actions that often reapply resources and combat power. Based on the commander’s decision and guidance, the staff resynchronizes the operation to mass the maximum effects of combat power against an enemy force to seize, retain, and exploit the initiative. This involves synchronizing operations in time, space, and purpose and issuing directives to subordinates. (See table 6-1 on page 140 for a summary of a range of possible actions with respect to decisions made during execution.) When modifying the plan, commanders and staffs seek to—

- Make the fewest changes possible.
- Facilitate future operations.

6-13. In the event of an execution decision, commanders only make those changes to the plan needed to correct variances. As much as possible, they keep the current plan the same to present subordinates with the fewest possible changes. If a variance is such that an adjustment decision is necessary, commanders consider the extent of change necessary to take advantage of an opportunity or mitigate a threat in terms of risk, time available or other considerations. Whenever possible, commanders ensure that changes do not preclude options for future operations. This is especially important for echelons above brigade.

Table 6-1. Decision types and related actions

Decision types		*Actions*
Execution decisions	Minor variances from the plan. Operation proceeding according to plan. Variances are within acceptable limits.	Execute planned actions. Commander or designee decides which planned actions best meet the situation and directs their execution. Staff issues fragmentary order. Staff completes follow-up actions.
	Anticipated situation. Operation encountering variances within the limits for one or more branches or sequels anticipated in the plan.	Execute a branch or sequel. Commander or staff review branch or sequel plan. Commander receives assessments and recommendations for modifications to the plan, determines the time available to refine it, and either issues guidance for further actions or directs execution of a branch or sequel. Staff issues fragmentary order. Staff completes follow-up actions.
Adjustment decisions	Unanticipated situation— friendly success. Significant, unanticipated positive variances result in opportunities to achieve the end state in ways that differ significantly from the plan.	Make an adjustment decision. Commander recognizes the opportunity or threat and determines time available for decision making. Commander selects a decision-making method. If there is not enough time for a complete military decision-making process, the commander may direct a single course of action or conduct rapid decision-making and synchronization process with select staff members. Depending on time available, commanders may issue verbal fragmentary orders to subordinates followed by a written fragmentary order to counter the threat or exploit an opportunity. In rare situations commanders may reframe the problem, change the mission, and develop an entirely new plan to address significant changes in the situation.
	Unanticipated situation— enemy threat. Significant, unanticipated negative variances impede mission accomplishment.	

RAPID DECISION-MAKING AND SYNCHRONIZATION PROCESS

6-14. The RDSP is a technique that commanders and their staffs commonly use during execution. While identified here with a specific name and method, the approach is not new; its use in the Army is well established and tested. Commanders and staffs develop this capability through training. When using this technique, the following considerations apply:

- Rapid analysis is often more important than detailed analysis.
- Much of the analysis may be mental rather than written.
- The current operations integration cells, future operations cells, or both, should often conduct rapid analysis drills.

6-15. While the military decision-making process (MDMP) seeks the optimal solution, the RDSP seeks a timely and effective solution within the commander's intent. Using the RDSP lets leaders avoid the time-consuming requirements of developing decision criteria and comparing COAs. Under the RDSP, leaders combine their experience and intuition to quickly reach situational understanding. Based on this, they develop and refine acceptable COAs.

6-16. The RDSP facilitates continuously integrating and synchronizing the warfighting functions to address ever-changing situations. It meets the following criteria for making effective decisions during execution:

- It is comprehensive, integrating all warfighting functions.
- It ensures all actions support the essential task by relating them to the commander's intent and concept of operations.
- It allows rapid changes to the order or mission.
- It is continuous, allowing commanders to react immediately to opportunities and threats.

6-17. The RDSP is based on an existing order and the commander's priorities as expressed in that order. The RDSP includes five steps. The first two may be performed in any order, including concurrently. The last three are performed interactively until commanders identify and decide on a COA. (See figure 6-2 for a depiction of the RDSP.)

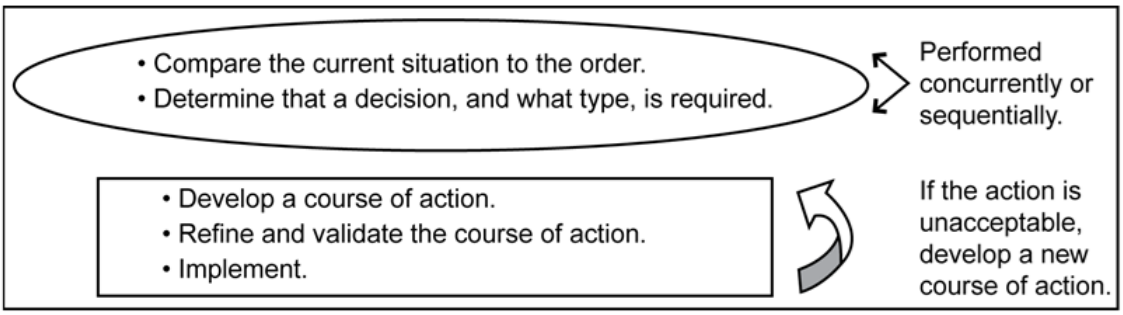


Figure 6-2. Rapid decision-making and synchronization process

COMPARE THE CURRENT SITUATION TO THE ORDER

6-18. Commanders and staffs identify likely variances during planning and identify potential options and actions that will likely be available when each variance occurs. During execution, commanders and staffs monitor the situation to identify changes in conditions. They then identify if the changed conditions represent variances from the order—especially opportunities, threats, and risks they present. Staff members use running estimates to look for indicators of variances that affect their areas of expertise. (See table 6-2 on pages 142 through 143 for examples of change indicators.)

6-19. Staff members are particularly alert for answers to commander's critical information requirements (CCIRs) that support anticipated decisions. They also watch for exceptional information—information that would have answered one of the CCIRs if the requirement for it had been foreseen and stated as one of the CCIRs. Exceptional information usually reveals a need for an adjustment decision.

6-20. When performing the RDSP, the current operations integration cell first compares the current situation to the one envisioned in the order. Where authorized, it may obtain assistance from the assessment section or the red team section in this analysis. The section or team would provide the most accurate and current assessment to inform the current operations integration cell recommendation on a proposed COA or solution. If the situation requires greater analysis, the chief of staff (COS) or executive officer (XO) may task the future operations cell (where authorized) or the plans cell to perform this analysis. At echelons with no future operations cell, the plans cell or the current operations integration cell performs this function.

Table 6-2. Examples of change indicators

Types	*Indicators*
General	• Answer to a commander's critical information requirement (CCIR). • Identification of an information requirement. • Change in mission. • Change in organization of unit. • Change in unit leaders. • Change in capabilities of subordinate unit. • Significant unplanned opportunity. • Change to planned resources or capabilities. • Change of assigned area.
Intelligence	• Identification of enemy main effort. • Identification of enemy reserves or counterattack. • Indications of unexpected enemy action or preparation. • Identification of an information requirement. • Insertion of manned surveillance teams. • Identification of high-value targets. • Answer to a priority intelligence requirement. • Enemy electromagnetic attack use. • Identification of unplanned chemical, biological, radiological, nuclear, or explosive hazards. • Indicators of illicit economic activity. • Identification of threats from within the population. • Increase in enemy solicitation of civilians for intelligence operations.
Movement and Maneuver	• Action that impacts or desynchronizes the planned operation of the main effort. • Unexpected success or failure in breaching or gap crossing operations. • Capture of significant numbers of enemy prisoners of war, enemy command posts, supply points, or artillery units. • Establishment of unplanned obstacles along major routes. • Success or failure of a subordinate unit task. • Modification of an airspace coordinating measure. • Numbers of dislocated civilians sufficient to affect friendly operations. • Damages to civilian infrastructure affecting friendly mobility. • Unexplained displacement of civilian personnel within a given area of operations.
Fires	• Receipt of an air tasking order. • Battle damage assessment results. • Unplanned repositioning of firing units. • Identification of high-payoff targets. • Identification of an information requirement. • Execution of planned fires. • Modification of a fire support coordination measure. • Effective enemy counterfire.

Table 6-2. Examples of Change indicators (continued)

Types	*Indicators*
Protection	• Chemical, biological, radiological, or nuclear (CBRN) report. • Indicators of enemy CBRN use. • Identification of threats to communications or computer systems. • Loss of friendly air defense capability resulting in loss of support. • Indicators of coordinated enemy actions against friendly forces or civilians. • Critical host nation infrastructure destroyed. • Identification of threat to base or sustainment facilities. • Escalation of force incidents. • Loss of border security.
Sustainment	• Significant loss of capability in any class of supply. • Mass casualties. • Contact on a supply route. • Identification of significant shortage in any class of supply. • Mass detainees. • Disruption of key logistics lines of communication. • Identification of significant incidences of disease and non-battle injury casualties. • Receipt of significant resupply. • Answer to a friendly force information requirement. • Changes in availability of host-nation support. • Degradations to essential civilian infrastructure by threat actions. • Civilian mass casualty event. • Outbreak of epidemic or famine within the civilian population. • Dislocated civilian event impacting operations. • Disruption of essential civil services (such as water or electricity).
Command and Control	• Loss of communications nodes. • Loss of contact with a command post or key leader. • Receipt of a fragmentary order or warning order from higher headquarters. • Prolonged jamming or network interference. • Effective adversary information efforts on civilians. • Impending changes in key military or civilian leadership.

DETERMINE THE DECISION REQUIRED

6-21. When a variance is identified, the commander directs action, while the chief of operations leads the current operations integration cell and selected functional cells in quickly comparing the current situation to the expected situation. This assessment accomplishes the following:

- Describes the variance.
- Determines if the variance provides a significant opportunity or threat and examines the potential of either.
- Determines if a decision is needed by identifying if the variance—
  - Indicates an opportunity that can be exploited to accomplish the mission faster or with fewer resources.
  - Directly threatens the main effort's success.
  - Threatens a supporting effort such that it may impact the main effort.
  - Remains within the scope of the commander's intent and concept of operations. (If so, it determines what execution decision is needed.)
  - Requires changing the concept of operations substantially. (If so, it determines what adjustment decision or new approach will best suit the circumstances.)

6-22. For minor variances, the chief of operations works with other integrating cell leads to determine whether changes to control measures are needed. If so, they determine how those changes affect other warfighting functions. They direct changes within their authority (execution decisions) and notify the COS or XO and the affected command post cells and staff elements.

6-23. Commanders intervene directly in cases that affect the overall direction of the unit. They describe the situation, direct subordinates to provide any additional information they need, and order either implementation of planned responses or development of an order to redirect the force.

DEVELOP A COURSE OF ACTION

6-24. If the variance requires an adjustment decision, the designated integrating cell and affected command post cell leads recommend implementation of a COA or obtain the commander's guidance for developing one. They use the following conditions to develop possible COAs:

- Mission.
- Commander's intent.
- Current dispositions and freedom of action.
- CCIRs.
- Limiting factors, such as supply constraints, boundaries, and combat strength.

6-25. The new options must conform to the commander's intent. Possible COAs may alter the concept of operations and CCIRs, if they remain within the commander's intent. When necessary, the commander reviews and approves changes to the CCIRs. Functional cell leads and other staff leaders identify areas that may be affected within their areas of expertise by proposed changes to the order or mission. COA considerations include, but are not limited to, those shown in table 6-3.

6-26. When reallocating resources or priorities, commanders assign only minimum essential assets to supporting efforts and a reserve. They weight the main effort with necessary assets. This applies when allocating resources for the overall operation or within a warfighting function.

6-27. The commander is as likely as anyone to detect the need for change and to sketch out the options. Whether the commander, COS, XO, or chief of operations does this, the future operations cell is often directed to further develop the concept and draft the order. The chief of operations and the current operations integration cell normally lead this effort, especially if the response is needed promptly or the situation is not complex. The commander, COS, or XO is usually the decision-making authority, depending on the commander's delegation of authority. The commander, however, remains responsible for implementing and executing those decisions.

6-28. Commanders normally direct the future operations cell or the current operations integration cell to prepare a fragmentary order (FRAGORD) setting conditions for executing a new COA. When speed of action is necessary or desirable, commanders make an immediate adjustment decision—using intuitive decision making—in the form of a focused COA. Developing the focused COA often occurs after mental wargaming by commanders until they reach an acceptable COA. When time is available, commanders direct the plans cell to develop a new COA using the MDMP. Staff members look for considerations in their areas of expertise when developing a COA. (See table 6-3 for a list of COA considerations.)

Table 6-3. Course of action considerations

Types	*Actions*
Intelligence	• Modifying intelligence requirements. • Modifying the information collection plan. • Updating named areas of interest and target areas of interest. • Updating the enemy situation template and enemy course of action statements. • Updating the intelligence estimate. • Confirming or denying threat course of action.
Movement and Maneuver	• Assigning new objectives. • Assigning new tasks to subordinate units. • Adjusting terrain management. • Employing obscurants. • Emplacing obstacles. • Modifying information collection plan. • Modifying airspace coordinating measures. • Making unit boundary changes. • Clearing obstacles. • Establishing and enforcing movement priority.
Fires	• Updating fires against targets or target sets. • Modifying the high-payoff target list and the attack guidance matrix. • Updated air tasking order based allocations. • Modifying radar zones. • Modifying the priority of fires. • Modifying fire support coordination measures.
Protection	• Moving air defense weapons systems. • Establishing decontamination sites. • Conducting chemical, biological, radiological, or nuclear reconnaissance. • Establish movement corridors on critical lines of communications. • Changing air defense weapons control status. • Enhancing survivability through engineer support. • Revising and updating personnel recovery coordination. • Reassigning or repositioning response forces.
Sustainment	• Prioritizing medical evacuation assets. • Repositioning logistics assets. • Positioning and prioritizing detainee and resettlement assets. • Repositioning and prioritizing general engineering assets. • Modifying priorities. • Modifying distribution.
Command and Control	• Moving communications nodes. • Moving command posts. • Command post survivability. • Impacts to target audiences. • Adjusting themes and messages to support the new decision. • Adjusting measures for minimizing civilian interference with operations. • Revising recommended protected targets. • Modifying stability tasks.

REFINE AND VALIDATE THE COURSE OF ACTION

6-29. Once commanders describe the new COA, the current operations integration cell conducts an analysis to validate its feasibility, suitability, and acceptability. If acceptable, the COA is refined to resynchronize the warfighting functions enough to generate and apply the needed combat power. Staffs with a future operations cell may assign that cell responsibility for developing the details of the new COA and drafting a FRAGORD to implement it. The commander, COS, or XO may direct a hasty operations synchronization meeting to perform this task and ensure rapid resynchronization.

6-30. Validation and refinement are done quickly. Normally, the commander and staff officers conduct a mental wargame of the new COA. They consider potential enemy reactions, the unit's counteractions, and secondary effects that might impact the force's synchronization. Each staff member considers the following items:

- Is the new COA feasible in terms of my warfighting function or area of expertise?
- How will this new action affect my warfighting function or area of expertise?
- Does it require changing my information requirements? For example—
  - Should any of the information requirements be nominated as a CCIR?
  - Should we add or modify essential elements of friendly information (EEFIs)?
- What other command post (CP) cells and elements does this action affect?
- What actions within my warfighting function or area of expertise does this change require?
- Will this COA require changing objectives or targets nominated by staff members?
- What are potential enemy reactions?
- What are the possible friendly counteractions?
  - Does this counteraction affect my area of expertise?
  - Will it require changing my information requirements?
  - Are any of my information requirements potential CCIRs?
  - What actions within my area of expertise does this counteraction require?
  - Will it require changing objectives or targets nominated by staff members?
  - What other command post cells and elements does this counteraction affect?

6-31. The validation and refinement will show if the COA will solve the problem adequately. If it does not, the COS or chief of operations modifies it through additional analysis or develops a new COA. The COS or XO informs the commander of any changes made to the COA.

IMPLEMENT

6-32. When a COA is acceptable, the COS or XO recommends implementation to the commander or implements it directly, if the commander has delegated that authority. Implementation normally requires a FRAGORD; in exceptional circumstances, it may require a new operation order (OPORD). That order changes the concept of operations (in adjustment decisions), resynchronizes the warfighting functions, and disseminates changes to control measures. The staff uses warning orders (WARNORDs) to alert subordinates to a pending change. The staff also establishes sufficient time for the unit to implement the change without losing integration or being exposed to unnecessary tactical risk.

6-33. Commanders often issue orders to subordinates verbally in situations requiring quick reactions. At battalion and higher echelons, written FRAGORDs confirm verbal orders to ensure synchronization, integration, and notification of all parts of the force. Common revisions to products needed to affect adjustments include the following:

- Updated enemy situation, including the situation template.
- Revised CCIRs.
- Updated information collection plan.
- Updated scheme of maneuver and tasks to maneuver units, including an execution matrix, decision support matrix, or template.
- Updated scheme of fires, including the fire support execution matrix, high-payoff target list (HPTL), and attack guidance matrix (AGM).
- Updated information tasks.

6-34. Leaders typically verify that subordinates understand critical tasks. Verification methods include conducting a confirmation brief or backbrief. These are conducted both between commanders and within staff elements to ensure mutual understanding.

6-35. After the analysis is complete, the current operations integration cell and other CP cells update decision support template (DST) and synchronization matrixes. Staff members begin the synchronization needed to implement the decision. This synchronization involves collaboration with other CP cells and subordinate staffs. Staff members coordinate those actions needed to eliminate undesired effects that might cause friction. These cells provide results of this synchronization to the current operations integration cell and the common operational picture.

6-36. During implementation of the RDSP, the current operations integration cell keeps the warfighting functions synchronized as the situation changes. Anticipating certain outcomes allows commanders to mass the effects of combat power against enemy forces at decisive times and places. When making synchronization decisions or allowing others' synchronization in collaboration to proceed, commanders and staffs consider the following outcomes:

- Combined arms integration.
- Responsiveness.
- Timeliness.

6-37. Commanders also synchronize collaboratively. Coordination among higher, adjacent, supporting, and subordinate commanders facilitates execution by improving interaction between units as they anticipate and solve problems. Crosstalk among subordinate commanders can provide synchronizations and lead to rapid decision making. Such synchronization occurs without the higher echelon commander becoming involved, except to affirm, the decisions or agreements of subordinates.

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Chapter 7
Troop Leading Procedures

This chapter describes the eight steps of troop leading procedures (TLP), as they apply to small units (at company and lower echelons) of all types. The chapter begins with an overview of TLP. The chapter concludes with a discussion how unit leaders perform TLP to develop plans and orders.

TROOP LEADING PROCEDURES OVERVIEW

7-1. *Troop leading procedures* is a dynamic process used by small-unit leaders to analyze a mission, develop a plan, and prepare for an operation (ADP 5-0). Company-level and smaller units use TLP because they lack the formal staffs to conduct the military decision-making process (MDMP). The lack of staff places the responsibility for planning primarily on the commander or small-unit leader. While this chapter discusses TLP from a ground maneuver perspective, they are applicable to all small units and small-unit leaders.

7-2. TLP begin when a company or smaller unit receives a change of mission or an order for a new mission. They provide small-unit leaders a framework for planning and preparing for operations. TLP help leaders to effectively and efficiently use available time to issue orders and execute tactical operations while maximizing understanding of the situation. TLP may be done in parallel or collaboration with MDMP; however, TLP are not the MDMP. Unlike the MDMP, TLP are not for the purpose of finding the optimal way of solving a problem (for example, considering multiple courses of action [COAs]). TLP are a logical process of analysis focused on understanding the situation and determining how the echelon will accomplish its directed task.

PERFORMING TROOP LEADING PROCEDURES

7-3. TLP consist of eight steps. The steps are not rigid. Some steps are done concurrently, while others may go on continuously throughout planning and preparation. For example, steps 1-3 are normally conducted in order, while steps 3 through 7 are sequenced as needed. The last step, supervise and refine, occurs throughout. (See paragraphs 7-4 to 7-30 for a discussion on performing the eight steps of TLP.) The steps of TLP are—

- Step 1-Receive the mission.
- Step 2-Issue a warning order.
- Step 3-Make a tentative plan.
- Step 4-Initiate movement.
- Step 5-Conduct reconnaissance.
- Step 6-Complete the plan.
- Step 7-Issue the order.
- Step 8-Supervise and refine.

STEP 1-RECEIVE THE MISSION

7-4. Receive the mission may occur in several ways. It may begin when the initial warning order (WARNORD) or operation order (OPORD) arrives from higher headquarters or when a leader anticipates a new mission. Frequently, leaders receive a mission in a fragmentary order (FRAGORD) over the radio. Ideally, they receive a series of WARNORDs, the OPORD, and a briefing from their commander. When they receive the mission, leaders perform an initial assessment of the situation and assess the time available for planning and preparation.

Note. Immediately following the receipt of order, subordinate leaders usually brief their superior on the order they received. This is called a confirmation brief. During a confirmation brief, they brief their understanding of the commander's intent, the specific tasks, and purposes they are assigned, and the relationship of their tasks to those of other elements conducting the operation. They describe any important coordinating measures specified in the order. The confirmation brief is normally used with other types of rehearsals.

7-5. Leaders filter relevant information into the categories of the mission variables. They also consider and assess relevant information factors into each of the variables which are generally most important to small-unit leaders during large-scale combat operations. This initial assessment and time allocation form the basis of their initial WARNORDs and addresses the mission variables of METT-TC (I) (mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations.) The order and detail in which leaders analyze mission variables is flexible and often depends on the amount of information available and its relative importance. (See Appendix A for a more detailed description of the operational variables and the mission variables.)

Note. When conditions allow, effective leaders do not wait until their higher echelon headquarters completes planning to begin their planning. Using all information available, leaders develop their unit mission as completely as they can. They focus on the mission, commander's intent, and concept of operations of their higher echelon and next higher headquarters. They pick major tasks their unit will likely be assigned and develop a mission statement based on the information they received. At this stage, the mission may be incomplete. For example, an initial mission statement could be, "First platoon conducts an ambush in the next twenty-four hours." While not complete, this information allows subordinates to initiate preparations. Leaders complete a mission statement during TLP step 3 (make a tentative plan) and step 6 (complete the plan).

7-6. Based on what they know, leaders estimate the time available to plan and prepare for the mission. They begin by identifying the times at which they must complete major planning and preparation events, including rehearsals. Reverse planning assists in this process. Leaders identify critical times specified by higher headquarters and work backwards, estimating how much time each event will consume. Critical times might include times to load aircraft, cross the line of departure, or reach the start point for movement.

7-7. Leaders ensure that subordinate echelons have sufficient time for planning and preparation. Generally, leaders at all levels use no more than one-third of the available time for planning and issuing the OPORD. Leaders ensure the remaining two-thirds of time is available to subordinates. Table 7-1 illustrates an initial timeline for an infantry company. The company adjusts the tentative timeline as necessary.

Table 7-1. Sample reverse planning timeline

0600—Execute the mission.
0530—Finalize or adjust the plan based on leader's reconnaissance.
0400—Establish the objective rally point; begin leader reconnaissance.
0200—Begin movement.
2100—Conduct platoon inspections.
1900—Conduct rehearsals.
1800—Conduct resupply.
1745—Hold backbriefs (squad leaders to platoon leaders).
1630—Issue platoon OPORDs.
1500—Hold backbriefs (platoon leaders to company commander).
1330—Issue company OPORD.
1230—Issue WARNORD #3.
1045—Conduct reconnaissance.
1030—Issue WARNORD #2.
1000—Receive battalion OPORD.
0900—Receive battalion WARNORD; issue company WARNORD #1.
OPORD operation order WARNORD warning order

STEP 2-ISSUE A WARNING ORDER

7-8. As soon as leaders finish their initial assessment of the situation and the time available, they issue a WARNORD. Leaders do not wait for more information. They issue the best WARNORD possible with the

information available at the time and update it as needed with additional WARNORDs. This allows for maximum subordinate planning time and allows subordinates to begin critical tasks immediately.

7-9. The WARNORD contains as much detail as possible. It informs subordinates of the unit mission and gives them the leader's initial timeline. Leaders may also provide any other instructions or information they think will help subordinates prepare for the new mission. This includes information on the enemy, the nature of the higher headquarters' plan, and any specific instructions for preparing their units, such as directed rehearsals or special equipment to prepare or inspect. The most important thing is that leaders do not delay in issuing the initial WARNORD. As more information becomes available, leaders can—and should—issue additional WARNORDs. By issuing the initial WARNORD as quickly as possible, leaders enable their subordinates to begin their own planning and preparation.

7-10. WARNORDs follow the five-paragraph OPORD format. Normally an initial WARNORD issued at battalion echelons and below includes—

- The mission or nature of the operation.
- The time and place for issuing the OPORD.
- Units or elements participating in the operation.
- Specific tasks not addressed by unit standard operating procedures (SOPs).
- The timeline for the operation.

(See Appendix C for the WARNORD format.)

STEP 3-MAKE A TENTATIVE PLAN

7-11. Once they have issued the initial WARNORD, leaders develop a tentative plan. At echelons below battalion, these steps are less structured than for units with staffs. Often, leaders perform them mentally. Typically, due to constraints, a single COA is developed during TLP; however, when more detailed planning is necessary, additional COAs are developed and analyzed.

Mission Analysis

7-12. Leaders perform mission analysis to better understand the problem, situation, and mission to drive subsequent planning. This form of mission analysis follows the METT-TC (I) format, continuing the initial assessment performed in TLP step 1. The potential information considerations are embedded within each of the other variables. (See Appendix A for a more detailed description of the mission variables.)

Course of Action Development

7-13. The mission analysis provides information needed to develop a COA. COA development aims to determine one or more ways to accomplish the mission. At lower echelons, the mission may be a single task. Platoon or company missions within the framework of a battalion operation may be directive in nature, requiring a single COA. However, if the situation allows, leaders may develop and then analyze additional COAs. Leaders do not wait for a complete order before beginning COA development. They begin COA development with the information at hand, and then they modify or update the COA as more information becomes available. Usable COAs are expressed using the format discussed in Chapter 5: feasible, acceptable, suitable, complete, and distinguishable. Leaders develop COAs as soon as they have enough information to do so. To develop COAs, leaders first focus on the actions the unit takes at the objective and develop a reverse plan to the starting point.

Analyze Courses of Action

7-14. When the situation allows the development and analysis of multiple COAs, leaders think through the operation from start to finish for each COA. Leaders generally conduct a wargame more intuitively than the structured process discussed in Chapter 5 as part of the MDMP. When time is available, the wargame should be conducted with key leaders to aid in analysis. They compare the COAs with the enemy's most probable COA. At the small-unit level, the enemy's most probable COA is what the enemy is most likely to do given what friendly forces are doing at that time. Leaders visualize a set of actions, reactions, and counteractions. The object is to determine what can go wrong and what decision leaders will likely have to make as a result.

Course of Action Comparison and Selection

7-15. When the situation allows the development of multiple COAs, leaders compare them by weighing the advantages, disadvantages, strengths, and weaknesses of each, as noted during COA analysis. They decide which COA to execute based on this comparison and on their judgment. They consider—

- Mission accomplishment.
- Time available to execute the operation.
- Risks.
- Subordinate unit tasks and purposes.
- Projected casualties.
- Posturing of the force for future operations.

STEP 4-INITIATE MOVEMENT

7-16. Leaders conduct any movement directed by their higher echelon headquarters or deemed necessary within constraints to continue mission preparation or position their unit for execution. This step could occur anytime during TLP. They do this as soon as they have enough information to do so, or when the unit is required to move to position itself for a task. This is also essential when time is short. Movements may be to an assembly area, a battle position, a new assigned area, or an attack position as directed or approved. They may include movement of reconnaissance elements, guides, or quartering parties.

Note. Leaders should ensure security is provided and fires are integrated for all movements.

STEP 5-CONDUCT RECONNAISSANCE

7-17. Whenever time and circumstances allow, or as directed by higher headquarters, leaders personally observe the assigned area for the mission prior to execution. This is done to verify terrain analysis, adjust the plan, and confirm the usability and time of routes for critical movements. No amount of information from higher headquarters can substitute for firsthand assessment of the mission variables from within the assigned area. When time or circumstances do not allow, the leader must conduct a map reconnaissance supplemented by geospatial intelligence products and other intelligence products and reports. As directed, subordinates or other elements (such as scouts) may conduct reconnaissance while the leader completes other TLP steps.

7-18. Leaders use results of COA analysis to identify information requirements. Leaders perform reconnaissance tasks to confirm or deny information that supports the tentative plan. They focus first on information gaps identified during mission analysis. Leaders ensure their leader's reconnaissance complements the higher headquarters' information collection plan. The unit may perform additional reconnaissance tasks as the situation allows. This step may also precede making a tentative plan if commanders lack enough information to begin planning. Reconnaissance may be the only way to develop the information required for planning.

STEP 6-COMPLETE THE PLAN

7-19. During this step, leaders incorporate the results of reconnaissance into their selected COA to complete the plan or order. This includes preparing overlays, refining the indirect fire target list, and coordinating sustainment and signal requirements. At lower echelons, this step may entail only confirming or updating information contained in the tentative plan. If the situation allows, leaders make final coordination with adjacent units and higher headquarters before issuing the order.

STEP 7-ISSUE THE ORDER

7-20. Small-unit orders are normally issued verbally and supplemented by graphics and other control measures. An order follows the standard five-paragraph OPORD format. Typically, leaders below company level do not issue a commander's intent. They repeat and reinforce the intent of their higher and next higher echelon commanders. (See Appendix D for the OPORD format.)

7-21. The ideal location for issuing the order is a point in the assigned area with a view of the objective and other aspects of the terrain. When issuing the order at or near the objective, leaders implement appropriate measures to maintain operations security (OPSEC). The leader may perform a leader's reconnaissance,

complete the order, and then summon subordinates to a specified location to receive it. Typically, OPSEC or other constraints make it impractical to issue the order on the terrain, but it is the ideal location when the situation allows, such as in the defense When impractical to issue the order at the objective, leaders use a sand table, a detailed sketch, maps, and other products to depict the assigned area and the situation.

STEP 8-SUPERVISE AND REFINE

7-22. Throughout TLP, leaders monitor mission preparations, coordinate with adjacent units, supervise and assess preparations, and refine the plan as necessary. Normally, unit SOPs state individual responsibilities and the sequence of preparation activities. To ensure the unit is ready for the mission, leaders supervise subordinates and inspect their personnel and equipment.

7-23. A crucial component of the supervise and refine step is rehearsal. Rehearsals allow leaders to assess their subordinates' preparations and identify areas that require more supervision. Leaders conduct rehearsals to—

- Practice essential tasks.
- Identify weaknesses or problems in the plan.
- Coordinate subordinate element actions.
- Improve Soldier understanding of the concept of operations.
- Foster confidence among Soldiers.

7-24. Company and smaller-sized units select rehearsal techniques based on the situation (time and level of security), complexity of the operations, and level of training or familiarity of the force with the type of operation being conducted. The common rehearsal techniques used by company and smaller-sized units include but are not limited to—

- Full dress rehearsal.
- Key leader rehearsal.
- Terrain-model rehearsal.
- Map rehearsal.

(See FM 6-0 for a detailed discussion of rehearsals.)

7-25. The full-dress rehearsal requires considerable resources and the most time, but it provides the most benefit. The full-dress rehearsal is often the preferred rehearsal technique. Leaders rehearse on terrain like the terrain in the assigned area. Leaders and units repeat rehearsals of small-unit actions until they are executed to standard. A full-dress rehearsal helps Soldiers clearly understand what is expected. It helps leaders better visualize to anticipate opportunities or areas of concern, and it helps Soldiers gain confidence in their ability to successfully accomplish the mission.

7-26. Circumstances may prohibit a rehearsal with all members of the unit. In these cases, a key-leader rehearsal involves only select individuals of the organization and its subordinate units. It normally requires fewer resources than a full-dress rehearsal, and it may require developing a rehearsal plan that mirrors the actual plan but fits the terrain of the rehearsal.

7-27. A key-leader rehearsal normally requires less time than a full-dress rehearsal. Commanders consider how much time their subordinates need to plan and prepare when deciding whether to conduct a key leader rehearsal. A key-leader rehearsal is less likely to present OPSEC compromises than a full-dress rehearsal because it has fewer participants and movements. Commanders can use this technique to prepare key leaders for a full-dress rehearsal.

7-28. The terrain-model rehearsal takes less time and fewer resources than a full-dress or a key leader rehearsal. An accurately constructed terrain model helps subordinate leaders visualize the commander's intent and concept of operations. When possible, commanders place the terrain model where it overlooks the actual terrain on the assigned area. The model's orientation coincides with that of the terrain. The size of the terrain model can vary from small (using markers to represent units) to large (on which the participants can walk). A large model helps reinforce the participants 'perception of unit positions on the terrain.

7-29. Often, constructing a terrain model consumes the most time during this technique. Units require a clear SOP that states how to build a model, so it is accurate, large, and detailed enough to conduct the rehearsal. A good SOP also establishes staff responsibility for building the terrain model and a timeline for its

completion. Because a terrain model is geared to the echelon conducting the rehearsal, multi-echelon rehearsals using this technique are difficult.

7-30. Terrain management is less difficult with a terrain-model rehearsal than with the full dress or key leader rehearsals. A good site is easy for participants to find, yet it is concealed from the enemy. An optimal location overlooks the terrain where the unit will execute the operation.

7-31. A map rehearsal requires few resources and is often the best option in time-constrained conditions. Subordinate leaders describe their actions from the start to the finish of the operation using a map of the assigned area and any appropriate overlays. Map rehearsals are generally conducted, with all leaders reviewing their tasks. This technique requires the least terrain of all rehearsals. A good site ensures participants can easily stay concealed from the enemy. An optimal location overlooks the terrain where the unit will execute the operation while implementing appropriate OPSEC measures. When time is available, map rehearsals can be combined with other types of rehearsals.

7-32. As leaders supervise preparation, they refine the plan as required. FRAGORDs from higher echelons, updated intelligence, and insights gained during the rehearsal are some examples requiring leaders to refine their plan. Most importantly, leaders create plans to ensure that all their subordinates focus on accomplishing the same mission within the commander's intent. If required, they can deviate from the plan and execute changes based on battlefield conditions and enemy forces. Supervision ensures leaders assess their subordinates' understanding of their orders, determine where additional guidance or planning is necessary, and ensure units' preparations are best focused toward accomplishing the mission.

Chapter 8
Assessments

This chapter provides an overview of assessment within the operations process. Next, it describes the steps of the assessment process and a discussion on assessment planning. The chapter concludes with a section on assessment within the military decision-making process (MDMP). (See ADP 5-0 for the fundamentals of assessment. See ATP 5-0.3 for assessment techniques and assessment planning examples.)

ASSESSMENT AND THE OPERATIONS PROCESS

8-1. *Assessment* is the determination of the progress toward accomplishing a task, creating a condition, or achieving an objective (JP 3-0). This involves the comparison of outcomes with actual events to determine progress toward attaining the desired end state. It requires the continuous monitoring and evaluation of the operational environment (OE) to determine what changes might affect the conduct of the operation.

8-2. Assessment precedes and guides the other activities of the operations process as shown in figure 8-1 on page 156. The focus of assessment differs during planning, preparation, and execution. During planning, assessment focuses on developing an assessment plan. During preparation, assessment focuses on monitoring changes in the situation and on evaluating the progress of readiness to execute the operation. Assessment during execution involves a deliberate comparison of forecasted outcomes to actual events, using indicators to judge progress toward attaining desired end state conditions. During execution, assessments help commanders adjust plans based on changes in the situation, when the operation is complete, and when to transition into the next cycle of the operations process. Collection and analysis of data and information to assessment questions—questions pertaining to changes in the OE and progress toward accomplishing task and achieving objectives—focus assessment throughout the operations process. (For more information on assessment questions see paragraph 8-29.)

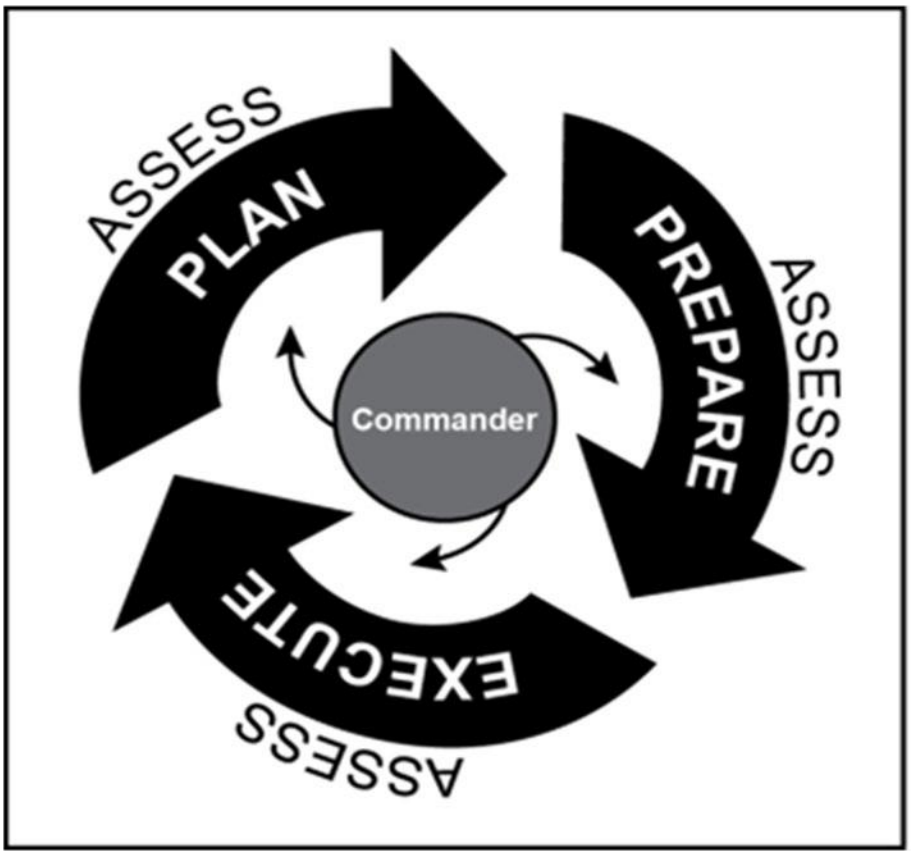

Figure 8-1. The operations process

8-3. The situation and type of operations affect the characteristics of assessment. During large-scale combat, assessments tend to be rapid, focused on the destruction of enemy units, terrain gained or lost, objectives achieved, and the status of friendly capabilities. In other situations, such as counterinsurgency operations, assessments are less tangible. Assessing the level of security in an area or the population's support for the government is challenging. Identifying what and how to assess requires significant effort from commanders and staffs. Assessment consists of—

- Monitoring the current situation to collect relevant information.
- Evaluating progress toward attaining end state conditions, achieving objectives, and performing tasks.
- Recommending or directing action for improvement.

8-4. Assessment occurs in varying degrees at all echelons. The situation and echelon dictate the focus and methods leaders use to assess. Everyone conducts assessments. While commanders have staffs helping them assess, individual Soldiers assess whether they should continue to fight or not. Leaders assess their Soldier's "morale." Normally, commanders plan for and assess those specific operations or tasks that they were directed to accomplish. This properly focuses collection and assessment at each echelon, reduces redundancy, and enhances the efficiency of the overall assessment process.

FORMAL ASSESSMENTS

8-5. For units with a staff, assessment becomes more formal at each higher echelon. The availability of dedicated resources (including staff officer expertise and available time) to conduct assessments proportionally increase from battalion to brigade, division, corps, and theater army. Echelons above brigade include a dedicated core group of analysts. This group typically specializes in operations research and systems analysis, developing formal assessment plans, and various assessment products. The assessment plan is typically developed during the MDMP with an output of Annex M in a plan or order. The plan is

continuously reviewed and updated in various boards and working groups, such as the assessment working group. Assessment at brigade and battalion echelons is usually less formal than at higher echelons, often relying on direct observations and the judgment of commanders and their staffs. (See FM 6-0 for further discussion of boards and working groups.)

INFORMAL ASSESSMENTS

8-6. For units without a staff or with a limited staff, assessments are mostly informal. An informal assessment means not being informed by dedicated assessment staff or collection assets as much as units are from things like personal observation, running estimates, operations reporting, and decision-making tools. All of these are things which have a purpose other than to assess performance or effects, but they still inform the leader's situational understanding of operational performance or the effects generated.

8-7. As an example, small-unit leaders focus on assessing their unit's readiness—personnel, equipment, supplies, and morale—and their unit's ability to perform assigned tasks through observation, knowledge, and experience. Through this informal assessment leaders determine whether the unit has attained task proficiency. If those tasks have not produced the desired results, leaders explore why they have not and consider what improvements could be made for unit operations which are then validated using formal assessments. As they assess and learn, small units change their tactics, techniques, and procedures based on their experiences.

8-8. Commanders and operations officers may routinely perform multiple informal assessments during an operation to confirm or deny assumptions, observe the progress of subordinate units, and make judgement calls based on their previous experiences. These observations often lead to the decision to make changes in the plan based the observed changes in the situation. These kinds of assessments can be performed due to reoccurring situations or as a matter of knowledge and expertise, and they do not require significant resources. In this way, even the lowest echelons in the Army follow the assessment process.

ASSESSMENT PROCESS

8-9. Just like the operations they support, there is not a prescribed doctrinal checklist for conducting assessment. Every situation has its own distinctive challenges, which makes every assessment unique. The following steps help guide the development of an effective assessment plan and the assessment during preparation and execution of the operation:

- Step 1 - Develop an assessment approach (planning).
- Step 2 - Develop an assessment plan (planning).
- Step 3 - Collect information and intelligence (preparation and execution).
- Step 4 - Analyze information and intelligence (preparation and execution).
- Step 5 - Communicate feedback and recommendations (preparation and execution).
- Step 6 - Adapt plans or operations (planning and execution).

STEP 1 - DEVELOP THE ASSESSMENT APPROACH

8-10. Assessment begins in planning, as the commander identifies the operation's end state, operational approach, and associated objectives and tasks. Concurrently, staff members begin to develop an assessment approach by identifying information requirements needed to monitor and analyze conditions associated with attaining the operation' end state, achieving objectives, and performing tasks. In doing so, staff members try to answer the following questions:

- How will we know we are achieving commander's intent and meeting intermediate objectives?
- What information do we need?
- Who is best postured to provide that information?

8-11. If a higher echelon headquarters assessment plan exists, staff members align applicable elements of that assessment plan to the plan they are developing. The assessment approach becomes the framework for the assessment plan, and it will continue to mature through plan development. The assessment approach should identify the information and intelligence needed to assess progress and inform decision making for more effective operations.

STEP 2 - DEVELOP THE ASSESSMENT PLAN

8-12. This step overlaps step 1 during the identification of the objectives and effects. The assessment plan focuses appropriate monitoring and collection of necessary information and intelligence to inform decision making throughout execution. The assessment plan links objectives, desired effects, and tasks to observable key indicators. The assessment plan can be developed using the operational approach as a baseline to identify lines of effort or lines of operation that link directly to objectives and the desired end state.

8-13. The assessment plan includes required information oversight responsibilities to gather, process, exploit, analyze, integrate, disseminate, classify, and archive the required information. Developing the assessment plan is a whole-of-staff effort, and it should include other key stakeholders to better shape the effort. The assessment plan should identify staffs or subordinate organizations to monitor, collect, and analyze information and develop recommendations and assessment products as required. Assessment planning is discussed in detail in paragraphs 8-19 through 8-33.

STEP 3 - COLLECT INFORMATION AND INTELLIGENCE

8-14. Staffs collect relevant information throughout planning, preparing, and executing. They refine and adapt information requirements as an operation progresses. Staffs transmit information during execution through battle rhythm events and reports, such as battle update assessments and commander's updates. For example, staffs continually provide updates about the situation, including information about enemy forces, terrain, civil considerations, and friendly forces. Other sections collect information related to the other mission and operational variables.

STEP 4 - ANALYZE INFORMATION AND INTELLIGENCE

8-15. Analysis seeks to identify positive or negative movement toward achieving objectives or attaining end state conditions most effectively. Accurate analysis seeks to identify trends and changes that significantly impact the operation. Based on this analysis, staff members determine the effects on forces and resource allocation, determine whether forces have achieved their objectives, or realize that a decision point has emerged.

8-16. Recommendations generated by staff analyses regarding achievement of the objective or attainment of the desired end-state conditions enable staff members to develop recommendations for consideration. Recommendations can—

- Update, change, add, or remove critical assumptions.
- Transition between phases.
- Execute branches or sequels.
- Change resource allocation.
- Adjust objectives or end-state conditions.
- Change or add tasks to subordinate units.
- Adjust priorities.
- Change priorities of effort.
- Change command relationships.
- Change task organizations.
- Adjust decision points.
- Refine or adapt the assessment plan.

STEP 5 - COMMUNICATE FEEDBACK AND RECOMMENDATIONS

8-17. Assessment products contain recommendations for the commander based on the commander's guidance. Regardless of quality and effort, the assessment process is limited if the communication of its results is deficient or inconsistent with the commander's personal style of assimilating information and making decisions. Additionally, there may be a requirement to provide input to higher echelon headquarters' assessments in which the requirements and feedback could be within a different construct.

STEP 6 - ADAPT PLANS OR OPERATIONS

8-18. Upon receiving the staff's assessments, commanders direct changes or provide additional guidance that dictate modifications to operations. Staffs capture the commander's decisions and guidance in fragmentary orders (FRAGORDs) that direct forces to take necessary actions. As the operation evolves, the assessment plan evolves as well.

ASSESSMENT PLANNING

8-19. Assessment planning and the development of an assessment plan correlate to the work done in the first two steps of the assessment process: develop the assessment approach and develop the assessment plan. Develop the assessment approach (step one of the assessment process) makes inputs to initial decisions about the organization of the assessment effort, the relationship of assessors to the rest of the staff, the integration of assessment working groups into the battle rhythm, and the sort of information that is gathered and analyzed to improve the staff's understanding of an OE.

8-20. Develop the assessment plan is step two of the assessment process. It produces outcomes to refine, formalize, and communicate these decisions throughout the organization through written standard operating procedures (SOPs), an assessment annex (Annex M of an order or plan), collection matrices, or other documents. The assessment plan should match the logic of the operational plan. For example, if the operation plan (OPLAN) or operation order (OPORD) specifies lines of operation or lines of effort, then an assessment plan should be based on the lines of operation or lines of effort. Paragraphs 8-21 through 8-32 address steps to develop an assessment plan. During planning, the assessment working group develops an assessment plan using six steps:

- Step 1-Gather tools and assessment data.
- Step 2-Understand current and desired conditions.
- Step 3-Develop an assessment framework.
- Step 4-Develop the collection plan.
- Step 5-Assign responsibilities for conducting analysis and generating recommendations.
- Step 6-Identify feedback mechanisms.

STEP 1 - GATHER TOOLS AND ASSESSMENT DATA

8-21. Planning begins with receipt of mission. The receipt of mission alerts the staffs to begin updating their running estimates and gathering the tools necessary for mission analysis and continued planning. Specific tools and information gathered regarding assessment include, but are not limited to—

- The higher echelon headquarters' plan or order, including the assessment annex if available.
- If relieving a unit, any current assessments and assessment products.
- Relevant assessment classified or open-source products produced by civilian and military organizations.
- The identification of potential data sources, including academic institutions and civilian subject matter experts.
- The current OPLAN or OPORD and associated planning products.

STEP 2 - UNDERSTAND CURRENT AND DESIRED CONDITIONS

8-22. Assessment is about improving effectiveness and measuring progress toward the desired end state. To do this, commanders and staffs compare current conditions in the assigned area against desired conditions. Army design methodology (ADM) and the MDMP help commanders and staffs develop an understanding of the current situation and end state condition.

8-23. Early in planning, commanders issue their initial commander's intent, planning guidance, and commander's critical information requirements (CCIRs). The end state in the initial commander's intent describes the desired conditions the commander wants to achieve. The staff element responsible for the assessment plan identifies each specific desired end state condition mentioned in the commander's intent. These specific desired end state conditions focus the overall assessment of the operation. Understanding current conditions and desired end state conditions forms the basis for building the assessment framework.

STEP 3 - DEVELOP AN ASSESSMENT FRAMEWORK

8-24. All plans and orders have a general logic. This logic links tasks to subordinate units to the achievement of objectives, and the achievement of objectives to attainment of the operation's end state. An assessment framework incorporates the logic of the plan and uses indicators, including measures of effectiveness (MOEs) and measures of performance (MOPs), as tools to determine progress toward attaining desired end state conditions.

8-25. An *indicator* is in the context of assessment, a specific piece of information that infers the condition, state, or existence of something, and provides a reliable means to ascertain performance or effectiveness (JP 5-0). Ideally, the resources and capabilities to collect on each indicator would be available. Planners should develop and recommend priorities to inform the decision making for the allocation of limited resources and capabilities. Indicators should be—

- Relevant—bear a direct relationship to a task, effect, object, or end state condition.
- Observable—collectable so that changes can be detected and measured or evaluated.
- Responsive—signify changes in the OE in time to enable effective decision making.
- Resourced—collection assets and staff resources are identified to observe and evaluate.

8-26. The two types of indicators commonly used in assessment include MOEs and MOPs. A *measure of effectiveness* is an indicator used to measure a current system state, with change indicated by comparing multiple observations over time (JP 5-0). MOEs tend to be more quantitative in nature. MOEs are commonly found and tracked in formal assessment plans. MOEs help to answer the question "Are we doing the right things?" Examples of MOEs include—

- Reduction in network outages or disruptions.
- Number of tons arriving at the port as expected.
- Number of reported attacks in the assigned area.
- Number of times effectively jammed.
- Number of confirming enemy reports.

8-27. A *measure of performance* is an indicator used to measure a friendly action that is tied to measuring task accomplishment. (JP 5-0). MOPs are qualitative in nature. MOPs help answer questions such as "Was the action taken?" or "Were the tasks completed to standard?" A MOP confirms or denies that a task has been properly performed. MOPs are also commonly used to evaluate training. MOPs help to answer the question "Are we doing things right?" There is no direct hierarchical relationship among MOPs to MOEs. MOPs do not contribute to MOEs or combine in any way to produce MOEs. MOPs simply measure the performance of a task. MOPs are commonly found and tracked in execution matrixes or in routine reporting. Evaluating task accomplishment using MOPs is relatively straightforward and often results in a yes or no answer. Examples of MOPs include—

- Route X cleared.
- Enemy defeated on objective IRON.
- Generators delivered, are operational, and are secured at villages A, B, and C.
- Aerial dissemination of 60,000 leaflets over village D.

8-28. Staff members organize MOEs and MOPs into an assessment framework. An assessment framework normally begins with end state conditions, objectives, and tasks and then associates MOEs and MOPs. This framework allows the assessment indicators to follow the logic of the operational plan.

8-29. A technique to focus indicators is to build specific assessment questions into the assessment plan. Assessment questions provide the commander and staff with answers to critical information pertaining to the OE and progress toward accomplishing tasks, objectives, and the desired end state. An example of an assessment question is "How well are we accomplishing our task" and a related question such as, "How can we achieve our objectives more effectively—more quickly, qualitatively better, at less cost, or at less risk?" As assessment questions are generated, information and intelligence requirements and indicators are developed and assigned to answer the questions. As information requirements and indicators answer assessment questions, the commander can use the data and information to make more informed decisions in relation to the progress of completing tasks, achieve objectives, and attaining the desired end state. (For more information on assessment questions see ATP 5-0.3 and JP 5-0.)

STEP 4 - DEVELOP THE COLLECTION PLAN

8-30. Each indicator represents an information requirement. Staff members input these information requirements into the information collection synchronization process. Then, information collection assets are tasked to collect on the information requirements. In other situations, reports formats in unit SOPs may suffice. If not, the unit may develop a new report. Staff members may collect the information requirement from organizations external to the unit. For example, a host-nation's central bank may publish a consumer price index for that nation. The assessment plan identifies the source for each indicator and the staff member who collects that information. Assessment information requirements compete with other information requirements for resources. When an information requirement is not resourced, staffs cannot collect the associated indicator and must remove it from the plan. Staffs then adjust the assessment framework to ensure that the MOE or MOP is properly worded.

STEP 5 - ASSIGN RESPONSIBILITIES FOR CONDUCTING ANALYSIS AND GENERATING RECOMMENDATIONS

8-31. In addition to assigning responsibility for collection, commanders assign staff members to analyze assessment data and develop recommendations. For example, the intelligence officer leads the assessment of enemy forces. The engineer officer leads the effort on assessing infrastructure and development. The civil affairs operations officer leads assessment concerning the progress of local and provincial governments. The chief of staff (COS) aggressively requires staff principals and subject matter experts to participate in processing the formal assessment and in generating smart, actionable recommendations. The operations research and analysis officer assists the commander and staff with developing both assessment frameworks and the command's assessment process.

STEP 6 - IDENTIFY FEEDBACK MECHANISM

8-32. A formal assessment with meaningful recommendations that is not presented to the appropriate decision maker wastes time and energy. The assessment plan identifies the who, what, when, where, and why of that presentation. The commander and staff also discuss feedback leading up to and following that presentation. Feedback might include which assessment working groups the commander requires and how to act on and follow up on recommendations.

ASSESSMENT WITHIN THE MILITARY DECISION-MAKING PROCESS

8-33. Formal assessment planning happens concurrent with each step of the MDMP. Throughout the process the assessment cell remains engaged with the planning team to ensure the assessment follows the logic of the plan or order that will be produced and executed. Table 8-1 on pages 162 through 163 lists assessment planning activities performed during each of the planning steps of the MDMP.

Table 8-1. Assessment planning during the military decision-making process

During receipt of mission, the assessment cell—
Reviews the higher headquarters order to consider— • Higher headquarters operational approach. • Higher headquarters assessment annex and requirements. • Higher headquarters intelligence preparation of the operational environment (IPOE).
Determines the identification of potential data sources.
Reviews any current or historically relevant assessment products, either classified or open source, produced by civilian and military organizations.
If required, conducts operation assessment training with the assessment cell, assessment working group, and staff.
Actively participates in concept development.
Develops initial template assessment plan and data collection plan based on operational concept discussion with the assessment working group.
Determines commander's preferences for communicating the assessment.
Determines initial allocation of time available.
During mission analysis, assessment actions include—
Develop an initial assessment running estimate.
Review of IPOE, intelligence updates, and running estimates.
Support the development of risk assessment, initial measures of effectiveness and measures of performance, and initial commander's critical information requirements and essential elements of friendly information development.
Conduct assessment working groups to continue to develop assessment plan and data collection plan.
During course of action (COA) development, assessment actions include—
Provide assessment support to each COA development team.
Conduct assessment working groups to continue to develop assessment plan and data collection plan.
Provide assessment running estimate for each COA, if required.
Review broad concepts for viability of assessments.
During COA analysis, assessment actions include—
Provide input for evaluating progress toward attaining end-state conditions, achieving objectives, and performing tasks.
Update the assessment running estimate, if required.
Review the intelligence cells updates to the IPOE for changes needed to collection plans.
During COA comparison, assessment actions include—
Provide input on the ability to assess each COA.
Make recommendations on conduct of COA comparison and metrics.
Conduct assessment working groups to continue to develop assessment plan and data collection plan.
During COA approval, assessment actions include—
Provide input and analysis to finalize the operational approach.
Conduct assessment working groups to continue to finalize assessment plan and data collection plan. Assessment representatives are actively involved with the collection management working group to ascertain what is going to be collected. What is not collected is recognized as additional risk that is briefed to the commander.
Conduct engagement with staff and commander to gain approval for assessment plan, data collection plan, and revalidate or revise commanders' preference for communication of the assessment.

Table 8-1. Assessment planning during the military decision-making process (continued)

During order production, assessment actions include—
Develop appropriate assessment annex, if different from the assessment or collection plan.
Finalize the data collection plan.
Finalize the commander's assessment template.
Engage with the knowledge management team to establish assessment.
Prior to execution, continue to maintain situational awareness and adjust the assessment.

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Appendix A

Operational and Mission Variables

This appendix provides a description of operational and mission variables and their use as tools to develop and maintain situational understanding throughout an operation.

OVERVIEW OF OPERATIONAL AND MISSION VARIABLES

A-1. Success during operations demands timely and effective decisions based on applying judgement to available information and knowledge. As such, commanders and staffs seek to build and maintain situational understanding throughout the operations process. Situational understanding is product of applying analysis and judgment to relevant information to determine the relationships among the operational and mission variables.

OPERATIONAL VARIABLES

A-2. An operational environment (OE) is the aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. For Army forces, an OE includes portions of the land, maritime, air, space, and cyberspace domains understood through three dimensions (human, information, and physical). The land, maritime, air, and space domains are defined by their physical areas. The cyberspace domain, a man-made network of networks, transits and connects the other domains through the electromagnetic spectrum. (See FM 3-0 for a more detailed discussion of an OE.)

A-3. Understanding an OE forms the basis for decision making during planning, preparation, execution, and assessment of an operation. To help build this understanding, leaders analyze and describe an OE through the *operational variables*—a comprehensive set of information categories used to describe an operational environment (ADP 1-01). The eight interrelated operational variables are: political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT). (See table A-1 on page 166 for a brief description of each operational variable.)

Table A-1. Operational variables

Variable	*Brief Description*
Political	This variable describes the distribution of responsibility and power at all levels of governance-formally constituted authorities and informal or covert political powers. (Who are the policy and operational decision makers?)
Military	This variable includes the military and paramilitary capabilities of all relevant actors (enemy, friendly, and neutral) in an operational environment. (How does the enemy employ all capabilities throughout the range of military operations?)
Economic	This variable encompasses individual and group behaviors related to producing, distributing, and consuming resources. (What industries and capacities support enemy military operations?)
Social	+ This variable includes the cultural, religious, and ethnic makeup within an operational environment and the beliefs, values, customs, sex norms, and behaviors of society members. (Where are the critical cultural centers and how do they influence the population?)
Information	This variable describes the nature, scope, characteristics, and effects of individuals, organizations, and systems that collect, process, disseminate, or act on information. (How does information affect enemy decision making or support of the population?)
Infrastructure	This variable comprises the basic facilities, services, and installations needed for the functioning of a community or society. (What are the critical sources and locations that provide basic needs to the population?)
Physical Environment	This variable includes the geography and man-made structures and the climate and weather in the assigned area. (What types of terrain or weather conditions in this assigned area favor enemy operations?)
Time	This variable describes the timing and duration of activities, events, or conditions within an operational environment and how the timing and duration are perceived by various actors in the operational environment. (For example, at what times are people likely to congest roads or conduct activities that provide a cover for hostile operations?)

A-4. Each of the eight operational variables also has associated sub variables. The specific questions for each variable will differ, depending on the general nature of an OE.

MISSION VARIABLES

A-5. Mission variables are fundamental in analyzing the situation and developing a course of action (COA) for a given operation. Mission variables describe characteristics of an assigned area, focusing on how they might affect a mission. Incorporating the analysis of the operational variables into the mission variables ensures Army leaders consider the most relevant information available about conditions that pertain to the mission. Using the operational variables as a source of relevant information for the mission variables allows commanders to refine their situational understanding of their OE and to visualize, describe, direct, lead, and assess operations.

A-6. METT-TC (I) represents the mission variables leaders use to analyze and understand a situation in relationship to the unit's mission. As discussed in Chapter 1, the increased use of information (both military and civilian) to generate cognitive effects requires leaders to continuously assess the informational impacts on operations. Recent operational experiences demonstrate the importance of commanders and planners considering the informational aspects and impacts early in planning and constantly assess them to create desired effects and outcomes.

A-7. Commanders and planners integrate information into all operations and activities to create favorable support and circumstances for friendly action, limit enemy or adversary action, and minimize unintended consequences. Information considerations are the relevant friendly, threat, and neutral (both military and civilian) individuals, organizations, and systems capable of generating cognitive effects and influencing behavior. Table A-2 provides a brief description of each of the mission variables with information examples incorporated.

Table A-2. Mission variables descriptions with informational integrated examples

Variable	*Brief description*
Mission	Commanders and staffs view the mission variables in terms of their impact on mission accomplishment. The mission is the task, together with the purpose, that clearly indicates the action to be taken and the reason for it. It is always the first variable leaders consider during decision making. A mission statement contains the "who, what, when, where, and why" of the operation. The mission statement provides purpose to any operation and sets the parameters for generating cognitive effects.
Enemy	The second variable to consider is the enemy-dispositions (including organization, strength, location, and tactical mobility), doctrine, equipment, capabilities, vulnerabilities, and probable courses of action. Analysis of all enemy capabilities, intentions, and desired outcomes is essential in developing threat models and enemy courses of action.
Terrain and weather	Terrain and weather analysis are inseparable and directly influence each other's impact on military operations. Terrain includes natural features (such as rivers and mountains) and man-made features (such as cities, airfields, and bridges). Leaders analyze terrain using the five military aspects of terrain expressed in the memory aid OAKOC: observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment. The military aspects of weather include visibility, wind, precipitation, cloud cover, temperature, humidity, and space weather. Terrain and weather are neutral and impact both friendly and enemy operations, including impacts on communications, space-based support (including communication, navigation, and surveillance), military deception, and use of the electromagnetic spectrum.
Troops and support available	This variable includes the number, type, capabilities, and condition of available friendly troops and support. These include supplies, services, and support available from joint, host-nation, and unified action partners. Support available also includes capabilities available upon request such as air, space, cyberspace, and information operations support. They also include support from civilians and contractors employed by military organizations, such as the Defense Logistics Agency and the Army Materiel Command.
Time available	Leaders assess the time available for planning, preparing, and executing tasks and operations. This includes the time required to assemble, deploy, and maneuver units in relationship to the enemy and conditions. It also includes understanding the time necessary to request and initiate certain effects (such as cyberspace or electromagnetic warfare actions) and an appreciation for how long it will take to assess the effects of those actions.
Civil considerations	*Civil considerations* are the influence of man-made infrastructure, civilian institutions, and activities of the civilian leaders, populations, and organizations within an area of operations on the conduct of military operations (ADP 6-0). Understanding the behaviors and attitudes of the population, to include discerning if they are hostile, friendly, or neutral to the friendly forces, is a key aspect of analyzing civil considerations. Civil considerations comprise six characteristics, expressed as the memory aid ASCOPE: areas, structures, capabilities, organizations, people, and events.

A-8. Table A-3 on page 168 provides example information-related questions within each mission variable. These example questions are not intended to be an all-inclusive list, but they can help guide leaders and planners at all levels to integrate informational considerations into the analysis of the mission variables.

Table A-3. Example mission variables informational questions

Mission Variables	*Informational Questions*
Mission	What are we told to do and for what purpose? What strategic messaging is occurring that our mission supports? Does it include shaping enemy perception, decision making, and behavior? Does it include military deception? What OPSEC measures are implied?
Enemy	What are the enemy's capabilities to disrupt our C2 (including cyberspace, EW and space)? What are their collection capabilities, and can we counter them with good OPSEC measures? How susceptible are their troops to our messaging (MISO)? Are they vulnerable to deception (including MILDEC, TAC-D, and DISO)? What OPSEC measure can we implement to protect our information?
Terrain and weather	What are the terrain and weather impacts on the transmission of friendly communications, especially ground-based, line-of-sight communications? Can terrain mask friendly EMS signatures? What is the space weather impact on satellite-enabled communications (including C2, EW, cyberspace, and space)?
Troops and support available	What information capabilities do we have available, either organic, assigned, or attached? Do we have PSYOP, civil affairs, cyberspace support elements, or information operations field support teams? What support can headquarters provide?
Time available	Do we have time for supporting efforts, which may include appeals to surrender (MISO), jamming (EW), or offensive cyberspace operations? Do we have sufficient time to devise and execute a deception plan, or at least deception in support of OPSEC (DISO)? Is there sufficient time available for the information-related capabilities to affect behavior towards a favorable action? MISO usually does not change people's minds overnight, or on just one broadcast or leaflet drop. Likewise, it takes time to develop a deception plan. What OPSEC measure can we implement to protect our critical information? For support we need from headquarters, when is it available?
Civil considerations	+ Is the local population hostile, neutral, or friendly? Who are the relevant actors that can influence specific audiences? What conduits are available to deliver messages to the populace? Are they susceptible to MISO? What can civil affairs do to help? How do these factors vary by sex?
C2	command and control
DISO	deception in support of operations security
EMS	electromagnetic spectrum
EW	electromagnetic warfare
MILDEC	military deception
MISO	military information support operations
OPSEC	operations security
PSYOP	psychological operations (forces)
TAC-D	tactical deception

MISSION

A-9. Leaders analyze the higher echelon headquarters' warning order (WARNORD) or operation order (OPORD) to determine how their unit contributes to the higher headquarters' mission. They examine the following information that affects their mission:

- Higher headquarters' mission and commander's intent.
- Higher headquarters' concept of operations.
- Specified, implied, and essential tasks.
- Constraints.

A-10. Leaders first examine the mission and commander's intent of their higher echelon and the next higher echelon headquarters to determine the overall purpose of the operation and the desired military end state which guides the rest of planning. When these are unavailable, leaders infer them based on available information. When they receive the actual mission and commander's intent, leaders revise their plan, if necessary.

A-11. Leaders next examine their higher echelon's headquarters' concept of operations to determine how their unit's mission and tasks contribute to the higher mission's success. They determine details that will affect their operations, such as control measures and execution times.

A-12. Leaders then extract the specified and implied tasks assigned to their unit from WARNORDs and the OPORD. They determine why each task was assigned to their unit to understand how it fits within the commander's intent and concept of operations. From the specified and implied tasks, leaders identify essential tasks. Leaders complete these tasks to accomplish the mission. Failure to complete an essential task results in mission failure.

A-13. Leaders must also identify any constraints placed on their unit. Constraints can take the form of a requirement (for example, maintain a reserve of one platoon) or a prohibition on action (for example, no reconnaissance forward of PHASE LINE BRAVO before H-hour).

A-14. The product of this part of the mission analysis is the restated mission. The restated mission is a simple, concise expression of the essential task or tasks the unit must accomplish and the purpose to be achieved. The mission statement states who (the unit), what (the task), when (either the critical time or on order), where (location), and why (the purpose of the operation).

ENEMY

A-15. With the restated mission as the focus, leaders continue the analysis of the enemy. Analysis of all enemy capabilities, intentions, and desired outcomes is essential in developing threat models and enemy COAs. For units with a staff, an analysis of enemy capabilities and COAs is done using the intelligence preparation of the operational environment (IPOE) process led by the intelligence officer and supported by the entire staff. Each staff section brings its expertise to understand how enemy forces use all their capabilities against friendly forces. For example, the deputy fire support coordinator has a thorough understanding of enemy fires capabilities, and the intelligence officer understands enemy messages and themes used to influence decision making.

A-16. For small-unit operations, leaders need to know about the enemy's composition, disposition, strengths, recent activities, ability to reinforce, and possible COAs. Much of this information comes from higher echelon headquarters, and it must be refined to the level of detail required by the unit to continue with plan development. Additional information comes from adjacent units and other leaders.

A-17. Some information comes from the leader's experience. Leaders determine how the available information applies to their operation. They also determine what they do not know, but should know, about enemy forces. To obtain the necessary information, they identify these intelligence gaps to their higher headquarters or take action themselves (such as sending out reconnaissance patrols).

TERRAIN AND WEATHER

A-18. The next mission variable is terrain and weather. Leaders analyze the five military aspects of terrain expressed in the memory aid of OAKOC: observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment.

A-19. *Observation* is the condition of weather and terrain that permits a force to see the friendly, enemy, and neutral personnel and systems, and the key aspects of the environment (FM 1-02.1). Observation is the ability to see (or be seen by) the adversary either visually or through the use of surveillance devices. A *field of fire* is the area that a weapon or group of weapons may cover effectively from a given position (FM 3-90). Observation and fields of fire apply to both enemy and friendly weapons. Leaders consider direct-fire weapons and the ability of observers to mass and adjust indirect fire.

A-20. An *avenue of approach* is a path used by an attacking force leading to its objective or to key terrain. Avenues of approach exist in all domains (ADP 3-90). Avenues of approach include overland, air, and underground routes. Underground avenues are particularly important in urban operations.

A-21. *Key terrain* is any locality, or area, the seizure or retention of which affords a marked advantage to either combatant (JP 2-0). *Decisive terrain* is key terrain whose seizure and retention is mandatory for successful mission accomplishment (ADP 3-90). Terrain adjacent to an assigned area may be key if its control is necessary to accomplish the mission.

A-22. An *obstacle* is any barrier designed or employed to disrupt, fix, turn, or block the movement and maneuver, and to impose additional losses in personnel, time, and equipment (JP 3-15). Obstacles can exist naturally, or can be man-made, or can be a combination of both. Obstacles include military reinforcing obstacles, such as minefields. (See JP 3-15 for more information on obstacles.)

A-23. *Cover* is protection from the effects of fires (FM 3-96). *Concealment* is protection from observation or surveillance (FM 3-96). Terrain that offers cover and concealment limits fields of fire. Leaders consider friendly and enemy perspectives. Although remembered as separate elements, leaders consider the military aspects of terrain together.

A-24. The military aspects of weather are visibility, wind, precipitation, cloud cover, temperature, humidity, atmospheric pressure (as required), and space weather. The consideration of their effects is an important part of the mission analysis. Leaders review the forecasts and considerations available from Army and Air Force weather forecast models and develop COAs based on the effects of weather on the mission. The mission analysis considers the effects on Soldiers, equipment, and supporting forces, such as air and artillery support. Leaders identify the aspects of weather that can affect the mission. They focus on factors whose effects they can mitigate. For example, leaders may modify the standard operating procedures (SOPs) for uniforms and carrying loads based on the temperature. Small-unit leaders include instructions on mitigating weather effects in their tentative plan. They check for compliance during preparation, especially during rehearsals. (See ATP 2-01.3 for more information on the military aspects of weather.)

TROOPS AND SUPPORT AVAILABLE

A-25. Perhaps the most important aspect of mission analysis is determining the combat power of one's own force. Leaders understand the status of their Soldiers' morale, their experience and training, and the strengths and weaknesses of subordinate leaders. They determine all available resources and assess their capabilities. This includes troops attached to, or in direct support of, the unit. The assessment includes knowing the strength and status of unit equipment. It also includes understanding the full array of assets in support of the unit. Leaders know, for example, how much indirect fire, space, cyberspace, or information operation capabilities will become available, when they are available, and they will know the best assets to inform planning. Leaders should consider any new limitations based on the level of training or recent operations.

TIME AVAILABLE

A-26. Leaders not only appreciate how much time is available, but they also understand the time and space aspects of preparing, moving, fighting, and sustaining. They view their own tasks and enemy actions in relation to time. They know how long it takes under different conditions to prepare for certain tasks (such as orders production, rehearsals, and subordinate element preparations). Leaders should remain mindful of the extended timelines generally associated with achieving information effects such as achieving cognitive effects on enemy forces or creating and executing desired offensive cyberspace effects. Most importantly, leaders monitor the time available. As events occur, they assess their impact on the unit timeline and update previous timelines for their subordinates. Timelines list all events that affect the unit and its subordinate elements.

CIVIL CONSIDERATIONS

A-27. + Military operations are rarely conducted in uninhabited areas. Units are often surrounded by noncombatants. These noncombatants may include residents within the assigned area, local officials, and governmental and nongovernmental organizations. Leaders strive to understand the behaviors and attitudes of populations, to include discerning if they are hostile, friendly, or neutral to friendly forces and how they may be influenced. Based on information from higher echelon headquarters and their own knowledge and judgment, leaders identify civil considerations that affect their mission. Commanders typically analyze civil considerations using six factors known collectively as ASCOPE: areas, structures, capabilities, organizations, people, and events. A sex perspective should be nested within the analysis of the ASCOPE factors. For example, commanders and staffs consider the different norms and behaviors of the population by sex and age.

Areas

A-28. Key civilian areas are localities or aspects of the terrain within an assigned area that are not normally militarily significant. Leaders consider key civilian areas during terrain analysis, and they consider the assigned area from a civilian perspective. Commanders analyze key civilian areas in terms of how they affect the missions of their individual forces and how military operations affect these areas. Failure to consider key civilian areas can seriously affect the success of an operation. Examples of key civilian areas are—

- Areas defined by political boundaries, such as districts within a city.
- Municipalities within a region.
- Locations of government centers.
- Economic zones or regions.
- Ethnic or sectarian enclaves, neighborhoods, and fault lines.
- Social, political, religious, or criminal enclaves.
- Agricultural and mining regions.
- Trade routes.
- Possible sites for the temporary settlement of dislocated civilians or other civil functions.

Structures

A-29. Existing structures can play many significant roles. Some structures, such as bridges, communications towers, power plants, and dams are traditional high-payoff targets (HPTs). Others, such as churches, mosques, national libraries, and hospitals, are cultural sites that international law or other agreements generally protect. Still others are facilities with practical applications such as jails, warehouses, television and radio stations, and print plants that may be useful for military purposes. Some aspects of the civilian infrastructure, such as the location of toxic industrial materials, may influence operations.

A-30. Analyzing a structure involves determining how its location, functions, and capabilities can support or hinder an operation. Commanders also consider the consequences of using it. Using a structure for military purposes often competes with the civilian requirements for it. Commanders carefully weigh the expected military benefits against costs to the community that will have to be addressed in the future.

Capabilities

A-31. Commanders and staffs analyze capabilities from different levels. They view capabilities in terms of those required to save, sustain, or enhance life, in that order of priority. Capabilities can refer to the ability of local authorities—those of the host nation, aggressor nation, or some other body—to provide the population with key functions or services, such as public administration, public safety, emergency services, and food. Primary capabilities include those areas that the population may need help with after combat operations, such as public works and utilities, public health, economics, and commerce. Capabilities also refer to resources and services that can be contracted to support the military mission, such as interpreters, laundry services, construction materials, and equipment. The host nation or other nations might provide these resources and services.

Organizations

A-32. Organizations are nonmilitary groups or institutions in an assigned area. They influence and interact with the population, the force, and each other. They generally have a hierarchical structure, defined goals, established operations, fixed facilities or meeting places, and a means of financial or logistic support. Some organizations may be indigenous to the area. These may include church groups, social organizations, patriotic or service organizations, labor unions, criminal organizations, and community watch groups. Other organizations may come from outside an assigned area. Examples of these include multinational corporations, United Nations agencies, U.S. governmental agencies, and nongovernmental organizations, such as the International Red Cross.

A-33. Operations also often require commanders to coordinate with international organizations and nongovernmental organizations. Commanders remain familiar with organizations operating in their assigned area. Relevant information includes information about their activities, capabilities, and limitations. Situational understanding includes understanding how the activities of different organizations may affect

military operations and how military operations may affect these organizations' activities. From this, commanders can determine how organizations and military forces can work together toward common goals when necessary.

A-34. At certain times, every echelon of command will interact with other U.S. agencies, host-nation governmental agencies, and nongovernmental organizations. However, these groups and those in an assigned area may not always share the commander's objectives, ways to affect change, and point of view. Leaders must understand these organizations and their goals to best achieve desired end states.

A-35. In most cases, military forces have more resources than civilian organizations. However, civilian organizations may possess specialized capabilities that they may be willing to share with military forces. Commanders do not command civilian organizations in their assigned areas. However, some operations require achieving unity of effort with them and the force. These situations require skillful and artful leaders to achieve the desired unity of effort.

People

A-36. People is a general term used to describe nonmilitary personnel encountered by military forces. The term includes all civilians within the assigned area and those outside the assigned area whose actions, opinions, or political influence can affect the mission. Individually or collectively, people can affect a military operation positively, negatively, or neutrally. In stability tasks, Army forces work closely with civilians of all types.

A-37. + There can be many kinds of people living and operating in and around an assigned area. As with organizations, people may be indigenous or introduced from outside an assigned area. An analysis of people should identify them by their various capabilities, needs, and intentions. This analysis also identifies the key communicators and the formal and informal processes used to influence people. It is useful to separate people into distinct categories. When analyzing people, commanders consider various factors, including—

- Languages used in the assigned area and area of interest.
- Religious traditions, figures, and parties.
- Culture, including—
  - Social structure.
  - Behavioral patterns.
  - Perceptions.
  - Religious beliefs.
  - Tribal relationships.
  - Behavioral taboos.
  - Centers of authority.
  - Lifestyles.
  - Social history.
  - Sex norms, roles, and sex-based needs.

Events

A-38. Events are routine, cyclical, planned, or spontaneous activities that significantly affect organizations, people, and military operations. Examples may include—

- National and religious holidays.
- Agricultural crops, livestock, and market cycles.
- Elections.
- Civil disturbances.
- Celebrations.
- Natural phenomenon (including monsoons, seasonal floods and droughts, volcanic and seismic activity, and natural disasters).
- Man-made disasters.

Once significant events are determined, planners template the events and analyze them for their political, economic, psychological, environmental, and legal implications.

A-39. Technological innovation, external social influences, and natural and man-made disasters (such as hurricanes, environmental damage, and war) affect the attitudes and activities of governments and civilian populations. These changes cause stress in civilian populations and their leaders. A civilian population may or may not successfully incorporate these changes within its existing cultural value system. Addressing the problems posed by change requires considerable time and resources. The impatience of key leaders and groups, legal restrictions, and limits on resources can make resolutions difficult. However, when their resolution is necessary to accomplish the mission, commanders become concerned with them.

A-40. The existence of an independent press guarantees that U.S. military activities that do not meet America's military standards for dealing with noncombatants will be reported in U.S., host-nation, and international public forums. At times they will be reported almost instantly. Commanders consider the effects of their decisions and their forces' actions on public opinion. The activities of a force, or individual members of a force, can have far-reaching effects on the legitimacy of all military operations, including offense, defense, stability, or support. Commanders ensure their Soldiers understand that a tactically successful operation can also be operationally or strategically counterproductive because of the way in which they execute it or how people perceive its execution.

A-41. Commanders have legal responsibilities to refugees and noncombatants in their assigned areas. These responsibilities may include providing humanitarian assistance. A commander's responsibility to protect noncombatants influences planning and preparing for operations. Commanders assess the chance that their actions may result in dislocated civilians, and they consider their legal obligation to respect and protect them when choosing a COA and executing an operation.

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Appendix B

Command and Support Relationships

This appendix describes command and support relationships for joint, Army, and multinational forces.

COMMAND

B-1. Forces, not command authorities, are transferred between commands. When forces are transferred between commanders, the relationship the gaining commander will exercise and the losing commander will relinquish must be specified. Army and joint doctrine describe these authorities as command and support relationships. Command and support relationships provide the basis for unity of command and unity of effort in operations. Joint doctrine provides the framework for all command and support relationships. Because Army support relationships differ from joint, this appendix provides a discussion of joint command and support relationships first, followed by Army, and it closes with multinational command and coordination relationships. (See JP 1, Volume 2 for information on joint command relationships and authorities.)

B-2. Command is central to all military action. Inherent in command is the authority that a military commander lawfully exercises over subordinates. This includes the authority to assign missions and accountability for their successful completion. Although commanders may delegate authority to accomplish missions, they may not absolve themselves of the responsibility for the accomplishment of these missions. Authority is never absolute; the extent of authority is specified by the establishing authority, directives, and law. (See JP 1, Volume 2 and ADP 6-0 for more information on command.)

UNITY OF COMMAND AND EFFORT

B-3. *Unity of command* is the direction of all forces under a single, responsible commander who has the requisite authority to direct and employ those forces (JP 3-0). *Unity of effort* is coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization that is the product of successful unified action (JP 1, Volume 2). Both are fundamental to mission success. The joint force protects national interests around the world through unified action by establishing unity of command under a single commander in pursuit of a common purpose.

B-4. Correct task organization of the force is critical to establishing unity of command and unity of effort. Available forces and resources must be task organized appropriately to achieve operational and strategic objectives. The supply consumption and heavy casualties associated with large-scale combat operations drive commanders to anticipate re-task organizing and reconstitution operations to maintain operational tempo. Completing these tasks faster than the enemy gives friendly forces the advantage. To organize, reorganize, and reconstitute effectively, conventional, irregular, and contributing nations' forces cooperate within an established chain of command.

CHAIN OF COMMAND

B-5. The President and Secretary of Defense exercise authority and control of the armed forces through two distinct branches of the chain of command, as described in Title 10, United States Code (USC) and JP 1, Volume 2: the administrative branch and operational branch.

B-6. The administrative branch of the chain of command runs from the President, through the Secretary of Defense, to the Secretary of the respective military department and, as prescribed by the Secretary, to the commanders of those military organizations. Service secretaries prescribe the administrative branch chain of command and designate appropriate command authority to be exercised by subordinate commanders. Those forces not assigned to combatant commanders (CCDRs) are characterized as "Service retained" or "Service institutional" and remain assigned to the respective department secretary. Service-retained forces are forces that are specifically designed to execute operational missions when allocated to CCDRs via the global force management process. Institutional forces are those remaining forces and organizations that conduct the administrative functions of their respective military department secretaries such as service headquarters staffs

and service academies. Within their commands and in accordance with their departments' policies, military commanders establish command and support relationships. (See Figure B-1 for more on authority and control of the armed forces.)

B-7. The Secretary of the Army has the authority to prescribe command and support relationships for Service-retained and institutional forces to include organic, assigned, operational control (OPCON), tactical control (TACON), and administrative control (ADCON). The Army's administrative branch chain of command for institutional and Service-retained forces typically extends from the Secretary of the Army to an Army command, direct reporting units, and field operating agencies then to subordinate Army commanders. Army command and support relationships are described in paragraphs B-22 and B-45. The Secretary of the Army exercises ADCON of Service forces provided to CCDRs for operational missions through Army Service component commanders. The Secretary of the Army may also delegate to the Headquarters, Department of the Army staff the authority to direct these command and support relationships.

B-8. The operational branch of the chain of command runs from the President, through the Secretary of Defense, to the CCDRs. The Service Departments provide forces to the CCDRs through the Global Force Management process. The CCDRs exercise combatant command (command authority) (COCOM) over assigned forces and OPCON or TACON of attached forces. CCDRs are directly responsible to the President and Secretary of Defense for the performance of assigned missions and the preparedness of their commands. CCDRs prescribe the chain of command in their combatant commands and designate the appropriate command authority to be exercised by subordinate joint force commanders. In their commands, CCDRs and subordinate joint force commanders exercise authorities based on established joint command relationships.

B-9. The two branches of the chain of command merge at Service component commands. Under joint doctrine, each combatant command is a unified command. Each unified command includes a Service component command that exercises ADCON over Service forces assigned or attached to that unified command. A Service component command consists of the Service component headquarters and all Service forces assigned or attached to the unified commander. Army doctrine distinguishes between the Army component of a combatant command and Army components of other joint forces. Under Army doctrine, Army Service component command (ASCC) refers to the Army component assigned to a combatant command. There is only one ASCC within a combatant command's area of responsibility. The Army components of all other joint forces are called ARFORs. An *ARFOR* is the Army component and senior Army headquarters of all Army forces assigned or attached to a combatant command, subordinate joint force command, joint functional command, or multinational command (FM 3-94). An ARFOR consists of the senior Army headquarters and all Army forces that the CCDR subordinates to the joint force or places under the control of a multinational force commander. The ARFOR then exercises ADCON. (See FM 3-94 and JP 3-0 for more information on ARFOR.)

Note. The Secretary of the Army's authority over the administrative branch is established in Section 7013, Section 7074, and Section 10171 Title 10, USC. The Unified Commands' authority over the operational branch is established in Section 162 Title 10, USC.

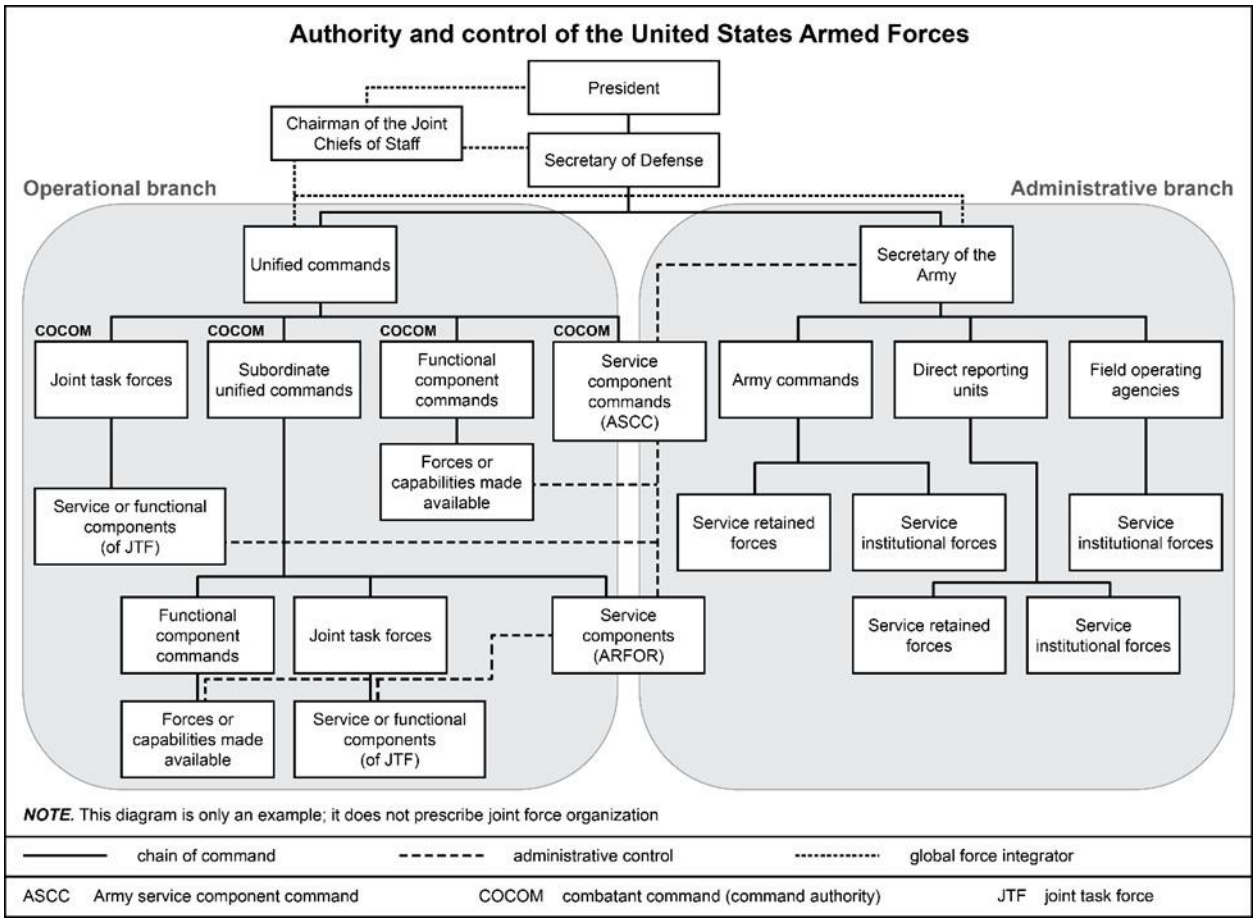

Figure B-1. Authority and control of the armed forces

JOINT COMMAND RELATIONSHIPS

B-10. Joint and Army command relationships define the authority a commander has over forces. However, joint and Army support relationships differ in that joint support relationships are considered command relationships whereas Army support relationships are not. CCDRs and subordinate joint force commanders have the authority to organize assigned or attached forces to best accomplish the assigned mission based on intent, the concept of operations, and consideration of Service organizations. The organization should be sufficiently flexible to meet the planned phases of the contemplated operations and any development that may necessitate a change in plan. Joint force commanders (JFCs) assign responsibilities, establish or delegate appropriate command relationships, and establish coordinating instructions. Joint doctrine uses the terms assigned and attached for providing forces to CCDRs but does not use these terms as command relationships. When an Army organization is assigned or attached to a CCDR or JFC, the Secretary of Defense or appropriate JFC also designates a command or support relationship. JP 1, Volume 2 specifies and details four types of joint command relationships. They are—

- COCOM.
- Operational control.
- Tactical control.
- Support.

COMBATANT COMMAND (COMMAND AUTHORITY)

B-11. *Combatant command (command authority)* is nontransferable command authority, which cannot be delegated, of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces; assigning tasks; designating objectives; and giving

authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command (JP 1, Volume 2). (See figure B-2 for a graphic listing joint command relationships.)

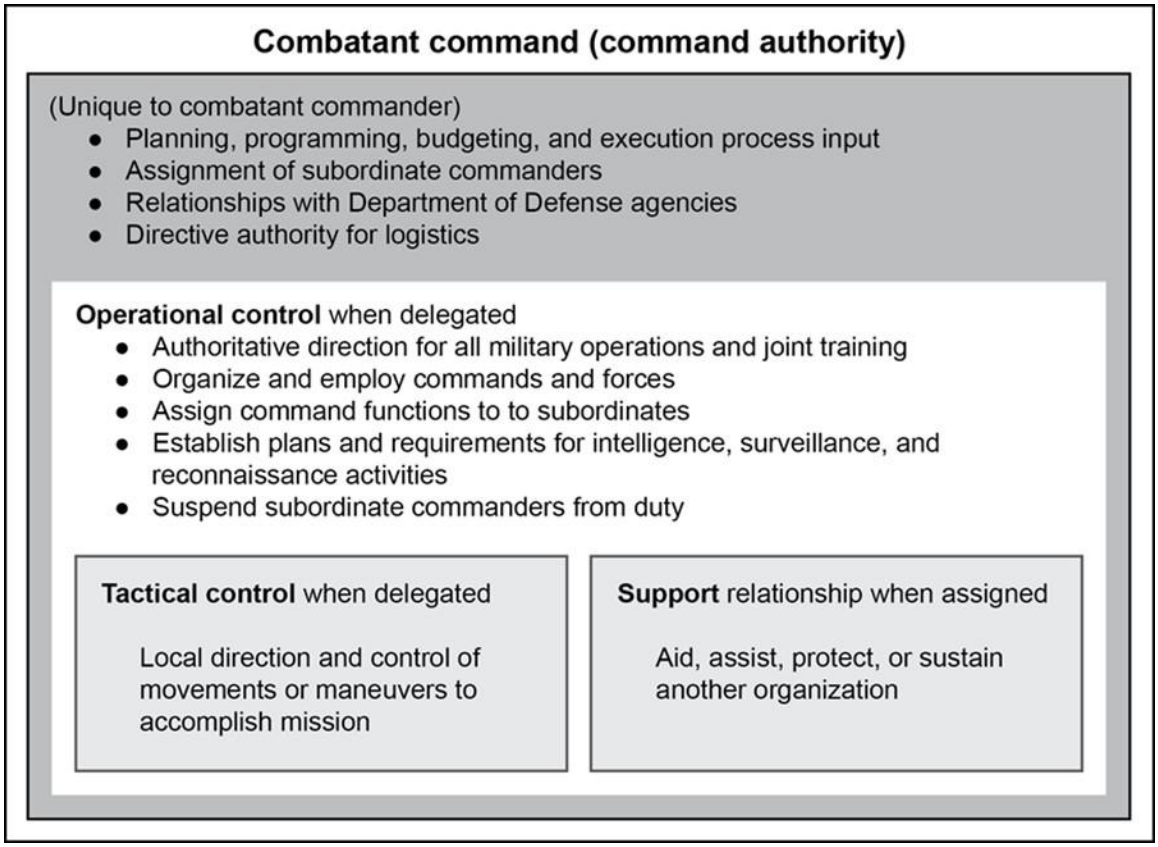

Figure B-2. Joint command relationships

B-12. COCOM only extends to those forces assigned to the combatant command by the Secretary of Defense. COCOM is established in federal law by Section 164, Title 10, USC. Normally, the CCDR exercises this authority through subordinate JFCs, Service components, and functional component commanders. COCOM includes the directive authority for logistics.

Directive Authority for Logistics

B-13. Included in COCOM is the directive authority for logistics, which may not be delegated. CCDRs may delegate authority for a common support capability to a subordinate commander as required to accomplish the subordinate commander's assigned mission. CCDRs exercise directive authority for logistics to coordinate, approve, and issue directives to subordinate commanders to increase effectiveness, improve economy of operations, and prevent or eliminate unnecessary duplication of facilities or redundancy in functions among the Service component commands. During multinational operations, the joint force establishes a national support element to provide logistical support. (For more information on directive authority for logistics, see JP 1, Volume 2.)

Directive Authority for Cyberspace Operations

B-14. The Secretary of Defense has vested Commander, United States Cyber Command (known as CDRUSCYBERCOM), with directive authority for cyberspace operations (also known as DACO). This authority allows Commander, United States Cyber Command to issue orders to all Department of Defense (DOD) components in directing the execution of Department of Defense information network operations and defensive cyberspace operations internal defensive measures, to compel unified action to secure, operate, and

defend the Department of Defense information network. (For more information on directive authority for cyberspace operations, see JP 1, Volume 2.)

JOINT OPERATIONAL CONTROL

B-15. *Operational control* is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission (JP 1, Volume 2). Commanders exercising OPCON over assigned or attached forces may delegate OPCON or TACON to subordinate commanders. Forces allocated to CCDRs through global force management are typically attached or assigned as OPCON to the gaining CCDR.

B-16. OPCON normally includes authority over all aspects of operations and joint training necessary to accomplish missions. It does not include directive authority for logistics or matters of administration, discipline, internal organization, or unit training. OPCON does include the authority to delineate functional responsibilities and operational areas of subordinate JFCs. The Secretary of Defense may specify adjustments to accommodate authorities beyond OPCON in an establishing directive. When transferring forces between CCDRs or when transferring members or organizations from the military departments to a combatant command, adjustments will be coordinated with the participating CCDRs.

JOINT TACTICAL CONTROL

B-17. *Tactical control* is the authority over forces that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish assigned missions or tasks assigned (JP 1, Volume 2). Commanders exercising TACON over assigned or attached forces may delegate TACON to subordinate commanders.

JOINT SUPPORT RELATIONSHIPS

B-18. Support is a command authority in joint doctrine. A superior commander establishes a supported and supporting relationship between subordinate commanders when one organization should aid, protect, complement, or sustain another force. Designating supporting relationships is important. It conveys priorities to commanders and staffs planning or executing joint operations. Designating a support relationship does not provide authority to organize and employ commands and forces, nor does it include authoritative direction for administrative and logistic support. (See figure B-2 for a depiction of joint command relationships. See table B-1 for a listing of joint doctrine support categories.)

Note. The joint command relationship of "Support" is distinct from Army support relationships. See paragraphs B-31 through B-36 for a discussion of Army support relationships.

Table B-1. Joint support categories

Category	*Definition*
General support	Support given to the supported force as a whole and not to any particular subdivision thereof (JP 3-09.3).
Mutual support	That support which units render each other throughout joint operations, because of their assigned tasks, their position relative to each other and to the enemy, or their inherent capabilities (JP 3-31).
Direct support	A mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance (JP 3-09.3).
Close support	Action of the supporting force against targets or objectives that are sufficiently near the supported force as to require detailed integration or coordination of the supporting action with fire, movement, or other actions of the supported force (JP 3-31).

B-19. Support is, by design, somewhat vague but very flexible. Establishing authorities ensure both supported and supporting commanders understand the authority of supported commanders. JFCs often establish supported and supporting relationships among components. An Army headquarters designated as the land component may be the supporting force during some campaign phases and the supported force in

other phases. A joint support relationship is not used when an Army commander task-organizes Army forces in a supporting role. When task-organized to support another Army force, Army forces use one of four Army support relationships.

OTHER JOINT AUTHORITIES

B-20. Three other authorities exist outside of traditional joint command and support relationships. These authorities are established by higher echelon headquarters and may be implemented to limit or specify certain aspects of OPCON or ADCON.

Joint Administrative Control

B-21. *Administrative control* is direction or exercise of authority over subordinate or other organizations in respect to administration and support (JP 1, Volume 2). It is a Service authority, not a joint authority. It is exercised under the authority of and is delegated by the Secretary of the Army. ADCON is synonymous with the Army's Title 10 USC authorities and responsibilities.

B-22. The ASCC is always the senior Army headquarters assigned to a combatant command. Its commander exercises command authorities as assigned by the CCDR and ADCON as delegated by the Secretary of the Army. ADCON is the Army's authority to administer and support Army forces even while in a combatant command area of responsibility. COCOM is the authority for command and control of the same Army forces. The Army is obligated to meet the CCDR's requirements for the operational forces. Essentially, ADCON directs the Army's support of operational force requirements. Unless modified by the Secretary of the Army, administrative responsibilities normally flow from Department of the Army through the ASCC to those Army forces assigned or attached to that combatant command. ASCCs usually share ADCON for at least some administrative or support functions. Shared ADCON refers to the internal allocation of Title 10, USC, section 3013(b) responsibilities and functions. This is especially true for Reserve Component forces. Certain administrative functions, such as pay, stay with the Reserve Component headquarters, even after unit mobilization. Shared ADCON also applies to direct reporting units of the Army that typically perform single or unique functions. The direct reporting unit, rather than the ASCC, typically manages individual and unit training for these units. The Secretary of the Army directs shared ADCON.

Joint Coordinating Authority

B-23. The *coordinating authority* is a commander or individual who has the authority to require consultation between the specific functions or activities involving forces of two or more Services, joint force components, or forces of the same Service or agencies but does not have the authority to compel agreement (JP 1, Volume 2). In case essential agreement cannot be obtained, the matter shall be referred to the appointing authority. Coordinating authority is a consultation relationship, not an authority through which command may be exercised. Coordinating authority is more applicable to planning and similar activities than to operations. For example, a joint security commander exercises coordinating authority over area security operations within the joint security area. Commanders or leaders at any echelon at or below combatant command may be delegated coordinating authority. These individuals may be assigned responsibilities established through a memorandum of agreement between military and nonmilitary organizations. (See JP 1, Volume 2 for a detailed discussion of coordinating authority.)

Joint Direct Liaison Authorized

B-24. *Direct liaison authorized* is that authority granted by a commander (any level) to a subordinate to directly consult or coordinate an action with a command or agency within or outside of the granting command (JP 1, Volume 2). Direct liaison authorized is more applicable to planning than operations and always carries with it the requirement of keeping the commander granting direct liaison authorized informed. Direct liaison authorized is a coordination relationship, not an authority through which command may be exercised.

ARMY COMMAND AND SUPPORT RELATIONSHIPS

B-25. Army command and support relationships define the authority a commander has over forces. Army forces use command relationships under the administrative and operational branches of the chain of

command. Army command and support relationships are similar but not identical to joint command authorities and relationships. Differences stem from the way Army forces task-organize internally and the need for a system of support relationships between Army forces. Another important difference is the requirement for Army commanders to exercise ADCON of Army forces. These differences allow for flexible allocation of Army capabilities within various Army echelons. Figure B-3 illustrates the types of commands controlled by Headquarters Department of the Army.

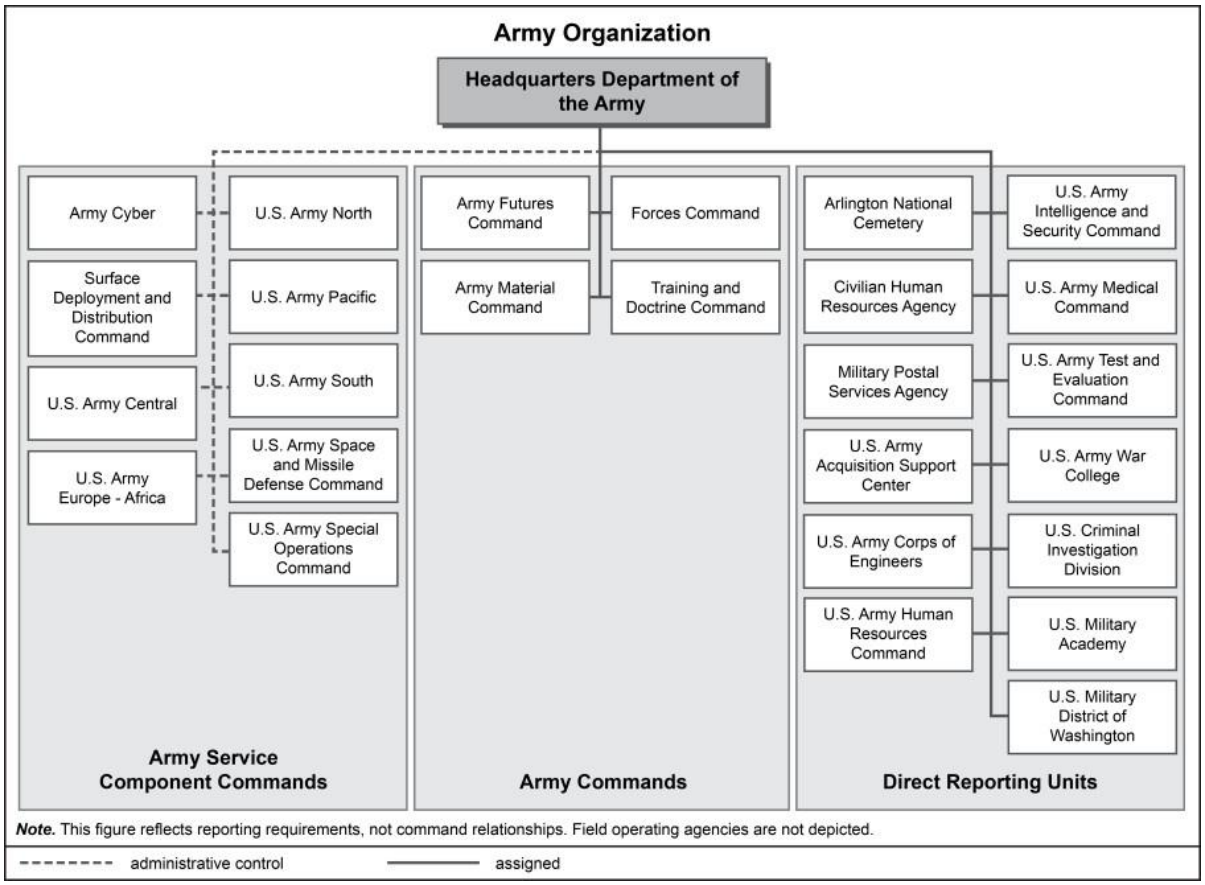

Figure B-3. Army command structure

ARMY COMMAND RELATIONSHIPS

B-26. Army command relationships define superior and subordinate relationships between units. By specifying a chain of command, command relationships unify effort and enable commanders to employ subordinate forces with maximum flexibility. The type of Army command relationship often relates to authorities required to accomplish assigned missions and the expected longevity of the relationship between the headquarters involved, and it quickly identifies the degrees of OPCON and ADCON that the gaining and losing Army commanders provide. Table B-2 on page 182 lists the Army command relationships and authorities typically associated with each. Army command relationships include—

- Organic.
- Assigned.
- Attached.
- OPCON. (See paragraph B-26.)
- TACON. (See paragraphs B-27 and B-28.)

Table B-2. Army command relationships

If relationship is—	Then the inherent responsibilities are: Have command relationship with—	May be task-organized by—	Unless modified, ADCON responsibility goes through—	Are assigned position or AO by—	Provide liaison to—	Establish and maintain communications with—	Have priorities established by—	Authorities CDR can impose on gaining unit further command or support relationship of—
Organic	Organic HQ	Organic HQ	Organic HQ	Organic HQ	N/A	N/A	Organic HQ	Attached; OPCON; TACON; GS; GSR; R; DS
Assigned	Gaining HQ	Gaining HQ	Gaining HQ	Gaining HQ	N/A	N/A	Gaining HQ	Attached; OPCON; TACON; GS; GSR; R; DS
Attached	Gaining HQ	Gaining HQ	Gaining HQ	Gaining HQ	As required by gaining HQ	Unit to which attached	Gaining HQ	OPCON; TACON; GS; GSR; R; DS
OPCON	Gaining HQ	Parent unit and gaining unit; gaining unit may pass OPCON to lower HQ	Parent HQ	Gaining HQ	As required by gaining HQ	As required by gaining HQ and parent HQ	Gaining HQ	OPCON; TACON; GS; GSR; R; DS
TACON	Gaining HQ	Parent HQ	Parent HQ	Gaining HQ	As required by gaining HQ	As required by gaining HQ and parent HQ	Gaining HQ	TACON; GS GSR; R; DS

ADCON	administrative control	GSR	general support—reinforcing
ASCC	Army Service component command	HQ	headquarters
AO	area of operations	N/A	not applicable
CDR	commander	OPCON	operational control
DS	direct support	R	reinforcing
GS	general support	TACON	tactical control

Note. A parent headquarters is either the organic headquarters of a unit, or the higher echelon headquarters of a unit established in the most recent task organization. A gaining headquarters is the headquarters to which a unit is attached, OPCON, or TACON for a specific operation, mission, or purpose.

Organic

B-27. Organic forces are those assigned to and forming an essential part of a military organization. For example, a brigade engineer battalion is an organic unit in a brigade combat team (BCT). The Army establishes organic command relationships through organizational documents such as tables of organization

and equipment and tables of distribution and allowances. If temporarily task-organized with another headquarters, organic units return to the control of their organic headquarters after completing the mission.

Assigned

B-28. Army assigned units remain subordinate to the higher echelon headquarters for extended periods, typically years. Assignment is based on the needs of the Army, and it is formalized by orders rather than organizational documents. Although force tailoring or task-organizing may temporarily detach units, they eventually return to either their headquarters of assignment or their organic headquarters. An Army headquarters is typically responsible for exercising ADCON over subordinate Army units under its command unless modified by a higher headquarters.

Attached

B-29. Attached units are temporarily subordinated to the gaining headquarters, often for months or longer. They return to their parent headquarters (assigned or organic) when the reason for the attachment ends. The Army headquarters that receives another Army unit through assignment or attachment assumes responsibility for exercising ADCON, and particularly sustainment, that normally extends down to that echelon, as specified by directives or orders. For example, when an Army division commander attaches an air defense battery to a BCT, the brigade commander assumes responsibility for unit training, maintenance, resupply, and unit-level reporting for that battalion.

B-30. For example, Army commanders normally transfer OPCON or TACON to a gaining headquarters for a given mission, lasting perhaps a few days. OPCON lets the gaining commander task-organize and direct forces. TACON does not let the gaining commander task-organize the unit. Neither OPCON nor TACON affect ADCON.

Army Operational Control

B-31. OPCON can be delegated to and exercised by the commanders of subordinate organizations. OPCON does not include directive authority for logistics or matters of administration, discipline, internal organization, or unit training. Commanders must specifically delegate these. Delegating commanders retain responsibility or these unless specifically delegated in order establishing the command relationship.

Army Tactical Control

B-32. TACON may be delegated to, and exercised by, commanders of subordinate organizations. TACON provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets within the assigned mission or task. TACON does not provide organizational authority or authoritative direction for administrative and logistics support; the commander of the parent unit continues to exercise these authorities unless otherwise specified in the establishing directive.

ARMY SUPPORT RELATIONSHIPS

B-33. Table B-3 on page 184 lists Army support relationships. Army support relationships are not a command authority. Commanders establish support relationships when subordination of one unit to another is inappropriate. If a unit has an established command relationship with a headquarters, a support relationship is unnecessary as the command relationship already grants the gaining commander all the authorities required. Support relationships are used to establish and prioritize support between and among subordinate commanders in both administrative and operational chains of command. Commanders assign a support relationship when—

- The support is more effective if a commander with the requisite technical and tactical expertise controls the supporting unit, rather than the supported commander.
- The echelon of the supporting unit is the same as or higher than that of the supported unit. For example, the supporting unit may be a brigade, and the supported unit may be a battalion. It would be inappropriate for the brigade to be subordinated to the battalion, hence the use of an Army support relationship.

- The supporting unit supports several units simultaneously. The requirement exists to set support priorities to allocate resources to supported units. Assigning support relationships is one aspect of command and control.

B-34. Army support relationships allow supporting commanders to employ their units' capabilities to achieve results required by supported commanders. Support relationships are graduated from an exclusive supported and supporting relationship between two units—as in direct support—to a broad level of support extended to all units under the control of the higher echelon headquarters-as in general support. Support relationships do not alter ADCON. Any delegation of ADCON should be specified in the order establishing the support relationship.

Table B-3. Army support relationships

	Then the inherent responsibilities are:							
If relationship is—	***Have command relationship with—***	***May be task-organized by—***	***Receives sustainment from—***	***Are assigned position or an area of operations by—***	***Provide liaison to—***	***Establish and maintain communications with—***	***Have priorities established by—***	***Authorities a CDR can impose on gaining unit further command or support relationship by—***
Direct support	Parent HQ	Parent HQ	Parent HQ	Supported HQ	Supported HQ	Parent HQ; supported HQ	Supported HQ	See note.
Reinforcing	Parent HQ	Parent HQ	Parent HQ	Reinforced HQ	Reinforced HQ	Parent HQ; reinforced HQ	Reinforced HQ; then parent HQ	Not applicable
General support–reinforcing	Parent HQ	Parent HQ	Parent HQ	Parent HQ	Reinforced HQ and as required by parent HQ	Reinforced HQ and as required by parent HQ	Parent HQ; then reinforced HQ	Not applicable
General support	Parent HQ	Parent HQ	Parent HQ	Parent HQ	As required by parent HQ	As required by parent HQ	Parent HQ	Not applicable
Note. Commanders of units in direct support may further assign support relationships between their subordinate units and elements of the supported unit after coordination with the supported commander.								
CDR commander				HQ headquarters				

B-35. For the Army, *direct support* is a support relationship requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance (FM 3-0). A unit assigned a direct support relationship retains its command relationship with its parent unit, but it is positioned by and has priorities of support established by the supported unit. (Joint doctrine considers direct support a mission rather than a support relationship.) A field artillery unit in direct support of a maneuver unit is concerned primarily with the fire support needs of only that unit. The commander of a unit in direct support recommends position areas and coordinates for movement clearances where the unit can best support the maneuver commander's concept of the operation.

B-36. *Reinforcing* is a support relationship requiring a force to support another supporting unit (FM 3-0). Only like units (for example, artillery to artillery) can be given a reinforcing mission. A unit assigned a reinforcing support relationship retains its command relationship with its parent unit, but it is positioned by the reinforced unit. A unit that is reinforcing has priorities of support established by the reinforced unit, then the parent unit. For example, when a direct support field artillery battalion requires more fires to meet maneuver force requirements, another field artillery battalion may be directed to reinforce the direct support battalion.

B-37. *General support-reinforcing* is a support relationship assigned to a unit to support the force as a whole and to reinforce another similar-type unit (FM 3-0). A unit assigned a general support-reinforcing support relationship is positioned and has its priorities established by its parent unit and secondly by the reinforced unit. For example, an artillery unit that has a general support-reinforcing relationship supports the force as a whole and provides reinforcing fires for other artillery units.

B-38. General support is that support given to the supported force as a whole and not to any subdivision thereof. Units assigned a general support relationship are positioned and have priorities established by their parent unit. A field artillery unit assigned in general support of a force has all of its fires under the immediate control of the supported commander or his designated force field artillery headquarters.

OTHER ARMY AUTHORITIES

B-39. Similar to joint organizations, other authorities exist outside of Army command and support relationships. Joint and Army forces both use three of the authorities in the same manner: administrative control, coordinating authority, and direct liaison authorized. The Army has two additional authorities: training and readiness oversight and training and readiness authority. These authorities are established by higher echelon headquarters when authorities need to be limited or specialized to a greater degree than traditional command and support relationships. Commanders may detail the authority in their implementing directives, but they may not use them when tailoring or task-organizing Army forces. Use of these authorities clarifies certain aspects of OPCON or ADCON. (See Table B-4 on page 187 for a listing of other authorities and relationships.) These authorities include—

- ADCON.
- Coordinating authority.
- Direct liaison authorized (also known as DIRLAUTH).
- Training and readiness oversight (TRO).
- Training and readiness authority (TRA).

Army Administrative Control

B-40. ADCON is synonymous with administration and support responsibilities identified in Title 10, USC. ADCON is the authority necessary to fulfill military departments' statutory responsibilities for administration and support. (See paragraph B-7 for a discussion on the Secretary of the Army and ADCON authorities.)

B-41. ADCON is exercised by commanders of Army forces assigned to a CCDR at any echelon at or below the level of ASCC and within Service-retained or Service-institutional Army organizations. ADCON is subject to the command authority of CCDRs. Army commanders exercising ADCON shall not usurp the authorities assigned by a CCDR exercising COCOM over assigned Service forces.

B-42. The Secretary of the Army is responsible for the administration and support of Army forces provided to CCDRs. The Secretary of the Army delegates ADCON over Army forces provided to CCDRs through ASCCs and ARFORs.

Army Coordinating Authority

B-43. Coordinating authority is the authority delegated to a commander or individual for coordinating specific functions or activities involving forces of two or more military departments, two or more joint force components, or two or more forces of the same Service. The commander or individual granted coordinating authority can require consultation between the agencies involved, but that person does not have the authority to compel agreement. If essential agreement cannot be obtained, the matter shall be referred to the appointing authority. Coordinating authority is a consultation relationship, not an authority through which command may be exercised. (See JP 1, Volume 2 for more information on coordinating authority.)

Army Direct Liaison Authorized

B-44. Direct liaison authorized is more applicable to planning than operations, and it always carries with it the requirement of keeping the commander granting direct liaison authorized informed. Direct liaison authorized is a coordination relationship, not an authority through which command may be exercised.

Training and Readiness Oversight

B-45. TRO is the authority that CCDRs may exercise over assigned Reserve Component forces when not on active duty or when on active duty for training. As a matter of DOD policy, this authority includes—

- Providing guidance to Service-component commanders on operational requirements and priorities to be addressed in military department training and readiness programs.
- Commenting on Service-component program recommendations and budget requests.
- Coordinating and approving participation by assigned Reserve Component forces in joint exercises and other joint training when on active duty for training or performing inactive duty for training.
- Obtaining and reviewing readiness and inspection reports on assigned Reserve Component forces.
- Coordinating and reviewing mobilization plans (including post-mobilization training activities and deployability validation procedures) developed for assigned Reserve Component forces.

(See JP 1, Volume 2 for more information on TRO.)

Training and Readiness Authority

B-46. TRA is the discrete authority, granted by a higher echelon commander, for a designated commander to give direction to an attached unit for leader development, individual and collective training, and unit readiness (including maintenance, manning, and equipping). It also includes responsibility for the health, welfare, morale, and discipline of assigned and attached personnel, and all facets of command that enable unit commanders to accomplish their missions. It does not include those installation command authorities vested in the Army senior commander. The commander executing TRA has a responsibility to coordinate unit readiness with the applicable installation Army senior commander.

Aligned

B-47. Alignment is an informal relationship between a theater army and other Army units identified for use in the area of responsibility (AOR) of a specific geographic combatant command. Alignment helps focus unit exercises and other training on a particular region. This may lead to establishment of direct liaison authorized between the aligned unit and a different ASCC. While alignment provides training focus, it does not provide exclusivity in employment. Therefore, Army commanders maintain a balance between regional focus and global capability.

Table B-4. Other Army authorities and relationships

Relationship	*Operational use*	*Established by*	*Authority and limitations*
ADCON	ADCON enables control of resources and equipment, personnel management, logistics, individual and unit training, readiness, mobilization, demobilization, discipline, and other matters not included in operational missions.	Commanders assigned to a CCDR or Commanders of service retained or service institutional forces.	ADCON is exercised over Service forces to provide to CCDRs for operational missions.
Coordinating Authority	Between commands or assigned to an individual consulting between specific functions or activities involving forces of two or more Services, joint force components, or forces of the same Service or agencies.	Appointing authority.	The command or individual has the authority to require consultation between specific functions or activities but, does not have the authority to compel agreement.
DIRLAUTH	Allows planning and direct collaboration between two units assigned to different commands, often based on anticipated tailoring and task organization changes	The parent unit headquarters. This is a coordination relationship, not an authority through which command may be exercised.	Limited to planning and coordination between units.
TRO	TRO is an authority exercised by a combatant commander over assigned RC forces not on active duty. Through TRO, CCDRs shape RC training and readiness. Upon mobilization of the RC forces, TRO is no longer applicable.	The CCDR identified in the "Forces for Unified Commands" memorandum. The CCDR normally delegates TRO to the ASCC.	TRO allows the CCDR to provide guidance on operational requirements and training priorities, review readiness reports, and review mobilization plans for RC forces. TRO is not a command relationship. ARNG forces remain under the command and control of their respective State Adjutant Generals until mobilized for Federal service. USAR forces remain under the command and control of the CG, USARC until mobilized.
TRA	TRA is an authority for a designated commander to give direction to an attached unit for leader development, individual and collective training, and unit readiness.	Higher commander.	TRA includes responsibility for all facets of command that enable commanders to accomplish their mission. It does not include those installation command authorities vested in the Army Senior Commander.
Aligned	Informal relationship to facilitate planning between a theater army and other Army units identified in operations and exercises in a specific combatant command.	Theater army and parent command.	Normally establishes information channels for coordination between the gaining theater army and Army units that are likely to be committed to that area of responsibility.

ADCON	administrative control	RC	Reserve Component
ASCC	Army Service component command	TRA	training and readiness authority
ARNG	Army National Guard	TRO	training and readiness oversight
CCDR	combatant commander	USAR	United States Army Reserve
CG	commanding general	USARC	United States Army Reserve Command
DIRLAUTH	direct liaison authorized		

MULTINATIONAL COMMAND AND COORDINATION RELATIONSHIPS

B-48. Army forces routinely serve in multinational operations, and echelons above brigade headquarters may form the core of a multinational headquarters. As such, it is important that Army commanders and staffs understand multinational command structures and authorities.

B-49. Multinational operations is a collective term to describe military actions conducted by forces of two or more nations, usually undertaken within the structure of an alliance or coalition. An alliance is the

relationship that results from a formal agreement between two or more nations for broad, long-term objectives that further the common interests of the members. Alliances have standing headquarters, organizations, and standardized agreements for the conduct of operations. Examples include the North Atlantic Treaty Organization (NATO) and the Combined Forces Command, Korea. Operations conducted with units from two or more allies are referred to as combined operations.

B-50. A coalition is an arrangement between two or more nations for a common action. Coalitions are formed by different nations with specific objectives, usually for a single occasion or for longer cooperation in a narrow sector of common interest. Operations conducted with units from two or more coalition members are referred to as coalition operations. (See JP 5-0 and FM 3-16 for further details on multinational operations.)

MULTINATIONAL COMMAND AUTHORITY

B-51. The Army and joint force have doctrinal definitions for command and support relationships. However, these definitions and authorities only apply to U.S. forces. In multinational operations, nations almost always retain national command of their forces, but they also determine the authority they will delegate to multinational commanders for the employment of their forces. The nations involved also establish national caveats. Command authority for a multinational force's command is normally negotiated between the participating nations, and it can vary from nation to nation. Command authority is specified in the implementing agreements, and it may include aspects of OPCON, TACON, support relationships, and coordinating authority. A clear and common understanding of what authorities are specified in the implementing agreement is essential to operations. This is particularly important when similar terms have different meanings to the various participants.

B-52. In many cases, coordinating authority may be the only acceptable means of accomplishing a multinational mission. Coordinating authority is a consultation relationship between commanders, not an authority by which command and control may be exercised. Normally, it is more applicable to planning than to operations. Use of coordinating authority requires agreement among participants, as the commander exercising coordinating authority has neither the authority to compel participation nor to resolve disputes.

B-53. Participating nations do not relinquish their national interests by participating in multinational operations. For example, as Commander in Chief, the President always retains, and cannot relinquish, national command authority over U.S. forces. The President also has the authority to terminate U.S. participation in multinational operations at any time. All nations participating in multinational operations retain similar authorities.

MULTINATIONAL COMMAND STRUCTURE

B-54. All multinational operations have two chains of command, regardless of structure or authority. The first is a national chain of command originating from respective national capitals. The second is the multinational chain of command constructed by the United Nations, alliance, or coalition. Multinational command structures make unity of command difficult to achieve. As a result, multinational commanders strive for unity of effort regardless of the agreed upon command structure. Multinational commanders strive to integrate and synchronize operations with all military and nonmilitary organizations in their operational area. In doing so, multinational commanders develop a high level of mutual trust and familiarity with other national contingents.

B-55. United Nations forces, alliances, and coalitions create command structures that meet the needs, diplomatic realities, constraints, and objectives of the participating nations. No single command structure fits the needs of all alliances; however, United Nations forces and coalitions normally use one of four basic structures for multinational operations:

- Integrated.
- Lead nation.
- Parallel.
- Combination.

B-56. Regardless of how a multinational force is organized operationally, each nation furnishing forces normally establishes a national component, often called a national command element, to ensure effective administration of its forces. The logistic support element of this component is referred to as the national support element.

Integrated Command Structure

B-57. Integrated commands designate a strategic commander from a member nation and have representative members from the member nations in the command headquarters. Multinational commands organized under an integrated command ensure the capabilities of member nations are represented and employed properly.

Lead Nation Command Structure

B-58. A lead nation command structure exists when all member nations place their forces under the control of one nation. The lead nation command can be distinguished by a dominant lead nation command and staff arrangement with subordinate elements retaining strict national integrity.

Parallel Command Structure

B-59. Under a parallel command structure, no single force commander is designated. The multinational force leaders must develop a means for coordination among the participants to attain unity of effort. This can be accomplished through coordination centers. Nonetheless, because of the absence of a single multinational force command, a parallel command structure should be avoided if possible.

Combination Command Structure

B-60. In a combination command structure, the lead nation concept and a parallel command structure exist simultaneously in a coalition. This occurs when two or more nations are the controlling elements for a mix of international forces. This structure is more desirable than the parallel command structure, but an effort to achieve a total lead-nation concept for unity of command is preferred. (See JP 3-16 and FM 3-16 for additional information on multinational command structures.)

NATO Command Relationships and Authorities

B-61. NATO is an example of a multinational organization with agreed upon structure and authorities. When planning and conducting operations as part of NATO, it is particularly important for leaders to understand the command relationships and the specified authorities, whether they are attached to a NATO command or receiving NATO capabilities. It is also important to understand that NATO terms and acronyms are similar to U.S. acronyms at times, but they often describe different authorities than joint and Army terms. NATO has five command relationships:

- Full command (FULLCOM).
- Operational command (OPCOM).
- OPCON.
- Tactical command (TACOM).
- TACON.

(See table B-5 on page 190 for a listing of NATO treaty organization command relationships. See Allied Tactical Publication-3.2.2 and AJP-3 for additional discussion of the authorities for each command relationship.)

Table B-5. North Atlantic Treaty Organization command relationships

	More authority → Less authority				
Authority	***FULLCOM***	***OPCOM***	***OPCON***	***TACOM***	***TACON***
May further delegate command authority	OPCOM OPCON TACOM TACON	OPCOM OPCON TACOM TACON	OPCON TACOM TACON	TACOM TACON	TACON
Task-organize the assigned element	X	X			
Assign missions to the assigned element	X	X	X (limited)		
Assign tasks to the assigned element for the purpose of which it has been assigned	X	X	X	X (limited)	
Coordinate movement, local defense, and force protection	X	X	X	X	X
Planning and coordination	X	X	X	X	X
Administrative and logistic responsibility	X				
FULLCOM OPCOM OPCON	full command operational command operational control		TACOM TACON	tactical command tactical control	

Full Command

B-62. FULLCOM is the military authority and responsibility of a commander to issue orders to subordinates. It covers every aspect of military operations and administration and exists only within national services. The term command, as used internationally, implies a lesser degree of authority than when it is used in the national sense. NATO or coalition commanders do not have FULLCOM over the forces assigned to them, since, in assigning forces to NATO, nations delegate only OPCOM or OPCON.

NATO Operational Command

B-63. OPCOM in NATO is the authority granted to a commander to assign missions or tasks to subordinate commanders, to deploy units, to reassign forces, and to retain or delegate OPCON and TACON as the commander deems necessary. It does not necessarily include responsibility for administration or logistics.

NATO Operational Control

B-64. OPCON in NATO is the authority delegated to a commander to direct assigned forces so that commander may accomplish specific missions or tasks, which are usually limited by function, time, or location, and to deploy assigned units, and to retain or assign TACON of those units. It does not include authority to assign separate employment of components of the units concerned. By itself, it does not include

administrative or logistics control. For forces allocated under OPCON, the gaining commander may not break up the organizational integrity of the force for separate employment. Under OPCON, forces assigned may only be employed within certain constraints such as function, time, or location imposed by the higher echelon authority.

NATO Tactical Command

B-65. TACOM in NATO is the authority delegated to a commander to assign tasks to forces under that command for the accomplishment of the mission assigned by higher authority. Under TACOM the gaining commander may only allocate to the assigned force a specific task consistent for the accomplishment of the mission and purpose assigned by the higher commander. Under TACOM the assigned force is allocated for specific tasks, and it is normally allocated for a limited period. This prevents the gaining commander from employing the assigned force in a role or manner not intended by the higher commander. When the task is complete or the specific timeframe expires, the TACOM relationship with the gaining force ends.

NATO Tactical Control

B-66. TACON in NATO is the detailed and usually local direction and control of movements or maneuvers necessary to accomplish missions or assigned tasks. TACON is generally used to indicate those units that will be located in another unit or formation's assigned geographic boundaries, where the gaining unit becomes responsible for coordination aspects within the shared area of operations (AO). The gaining commander has authority to coordinate local defense, including force protection and terrain allocation.

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Appendix C
Running Estimates

This appendix describes running estimates, and it explains how commanders and staffs build and maintain their running estimates throughout the operations process. This appendix provides a generic running estimate format that commanders and staff elements may modify to fit their functional areas. (See JP 5-0 for information on joint estimates.)

TYPES OF RUNNING ESTIMATES

C-1. Running estimates assist commanders and staffs with understanding situations, assessing progress, and making effective decisions throughout an operation. Effective plans and successful executions hinge on current and accurate running estimates with relevant information.

C-2. Each staff section maintains a running estimate within its specified area of expertise (for example, intelligence, fires, logistics, or personnel). When building and maintaining a running estimate, staff sections monitor current operations, and they continuously consider the following in context of the operations—

- Facts.
- Assumptions.
- Friendly force status, including location, activity, and combat power of subordinate units from two echelons down.
- Enemy activities and capabilities.
- Civil considerations.
- Conclusions and recommendations with associated risk.

C-3. Running estimates cover essential facts and assumptions, including a summary of the current situation. Running estimates always include recommendations for anticipated decisions. During planning, running estimates use these recommendations to select valid (meaning feasible, acceptable, suitable, distinguishable, and complete) courses of action (COAs) for further analysis. During preparation and execution, commanders use recommendations from running estimates to inform their decision making.

C-4. While staffs maintain formal running estimates, the commander's estimate is a mental process directly tied to the commander's visualization. Commanders integrate personal knowledge of the situation, analysis of the mission variables, assessments by subordinate commanders and their organizations, and relevant details gained from running estimates from the staff to develop the commander's assessment.

C-5. Because a commander may need a running estimate at any time, staffs must develop, update, and continuously revise running estimates. At a minimum, staffs maintain a running estimate on friendly capabilities while in garrison or when not actively engaged in operations. Staff elements immediately begin updating their running estimates upon receipt of a mission. They continue to build and maintain their running estimates throughout the operations process of planning, preparation, execution, and assessment.

ESSENTIAL QUALITIES OF RUNNING ESTIMATES

C-6. A comprehensive running estimate addresses all aspects of operations. It contains essential facts and assumptions, including a summary of the current situation by the mission variables, conclusions, and recommendations. (See paragraphs A-5 through A-41 for more information on the mission variables.) Comprehensive estimates consider both the quantifiable and the intangible aspects of military operations. They translate friendly and enemy strengths, weapons systems, training, morale, and leadership into combat capabilities. Preparing an estimate requires a clear understanding of weather and terrain effects and, more important, the ability to visualize the environment and the capabilities it requires. Estimates provide a timely, accurate evaluation of the unit, the enemy, and the assigned area at a given time. (See table C-1 on page 194 for a generic format for a running estimate that parallels the planning process.)

Table C-1. Generic base running estimate format

1. SITUATION AND CONSIDERATIONS.
   a. Area of Interest. Identify and describe those factors of the area of interest that affect functional area considerations.
   b. Characteristics of the assigned area.
      (1) Terrain. State how terrain affects a functional area's capabilities.
      (2) Weather. State how weather affects a functional area's capabilities.
      (3) Enemy Forces. Describe enemy disposition, composition, strength, and systems within a functional area. Describe enemy capabilities and possible courses of action (COAs) and their effects on a functional area.
      (4) Friendly Forces. List current functional area resources in terms of equipment, personnel, and systems. Identify additional resources available for the functional area located at higher echelon, adjacent, or other units. List those capabilities from other military and civilian partners that may be available to provide support in the functional area. Compare requirements to current capabilities and suggest solutions for satisfying discrepancies.
      (5) Civilian Considerations. Describe civil considerations that may affect the functional area, including possible support needed by civil authorities from the functional area and possible interference from civil aspects.
   c. Facts and Assumptions. List all facts and assumptions that affect the functional area.
2. MISSION. Show the restated mission resulting from mission analysis.
3. COURSES OF ACTION.
   a. List friendly COAs that were wargamed.
   b. List enemy actions or COAs that were templated that impact the functional area.
   c. List the evaluation criteria identified during COA analysis. All staffs use the same criteria.
4. ANALYSIS. Analyze each COA using the evaluation criteria from COA analysis. Review enemy actions that impact the functional area as they relate to COAs. Identify issues, risks, and deficiencies these enemy actions may create with respect to the functional area.
5. COMPARISON. Compare COAs. Rank order COAs for each key consideration. Use a decision matrix to aid the comparison process.
6. RECOMMENDATIONS AND CONCLUSIONS.
   a. Recommend the most supportable COAs from the functional area perspective.
   b. Prioritize and list issues, deficiencies, and risks and provide recommendations on how to mitigate them.

C-7. Estimates are as thorough as time and circumstances permit. Commanders and staffs constantly collect, process, and evaluate information. The staff members update their estimates as they receive and assess new information or as the nature of an operation changes. For example, staff members update their estimates—

- When they recognize new facts.
- When they replace assumptions with facts or determine assumptions as invalid.
- When they receive changes to the mission or when changes are indicated.

C-8. Updated estimates for the current operation can often provide a basis for estimates for future missions and changes to current operations. Estimates analyze the implications for the future and support the commander's visualization. These estimates link the current operations with future plans. The commander's visualization directs the end state. Estimates contribute to this ability and visualization.

C-9. The base running estimate addresses information unique to each functional area. Staff sections need to specifically tailor their estimates to their commander's information requirements and the operation that the estimate will inform. The base running estimate serves as the staff element's initial assessment of the current readiness of equipment and personnel and how the factors considered in the running estimate affect the staff's ability to accomplish the mission. Each staff element identifies functional area friendly and enemy strengths, systems, training, morale, leadership, and weather and terrain effects, and how all these factors impact the operational environment (OE), including the assigned area. Because the running estimate is based on a specific moment in time, each staff element constantly updates the estimate as new information arises, as assumptions become facts or are invalidated, when the mission changes, or when the commander requires additional input.

RUNNING ESTIMATES IN THE OPERATIONS PROCESS

C-10. Commanders and staff elements build and maintain their running estimates during the operations process steps of planning, preparing, executing, and assessing. Commanders and staff elements immediately begin verifying and updating their running estimates upon receipt of a mission.

RUNNING ESTIMATES IN PLANNING

C-11. During initial planning, running estimates are key sources of information during mission analysis. Following mission analysis, commanders and staff elements continuously update their running estimates throughout the rest of the military decision-making process (MDMP). (See Chapter 5 for more information on the MDMP.)

C-12. Based on the mission and the initial commander's intent, the staff develops one or more proposed COAs and continually refines its running estimates to account for the mission variables. The updated running estimates then support COA analysis in which the staff identifies the strengths and weaknesses of each COA. The staff relies on its updated running estimate to provide input to COA analysis. Following COA analysis, the staff compares the proposed COAs against each other and recommends one of them to the commander for approval. During all these activities, each staff element continues to update and refine its running estimate to give commanders the best possible information available at the time to support their decisions. The selected COA provides each staff element an additional focus for its estimates and the key information it will need during orders production. Key information recorded in the running estimate may be included in orders, particularly in the functional annexes.

C-13. Running estimates and COA analysis provide information that helps commanders. Commanders use this information to determine the best task organization to—

- Facilitate the commander's intent and concept of operations.
- Weight the main effort.
- Create effective combined arms teams to accomplish missions or achieve desired end-state conditions.
- Retain flexibility to meet unforeseen events and support future operations.
- Allocate resources with minimum restrictions on their employment.

C-14. All staff elements also incorporate risk management into their running estimates and provide recommendations to mitigate risk within their areas of expertise. The operations officer coordinates risk management throughout the operations process. (See ATP 5-19 for a detailed discussion of the risk management process.)

RUNNING ESTIMATES IN PREPARATION

C-15. As the commander and staff transition from planning to execution, they use running estimates to identify the current readiness of the unit in relation to its mission. The commander and staff also use running estimates to develop, then track, mission readiness goals and additional preparation requirements such as integration of new units, training, and sustainment preparation. (See ADP 5-0 for a detailed listing of preparation activities.)

RUNNING ESTIMATES IN EXECUTION

C-16. During execution, the staff incorporates information included in running estimates into the common operational picture. This enables the staff to depict key information from each functional area or warfighting function as it impacts current and future operations. This information directly supports the commander's visualization and rapid decision making during operations. (See paragraphs 6-14 through 6-37 for more information on rapid decision making.) During execution, running estimates serve as a key assessment tool.

RUNNING ESTIMATES IN ASSESSMENT

C-17. Each staff element continuously analyzes new information during operations to create knowledge, facilitate understanding, and assess if operations are progressing according to plan. During planning, staffs develop measures of effectiveness (MOEs) and measures of performance (MOPs) to support assessment, including analysis of anticipated decisions during preparation and execution. (See Chapter 8 for an

explanation of the 6-step assessment planning process). The assessment of current operations also supports validation or rejection of additional information that will help update estimates and support further planning. At a minimum, a staff element's running estimate assesses—

- Friendly force capabilities with respect to ongoing and planned operations.
- Enemy capabilities as they affect the staff element's area of expertise for current operations and plans for future operations.
- Civil considerations as they affect the staff element's area of expertise for current operations and plans for future operations.

C-18. Details of the running estimate may change based upon the situation, mission, commander's preference, and other factors. Regardless of potential variations, when maintained properly and updated regularly, running estimates are valuable staff tools and ready references which enhance mutual understanding, assessment, and decision making. Maintaining updated running estimates challenges the staff to enhance situational understanding, anticipate future requirements, and provide the commander with the most accurate and relevant information available to make the best decisions.

Appendix D

Plans and Orders Formats

This appendix provides an overview of types of plans and orders and preparing effective orders. A discussion on administrative instructions and formats for preparing Army plans and orders follows. (See CJCSM 3130.03[A] for joint plans and orders instructions and formats.)

PLANS AND ORDERS

D-1. An output of planning is a plan or order—a directive for future action. Commanders issue plans and orders to subordinates to communicate their understanding of the situation and their vision for how the operation should unfold. Plans and orders synchronize the action of forces in time, space, and purpose to achieve objectives and accomplish the mission. They also inform others outside the organization on how to cooperate and provide support. Plans, orders, and their attachments (annexes, appendixes, tabs, and exhibits) follow the basic five-paragraph format of—

- Situation.
- Mission.
- Execution.
- Sustainment.
- Command and signal.

Note. The formats in this appendix account for information categories that address the range of military operations, and they are applicable up to theater army headquarters. Planners are not required to develop all subparagraphs to the base plan, nor are they required to develop all attachments as listed in this appendix. Planners may add subparagraphs or attachments as required.

TYPES OF PLANS

D-2. A plan is a design for a future or anticipated operation. Plans come in many forms, and they vary in scope, complexity, and length of planning horizons. There are several types of plans, including—

- Campaign plan.
- Operation plan (OPLAN).
- Supporting plan.
- Branch.
- Sequel.

D-3. Developing and issuing a campaign plan is appropriate when the contemplated simultaneous or sequential military operations exceed the scope of a single major operation. Joint force commanders develop campaign plans. The types of campaign plans are discussed in Chapter 2. Contingency plans are branches of campaign plans, typically prepared in advance of an anticipated crisis, and they must be modified during execution. Both types of joint plans have four levels of details: commander's estimate, base plan, concept plan, and OPLAN.

D-4. An *operation plan* is a complete and detailed plan containing a full description of the concept of operations, all annexes applicable to the plan, and a time-phased force and deployment list (JP 5-0). An OPLAN may address an extended period that connects a series of objectives and operations, or it may be developed for a single part or phase of a long-term operation. An OPLAN becomes an operation order (OPORD) when the commander sets an execution time or designates an event that triggers the operation.

D-5. A *supporting plan* is an operation plan prepared by a supporting commander, a subordinate commander, or an agency to satisfy the requests or requirements of the supported commander's plan (JP 5-0). For example, an ARFOR commander develops a supporting plan for how Army forces will support the joint force commander's campaign plan or OPLAN.

D-6. A branch is the contingency options built into the base plan. A branch is used for changing the mission, orientation, or direction of movement of a force to aid success of the operation based on anticipated events, opportunities, or disruptions caused by enemy actions and reactions. Branches add flexibility to plans by anticipating situations that could alter the basic plan or order.

D-7. A sequel is the subsequent major operation or phase based on the possible outcomes of the current major operation or phase. For every action or major operation that does not accomplish a strategic or operational objective, there should be a sequel for each possible outcome, such as win, lose, draw, or decisive win.

TYPES OF ORDERS

D-8. An order is a communication, written, oral, or by signal, which conveys instructions from a superior to a subordinate. In the context of planning, there are three types of written orders:

- Operation order (OPORD).
- Fragmentary order (FRAGORD).
- Warning order (WARNORD).

D-9. An *operation order* is a directive issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation (JP 5-0). Commanders issue OPORDs to direct the execution of long-term operations and the execution of discrete short-term operations within the framework of a long-range OPORD.

D-10. A *fragmentary order* is an abbreviated operation order issued as needed to change or modify an order or to execute a branch or sequel (JP 5-0). FRAGORDs differ from OPORDs in the degree of detail provided.

D-11. A *warning order* is a preliminary notice of an order or action that is to follow (JP 5-0). WARNORDs help subordinate units and staffs prepare for new missions by describing the situation, providing initial planning guidance, and directing preparation activities.

D-12. In addition to the types of orders in paragraphs D-8 through D-11, Army forces may receive the following types of orders from a joint headquarters:

- Planning order (also known as a PLANORD).
- Alert order.
- Execute order (also known as an EXORD).
- Prepare-to-deploy order.
- Deployment order (also known as a DEPORD).
- Redeployment order.

(See CJCSM 3130.03[A] for clarification and guidance on these orders.)

EFFECTIVE PLANS AND ORDERS

D-13. Commanders stress the importance of mission orders as a way of building simple, flexible plans. Mission orders focus on what to do and the purpose of doing it without prescribing exactly how to do it. Commanders establish control measures to aid cooperation among forces without imposing needless restrictions on freedom of action. Mission orders contribute to flexibility by allowing subordinates the freedom to seize opportunities or react effectively to unforeseen enemy actions and capabilities.

D-14. Mission orders follow the five-paragraph format, and they are as brief and simple as possible. Mission orders clearly convey the unit's mission and commander's intent. They summarize the situation (including current or anticipated starting conditions), describe the operation's end state, and provide a concept of operations to accomplish the unit's mission. When assigning tasks to subordinate units, mission orders include all components of a task statement: who, what, when, where, and why. However, commanders particularly emphasize the purpose (why) of the tasks to guide (along with the commander's intent) disciplined initiative.

D-15. Mission orders contain the proper level of detail; they are neither so detailed that they stifle initiative nor so general that they provide insufficient direction. The proper level depends on each situation, and it is not easy to determine. Some phases of operations require tighter control over subordinate elements than

others require. An air assault's air movement and landing phases, for example, require precise synchronization. Its ground maneuver plan may require less detail.

Note. As a rule, the base plan or order contains only the specific information required to provide the guidance to synchronize combat power while allowing subordinates as much freedom of action as possible. Attachments to the plan or order contain details regarding the situation and instructions necessary for synchronization.

D-16. Commanders issue written plans and orders that contain both text and graphics. Graphics convey information and instructions through military symbols. They complement the written portion of a plan or an order and promote clarity, accuracy, and brevity. Staffs often develop and disseminate written orders electronically to shorten the time needed to gather and brief the orders group and facilitate subordinate planning. Staffs can easily edit and modify electronically produced orders. They can send the same order to multiple recipients simultaneously. Using computer programs to develop and disseminate precise, corresponding graphics adds to the efficiency and clarity of the orders process. (See FM 1-02.2 for a list of approved symbols.)

D-17. Electronic editing makes importing text and graphics into orders easy. Unfortunately, such ease can result in orders becoming unnecessarily large without added operational value. This can unnecessarily burden tactical communications with their transmission. Commanders need to ensure that orders contain only that information needed to facilitate effective execution. Orders should not repeat unit standard operating procedures (SOPs). Orders should be clear, concise, and relevant to the mission.

D-18. Effective plans and orders are simple and direct to reduce misunderstanding and confusion. The situation determines the degree of simplicity required. Simple plans executed on time are better than detailed plans executed late. Commanders at all echelons weigh potential benefits of a complex concept of operations against the risk that subordinates will fail to understand it.

D-19. Effective plans and orders reflect authoritative and positive expression through the commander's intent. As such, the language is direct and affirmative. An example of this is, "The combat trains will remain in the assembly area" instead of "The combat trains will not accompany the unit." Effective plans and orders directly and positively state what the commander wants the unit and its subordinate units to do and why.

D-20. Effective plans and orders avoid meaningless expressions, such as "as soon as possible." Indecisive, vague, and ambiguous language and passive voice lead to uncertainty and lack of confidence.

D-21. Effective plans and orders possess brevity and clarity. These plans use short words, sentences, and paragraphs. Plans use acronyms unless clarity is hindered. Plans do not include material covered in SOPs, but they refer to those SOPs instead. Brief and clear orders—

- Use doctrinally correct terms and symbols.
- Avoid jargon.
- Use defined non-doctrinal terms when a doctrinal term is not available.
- Eliminate every opportunity for misunderstanding the commander's intended meaning.

ADMINISTRATIVE INSTRUCTIONS

D-22. Regardless of echelon, order writers show the main five paragraph headings on written orders. A paragraph heading with no text will state "None" or "See [attachment type] [attachment letter or number]." Order writers underline and bold the titles of these five main paragraphs. For example, "situation" is **Situation**. All subparagraphs and subtitles begin with capital letters and are underlined. For example, "concept of operations" is Concept of Operations.

D-23. When a paragraph is subdivided, it must have at least two subdivisions. The tabs are set at 0.25 inches, and the space is doubled between paragraphs. Subsequent lines of text for each paragraph may be flush left or equally indented at the option of the chief of staff (COS) or executive order (XO), as long as they are consistent throughout the order. (See figure D-1 on page 200 for an example paragraph layout for plans and orders.)

1. **Title**. Text.
    a. Title. Text.
    b. Title. Text.
        (1) Title. Text.
        (2) Title. Text.
            (a) Title. Text.
            (b) Title. Text
                1. Title. Text.
                2. Title Text.

2. **Title.** Text. (Follow the same subparagraph format as above.)

Figure D-1. Paragraph layout for plans and orders

ACRONYMS AND ABBREVIATIONS

D-24. Order writers use acronyms and abbreviations to save time and space, if they do not cause confusion. However, order writers do not sacrifice clarity for brevity. Order writers keep acronyms and abbreviations consistent throughout the order and its attachments. They avoid using acronyms and abbreviations not found in FM 1-02.1 or the *DOD Dictionary of Military and Associated Terms*. Before using an entire acronym or abbreviation, at its first use in the document order writers use the full form of the term and then place the acronym or abbreviation between parentheses immediately after the term. After this first use, they use the acronym or abbreviation throughout the document.

LOCATION AND DIRECTION DESIGNATIONS

D-25. Location and direction designations are important in orders. Order writers describe locations or points on the ground by—

- Providing the map datum used throughout the order.
- Referring to military grid reference system coordinates.
- Referring to longitude and latitude if available maps do not have the military grid reference system.

Order writers designate directions in one of two ways:

- As a point of the compass (for example, north or northeast).
- As a magnetic, grid, or true bearing, stating the unit of measure (for example, 85 degrees [magnetic]).

D-26. When first mentioning a place or feature on a map, order writers print the name in capital letters exactly as spelled on the map and show its complete grid coordinates (grid zone designator, 100-kilometer grid square, and four-, six-, eight-, or ten-digit grid coordinates) in parentheses after it. When first using a control measure, such as a contact point or a phase line, order writers print the name or designation of the control measure in capital letters followed by its complete grid coordinates in parentheses. Thereafter, they repeat the coordinates only for clarity.

D-27. Order writers describe areas by naming the northernmost (12 o'clock) point first and the remaining points in clockwise order. They describe positions from left to right and from front to rear, facing the enemy. To avoid confusion, order writers identify flanks by compass directions, rather than right or left of the friendly force.

D-28. If the possibility of confusion exists when describing a route, order writers add a compass direction for clarity (for example, "The route is northwest along the road LAPRAIRIE-DELSON."). If a particular route already has a planning name, such as main supply route LION, order writers refer to the route using only that designator.

D-29. Order writers designate trails, roads, and railroads by the names of places along them or with grid coordinates. They precede place names with a trail, road, or railroad (for example, "road GRANT—CODY").

Order writers designate the route for a movement by listing a sequence of grids from the start point to the release point. Otherwise, they list the sequence of points from left to right or front to rear, facing the enemy.

D-30. Order writers identify riverbanks as north, south, east, or west. In wet gap-crossing operations, they identify riverbanks as either near or far.

NAMING CONVENTIONS

D-31. Unit SOPs normally designate naming conventions for graphics (for example, assembly areas, phase lines, and objectives). Otherwise, planners select them. For clarity, order writers avoid multiword names, such as "JUNCTION CITY." Simple names are better than complex ones. To ensure operations security (OPSEC), order writers avoid assigning names that could reveal unit identities, such as the commander's name or the unit's home station. They do not name sequential phase lines and objectives in alphabetical order. For memory aids, order writers use sets of names designated by the type of control measure or subordinate unit. For example, a division order might use colors for objective names and minerals for phase line names.

CLASSIFICATION MARKINGS

D-32. AR 380-5 contains detailed information on marking documents, transmitting procedures, and other classification instructions. Order writers mark each page and portions of the text on that page with the appropriate abbreviation ("TS" for TOP SECRET, "S" for SECRET, "C" for CONFIDENTIAL, "CUI" for CONTROLLED UNCLASSIFIED INFORMATION, or "U" for UNCLASSIFIED). Order writers place classification markings at the top and bottom of each page. All paragraphs must have the appropriate classification marking immediately following the alphanumeric designation of the paragraph (preceding the first word if the paragraph is not numbered). Typically, when classified the first page in the upper left or the bottom left of the plan or order the following information is included:

- Classified by.
- Reason.
- Downgrade to.
- Declassify on.

D-33. The "AUTHORIZED FOR RELEASE TO", "REL TO", //REL control marking is authorized for use on all classified military or defense controlled unclassified information that has been determined by an authorized disclosure official, in accordance with established foreign disclosure policies, to be releasable, or that has been released through established foreign disclosure procedures and channels, to the foreign country or international organization indicated. (See AR 380-5 for more information on classification markings.)

D-34. The "Controlled Unclassified Information" acronym, CUI, will be used in place of "U" when a portion is UNCLASSIFIED but contains CUI information. CUI will be used when content is unclassified but must be safeguarded from unauthorized disclosure. Typically, when a plan or order contains CUI the following information is added to the first page in either the upper left or bottom left corner:

- Controlled by.
- CUI categories.
- Limited dissemination control.
- Point of contact

(See DODI 5200.48 for further information on CUI definition, policy, and markings.)

D-35. The Army typically conducts operations as part of a larger multinational effort often incorporating unified action partners. This requires sharing of information to the greatest extent possible and writing plans and orders releasable to those unified action partners who are part of and support those operations. Commanders and staffs must understand how to write for release. (See ATP 3-16.02 for more information on write for release.) This requires an understanding of how commanders may release to, or withhold information from, selected unified action partners. Information marked "Not Releasable To Foreign Nationals" (NOFORN) is nonreleasable to foreigners and must be referred to the originator. NOFORN is not authorized for new classification decisions. A limited amount of information will contain the marking "U.S. ONLY". This information cannot be shared with any foreign government. (See AR 380-5 for more details on NOFORN markings. See local SOPs for classification and dissemination guidance. See FM 6-0 and AR 380-10 for information on foreign disclosure.)

EXPRESSING UNNAMED DATES AND HOURS

D-36. Order writers use specific letters to designate unnamed dates and times in plans and orders. Common letters for dates and times are listed in table D-1.

Table D-1. Designated letters for dates and times

Term	*Designates*
C-day	The unnamed day on which a deployment operation commences or is to commence (JP 5-0).
D-day	The unnamed day on which a particular operation commences or is to commence (JP 3-02).
H-hour	The specific hour on D-day at which a particular operation commences (JP 5-0).
L-hour	The specific hour on C-day at which a deployment operation commences or is to commence (JP 5-0).
P-hour	**The specific hour on D-day at which a parachute assault commences with the exit of the first Soldier from an aircraft over a designated drop zone. P hour may or may not coincide with H-hour planning horizon.**

EXPRESSING TIME

D-37. The effective time for implementing a plan or order is the same as the date-time group of the order. Order writers express the date and time as a six-digit date-time group. The first two digits indicate the day of the month; the next four digits indicate the time. The letter at the end of the time indicates the time zone. Staffs add the month and year to the date-time group, as a three-letter capitalized month and two-digit year, to avoid confusion. For example, a complete date-time group for 6 August 2025 at 1145Z appears as "061145ZAUG2025".

D-38. If the effective time of any portion of the order differs from that of the order, staffs identify those portions at the beginning of the coordinating instructions (in paragraph 3). For example, order writers may use "Effective only for planning on receipt" or "Task organization effective 261300ZMAY2025."

D-39. Order writers express all times in a plan or order in terms of one time zone, for example ZULU or LOCAL. Staffs include the appropriate time zone indicator in the heading data and mission statement. For example, the time zone indicator for Central Standard Time (known as CST) in the continental United States is SIERRA. When daylight savings time is in effect, the time zone indicator for Central Daylight Time (known as CDT) is ROMEO. The relationship of local time to ZULU time, not the geographic location, determines the time zone indicator to use.

Note. Order writers do not abbreviate local time as L. The abbreviation for the LIMA time is L.

D-40. When using inclusive dates, staffs express them by writing both dates separated by a dash (for example, 6-9 August 2025 or 6 August-6 September 2025). They express times in the 24-hour clock system by means of four-digit Arabic numbers, including the time zone indicator.

IDENTIFYING PAGES

D-41. Staffs identify pages following the first page of plans and orders with a short title identification heading located two spaces under the classification marking. They include the number (or letter) designation of the plan and the issuing headquarters. For example, OPLAN 00-15-23d AD (U) or Annex B (Intelligence) to OPLAN 00-15-23rd AD (U). (In this case, AD stands for armored division.)

NUMBERING PAGES

D-42. Order writers number the pages of the base order and each attachment separately beginning on the first page of each attachment. They use a combination of alphanumeric designations to identify each attachment.

D-43. Order writers use Arabic numerals only to indicate page numbers. They place page numbers after the alphanumeric designation that identifies the attachment. They use Arabic numerals without any proceeding

alphanumeric designation for base order page numbers. For example, the designation of the third page to Annex C is C-3. Order writers assign each attachment either a letter or Arabic numeral that corresponds to the letter or number in the attachment's short title. They assign letters to annexes, Arabic numerals to appendixes, letters to tabs, and Arabic numerals to exhibits. For example, the designation of the third page to Appendix 5 to Annex C is C-5-3.

D-44. Order writers separate elements of the alphanumeric designation with hyphens. For example, the designation of the third page of exhibit 2 to Tab B to Appendix 5 to Annex C is C-5-B-2-3.

ATTACHMENTS

D-45. Attachments (annexes, appendixes, tabs, and exhibits) are information management tools that expand on the base plan or order. However, even when attachments are used, an effective base order contains enough information to be executed without them. The organizational structure for attachments to Army OPLANs and OPORDs is in table D-2 on pages 211 through 215.

D-46. Commanders and staffs are not required to develop all attachments listed in table C-2 (on pages C-15 through C-19). The number and type of attachments depend on the commander, echelon of command, and needs of a particular operation. Minimizing the number of attachments keeps the order consistent with completeness and clarity. If the information relating to an attachment's subject is brief, the order writer places the information in the base order and omits the attachment. Staffs list attachments under an appropriate heading at the end of the document they expand. For example, they list annexes at the end of the base order, appendixes at the end of annexes, and so forth.

D-47. When an attachment is not required, staffs indicate this by stating "omitted." For example, the order writer would state, "Annex R (Reports) omitted." If the situation requires an additional attachment not provided in table D-2 (on pages 211 through 215) leaders can add to this structure. For example, if there is a requirement to add an additional tab to Appendix 1 (Intelligence Estimate) to Annex B (Intelligence), the order writer would label that additional attachment as Tab E (Attachment name) to Appendix 1 (Intelligence Estimate) to Annex B (Intelligence).

D-48. Staffs refer to attachments by letter or number and title. They use the following naming conventions:

- Annexes. Staffs designate annexes with capital letters, for example, Annex D (Fires) to OPORD 19-06-1 ID.
- Appendixes. Staffs designate appendixes with Arabic numbers, for example, Appendix 1 (Intelligence Estimate) to Annex B (Intelligence) to OPORD 19-06-1 ID.
- Tabs. Staffs designate tabs with capital letters, for example, Tab B (Target Synchronization Matrix) to Appendix 3 (Targeting) to Annex D (Fires) to OPORD 19-06-1 ID.
- Exhibits. Staffs designate exhibits with Arabic numbers, for example, Exhibit 1 (Traffic Circulation and Control) to Tab C (Transportation) to Appendix 1 (Logistics) to Annex F (Sustainment) to OPORD 19-06-1 ID.

(In this case, ID stands for infantry division.)

D-49. If an attachment has wider distribution than the base order or is issued separately, the attachment requires a complete heading and acknowledgment instructions. When staffs distribute attachments with the base order, these elements are not required.

BASE PLAN OR ORDER FORMAT

D-50. The example in figure D-2 on pages 204 through 209 provides the format and instructions for developing the base OPLAN or OPORD.

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the operation plan (OPLAN) or operation order (OPORD). Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 for classification and release marking instructions.

Copy ## of ## copies
Issuing headquarters
Place of issue
Date-time group of signature

The first line of the heading is the copy number assigned by the issuing headquarters. Maintain a log of specific copies issued to addressees. The second line is the official designation of the issuing headquarters (for example, 1st Infantry Division). The third line is the place of issue. It may be a code name, postal designation, or geographic location. The fourth line is the date or date-time group that the plan or order was signed or issued and becomes effective unless specified otherwise in the coordinating instructions.

OPERATION PLAN or ORDER [number] [(code name)] [(classification of title)]

Example: **OPORD 3411 (OPERATION DESERT DRAGON) (UNCLASSIFIED)**

Number plans and orders consecutively by calendar year. Include code name (randomized for operations security), if any.

(U) References: *List documents essential to understanding the OPLAN or OPORD. List references concerning a specific function in the appropriate attachments.*

(a) List maps and charts first. Map entries include series number, country, sheet names, or numbers, edition, and scale.

(b) List other references in subparagraphs. List documents in precedent from higher echelon to lower, for example a corps level OPLAN or OPORD, and then a division level OPLAN or OPORD.

(U) Time Zone Used Throughout the OPLAN or OPORD: *State the time zone used in the assigned area during execution. When the OPLAN or OPORD applies to units in different time zones, use Greenwich mean time (ZULU).*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. The situation paragraph describes the conditions of the operational environment that impact operations in the following subparagraphs (to include informational considerations):

a. (U) Area of Interest. Describe the area of interest which includes the area of influence. Refer to Annex B (Intelligence) as required.

b. (U) Assigned Area. Describe the assigned area. Refer to the appropriate map by its subparagraph under references, for example, "Map, reference (a)." See Appendix 2 (Operation Overlay) to Annex C (Operations) as required.

(1) (U) Terrain. Describe the aspects of terrain that impact operations. Refer to Annex B (Intelligence) as required.

[page number]
[CLASSIFICATION]

Figure D-2. Operation plan or operation order format

[CLASSIFICATION]

OPLAN or OPORD [number] [(code name)] [issuing headquarters] [(classification of title)]

Place the classification and title of the OPLAN or OPORD and the issuing headquarters at the top of the second and any subsequent pages of the base plan or order.

(2) (U) Weather. *Describe the aspects of weather that impact operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *Identify enemy forces and appraise their general capabilities. Describe the enemy's composition, disposition, location, strength, and probable courses of action. Identify enemy informational considerations as required. Identify any adversaries within the assigned area. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Briefly identify the mission of friendly forces in the following subparagraphs:*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the critical aspects of the civil situation, to include informational considerations, that impact operations. Refer to Annex B (Intelligence) as required.*

g. (U) Assumptions. *List assumptions used in the development of the OPLAN or OPORD.*

2. (U) Mission. *State the unit's mission—a short description of who, what (task), when, where, and why (purpose) that clearly indicates the action to be taken and the reason for doing so.*

3. (U) Execution. *Describe how the commander intends to accomplish the mission in terms of the commander's intent, concept of operations, schemes of support, tasks to subordinate units, and coordinating instructions in the subparagraphs below.*

a. (U) Commander's Intent. *Describe what the force must do and conditions the force must establish with respect to the enemy, terrain, and civil considerations that represent the desired end state. The commander's intent normally includes:*

Purpose–an expanded description of the operation's purpose.

Key tasks–significant activities the force as a whole must perform to achieve the desired end state.

End state–a description of the desired future conditions that represent success.

b. (U) Concept of Operations. *Describe the sequence of actions the force will use to achieve the operation's end state. Use components of the operational framework (assigned areas, deep, close, and rear operations; and main effort, supporting effort, and reserve) as required. If the concept of operations is phased, describe each phase in a subparagraph. Label these subparagraphs as "Phase" followed by the appropriate Roman numeral, for example, "Phase I." All paragraphs and subparagraphs of the base order and all attachments must mirror the phasing established in the concept of operations. Refer to Appendix 2 (Operations Overlay) to Annex C (Operations) and other attachments to Annex C (Operations) as required.*

[page number]

[CLASSIFICATION]

Figure D-2. Operation plan or operation order format (continued)

[CLASSIFICATION]

OPLAN or OPORD [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Scheme of Maneuver. *Describe the employment of maneuver units in accordance with the concept of operations. Identify the primary tasks of maneuver units (for example, movement to contact, feint, screen, area defense) and the purpose of each. Identify and include priorities for the reserve. Refer to Annex C (Operations) as required.*

(2) (U) Scheme of Intelligence. *Describe how the commander envisions intelligence supporting the concept of operations. Include the priority of effort for situation development, targeting, and assessment. State the priority of intelligence support to units and areas. Refer to Annex B (Intelligence) as required*.

(3) (U) Scheme of Information Collection. *Describe how the commander intends to use reconnaissance missions and surveillance tasks to support the concept of operations. Include the primary reconnaissance objectives. Refer to Annex L (Information Collection) as required.*

Note. For domestic operations, this paragraph is titled "Information Awareness and Assessment" and the contents of this paragraph comply with Executive Order 12333. (See ATP 2-91.7 for more information on information collection.)

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(4) (U) Scheme of Fires. *Describe how the commander intends to use fires to support the concept of operations. State the priorities for, allocation of, and restrictions on fires. Use subparagraphs for field artillery support, air support, electromagnetic attack, and offensive cyberspace operations, as required. Refer to Annex C (Operations) and Annex D (Fires) as required.*

(5) (U) Scheme of Protection. *Describe how the commander envisions protection supporting the concept of operations. Include the priorities of protection by unit and area, including survivability and local security measures. Address area security, including security for routes, bases, and critical infrastructure. Identify reaction forces and their priorities. Use subparagraphs for protection warfighting (for example, operational security; chemical, biological, radiological, or nuclear (CBRN) operations; explosive ordnance disposal support; personnel recovery; detention operations; antiterrorism measures; and police operations) as required. Refer to Annex E (Protection) as required.*

(6) (U) Scheme of Engineering. *State the overall scheme of engineering in support of the concept of operations. Describe key mobility, countermobility, survivability, general, and geospatial engineering tasks. Include priorities of support by unit or area. Refer to Annex G (Engineer) as required*.

(7) (U) Scheme of Air and Missile Defense. *Describe how the commander intends to use air and missile defense to support the concept of operations. State the priorities for, allocation of, and restrictions on air defense artillery (ADA) by phase. This must provide the flexibility necessary for subordinate commanders to determine how to develop their air defense plans while ensuring necessary procedural and positive controls. Include a general narrative for the entire operation that addresses ADA support tasks, allocation of assets, positioning guidance for ADA units, identification, and engagement authorities (by area, type of aerial threat, or phase of the operation) and rules of engagement (ROE). Refer to Annex C (Operations), Annex D (Fires), and Annex I (Air and Missile Defense) as required*.

c. (U) Tasks to Subordinate Units. *State the tasks assigned to each unit that reports directly to the headquarters issuing the order. Each task must include who (the subordinate unit assigned the task), what (the task itself), when, where, and why (purpose). Use a separate subparagraph for each unit. List units in task organization sequence. Place tasks that affect two or more units in paragraph 3k (Coordinating Instructions).*

[page number]

[CLASSIFICATION]

Figure D-2. Operation plan or operation order format (continued)

[CLASSIFICATION]

OPLAN or OPORD [number] [(code name)]—[issuing headquarters] [(classification of title)]

d. (U) Coordinating Instructions. *List only instructions and tasks applicable to two or more units not covered in unit standard operating procedures (SOPs).*

(1) (U) Operational timeline. *List time or condition when the OPORD becomes effective. List critical times. Refer to Appendix 3 (Decision Support Products) to Annex C (Operations) as required.*

(2) (U) Commander's Critical Information Requirements. *List commander's critical information requirements (CCIRs). Include subparagraphs for priority intelligence requirements (PIRs) and friendly force information requirements (FFIRs).*

(3) (U) Essential Elements of Friendly Information. *List essential elements of friendly information (EEFIs).*

(4) (U) Fire Support Coordination Measures. *List critical fire support coordination or control measures.*

(5) (U) Airspace Coordinating Measures. *List critical airspace coordinating or control measures.*

(6) (U) Rules of Engagement. *List ROE. Refer to Appendix 11 (Rules of Engagement) to Annex C (Operations) as required.*

Note. For operations within the United States and its territories, title this paragraph "Rules for the Use of Force."

---

(7) (U) Risk Reduction Control Measures. *State measures specific to this operation not included in unit standard operating procedures. They may include mission-oriented protective posture, emission control status, operational exposure guidance, and fratricide avoidance measures. Refer to Annex E (Protection) as required.*

(8) (U) Personnel Recovery Coordination Measures. *Personnel recovery measures specific to this operation. Examples of measures that are often included in this paragraph include isolated Soldier guidance, assigned area-specific legal and rules of engagement considerations as they relate to recovery, Code of Conduct guidance and training requirements, and extracts from the air tasking order special instructions. Refer to Appendix 16 (Personnel Recovery) to Annex C (Operations).*

(9) (U) Themes and messages. *Identify themes and messages to emphasize and those to avoid. Refer to Appendix 13 (Military Information Support Operations) to Annex C (Operations) and Annex J (Public Affairs).*

(10) (U) Other Coordinating Instructions. *List in subparagraphs any additional coordinating instructions and tasks that apply to two or more unit as required.*

4. (U) Sustainment. *Describe the scheme of sustainment, including priorities of sustainment by unit or area, significant sustainment issues that might impact the overall mission, sustainment risks, unique support requirements. Include instructions for non-tactical movements, deployments, and transportation—or references to applicable appendixes—if appropriate. As required, use the following subparagraphs to provide the scheme of support for logistics, personnel, health service support, and financial management. Provide detailed instructions for each sustainment subfunctions in appendices to Annex F (Sustainment).*

[page number]

[CLASSIFICATION]

Figure D-2. Operation plan or operation order format (continued)

[CLASSIFICATION]

a. (U) Logistics. *Provide information on classes of supply. Identify and list maps, water, special supplies, and excess and salvage materiel, as applicable. List logistic supply point locations and state logistics plan and procedures. Refer to Tab D (Supply) to Appendix 1 (Logistics) to Annex F (Sustainment) as required*.

b. (U) Personnel. *Provide personnel information. Outline plans for unit-strength maintenance; personnel management; morale development and maintenance; discipline, law, and order; headquarters management; force provider; religious support; and legal and finance support. Refer to Appendix 2 (Personnel Services Support) to Annex F (Sustainment) as required*.

c. (U) Health Service Support. *Provide health service support information. Identify availability, priorities, and instructions for medical treatment from the point of injury through hospitalization at Role 3 and Role 4. Describe the plan for collection and medical treatment of sick, injured, or wounded U.S., multinational, and joint force Soldiers, enemy prisoners of war, detainees, and, when authorized, civilians. Describe medical evacuation to include medical regulating and the provision of enroute care to patients being transported. Describe support requirements for medical logistics (including blood management), medical device maintenance and services necessary to sustain operations. Refer to Appendix 3 (Health Service Support) to Annex F (Sustainment) as required*.

d. (U) Financial Management. *As required, refer to Annex F (Sustainment). Provide financial management support information. Identify financial management support funding responsibilities, command responsibilities, and functional alignments for providing financial management support. Ensure sufficient detail to ensure that provisions are made to support all mission essential tasks. Outline special program funding and procedures unique to the operations (for example, Commander's Emergency Response Program, Department of Defense [DOD] Small Rewards Program, and Train and Equip programs). Refer to Tab B (Financial Management) to Appendix 2 (Personnel Services Support) to Annex F (Sustainment) as required*.

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of Commander and Key Leaders. *State where the commander and key leaders intend to be during the operation, by phase if the operation is phased*.

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's SOPs.*

b. (U) Command Posts. *Describe the employment of command posts, including the location of each command post and time when it is operational and non-operational, as appropriate. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault")*.

c. (U) Signal. *Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communication plan. Refer to Annex H (Signal) as required*.

ACKNOWLEDGE: *Provide instructions for how the addressees acknowledge receipt of the OPLAN or OPORD. The word "acknowledge" may suffice. Refer to the message reference number if necessary. Acknowledgement of an OPLAN or OPORD means that it has been received and understood*.

[Commander's last name]

[Commander's rank]

[page number]

[CLASSIFICATION]

Figure D-2. Operation plan or operation order format (continued)

[CLASSIFICATION]

The commander or authorized representative signs the original copy. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original order. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

OPLAN or OPORD [number] [(code name)]—[issuing headquarters] [(classification of title)]

ATTACHMENTS: List attachments by letter and title. When an attachment is not required, label it "Omitted."

Annex A–Task Organization

Annex B–Intelligence

Annex C–Operations

Annex D–Fires

Annex E–Protection

Annex F–Sustainment

Annex G–Engineer

Annex H–Signal

Annex I–Air and Missile Defense

Annex J–Public Affairs

Annex K–Civil Affairs Operations

Annex L–Information Collection

Annex M–Assessment

Annex N–Space Operations

Annex O–Spare

Annex P–Host-Nation Support

Annex Q–Knowledge Management

Annex R–Reports

Annex S–Special Technical Operations

Annex T–Spare

Annex U–Inspector General

Annex V–Interagency Coordination

Annex W–Operational Contract Support

Annex X–Spare

Annex Y–Spare

Annex Z–Distribution

DISTRIBUTION: *Furnish distribution copies either for action or for information. List in detail those who are to receive the plan or order. Refer to Annex Z (Distribution) if lengthy*.

[page number]

[CLASSIFICATION]

Figure D-2. Operation plan or operation order format (continued)

D-51. Table D-2 (on pages 211 through 215) lists the attachments (annexes, appendixes, tabs, and exhibits) to the base OPLAN or OPORD and identifies the staff officers responsible for developing each attachment. If a unit does not have a staff officer listed, the unit SOP should designate an alternate.

Table D-2. List of attachments and responsible staff officers

ANNEX A–TASK ORGANIZATION (assistant chief of staff, plans [G-5] or chief of staff, operations [G-3] or battalion or brigade operations staff officer [S-3])
ANNEX B–INTELLIGENCE (assistant chief of staff, intelligence [G-2] or battalion or brigade intelligence staff officer [S-2])
Appendix 1–Intelligence Estimate Tab A–Terrain Tab B–Weather Tab C–Civil Considerations Tab D–Intelligence Preparation of the Operational Environment Products Appendix 2–Counterintelligence Appendix 3–Signals Intelligence Appendix 4–Human Intelligence Appendix 5–Geospatial Intelligence Appendix 6–Measurement and Signature Intelligence Appendix 7–Open-Source Intelligence
ANNEX C–OPERATIONS (G-5 or assistant chief of staff, operations [G-3] or S-3)
Appendix 1–Army Design Methodology Products Appendix 2–Operation Overlay Appendix 3–Decision Support Products Tab A–Execution Matrix Tab B–Decision Support Template and Matrix Tab C-Execution Checklist Appendix 4–Gap Crossing Operations Tab A–Traffic Control Overlay Appendix 5–Air Assault Operations Tab A–Pickup Zone Diagram Tab B–Air Movement Table Tab C–Landing Zone Diagram Appendix 6–Airborne Operations Tab A–Marshalling Plan Tab B–Air Movement Plan Tab C–Drop Zone or Extraction Zone Diagram Appendix 7–Amphibious Operations Tab A–Advance Force Operations Tab B–Embarkation Plan Tab C–Landing Plan Tab D–Rehearsal Plan Appendix 8–Special Operations Appendix 9–Battlefield Obscuration Appendix 10–Airspace Tab A–Air Traffic Services Appendix 11–Rules of Engagement Tab A–No Strike List Tab B–Restricted Target List Appendix 12–Cyberspace Electromagnetic Activities Tab A–Offensive Cyberspace Operations Tab B–Defensive Cyberspace Operations

Table D-2. List of attachments and responsible staff officers (continued)

Tab C–Electromagnetic Attack
Tab D–Electromagnetic Protection
Tab E – Electromagnetic Support
Appendix 13–Military Information Support Operations
Appendix 14–Military Deception
Appendix 15–Soldier and Leader Engagement
Appendix 16–Personnel Recovery
ANNEX D–FIRES (chief of fires, deputy fire support coordinator, or fire support officer)
Appendix 1–Fire Support Overlay
Appendix 2–Fire Support Execution Matrix
Appendix 3–Targeting
Tab A–Target Selection Standards
Tab B–Target Synchronization Matrix
Tab C–Attack Guidance Matrix
Tab D–Target List Worksheet
Tab E–Battle Damage Assessment
Appendix 4–Field Artillery Support
Appendix 5–Air Support
Appendix 6–Naval Surface Fire Support
ANNEX E–PROTECTION (chief of protection or protection officer as designated by the commander)
Appendix 1–Area Security
Appendix 2–Risk Management
Appendix 3–Operations Security
Appendix 4–Populace and Resource Control
Appendix 5–Physical Security
Appendix 6–Antiterrorism
Appendix 7–Police Operations
Appendix 8–Survivability
Appendix 9–Force Health Protection
Appendix 10–Chemical, Biological, Radiological, and Nuclear Operations
Appendix 11–Explosive Ordnance Disposal
Appendix 12–Detention Operations
Appendix 13–Cyberspace Security and Defense

Table D-2. List of attachments and responsible staff officers (continued)

ANNEX F–SUSTAINMENT (assistant chief of staff, logistics [G-4] or battalion or brigade logistics staff officer [S-4])
Appendix 1–Logistics
Tab A–Sustainment Overlay
Tab B–Maintenance
Tab C–Transportation
Exhibit 1–Traffic Circulation and Control
Exhibit 2–Traffic Circulation Overlay
Exhibit 3–Road Movement Table
Exhibit 4–Highway Regulation
Tab D–Supply
Tab E–Field Services
Tab F–Distribution
Tab G–Contract Support Integration
Tab H–Mortuary Affairs
Appendix 2–Personnel Services Support
Appendix 2–Personnel Services Support
Tab A–Human Resources Support
Tab B–Financial Management
Tab C–Legal Support
Tab D–Religious Support
Tab E–Band Operations
Appendix 3–Health Service Support
Appendix 4—Financial Management
ANNEX G–ENGINEER (engineer officer)
Appendix 1–Mobility and Countermobility
Tab A–Obstacle Overlay
Appendix 2–Survivability
Appendix 3–General Engineering
Appendix 4–Geospatial Engineering
Appendix 5–Environmental Considerations
Tab A–Environmental Assessments
Tab B–Environmental Assessment Exemptions
Tab C–Environmental Baseline Survey

Table D-2. List of attachments and responsible staff officers (continued)

ANNEX H–SIGNAL (assistant chief of staff, signal [G-6] or battalion or brigade signal staff officer [S-6])
Appendix 1– Scheme of Signal Support Overlay
Tab A–Retransmission Team Mission Checklist
Appendix 2–Department of Defense Information Network Operations
Tab A–Cyberspace Security Incident Battle Drill
Tab B–Cyberspace Security Incident Report
Tab C–Network Node Allocation and Organization
Tab D–Network Outage Procedures and Report
Tab E–Scheme of Network Monitoring
Appendix 3–Network Transport and Information Services
Tab A–Line of Sight Analysis
Tab B–High Frequency Radio Network Diagram
Tab C–Voice, Video, Data Logical Network Diagrams
Tab D–Voice over Internet Protocol Phonebook
Tab E–Upper Tier Satellite Transmission Diagram
Tab F–Coalition Forces Network Diagram and Foreign Disclosure Guidance
Tab G–Satellite Access Authorizations and Gateway Access Authorizations
Tab H–Retransmission Network Diagram
Tab I–Command and Control Information Systems Allocation and Interconnections (Battle Command Common Server and Tactical Server Infrastructure Configurations)
Tab J–Tactical Satellite Network Diagram
Tab K–Digital Fires Diagram
Appendix 4–Spectrum Management Operations
Tab A–Signal Operating Instructions and Frequency Allocation (Commo Card; Tactical Radios)
Tab B–Signal Operating Instructions (Lightweight Directory Access Protocol Data Interchange Format)
Tab C–Joint Restricted Frequency List
Tab D–Joint Spectrum Interference Resolution Report Format and Procedures
Tab E–Guard List
Appendix 5–Communications Security
Tab A–Communications Security Callout Message
Tab B–Known Supersession Dates
Tab C–Communications Security Compromise Procedures
ANNEX I– AIR AND MISSILE DEFENSE (air and missile defense [AMD] officer)
Appendix 1– AMD Execution Matrix
Appendix 2– Enemy Force Arrayal
Appendix 3– Friendly Force Arrayal
Appendix 4– Support Relationships
Appendix 5– Airspace Management Measures
Appendix 6—Sensor Plan
Appendix 7– AMD Communications Architecture

Table D-2. List of attachments and responsible staff officers (continued)

ANNEX J–PUBLIC AFFAIRS (public affairs officer)
Appendix 1–Public Affairs Guidance
ANNEX K–CIVIL AFFAIRS OPERATIONS (assistant chief of staff, civil affairs operations [G-9] or battalion or brigade civil affairs operations staff officer [S-9])
Appendix 1–Execution Matrix Appendix 2–Populace and Resources Control Plan Appendix 3–Civil Information Management Plan
ANNEX L–INFORMATION COLLECTION (G-3 or S-3)
Appendix 1–Information Collection Plan Appendix 2–Information Collection Overlay
ANNEX M–ASSESSMENT (G-5 or G-3 or S-3)
ANNEX N–SPACE OPERATIONS (space officer)
ANNEX O–SPARE
ANNEX P–HOST-NATION SUPPORT (G-4 or S-4)
ANNEX Q–KNOWLEDGE MANAGEMENT (knowledge management officer)
Appendix 1–Knowledge Management Decision Support Matrix Appendix 2–Common Operational Picture Configuration Matrix Appendix 3–Command and Control Network Integration Matrix Appendix 4–Content Management Appendix 5–Battle Rhythm
ANNEX R–REPORTS (G-3 or S-3, G-5, and knowledge management officer)
ANNEX S–SPECIAL TECHNICAL OPERATIONS (special technical operations officer)
ANNEX T–SPARE
ANNEX U–INSPECTOR GENERAL (inspector general)
ANNEX V– INTERORGANIZATION-INTERAGENCY COORDINATION (G-3 or S-3 and G-9 or S-9)
ANNEX W–OPERATIONAL CONTRACT SUPPORT (G-4 or S-4)
ANNEX X–SPARE
ANNEX Y–SPARE
ANNEX Z–DISTRIBUTION (G-3 or S-3) and (knowledge management officer)

D-52. The example in figure D-3 on pages 216 and 2-17 provides the format and instructions for developing an attachment to an OPORD or OPLAN: an annex, appendix, tab, or exhibit. The reference to functional area in this attachment format refers to the subject of this attachment [a warfighting function (sustainment), a subfunction (logistics), and operations (air assault operations), or activity (traffic circulation and control)].

[CLASSIFICATION]

(Change from verbal orders, if any)

Copy ## of ## copies

Issuing headquarters

Place of issue

Date-time group of signature

Message reference number

Include heading if attachment is distributed separately from the base order or higher-level attachment.

[Attachment type and number or letter] [(attachment title)] TO [higher-level attachment type and number or letter, if applicable] [(higher-level attachment title, if applicable)] TO OPERATION PLAN or ORDER [number] [(code name)] [(classification of title)]

Example: **EXHIBIT 1 (TRAFFIC CIRCULATION AND CONTROL) TO TAB C (TRANSPORTATION) TO APPENDIX 1 (LOGISTICS) TO ANNEX F (SUSTAINMENT) TO OPORD 3411 (OPERATION DESERT DRAGON) (UNCLASSIFIED)**

References: *Refer to higher headquarters' operation plan (OPLAN) or operation order (OPORD) and identify map sheets for operation (optional). If applicable, list references concerning only the attachment (optional).*

Time Zone Used Throughout the Order:

1. (U) Situation. *Include information affecting the functional area that paragraph 1 of the OPLAN, Intelligence Estimate, or OPORD does not cover or that needs expansion*.

a. (U) Area of Interest. *Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe aspects of terrain that impact the functional area. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe aspects of weather that impact the functional area. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy functional area units for one echelon up and two echelons down. List enemy maneuver and other area capabilities that will impact friendly operations. State expected enemy courses of action and employment of enemy functional area assets. Refer to Annex B (Intelligence) as required*.

d. (U) Friendly Forces. *Outline the higher headquarters' plan as it pertains to the functional area. List designation, location, and outline of plan of higher, adjacent, and other functional area assets that support or impact the issuing headquarters or require coordination and additional support*.

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact the conduct of functional area operations or implementation of functional area-specific equipment and tactics*.

f. (U) Civil Considerations. *Describe critical aspects of the civil situation that impact the functional area. Refer to Annex K (Civil Affairs Operations) as required*.

g. (U) Assumptions. *List any functional area-specific assumptions that support the development of this attachment.*

[page number]

[CLASSIFICATION

Figure D-3. Operation order or operation plan attachment format

[CLASSIFICATION]
[Attachment type and number/letter] [(attachment title)] TO [higher-level attachment type and number or letter, if applicable] [(higher-level attachment title, if applicable)] TO OPERATION PLAN or ORDER [number] [(code name)] [(classification of title)]
2. (U) Mission. State the mission of the functional area in support of the base plan or order.
3. (U) Execution.
a. (U) Scheme of Support. *Describe how the functional area supports the commander's intent and concept of operations. Establish the priorities of support to units for each phase of the operation. Refer to Annex C (Operations) as required.*
b. (U) Tasks to Subordinate Units. *List functional area tasks assigned to specific subordinate units not contained in the base order*.
c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base order*.
4. (U) Sustainment. *Identify priorities of sustainment for functional area key tasks and specify additional instructions as required. Refer to Annex F (Sustainment) as required*.
5. (U) Command and Signal.
a. (U) Command. *State the location of commander and key leaders.*
b. (U) Control. *State the functional area liaison requirements not covered in the base order.*
c. (U) Signal. *Address any functional area-specific communications requirements or reports. Refer to Annex H (Signal) as required*.
ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order*.
[Commander's last name]
[Commander's rank]
OFFICIAL:
[Authenticator's name]
[Authenticator's position]
Either the commander or principal staff officer responsible for the functional area will sign attachments.
ATTACHMENT: *List lower-level attachments as required.*
DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*
[page number]
[CLASSIFICATION]

Figure D-3. Operation order or operation plan attachment format (continued)

D-53. The example in figure D-4 on page 218 provides the format and instructions for developing a WARNORD. The example in figure D-5 on page 219 provides the format and instructions for developing a FRAGORD.

[CLASSIFICATION]

(Change from verbal orders, if any) (Optional)

Copy ## of ## copies
Issuing headquarters
Place of issue
Date-time group of signature

WARNING ORDER [number] Example: WARNING ORDER #3

(U) References: *Refer to higher headquarters' operation plan (OPLAN) or operation order (OPORD) and identify map sheets for operation (optional).*

(U) Time Zone Used Throughout the OPLAN or OPORD: (*optional*).

(U) Task Organization: (*Provide initial task organization to include attachments and detachments.*)

1. (U) Situation. *The situation paragraph describes the conditions and circumstances of the operational environment that impact operations in the following subparagraphs*:

a. (U) Area of Interest.

b. (U) Assigned Area.

c. (U) Enemy Forces.

d. (U) Friendly Forces.

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations.

f. (U) Civil Considerations.

g. (U) Assumptions.

2. (U) Mission. *State the issuing headquarters' mission.*

3. (U) Execution.

a. (U) Initial Commander's Intent. *Provide brief commander's intent statement.*

b. (U) Concept of Operations. *This may be "to be determined" for an initial warning order (WARNORD).*

c. (U) Tasks to Subordinate Units. *Include any known tasks at time of issuance of WARNORD.*

d. (U) Coordinating Instructions.

4. (U) Sustainment. *Include any known logistic, personnel, finance, or health service support preparation tasks.*

5. (U) Command and Signal. *Include any changes to the existing order or state "No change."*

ACKNOWLEDGE:

[Commander's last name]
[Commander's rank]

OFFICIAL:

[Authenticator's name]
[Authenticator's position]

ANNEXES: List annexes by letter and title.

DISTRIBUTION: List recipients.

[page number]

[CLASSIFICATION]

Figure D-4. Warning order format

[CLASSIFICATION]
(Change from verbal orders, if any) (Optional)

Copy ## of ## copies
Issuing headquarters
Place of issue
Date-time group of signature
Message reference number

FRAGMENTARY ORDER [number] to OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

Example**: FRAGORD #1 TO OPORD 3411 (OPERATION DESERT DRAGON) (UNCLASSIFIED)**

(U) References: *Refer to the higher order being modified. Specify the fragmentary order (FRAGORD) number to the higher order as necessary.*

(U) Time Zone Used Throughout the OPLAN or OPORD: (optional)

1. (U) Situation. *Include any changes to this paragraph or state "No change."*

2. (U) Mission. *Include any changes to this paragraph or state "No change."*

3. (U) Execution. *Include any changes to this paragraph or state "No change."*

a. (U) Commander's Intent. *Include any changes or state "No change."*

b. (U) Concept of Operations. *Include any changes or state "No change."*

1. (U) Scheme of Maneuver. Include any changes or state "No change."
2. (U) Scheme of Intelligence. *Include any changes or state "No change."*
3. (U) Scheme of Information Collection. *Include any changes or state "No change."*
4. (U) Scheme of Fires. *Include any changes or state "No change."*
5. (U) Scheme of Protection. *Include any changes or state "No change."*
6. (U) Scheme of Engineering. *Include any changes or state "No change."*
7. (U) Scheme of Air and Missile Defense. *Include any changes or state "No change."*

c. (U) Tasks to Subordinate Units. *Include any changes or state "No change."*

d. (U) Coordinating Instructions. *Include any changes or state "No change."*

4. (U) Sustainment. *Include any changes to this paragraph or state "No change."*

5. (U) Command and Signal. *Include any changes to this paragraph or state "No change."*

ACKNOWLEDGE:

[Commander's last name]
[Commander's rank]

OFFICIAL:

[Authenticator's name]
[Authenticator's position]

ANNEXES*: List annexes by letter and title.*

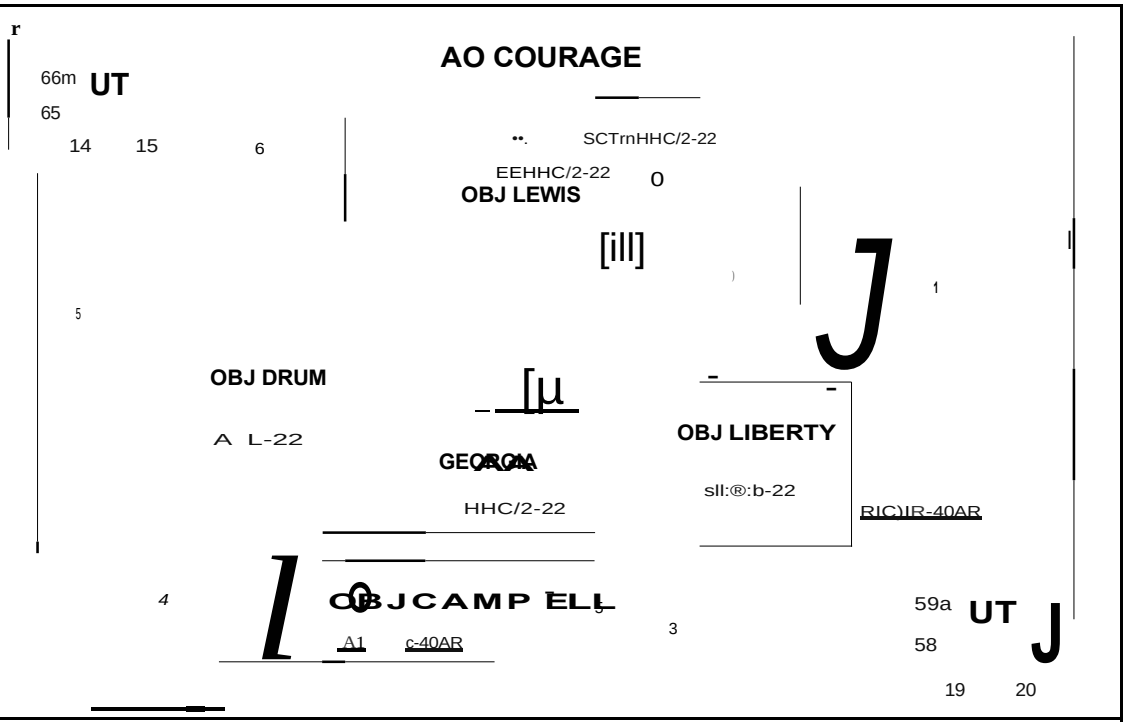
DISTRIBUTION:

[page number]
[CLASSIFICATION]

Figure D-5. Fragmentary order format

D-54. If, on occasion, a FRAGORD has an annex as an attachment, order writers use the naming convention for that attachment, for example "ANNEX A (TASK ORGANIZATION) to FRAGMENTARY ORDER #1 to OPERATION ORDER 3411 (Operation Desert Dragon) (Unclassified)."

D-55. In time-constrained environments or during fast-paced operations, commanders and staffs typically must rapidly plan an operation and issue an order. A technique commonly used in these instances at brigade and lower echelons is to issue an overlay order with verbal instructions. (See figure D-6 on page 221 for an example of an overlay order.)



TASK ORGANIZATION

TFCONTROL	Af2-22 **IN**	B/2-22 **IN**	Af8-40AR	B/8-40 AR
Sniper Sqd/HHC/2-22	1/Af2-22 IN 2/Af2-22 IN 3/Af8-40 AR	1/B/2-22 IN 2/B/2-22 IN 3/B/8-40 AR	1/Af8-40AR 2/Af8-40 AR 3/Af2-22 **IN**	1/B/8-40 AR 2/B/8-40 AR 3/B/2-22 **IN**
HHC				HN Civil Authorities (DIRLAUTH)
Scout PLT/2-22 **IN**	Mortars/HHC/2-22	Medical/HHC/2-22		None

MISSION: TF 2-22 conducts a cordon and search in AO COURAGE NLT 1209D0ZJAN13 to limit the attacks on coalition forces.

COMMANDER'S INTENT: Simultaneous occupation of outer cordon checkpoints to isolate search objectives and prevent ACF exfiltration or infiltration. Lead with information dissemination of themes and messages. Exercise patience, discipline, and respect for host-nation population and property while conducting thorough searches. Immediate evacuation of ACF personnel to BCT Detainee Collection Point for processing and evacuation. End state is OBJs LEWIS, DRUM, LIBERTY and CAMPBELL free of ACF and companies postured for future operations.

EXECUTION - TASKS TO SUBORDINATE UNITS:

Af2-22 IN (ME)	Secure OBJ DRUM (inner cordon) and conduct search to capture ACF and seize weapons caches in order to limit the attacks on coalition forces.
B/2-22 IN (SE)	Secure OBJ LIBERTY (inner cordon) and conduct search to capture ACF and seize weapons caches in order to limit the attacks on coalition forces.
Af8-40 AR (SE)	1. Secure OBJ CAMPBELL (inner cordon) and conduct search to capture ACF and seize weapons caches in order to limit the attacks on coalition forces.
B/8-40 AR (SE)	1. Secure the outer cordon at checkpoints 1-6. 2. Secure AA KANSAS, for Host-Nation Civil Authority occupation.
HHC (-)/2-22	1. Secure TF tactical command post and TF Forward Aid Station in OBJ LEWIS.
Sniper/HHC/2-22	1. Occupy AA GEORGIA and provide observation and surveillance of OBJs DRUM, LIBERTY, and CAMBELL. 2. 0/0 deliver precision fires to destroy ACF.

Acknowledge: Af2-22 IN, B/2-22 IN, *NB-40* AR, B/8-40AR, HHC/2-22, Sniper/2-22 IN

AA assembly area
ACF anti-coalition forces
AO area of operations
AR armor
BCT brigade combat team
CP command post
DIRLAUTH direct liaison authorized
HHC headquarters and headquarter company
HN host-nation
OBJ objective
010 on order
PLT platoon
TF taskforce

Figure D-6. Example of overlay order

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Appendix E

Annex Formats

This appendix provides commanders and staffs guidance and formats to build annexes for plans and orders. This appendix lists 26 annexes and provides formats for 22 annexes. There are four annexes designated as spares: annexes O, T, X, and Y. Commanders and staffs use these annexes as required.

ANNEX A (TASK ORGANIZATION) FORMAT AND INSTRUCTIONS

E-1. This annex discusses the fundamentals of task organization and provides the format and instructions for developing Annex A (Task Organization) to the base plan or order. This annex does not follow the five-paragraph attachment format. Unit standard operating procedures (SOPs) will dictate development and format for this annex.

FUNDAMENTAL CONSIDERATIONS

E-2. Characteristics to examine when task-organizing the force include, but are not limited to, training, experience, equipment, sustainability, the operational environment (OE), (including the threat), and mobility. For Army forces, it includes allocating available assets to subordinate commanders and establishing their command and support relationships. Command and support relationships provide the basis for unity of command in operations. The assistant chief of staff, plans (G-5) or assistant chief of staff, operations (G-3), or battalion or brigade operations staff officer (S-3) develops Annex A (Task Organization).

Note. Army command relationships are similar but not identical to joint command authorities and relationships. Differences stem from the way Army forces are organically organized, task organized internally, and the need for a system of support relationships between Army forces. Another important difference is the requirement for Army commanders to handle administrative control requirements.

E-3. Military units consist of organic components. Organic parts of a unit are those forming an essential part of the unit, and they are listed in its table of organization and equipment. With the appropriate authorities, commanders can alter organizations' organic unit relationships to better allocate assets to subordinate commanders.

E-4. The Army can assign units to remain subordinate to a higher echelon headquarters for extended periods, typically years. Assignment is based on the needs of the Army, and it is formalized by orders rather than organizational documents. Although force tailoring or task-organizing may temporarily detach units, they eventually return to either their headquarters of assignment or their organic headquarters. Attached units are temporarily subordinated to the gaining headquarters, and the period of attachment may be lengthy, often months or longer.

E-5. Attached units return to their parent headquarters (assigned or organic) when the reason for the attachment ends. The Army headquarters that receives another Army unit through assignment or attachment assumes responsibility for the administrative control (ADCON) requirements, particularly sustainment, that normally extend down to that echelon, unless modified by directives or orders.

E-6. Commanders can also establish temporary command and support relationships to facilitate exercising command and control. Establishing clear command and support relationships is fundamental to organizing any operation. These relationships establish clear responsibilities and authorities between subordinate and supporting units. Some command and support relationships (for example, tactical control [TACON]) limit the commander's authority to prescribe additional relationships. Knowing the inherent responsibilities of each command and support relationship allows commanders to effectively organize their forces and helps supporting commanders understand their unit's role in the organization.

E-7. Commanders designate command and support relationships to weight the main effort and support the concept of operations. Task organization also helps subordinate and supporting commanders support the commander's intent. These relationships carry with them varying responsibilities to the subordinate unit by the parent and gaining units. Commanders consider two organizational principles when task-organizing forces:

- Maintain cohesive mission teams.
- Do not exceed subordinates span of control capabilities.

E-8. When possible, commanders maintain cohesive mission teams. They organize forces based on standing headquarters, their assigned forces, and habitual associations, when possible. When this is not feasible, and commanders create ad hoc organizations, commanders arrange time for training and establishing functional working relationships and procedures. Once commanders have organized and committed a force, they maintain its task organization unless the benefits of a change clearly outweigh the disadvantages. Reorganizations may result in a loss of time, effort, and tempo. Sustainment considerations may also preclude quick reorganization.

E-9. Commanders carefully avoid exceeding the span of control capabilities of subordinates. Span of control refers to the number of subordinate units under a single commander. This number depends on the situation and may vary. As a rule, commanders can effectively command two to six maneuver units. Allocating subordinate commanders more units gives them greater flexibility and increases options and combinations. However, increasing the number of subordinate units increases the number of decisions commanders have to make. This slows down the reaction time among decision makers.

E-10. Running estimates and course of action (COA) analysis of the military decision-making process (MDMP) provide information that helps commanders determine the best task organization. An effective task organization—

- Facilitates the commander's intent and concept of operations.
- Retains flexibility within the concept of operations.
- Adapts to conditions imposed by mission variables.
- Accounts for the requirements to conduct essential stability tasks for populations within an assigned area.
- Creates effective combined arms teams.
- Provides mutual support among units.
- Ensures flexibility to meet unforeseen events and to support future operations.
- Allocates resources with minimum restrictions on their employment.
- Promotes unity of command.
- Offsets limitations and maximizes the potential of all forces available.
- Exploits enemy vulnerabilities.

Creating an appropriate task organization requires understanding several things. These include—

- The mission, including the higher echelon commander's intent and concept of operations.
- The fundamentals of offense, defense, and stability operations, and defense support of civil authorities' tasks (see ADP 3-0 for more information on these fundamentals) and basic tactical concepts (see ADP 3-90 for more information on tactical concepts).
- The roles and relationships among the warfighting functions.
- The status of available forces, including morale, training, and equipment capabilities.
- Specific unit capabilities, limitations, strengths, and weaknesses.
- The risks inherent in the plan.

E-11. During COA analysis, commanders identify what resources they need, and where, when, and how frequently they will need them. Formal task organization and the change from generic to specific units begin after COA analysis when commanders assign tasks to subordinate commanders. Staffs assign tasks to subordinate headquarters, determine if subordinate headquarters have enough combat power, and re-allocate combat power as necessary. They then refine command and support relationships for subordinate units and decide the priorities of support. Commanders approve or modify their staffs' recommended task organization based on their evaluation of the factors listed in paragraphs E-8 through E-10 and information from running

estimates and COA analysis as part of the military decision-making process. In allocating assets, commanders and staffs consider—

- The task organization for the ongoing operation.
- Potentially adverse effects of breaking up cohesive teams by changing the task organization.
- Time necessary to re-align the organization after receipt of the task organization.
- Limits on control over supporting units provided by higher headquarters.

FORMAT AND INSTRUCTIONS

E-12. Annex A (Task Organization) of the operation plane (OPLAN) and operation order (OPORD) is one of the annexes that does not follow the standard five-paragraph attachment format. (Refer to appendix C for more information on OPLAN and OPORD attachments and formats.) Task organization is typically displayed in a list or an outline format following the unit listing convention shown in table E-1. (See table E-1 on pages 226 through 227 for unit listing conventions.)

Table E-1. Army unit listing convention

	Corps	*Division*	*Brigade*	*Battalion*	*Company*
Movement and Maneuver	Divisions Separate maneuver brigades or battalions Combat aviation brigades or battalions Special operations forces -Ranger -Special Forces Civil affairs PSYOP SFAB	Brigade-sized ground units in alpha-numerical order - Infantry - Armor - Stryker Battalion TF - Named TFs in alphabetical order - Numbered TFs in numerical order Combat aviation brigade Civil affairs PSYOP Special operations forces - Ranger - Special Forces SFAB	Battalion TFs Battalions or squadrons - Combined arms - Infantry - Reconnaissance Company teams Companies Air cavalry squadrons Attack battalion Civil affairs PSYOP	- Named teams in alphabetical order - Letter designated teams in alphabetical order Companies or troops (in alphabetical order) -Infantry -Armor -Stryker Civil affairs PSYOP	Platoons -Organic platoons -Attached platoons -Weapons squads
Fires	Field artillery brigade USAF air support operations group Air defense	Field artillery brigade (DIVARTY) USAF air support operations squadron Air defense	Fires artillery battalion USAF tactical air control party Air defense	Field artillery batteries Fire support team Mortar platoon USAF joint terminal attack controller Air defense	Field artillery firing platoons Fire support team Mortar section Air defense
Intelligence	Expeditionary military intelligence brigade -Analysis -Processing, exploitation, and dissemination -SIGINT collection	Expeditionary military intelligence brigade -Analysis -Processing, exploitation, and dissemination -SIGINT collection	CI teams Ground sensor teams Human terrain team HUMINT teams Scout platoon TUAS platoon	CI teams Ground sensor teams HUMINT teams Scout platoon TUAS platoon	CI teams Ground sensor teams HUMINT teams Scout platoon TUAS platoon
Protection	MEB Functional brigades -Air defense -CBRN -Engineer -EOD -Military police -Global Medical Field laboratory -Medical Detachment Veterinary Service School	MEB Functional brigades -Air defense -CBRN -Engineer -EOD -Military police	Functional battalions or companies or batteries and detachments -Air defense -CBRN -Engineer -EOD -Military police	Functional companies or batteries and detachments -Air defense -CBRN -Engineer -EOD -Military police	Functional platoons and detachments -Air defense -CBRN -Engineer -EOD -Military police

Table E-1. Army unit listing convention (continued)

	Corps	*Division*	*Brigade*	*Battalion*	*Company*
Sustainment	Expeditionary Sustainment Command Sustainment brigade (attached functional units are listed in alpha-numerical order) -Contracting -Finance -Ordnance -Personnel services -Transportation -Quartermaster Medical brigade (support)	Sustainment brigade (attached functional units are listed in alpha-numerical order) -Contracting -Finance -Ordnance -Personnel services -Transportation -Quartermaster Medical brigade (support	Brigade support battalion (attached or supporting functional units are listed first by branch in alphabetical order and then in numerical order)	Forward support company (attached or supporting functional units are listed first by branch in alphabetical order and then in numerical order)	Attached or supporting functional platoons and teams listed in alpha-numerical order
Command and Control	Signal brigade DLD Public Affairs PRT Space TAOG OGA, such as an FBI forensics team (listed in alphabetical order with reference to any applicable nonstandard command and support relationship)	Signal battalion Public affairs PRT Space TAOG OGA (listed in alphabetical order with reference to any applicable nonstandard command and support relationship)	Signal company Public affairs PRT AOB OGA (listed in alphabetical order with reference to any applicable nonstandard command and support relationship)	Signal detachment Public affairs PRT OGA (listed in alphabetical order with reference to any applicable nonstandard command and support relationship	

AOB	airfield operations battalion	OGA	other governmental agencies
CBRN	chemical, biological, radiological, or nuclear	PRT	provincial reconstruction team
CI	counterintelligence	PSYOP	psychological operations (forces)
DIVARTY	division artillery	SFAB	security force assistance brigade
DLD	digital liaison detachment	SIGINT	signals intelligence
EOD	explosive ordnance disposal	TAOG	theater airfield operations group
FBI	Federal Bureau of Investigations	TF	task force
HUMINT	human intelligence	TUAS	tactical unmanned aerial system
MEB	maneuver enhancement brigade	USAF	United States Air Force

E-13. Order writers group units by headquarters. They list major subordinate maneuver units first (for example, 2d Armored Brigade Combat Team (ABCT); 1-77th Infantry (IN); A/4-52d Cavalry (CAV). Order writers place them by size in numerical order. They list brigade combat teams (BCTs) ahead of combat aviation brigades. In cases where two BCTs are numbered the same, order writers use the division number (by type). For example, 1st ABCT 1st IN Division (Mechanized) is listed before the 1st ABCT 1st Armored Division (AD). In turn, the 1st ABCT 1st AD is listed before the 1st ABCT 1st CAV Division. Combined arms battalions are listed before battalions, and company teams before companies. Order writers follow maneuver units with multifunctional supporting units in this order: fires, battlefield surveillance, maneuver enhancement, and sustainment. Supporting units (in alpha-numeric order) follow multifunctional supporting units. For example, a medical brigade (support) is listed after a functional engineer brigade but before a functional military police brigade. The last listing should be any special troops units under the command of the force headquarters.

E-14. Order writers use a plus (+) symbol when attaching one or more subordinate elements of a similar function to a headquarters. They use a minus symbol (-) when deleting one or more subordinate elements of a similar function to a headquarters. Order writers always show the symbols in parenthesis. They do not use

a plus symbol when the receiving headquarters is a combined arms task force or company team. Order writers do not use plus and minus symbols together (as when a headquarters detaches one element and receives attachment of another); they use the symbol that portrays the element's end strength with respect to other similar elements. Order writers do not use either symbol when two units swap subordinate elements, and their end strength is unchanged. Here are some examples:

- Within the 3-68th Combined Arms Battalion, C Company loses one platoon to A Company; the battalion task organization will show A Co. (+) and C Co. (-).
- Within the 3-68th Combined Arms Battalion, C Company swaps one platoon with A Company; the battalion task organization will show Team A and Team C. (The teams can also be named for their commanders, their unit nickname, or some other naming scheme.)
- 4-77th IN receives a tank company from 1-30th Armor (AR); the BCT task organization will show Task Force 4-77 IN and 1-30 AR (-).
- Division and corps headquarters are typically task organized. Therefore, order writers do not show these headquarters with either the plus (+) or minus (-) symbol.

E-15. If applicable, order writers list task organizations according to phases of the operation. When the effective attachment time of a nonorganic unit to another unit differs from the effective time of the plan or order, order writers add the effective attachment time in parentheses after the attached unit—for example, 1 80 IN (OPCON [operational control] to 2 ABCT Phase II). They list this information either in the task organization (preferred) or in paragraph 1c of the plan or order, but not both. For clarity, order writers list subsequent command or support relationships under the task organization in parentheses following the affected unit-for example, "...on order OPCON to 2 ABCT" is written (O/O OPCON 2 ABCT).

E-16. Long or complex task organizations are displayed in outline format in Annex A (Task Organization) of the OPLAN or OPORD in lieu of being placed in the base plan or order. Units are listed under the headquarters to which they are allocated or that they support in accordance with the organizational taxonomy previously provided in this chapter. The complete unit task organization for each major subordinate unit should be shown on the same page. Order writers only show command or support relationships if they are other than organic or attached. Other Services and multinational forces recognize and understand this format. Planners should use it during joint and multinational operations.

E-17. Order writers list subordinate units under the higher echelon headquarters to which they are assigned, attached, or in support. They place direct support (DS) units below the units they support. Order writers indent subordinate and supporting units two spaces. They identify relationships other than attached with parenthetical terms-for example, general support (GS) or DS.

E-18. Order writers provide the numerical designations of units as Arabic numerals unless they are shown as Roman numerals. For example, an Army corps is numbered in series beginning with Roman numeral "I"-for example, I Corps or XVIII Airborne Corps.

E-19. During multinational operations, order writers insert the country code between the numeric designation and the unit's name-for example, 3d (DE) Corps. (Here, DE designates that the corps is German. See FM 1 02.1 for a listing of authorized country codes.)

E-20. Order writers use abbreviated designations for organic units. They use the full designation for nonorganic units-for example, 1-52 FA (MLRS) (GS), rather than 1-52 FA. (Here FA designates field artillery and MLRS designates multiple launch rocket system.) They specify a unit's command or support relationship only if it differs from that of its higher headquarters.

E-21. Order writers designate task forces with the last name of the task force (TF) commander (for example, TF WILLIAMS), a code name (for example, TF DESERT DRAGON), or a number (for example, TF 47 or TF 1-77 IN).

E-22. For unit designations at theater army level, order writers list major subordinate maneuver units first, placing them in alpha-numeric order, followed by multifunctional brigades in the following order: fires, intelligence, maneuver enhancement, sustainment, then followed by functional brigades in alpha-numeric order, and any units under the command of the force headquarters. For each function following maneuver, they list headquarters in the order of commands, brigades, groups, battalions, squadrons, companies, detachments, and teams.

E-23. Figure E-1 (on pages 229 through 231) illustrates a sample Annex A (Task Organization) format. It also provides a sample acronym list for task organization.

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

Copy ## of ## copies
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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.
ANNEX A (TASK ORGANIZATION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]
(U) References: *List documents essential to understanding Annex A (Task Organization).*
a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*
b. *List other references in subparagraphs labeled as shown.*
c. *Doctrinal references for task organization include ADP 3-0, ADP 5-0, ADP 6-0, FM 5-0, FM 6-0, JP 1, and JP 5-0.*
(U) Time Zone Used Throughout the Operation Plan or Operation Order: *Write the time zone established in the base plan or order.*
(U) Task Organization: *Describe the organization of forces (to include attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

[page number]
[CLASSIFICATION

Figure E-1. Sample Annex A (Task Organization) format

[CLASSIFICATION]
ANNEX A (TASK ORGANIZATION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]
(sample task organization)

87 IBCT	63 EOD	17 MEB 52 ID
1-80 IN	1/2/1/55 SIG CO (COMCAM)	25 CM BN (-)
2-80 IN	2D MP PLT RTS TM 1/A/52 BSTB	7 EN BN
3-13 CAV	RTS TM 2/A/52 BSTB	700 MP BN
A/3-52 AV (ASLT) (DS)	RTS TM 3/A/52 BSTB	2/2/1/55 SIG CO (COMCAM)
B/1-52 AV (ARB) (DS)	RTS TM	11 ASOS (USAF)
C/4-52 CAV (ARS) (-) (DS)	**2/54 ABCT (-)**	**116 ABCT (+)**
2-636 FA	4-77 IN	1-163 IN
A/3-52 FA (+)	8-40 AR	3-116 AR
TACP/52 ASOS (USAF)	3-20 CAV	2-116 AR
Q37 52 FA BDE (GS)	2/C/4-52 CAV (ARS) (DS)	1-148 FA
99 BSB	2-607 FA	145 BSB
845 FRSD	TACP/52 ASOS (USAF)	4/B/2-52 AV (GSAB) (TACON)
1/577 MED CO (GRD AMB) (-)	105 BSB	4/2/311 QM CO (MA)
3/B/2-52 AV (GSAB) (TACON)	3/2/311 QM CO (MA)	4/577 MED CO (GRD AMB) (-)
1/2/311 QM CO (MA)	2/B/2-52 AV (GSAB) (TACON)	844 FRSD
87 BSTB	843 FRSD	116 BSTB
53 EOD	3/577 MED CO (GRD AMB) (-)	366 EN CO (SAPPER) (DS)
3/2/1/55 SIG CO (COMCAM)	3 BSTB	1/401 EN CO (ESC) (DS)
B/420 CA BN	A 388 CA BN	2/244 EN CO (RTE CL) (DS)
2 HCT/3/B/52 BSTB	1/244 EN CO (RTE CL) (DS)	52 EOD
745 EN CO (MAC) (DS)	763 EOD	1/301 MP CO
1/1/52 CM CO (R/D) (R)	2/2/1/55 SIG CO (COMCAM)	1/3/1/55 SIG CO (COMCAM)
2/467 CM CO	3D MP PLT	1/467 CM CO
1/1102 MP CO (DS)	**52 CAB AASLT**	C/388 CA BN
4/A/52 BSTB	HHC/52 CAB	116 MP PLT
2/52 ABCT (-)	1/B/1-31 IN (DIV QRF) (OPCON)	52 SUST BDE
1-31 IN (-)	1-52 AV (ARB) (-)	52 BTB
1-30 AR (-)	4-52 CAV (ARS) (-)	520 CSSB
1-20 CAV	3-52 AV (ASLT) (-)	521 CSSB
A/4-52 CAV (ARS) (DS)	2-52 AV (GSAB)	52 MED BDE
2-606 FA (2x8)	1 (TUAS)/B/52 BSTB (-) (GS)	10 Hospital Center
TACP/52 ASOS (USAF)	2/694 EN CO (HORIZ) (DS)	168 MMB
521 BSB	52 FA BDE	52 HHB
2/2/311 QM CO (MA)	HHB	A/1-30 AR (DIV RES)
1/B/2-52 AV (GSAB) (TACON)	TAB (-)	35 SIG CO (-) (DS)
2/577 MED CO (GRD AMB)	1-52 FA (MLRS)	154 LTF
842 FST	3-52 FA (-) (M109A6)	2/1/55 SIG CO (-)
2 BSTB	1/694 EN CO (HORIZ) (DS)	14 PAD
31 EN CO (MRBC) (DS)		388 CA BN (-) (DS)
2/244 EN CO (RTE CL) (DS)		

[page number]
[CLASSIFICATION]

Figure E-1. Sample Annex A (Task Organization) format (continued)

[CLASSIFICATION]
ANNEX A (TASK ORGANIZATION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]
(sample acronym list)

AASLT	air assault	HHC	headquarters and headquarters company
ABCT	armored brigade combat team	HORIZ	horizontal
AR	armor	IBCT	infantry brigade combat team
ARB	attack reconnaissance battalion	ID	infantry division
ARS	attack reconnaissance squadron	IN	infantry
ASLT	assault	LTF	logistic task force
ASOS	air support operations squadron	MA	mortuary affairs
AV	aviation	MAC	mobility augmentation company
BDE	brigade	MEB	maneuver enhancement brigade
BN	battalion	MED	medical
BSB	brigade support battalion	MLRS	multiple launch rocket system
BSTB	brigade special troops battalion	MMB	multifunctional medical battalion
BTB	brigade troop battalion	MP	military police
CA	civil affairs	MRBC	multi-role bridge company
CAB	combat aviation brigade	OPCON	operational control
CAV	cavalry	PAD	public affairs detachment
CM	chemical	PLT	platoon
CO	company	QM	quartermaster
COMCAM	combat camera	QRF	quick reaction force
CSSB	combat sustainment support battalion	R	reinforcing
DIV	division	R/D	reconnaissance/decontamination
DS	direct support	RES	reserve
EN	engineer	RTE CL	route clearance
EOD	explosive ordnance disposal	RTS	retransmission
ESC	expeditionary sustainment command	SIG	signal
FA	field artillery	SUST	sustainment
FRSD	forward resuscitative surgical detachment	TAB	target acquisition battery
FST	fire support team	TACON	tactical control
GRD AMB	ground ambulance	TACP	tactical air control party
GS	general support	TM	team
GSAB	general support aviation battalion	TUAS	tactical unmanned aircraft system
HCT	human intelligence collection team	USAF	United States Air Force
HHB	headquarters and headquarters battalion		

[page number]
[CLASSIFICATION]

Figure E-1. Sample Annex A (Task Organization) format (continued)

ANNEX B (INTELLIGENCE) FORMAT AND INSTRUCTIONS

E-24. This annex provides fundamental considerations, formats, and instructions for developing Annex B (Intelligence) to the base plan or order. This annex follows the five-paragraph attachment format.

E-25. Commanders and staffs use Annex B (Intelligence) to describe how intelligence supports the concept of operations described in the base plan or order. The assistant chief of staff, intelligence (G-2) or battalion or brigade intelligence staff officer (S-2) develops Annex B (Intelligence).

E-26. The purpose of Annex B (Intelligence) is to provide detailed information and intelligence on the characteristics of the OE and to direct intelligence and counterintelligence activities. Staffs use appendixes to provide detailed analysis of the OE and instructions from the various intelligence disciplines. (See figure E-2 on pages 232 through 236 for the format of Annex B.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX B (INTELLIGENCE) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for this annex include ADP 2-0, FM 2-0, FM 5-0, and FM 6-0.*

(U) Time Zone Used Throughout the Plan or Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order or on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting intelligence that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations) as required.*

[page number]
[CLASSIFICATION]

Figure E-2. Sample Annex B (Intelligence) format

[CLASSIFICATION]

ANNEX B (INTELLIGENCE) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Terrain. *Describe the aspects of terrain that impact intelligence operations. Refer to Tab A (Terrain) to Appendix 1 (Intelligence Estimate) to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact intelligence operations. Refer to Tab B (Weather) to Appendix 1 (Intelligence Estimate) to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy intelligence units for one echelon up and two echelons down. List enemy maneuver and other area capabilities that will impact friendly intelligence operations. State expected enemy courses of action and employment of enemy intelligence assets.*

d. (U) Friendly Forces. *Outline the higher headquarters' intelligence plan. List designation, location, and outline the plan of higher, adjacent, and other intelligence organizations and assets that support or impact the issuing headquarters or require coordination and additional support.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *As required, identify and describe other organizations in assigned areas that may impact the conduct of intelligence operations or implementation of intelligence-specific equipment and tactics. Refer to Annex V (Interagency Coordination).*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact intelligence operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any intelligence-specific assumptions that support the annex development.*

2. (U) Mission. *State the mission of intelligence function in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Intelligence Support. *Outline the purpose of intelligence operations and summarize the means and agencies used in planning, directing, collecting, processing, exploiting, producing, disseminating, and evaluating intelligence in support of the concept of operations. When available and appropriate, integrate the resources of other Services and multinational forces. Refer to the base plan or order and Annex C (Operations) as required.*

b. (U) Tasks to Subordinate Units. *List intelligence tasks assigned to specific subordinate units not contained in the base plan or order. Use subparagraphs to list detailed instructions for each unit performing intelligence functions.*

c. (U) Counterintelligence. *Refer to Appendix 2 (Counterintelligence) to Annex B (Intelligence).*

d. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order.*

(1) (U) Requirements. *Provide guidance for determining intelligence requirements (including those of subordinate commanders), issuing orders, and issuing requests to information collection agencies*.

[page number]

[CLASSIFICATION]

Figure E-2. Sample Annex B (Intelligence) format (continued)

[CLASSIFICATION]

ANNEX B (INTELLIGENCE) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(a) (U) Priority Intelligence Requirements. *List the priority intelligence requirements along with the latest time intelligence of value for each priority intelligence requirement.*

(b) (U) Friendly Force Information Requirements. *List the friendly force information requirements.*

(c) (U) Requests for Information. *Provide separate, numbered subparagraphs applicable to each unit not organic or attached and from which intelligence support is requested, including multinational forces.*

(2) (U) Measures for Handling Personnel, Documents, and Material. *Describe in the following subparagraphs procedures for handling captured or detained personnel, captured documents, and materiel.*

(a) (U) Prisoners of War, Deserters, Repatriates, Inhabitants, and Other Persons. *State special handling, segregation instructions, and locations of the command's and next higher headquarters' personnel collection points.*

(b) (U) Captured Documents. *List instructions for handling and processing captured documents from time of capture to receipt by specified intelligence personnel*.

(c) (U) Captured Materiel. *Designate items or categories of enemy materiel required for examination. Include any specific instructions for processing and disposition (such as the effects of the Geneva Conventions on the disposition of captured medical materiel). Give locations of the command's and next higher headquarters' captured materiel collection points.*

(d) (U) Documents or Equipment Required. *List in each category the conditions under which units can obtain or request certain documents or equipment. Items may include aerial photographs and maps, charts, and geodesy (satellite) products.*

(3) (U) Distribution of Intelligence Products. *Identify and list in the following subparagraphs any special request procedures for intelligence products in support of this operation. List in each category the conditions under which units can obtain or request certain documents or equipment.*

(a) (U) Special Request for Reports. *Identify, list, or describe the following: periods that routine reports and distribution address; updates to the threat and environment portions of the common operational picture; formats and methods for push and pull intelligence support; and distribution of special intelligence studies, such as defense overprints, photo intelligence reports, and order of battle overlays.*

(b) (U) Special Request Liaison Requirements. *Identify, list, or describe the following liaison requirements: periodic or special intelligence meetings and conferences and special intelligence liaison, when indicated.*

(4) (U) Other Instructions. *Identify, list, or describe any other instructions not covered in the above paragraphs.*

4. (U) Sustainment. *Identify and list sustainment priorities for intelligence key tasks and specify additional sustainment instructions as necessary, to include contractor support. Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-2. Sample Annex B (Intelligence) format (continued)

[CLASSIFICATION]

OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support intelligence teams and operations. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for logistic support for intelligence. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Identify intelligence unique personnel requirements and concerns, including global sourcing support and contracted linguist requirements. Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify medical intelligence requirements of the assigned area from the National Center for Medical Intelligence on health hazards to include endemic and epidemic diseases, toxic industrial materials, and known disease vectors. Identify availability, priorities, and instructions for medical care. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of Commander and Key Leaders. *State where the commander and key leaders intend to be during the operation, by phase if the operation is phased.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault").*

b. (U) Signal. *Address any intelligence-specific communications requirements. Refer to Annex H (Signal) as required.*

[page number]

[CLASSIFICATION]

Figure E-2. Sample Annex B (Intelligence) format (continued)

[CLASSIFICATION]

OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

ACKNOWLEDGE: Include only if attachment is distributed separately from the base order.

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1–Intelligence Estimate

Appendix 2–Counterintelligence

Appendix 3–Signals Intelligence

Appendix 4–Human Intelligence

Appendix 5–Geospatial Intelligence

Appendix 6–Measurement and Signature Intelligence

Appendix 7–Open-Source Intelligence

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-2. Sample Annex B (Intelligence) format (continued)

ANNEX C (OPERATIONS) FORMAT AND INSTRUCTIONS

E-27. This annex provides fundamental considerations, formats, and instructions for developing Annex C (Operations) to the base plan or order. This annex follows the five-paragraph attachment format.

E-28. Commanders and staffs use Annex C (Operations) to describe and outline how this annex supports the concept of operations described in the base plan or order. The G-5, G-3, or S-3 develops Annex C (Operations).

E-29. This annex describes the operation's objectives. A complex operation's concept of support may require a schematic to show the operation's objectives and task relationships. It includes a discussion of the overall operations concept of support with specific details in element subparagraphs and attachments. It refers to the execution matrix to clarify timing relationships among various operations tasks. This annex also contains the information needed to synchronize timing relationships of each element related to operations. It includes operations-related constraints, if appropriate. (See figure E-3 on pages 238 through 242 for the format of Annex C.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Message reference number

Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX C (OPERATIONS) TO [OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for this annex are CJCSM 3122.05, ADP 3-0, ADP 5-0, ADP 6-0, FM 3-0, FM 3-01, FM 5-0, and FM 6-0.*

(U) Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (to include attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order or on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting operations that paragraph 1 of the operation plan or operation order does not cover or that needs expansion. If there is no new information from what is contained in the base order, then indicate this by stating "See base order."*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact operations. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *Identify and reference enemy overlays. First, list known and templated locations and activities of enemy units for two echelons down. For example, a U.S. division would address enemy battalions; a U.S. battalion would address enemy platoons. Second, list enemy maneuver and other capabilities that will impact friendly operations, to include informational considerations. Third, state the enemy most likely and most dangerous courses of action and employment of enemy assets. A staff more easily understands these enemy courses of action when they are depicted in sketches. Fourth, include an assessment of threat activities directed against U.S. government interests in the assigned area. Refer to Annex B (Intelligence) and other sources as required.*

[page number]
[CLASSIFICATION]

Figure E-3. Sample Annex C (Operations) format

[CLASSIFICATION]

ANNEX C (OPERATIONS) TO [OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

*(***Note.** *If conducting operations focused on stability or defense support of civil authorities, change the title of this subparagraph to "Terrorist or Criminal Threats.")*

d. *(U)* Friendly Forces. *Subparagraphs outline the mission, commander's intent, and concept of operations for headquarters one and two command echelons above the unit. Subparagraphs also provide the missions and concept of operations of flank units, supported units, supporting units, and other units and organizations, such as special operations forces, whose actions have a significant effect on the issuing headquarters or require coordination. This subparagraph uses the same format as the base order and can be shortened by using the phrase "See Base Order" if there is no change.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *As needed, identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact the conduct of the unit's operations or require support not identified in the base order. Also identify nongovernmental organizations in the assigned area that want nothing to do with the U.S. military and are not identified in the base order. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *List all critical civil considerations that impact on the unit's operations, such as cultural or religious sensitivities to male Soldiers searching female civilians, searching civilian homes at night, or resolving injury or damage claims not established in the base order. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any operations-specific assumptions that support the annex development.*

2. (U) Mission. *Enter the unit's restated mission only if this annex is distributed separately from the base order. It should contain a short description of the who, what (task), when, where, and why (purpose) that clearly indicates the action to be taken and the reason for doing so. A mission statement contains no subparagraphs. The mission statement covers on-order missions, otherwise state "See base order."*

3. (U) Execution. *Describe how the commander intends to accomplish the mission in terms of the commander's intent, an overarching concept of operations, scheme of employing maneuver, assessment, specified tasks to subordinate units, tasks to staff, and key coordinating instructions in the subparagraphs below only if this annex is distributed separately from the base order. Commanders ensure that their scheme of maneuver is consistent with their intent and that of the next two higher echelon commanders. This paragraph and the operation overlay are complementary, each adding clarity to, rather than duplicating, the other. Do not duplicate information in unit subparagraphs and coordinating instructions contained in the base order. Provide the primary tasks of maneuver units designated as the main effort and the purpose of each. Next, state the primary tasks of maneuver units designated as supporting efforts, including security operations, and the purpose of each. For offensive-focused operations, identify the form of maneuver. For defensive-focused operations, identify the type of defense. For stability-focused operations, describe the role of maneuver units by primary stability tasks. For defense support of civil authorities focused operations, describe the role of maneuver units by primary defense support of civil authorities support tasks. If the operation is phased, identify the main effort by phase. Identify and include priorities for the reserves. Refer to attached appendixes as required.*

[page number]

[CLASSIFICATION]

Figure E-3. Sample Annex C (Operations) format (continued)

[CLASSIFICATION]

ANNEX C (OPERATIONS) TO [OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

a. (U) Scheme of Maneuver. *State the scheme of maneuver by describing the employment of maneuver units, such as divisions, brigade combat teams, and combat aviation brigades in accordance with the concept of operations. Ensure that this paragraph is consistent with the operation overlay in Appendix 2 (Operation Overlay) to Annex C (Operations). Describe how the actions of subordinate maneuver units fit together to accomplish the mission. The scheme of maneuver expands the commander's selected course of action and expresses how each maneuver element of the force will cooperate. As the commander's intent focuses on the end state, the scheme of maneuver focuses on the maneuver tactics and techniques employed during the operation as well as synchronizes the actions of each maneuver element.*

(1). (U) Scheme of Engineering. *State the overall scheme of engineering in support of the concept of operations. Describe key mobility, countermobility, survivability, and general engineering tasks. Include priorities of support by unit or area. Refer to Annex G (Engineer) as required.*

(2). (U) Scheme of Obscuration. *State the scheme of battlefield obscuration, including priorities by unit or area. Refer to appendix 9 (Battlefield Obscuration) to Annex C (Operations) as required.*

(3). (U) Scheme of Information Collection. *Describe how the commander intends to use reconnaissance missions and surveillance tasks to support the concept of operations. Include the primary reconnaissance objectives. Refer to Annex L (Information Collection) as required.*

Note. For domestic operations, this paragraph is titled "Information Awareness and Assessment" and the contents of this paragraph comply with Executive Order 12333. (See ATP 2-91.7 for more information on information awareness and assessment.)

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b. (U) Assessment. *Describe the priorities for assessment and identify the measures of performance and effectiveness used to assess end state conditions and objectives. Refer to Annex M (Assessment) as required.*

c. (U) Tasks to Subordinate Units. *List movement and maneuver tasks assigned to specific subordinate units not contained in the base order. Each task must include who (the subordinate unit assigned the task), what (the task itself), when, where, and why (purpose). Use a separate subparagraph for each unit. List units in sequence of task organization. Place tasks that affect two or more units in paragraph 3d of this annex.*

d. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units or staff sections not covered in the base plan or order.*

4. (U) Sustainment. *Describe the concept of sustainment, including priorities of sustainment by unit or area. Include instructions for administrative movements, deployments, and transportation—or references to applicable appendixes—if appropriate. Use the following subparagraphs to provide the scheme of support for logistics, financial management, personnel, and health service support. Provide detailed instructions for each sustainment subfunctions in appendices to Annex F (Sustainment).*

a. (U) Logistics. *Refer to Annex F (Sustainment) as required.*

b. (U) Personnel. *Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-3. Sample Annex C (Operations) format (continued)

[CLASSIFICATION]

ANNEX C (OPERATIONS) TO [OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

5. (U) Command and Signal. *List information in this paragraph and its subparagraphs only if annex distributed separately from base order, otherwise state "Same as base order."*

a. (U) Command.

(1) (U) Location of Commander and Key Leaders. *State the location of the commander and key leaders.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U) Liaison Requirements. *State the liaison requirements not covered in the base order.*

b. (U) Control. *Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

(1) (U) Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault.").*

(2) (U) Reports. *List reports not covered in standard operating procedures. Refer to Annex R (Reports) as required.*

c. (U) Signal. *Address any communication requirements. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENT: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1–Army Design Methodology Products

Appendix 2–Operation Overlay

Appendix 3–Decision Support Products

Appendix 4–Gap Crossing Operations

Appendix 5–Air Assault Operations

Appendix 6–Airborne Operations

Appendix 7–Amphibious Operations

Appendix 8–Special Operations

Appendix 9–Battlefield Obscuration

[page number]

[CLASSIFICATION]

Figure E-3. Sample Annex C (Operations) format (continued)

[CLASSIFICATION]

ANNEX C (OPERATIONS) TO [OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

Appendix 10–Airspace

Appendix 11–Rules of Engagement

Appendix 12–Cyberspace Electromagnetic Activities

Appendix 13–Military Information Support Operations

Appendix 14 – Military Deception

Appendix 15 – Soldier Leader Engagement

Appendix 16–Personnel Recovery

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-3. Sample Annex C (Operations) format (continued)

ANNEX D (FIRES) FORMAT AND INSTRUCTIONS

E-30. This annex provides fundamental considerations, format, and instructions for developing Annex D (Fires) to the base plan or order. This annex follows the five-paragraph attachment format.

E-31. Commanders and staffs use Annex D (Fires) to describe how fires support the concept of operations described in the base plan or order. The chief of fires, deputy fire support coordinator, or fire support officer develops Annex D (Fires).

E-32. This annex describes the fires concept of support objectives. A complex fires concept of support may require a schematic to show the fires objectives and task relationships. It includes a discussion of the overall fires concept of support with the specific details in element subparagraphs and attachments. It refers to the execution matrix to clarify timing relationships among various fires tasks. This annex also contains the information needed to synchronize timing relationships of each element related to fires. It includes fires related constraints, if appropriate. (See figure E-4 on pages 243 through 248 for the format of Annex D.)

CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX D (FIRES) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) **References:** *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for this annex include ADP 3-19, FM 3-09, FM 3-60, FM 5-0, and FM 6-0.*

(U) Time Zone Used Throughout the Plan or Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting fires that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the assigned area which includes the area of influence as it relates to fires. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. Refer to Annex C (Operations) as required.

[page number]

[CLASSIFICATION]

Figure E-4. Sample Annex D (Fires) format

[CLASSIFICATION]

ANNEX D (FIRES) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Terrain. *Describe the aspects of terrain that impact fires. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact fires. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy fires units for one echelon above and two echelons below the unit. List enemy maneuver, indirect fire, counterfire, air, and electromagnetic warfare threats and other capabilities that will impact friendly fires operations. State expected enemy courses of action and employment of enemy fires assets. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' fires plan. List designation, location, and outline the plan of higher, adjacent, and other fires organizations and assets that support or impact the issuing headquarters or require coordination and additional support.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *As needed, identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *As required, identify and describe other organizations in the assigned area that may impact the conduct of fires or implementation of fires specific equipment and tactics. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact fires. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any fires-specific assumptions that support the annex development.*

2. (U) Mission. *State the mission of fires in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Fires. *Describe how fires support the commander's intent and concept of operations. Establish the priorities of fires to units for each phase of the operation. The scheme of fires must be concise but specific enough to clearly state what fires are to accomplish in the operation. The scheme of fires must answer the "who, what, when, where, and why" of the fires to be provided, but it must also provide enough flexibility to allow subordinate commanders to determine the "how" to the maximum extent possible by ensuring necessary procedural and positive control. The scheme of fires may include a general narrative for the entire operation that should address the fire support task and purpose, allocation of assets, positioning guidance for fire support assets and observers, and attack guidance to include the entire scalable range of effects (lethal to nonlethal effects). Add subparagraphs addressing fire support tasks for each phase of the operation use the following format: task, purpose, execution, and assessment in matrix form. Refer to the base plan or order and Annex C (Operations) as required.*

(1) Task, Purpose, Execution, and Assessment: *The example below provides a sample matrix for task, purpose, execution, and assessment, to be used at the discretion of the commander. See local standard operating procedures for additional guidance and details.*

[page number]

[CLASSIFICATION]

Figure E-4. Sample Annex D (Fires) format (continued)

[CLASSIFICATION]

ANNEX D (FIRES) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

Sample matrix for each fire support task							
PHASE: *State the phase of the operation.*							
TASK (what): *State the supported or maneuver commander task and the types of effects the fires unit must provide for that phase of the operation (suppress, neutralize, interdict, divert, exploit, deny, delay, deceive, disrupt, degrade, destroy, obscure, or screen).*							
PURPOSE (why): *State the supported or maneuver commander purpose and the desired end state for the targeted enemy formation, function, or capability. (There may be more than one task or purpose per phase.)*							
Priority of fire: *State the priority of fire to subordinate units for all fires assets under the unit's command or control.*							
Allocations: *List any additional assets assigned to subordinates for planning. Some examples are primary targets, radar zones, and attack aviation.*							
Positioning Guidance: *Provide positioning guidance to assets such as mortars or observers required for execution.*							
Restrictions: *List all restrictions for the phase.*							
Target Information: *Target number, trigger, location, observer, delivery, attack guidance, and communications refined by executer.*							
Fire Support Task	Target Number	Trigger	Location	Observer	Delivery	Attack Guidance	Communications
List the task number the target supports.	*List the target number or type of target.*	*State the trigger (tactical or technical) for the target.*	*Give the location of the target.*	*State the observer of the target (primary and alternate).*	*State the delivery system for the target (primary and alternate).*	*State the attack guidance and method of engagement for the target.*	*State the frequency and communications net the target will be called in on (primary, alternate, contingency, or emergency).*

b. (U) Scheme of Field Artillery Support. *Describe the scheme of cannon, rocket, and missile fires in support of operations. Include specific tasks to subordinate field artillery headquarters. Address any potential requirements for massing fires that may affect organic, direct support, or reinforcing fires units. Identify the timing and duration of specific identified fire plans, such as counterfire, preparations, suppression of enemy air defenses, or joint suppression of enemy air defenses. Refer to Appendix 4 (Field Artillery Support) to Annex D (Fires) as required.*

(1) (U) Organization for Combat. *Provide direction for the proper organization for combat, including the unit designation, nomenclature, and tactical task.*

(2) (U) Miscellaneous. *Provide any other information necessary for planning not already mentioned. Other information in this subparagraph may include changes to the targeting numbering system, the use of pulse repetition frequency codes, positioning restrictions, and a position area overlay.*

c. (U) Scheme of Air Support. *Briefly describe the maneuver commander's guidance for the use of air power. Refer to Appendix 5 (Air Support) to Annex D (Fires) as required.*

(1) (U) Organization for Combat. *Provide direction for the proper organization for combat, including the unit designation, nomenclature, and tactical task.*

[page number]

[CLASSIFICATION

Figure E-4. Sample Annex D (Fires) format (continued)

[CLASSIFICATION]

ANNEX D (FIRES) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(2) (U) Air Interdiction Operations. *Briefly describe the joint force air component commander's intent for air interdiction. Describe the maneuver commander's air interdiction concept and priorities for target attack within the assigned area.*

(3) (U) Close Air Support Operations. *Provide the allocation and distribution of close air support sorties by subordinate unit. Provide the desired method for planning close air support (immediate or preplanned) or any special control arrangements.*

(4) (U) Air Reconnaissance Operations. *Provide the concept for use of reconnaissance aircraft if resources are provided by the joint force air component commander. Refer to Annex L (Information Collection).*

(5) (U) Miscellaneous. *Provide any other information necessary for planning not already mentioned, including the following:*

(a) *The air tasking order's effective time.*

(b) *Deadlines for submission of air interdiction, close air support, reconnaissance aircraft, and electromagnetic warfare aircraft requests.*

(c) *The mission request numbering system as it relates to the target numbering system.*

(d) *The joint suppression of enemy air defenses tasking from the joint force land component commander.*

(e) *Reference to essential airspace control measures (including coordinating altitude, target areas, and low-level transit route requirements) identified in Annex C (Operations).*

d. (U) Scheme of Naval Fire Support. *Describe the concept for use of naval fire support. Include specific tasks to supporting units. Include trajectory limitations or minimum safe distances. Refer to Appendix 6 (Naval Fire Support) to Annex D (Fires) as required.*

(1) (U) Organization for Combat. *List the grouping or organization for combat, including the following:*

(a) (U) *Identify and list the allocation of observers and spotters.*

(b) (U) *Identify and list the allocation of ships to units.*

1. *A clear definition of the boundary of the assigned area if not specified in the basic plan. This area may be identified by phase if it is a phased operation.*

2. *Targeting products.*

3. *Fire support coordination measures.*

4. *The time of execution of program of fires relative to H-hour (counterfire, preparations or counter preparations, joint suppression of enemy air defenses), if needed.*

5. *Rules of engagement specific to fires.*

[page number]

[CLASSIFICATION]

Figure E-4. Sample Annex D (Fires) format (continued)

[CLASSIFICATION]

ANNEX D (FIRES) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

4. (U) Sustainment. *Identify sustainment priorities for fires key tasks and specify additional sustainment instructions as necessary. Describe critical or unusual sustainment actions that might occur before, during, and after the battle to support the commander's scheme of fires. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Use subparagraphs to identify priorities and specific instructions for fires logistics support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

(1) (U) Supply. *Identify the location of ammunition transfer holding points and ammunition supply points. Refer to Annex F (Sustainment) as required.*

(2) (U) Allocation of Ammunition. *List the allocation of cannon, rocket, and missile ammunition for each phase of the operation based on the amount of Class V available. Refer to Annex F (Sustainment) as required.*

b. (U) Personnel. *Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and key fires leaders.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault").*

b. (U) Signal. *Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

[page number]

[CLASSIFICATION]

Figure E-4. Sample Annex D (Fires) format (continued)

[CLASSIFICATION

ANNEX D (FIRES) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1–Fire Support Overlay

Appendix 2–Fire Support Execution Matrix

Appendix 3–Targeting

Appendix 4–Field Artillery Support

Appendix 5–Air Support

Appendix 6–Naval Fire Support

Appendix 7–Air and Missile Defense

DISTRIBUTION: Show only if distributed separately from the base order or higher-level attachments.

[page number]

[CLASSIFICATION]

Figure E-4. Sample Annex D (Fires) format (continued)

ANNEX E (PROTECTION) FORMAT AND INSTRUCTIONS

E-33. This annex provides fundamental considerations, formats, and instructions for developing Annex E (Protection) to the base plan or order. This annex follows the five-paragraph attachment format.

E-34. Commanders and staffs use Annex E (Protection) to describe how protection supports the concept of operations described in the base plan or order. This annex describes how the commander intends to prevent or mitigate detection, threat effects, and hazards to preserve combat power and enable freedom of action through the protection tasks (listed in this annex's appendixes). The chief of protection or a designated staff officer (engineer; chemical, biological, radiological, and nuclear; air and missile defense; or provost marshal) develops Annex E (Protection). The safety section provides the chief of protection with input on Appendix 2 (Risk Management), the OPSEC section provides input on Appendix 3 (Operations Security), the civil affairs section provides input for Appendix 4 (Populace and Resource Control), The surgeon provides input for Appendix 9 (Force Health Protection).

E-35. This annex describes the protection concept of support objectives. A complex protection concept of support may require a schematic to show the protection objectives and task relationships. This annex includes a discussion of the overall protection concept of support, with the specific details in element subparagraphs and attachments. It refers to the execution matrix to clarify timing relationships among various protection tasks. This annex also contains information needed to synchronize timing relationships of each element related to protection. It includes protection-related constraints, if appropriate. (See figure E-5 on pages 249 through 257 for the Annex E format.)

CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

Copy ## of ## copies

Issuing headquarters

Place of issue

Date-time group of signature

Message reference number

Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for protection include ADP 3-0, ADP 3-37, ADP 3-90, AR 385-10, AR 525-13, AR 525-28, AR 530-1, ATP 3-13.3, ATP 3-37.2, ATP 3-37.34, ATP 3-39.10, ATP 3-39.32, ATP 3-50.10, ATP 3-57.10,ATP 4-02.7, ATP 4-02.19, ATP 4-02.55, ATP 4-32, ATP 5-19, DA Pamphlet 385-10, FM 3-01, FM 3-11, FM 3-12, FM 3-13, FM 3-39, FM 3-50, FM 3-63, FM 5-0, and FM 6-0.*

(U) Time Zone Used Throughout the Plan or Order: Write the time zone established in the base plan or order.

[page number]

[CLASSIFICATION]

Figure E-5. Sample Annex E (Protection) format

[CLASSIFICATION]

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Provide situational information affecting the protection tasks and systems that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it impacts protection. Identify area of interest characteristics and hazards (including health hazards) that require coordinated protection actions to preserve the force. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Describe the assigned area of operation, zone, or sector s as it impacts protection. Identify and describe the assigned area's characteristics and hazards that require coordinated protection actions to preserve the force. Refer to Annex C (Operations) as required.*

(1) (U) Terrain. *Describe the aspects of terrain that impact protection operations. Identify terrain features in the area of interest and assigned area that create a hazard or enhance the threat. Specify protection actions that may be required as a result of the terrain. Identify terrain that may benefit protection capabilities. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact protection operations, tasks, and systems. Refer to Appendix 2 (Safety) to Annex E (Protection) and Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy protection units for one echelon up and two echelons down. List enemy maneuver and other area capabilities that will impact friendly operations. State expected enemy courses of action and employment of enemy protection assets. Include consideration of civil disturbances and criminal acts. Narrow the focus to offensive-minded threats that require planning, resources, and actions to protect the force. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' protection plan. List designation, location, and outline of plan of higher, adjacent, and other protection assets that support or impact the issuing headquarters or require coordination and additional support. List areas of the operation most vulnerable to enemy attack or adverse influence.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact the conduct of protection operations or impact protection specific equipment and tactics. Outline the results of the risk management process to mitigate the risk of fratricide. Enhance continual situational understanding by frequently updating data of friendly forces. Describe the method and timing of the data updates. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact protection operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any protection-specific assumptions that support the annex development.*

[page number]

[CLASSIFICATION]

Figure E-5. Sample Annex E (Protection) format (continued)

[CLASSIFICATION]

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

2. (U) Mission. *State the protection function mission in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Protection. *Describe how the protection tasks and systems support the commander's intent and concept of operations. Establish the priorities of support to units for each phase of the operation. If required information for a specific protection task or system is brief, include it in this paragraph and eliminate the associated appendix. Refer to the base order and Annex C (Operations) as required.*

(1) (U) Area Security. *State the scheme of area security and overall area security objective. Describe how area security supports the commander's intent, the maneuver plan, and protection priorities. Direct how each element of the force will cooperate to accomplish area security and tie that to support of the operation with the task and purpose statement. Discuss how area security orients on the force, installation, route, area, or asset to be protected. Discuss how area security is often an economy of force role assigned in some manner to many organizations. Discuss how area security is often designed to ensure the continued performance of supporting and sustaining tasks. Describe how forces engaged in area security operations saturate an area or position on key terrain to provide protection through early warning, reconnaissance, or surveillance and guard against unexpected enemy attack with an active response. Discuss the role of response forces in the operational area security scheme. Refer to Appendix 1 (Operational Area Security) to Annex E (Protection) as required.*

(2) (U) Risk Management. *Describe how risk management process supports the commander's intent and concept of operations. Describe how the risk management process provides a systematic and standardized process to identify hazards and react to changes within an operational environment to reduce or offset risk. Identify how risk management applies to operations and to nonoperational activities and the use of this process increases operational effectiveness and the probability of mission accomplishment. Risk management should include discussion on fratricide. Refer to Appendix 2 (Safety) to Annex E (Protection) as required.*

(3) (U) Operations Security. *Describe how operations security applies to all operations. All units conduct operations security to preserve essential secrecy from threat exploitation and support the commander's intent and concept of operations. Describe the general concept and any additional operations security measures with other staff and command elements and synchronize with adjacent units. Refer to Appendix 3 (Operations Security) to Annex E (Protection) as required.*

a. (U) *Identify actions that can be observed by threat intelligence systems.*

b. (U) *Determine indicators of threat intelligence that systems might obtain which could be interpreted or pieced together to derive critical information in time to be useful to the threat.*

c. (U) *Describe how to execute measures that eliminate or reduce (to an acceptable level) the vulnerabilities of friendly actions.*

(4) (U) Populace and Resource Control. *Describe how the implementation of populace and resource control measures may affect friendly, adversary, and other operations. Discuss how populace and resource control would influence friendly operations. Describe the conditions and circumstances of the operational environment that impact populace and resource control objectives. Describe how the commander envisions populace and resource control measures in support of the scheme of protection that supports the concept of operations in the base order. It should stress populace and resource control objectives, civil decisive points, measures of performance, and measures of effectiveness, transitions for each phase of the operation, and a general timeline for the operation. Refer to Appendix 4 (Populace and Resource Control to Protection) to Annex E (Protection) as required.*

[page number]

[CLASSIFICATION]

Figure E-5. Sample Annex E (Protection) format (continued)

[CLASSIFICATION]

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(5) (U) Physical Security. *Describe how physical security consists of physical measures that are designed to safeguard personnel; to prevent unauthorized access to equipment, installations, material, and documents; and to safeguard them against espionage, sabotage, damage, and theft. Refer to Appendix 5 (Physical Security Procedures) to Annex E (Protection) as required.*

(6) (U) Antiterrorism. *State the overall antiterrorism objective. Describe how the commander envisions antiterrorism measures in support of the scheme of protection that supports the concept of operations in the base order. It should stress detection, deterrence, and mitigation of the terrorist threat in the applicable environment (in-transit, on a base, during operations, and in protection of host-nation and local civilians). Refer to Appendix 6 (Antiterrorism) to Annex E (Protection) as required.*

(7) (U) Police Operations. *Describe how police operations encompass policing and the associated law enforcement activities to control and protect populations and resources and to facilitate the existence of a lawful and orderly environment. Describe how police operations are conducted across the range of military operations. As the operation transitions and the operational environment stabilizes, civil control efforts are implemented, and the rule of law is established. Refer to Appendix 7 (Police Operations) to Annex E (Protection) as required.*

(8) (U) Survivability. *Describe how personnel and physical assets have inherent survivability qualities or capabilities that can be enhanced through various means and methods. When existing terrain features offer insufficient cover and concealment, survivability can be enhanced by altering the physical environment to provide or improve cover and concealment. Describe how natural or artificial materials may be used as camouflage to confuse, mislead, or evade the enemy or adversary. Refer to Appendix 8 (Survivability) to Annex E (Protection) as required.*

(9) + (U) Force Health Protection. *Describe how force health protection supports the commander's intent and concept of operations. Establish the priorities of support to units for each phase of the operation. Identify and describe medical countermeasures to be taken (chemoprophylaxis, pretreatments, and barrier creams) in the event of chemical, biological, radiological, and nuclear operations. Identify and describe any chemoprophylaxis requirements for endemic diseases (such as malaria). Describe medical and occupational and environmental health surveillance activities which will be established. Identify and describe measures to be taken for behavioral and physical well-being to include operational public health, combat and operational stress control, veterinary services, dental services, and laboratory services. Describe comprehensive medical and surgical care for military working animals. Identify and describe food safety and food defense activities to include inspection of Class I rations. Establish veterinary public health guidance, consultation, and support regarding zoonotic diseases to reduce transmission to humans. Synchronize health threat reporting and statistics (such as the disease and nonbattle injury rate). Identify and describe measures to be taken for behavioral and physical well-being to include combat and operational stress control, dental services, women's health and sex-specific care, and laboratory services. Refer to Appendix 9 (Force Health Protection) to Annex E (Protection) as required.*

(10) (U) Operational Public Health. *Describe how environmental health is monitored and how to conduct health surveillance and epidemiology. Estimate risk hazards posed by identified health hazards exposure. Identify resources for commanders and unit leaders to remain informed and proactively engaged ensuring the health of their unit.*

(11) (U) Combat and Operational Stress Control. *Identify availability, priorities, and instructions for prevention, identification, and the management of adverse combat and operational stress reactions in units. Discuss measures to implement combat and operational stress control plans/programs.*

[page number]
[CLASSIFICATION]

Figure E-5. Sample Annex E (Protection) format (continued)

CLASSIFICATION]

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(12) (U) Veterinary Services. *Provide information on veterinary treatment in a deployed environment consisting of Roles 1 through 3 veterinary treatment support. Identify veterinary public health measures to prevent and mitigate the effects of foodborne disease; reduce the transmission of zoonotic diseases and monitor and mitigate endemic animal disease threats to military working animals. Identify food protection requirements.*

(13) (U) Dental Services. *Identify availability, priorities, and instructions for dental treatment. Describe the dental service support system to promote dental health; prevent and treat oral and dental disease; and provide far forward dental treatment; provide early treatment of severe oral and maxillofacial injuries.*

(14) (U) Medical Laboratory Services. *Describe processes to provide analytical, investigational, and consultative capabilities, and conduct medical laboratory analysis.*

(15) (U) Chemical, Biological, Radiological and Nuclear Operations. *Describe how the chemical, biological, radiological, and nuclear unit supports the commander's intent and concept of operations. Establish the priorities of support to units or the concept for employing chemical, biological, radiological, and nuclear units for each phase of the operation. Detail the priority of chemical, biological, radiological, and nuclear reconnaissance and decontamination support to the maneuver forces based on the mission and chemical, biological, radiological, and nuclear threat to assess threats and incidents, protect freedom of action, and mitigate chemical, biological, radiological, and nuclear incidents. Focus on the commander's guidance, mission, and intent. Emphasize how chemical, biological, radiological, and nuclear defense operations affect readiness and warfighting capability. Refer to Appendix 10 (Chemical, Biological, Radiological, and Nuclear Defense) to Annex E (Protection) as required.*

(16) (U) Explosive Ordnance Disposal. *Describe how explosive ordnance disposal supports the commander's intent and concept of operations. Establish the priorities of explosive ordnance disposal support to units for each phase of the operation. Refer to Appendix 11 (Explosive Ordnance Disposal) to Annex E (Protection) as required.*

(12) (U) Coordinate Air and Missile Defense. *Describe how air and missile defense protects the force from missile attack, air attack, and aerial surveillance by ballistic missiles, cruise missiles, conventional fixed- and rotary-wing aircraft, and unmanned aircraft systems. Indirect-fire protection systems protect forces from threats that are largely immune to air defense artillery systems. Describe how protection cell planners coordinate with the air defense airspace management cell for air and missile defense for the protection of the critical asset list and defended asset list and for other air and missile defense protection as required. Refer to Appendix 12 (Coordinate Air and Missile Defense) to Annex E (Protection) as required.*

(13) (U) Detention Operations. *Describe how detention operations are conducted by military police to shelter, sustain, guard, protect, and account for populations (detainees and U.S. military prisoners) as a result of military or civil conflict and natural or man-made disasters or to facilitate criminal prosecution. Discuss how units will handle detention operations from the point of capture to the point which they transition authority of any detainees. Refer to Appendix 13 (Detention Operations) to Annex E (Protection) as required.*

[page number]

[CLASSIFICATION]

Figure E-5. Sample Annex E (Protection) format (continued)

[CLASSIFICATION

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(14) (U) Electromagnetic Protection. *Describe how electromagnetic protection capabilities (electromagnetic protection, electromagnetic attack, and electromagnetic spectrum management) are integrated to protect Army access to the electromagnetic spectrum. Discuss how electromagnetic protection includes actions taken to ensure friendly use of the electromagnetic spectrum, such as frequency agility in a radio or variable pulse repetition frequency in radar and how electromagnetic protection protects U.S. and allied systems from the effects of friendly and enemy electromagnetic attack and electromagnetic interference. Describe how defensive electromagnetic attack primarily protects friendly personnel and equipment or platforms against lethal attacks by denying enemy use of the electromagnetic spectrum to guide or trigger weapons. Examples include self-protection and other protection measures such as the use of expendables (flares and active decoys), jammers, towed decoys, directed-energy infrared countermeasures, and counter radio-controlled improvised explosive device systems. Describe how electromagnetic spectrum management enables electronic systems to perform their functions in the intended environment without causing or suffering unacceptable interference. Refer to Appendix 14 (electromagnetic protection) to Annex E (Protection) as required.*

(15) (U) Cyberspace Security and Defense. *Describe how cyberspace security and defense (cyberspace security activities and defensive cyberspace operations-internal defensive measures) secures and defends the network through a defense-in-depth approach, incorporating layered security and defenses. Discuss how cyberspace security is the prevention of damage to, protection of, and restoration of computers, communications systems, communications services, wire communication, and electromagnetic communication, including information contained therein, to ensure its availability, integrity, authentication, confidentiality, and nonrepudiation. Describe how units plan, integrate, and synchronize defensive cyberspace operations-internal defensive measures to preserve freedom of action to support objectives as part of the operations process. Refer to Appendix 15 (Cyberspace Security and Defense) to Annex E (Protection) as required.*

b. (U) Tasks to Subordinate Units. *List protection tasks assigned to specific subordinate units not contained in the base order.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order. Identify any nonstandard operating procedure type of information that will enhance protection by coordinated actions. Examples include personnel identification, vehicle identification, and control measures. Provide additional coordinating instructions for the following:*

(1) (U) Protection Prioritization List. *Prioritize critical assets (people, property, equipment, activities, operations, information, facilities, or materials) that are critical to the commander's priorities and intent. The loss of these critical assets would have a very serious, debilitating effect on the ability of a unit to achieve mission success. Information derived from the commander's guidance, the intelligence preparation of the battlefield, targeting, risk management, warning orders, the critical asset list and defended asset list, and the mission analysis are used to identify critical assets.*

(2) (U) Criticality Assessment. *The criticality assessment identifies key assets that are required to accomplish a mission. It addresses the impact of a temporary or permanent loss of key assets or the unit ability to conduct a mission. It should also include high-population facilities (recreational centers, theaters, and sports venues) which may not be mission-essential. It examines the costs of recovery and reconstitution, including time, expense, capability, and infrastructure support. The staff gauges how quickly a lost capability can be replaced before giving an accurate status to the commander.*

[page number]

[CLASSIFICATION

Figure E-5. Sample Annex E (Protection) format (continued)

[CLASSIFICATION]

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(3) (U) Threat and Hazard Assessment. *The treat and hazard assessment comprises of a thorough, in-depth compilation and examination of information and intelligence that address potential threats and hazards in the assigned area and determines the likelihood or probability of occurrence of each threat and hazard. Threat and hazard assessments are continuously reviewed and updated as the operational environment changes.*

(4) (U) Vulnerability Assessment. *The vulnerability assessment identifies physical characteristics or procedures that render critical assets, areas, infrastructures, or special events vulnerable to known or potential threats and hazards. The staff addresses "who" or "what" is vulnerable and "how" it is vulnerable.*

(5) (U) Capability Assessment. *Capability assessment of an organization determines its current capacity to perform protection tasks based on the integrated material and nonmaterial readiness of the assets. A capability assessment considers the mitigating effects of existing manpower, procedures, and equipment. It is especially important in identifying capability gaps, which may be addressed to reduce the consequences of a specific threat or hazard.*

(6) (U) Essential Elements of Friendly Information.

(a) (U) *Date-time group, location, size, disposition, and flight path of aviation units in the assigned area.*

(b) (U) *Date-time group, location, size, disposition, and mobility of units in the assigned area.*

(c) (U) *Location and disposition of command nodes.*

(d) (U) *Sustainment plans and sustainment operations.*

(e) (U) *Methods of locating and neutralizing enemy weapons of mass destruction and tactical ballistic missile capabilities.*

(f) (U) *Sustainment, operational, intelligence, command, control, and communication limitations and vulnerabilities.*

(g) (U) *Vulnerabilities that could be exploited to recue or eliminate international support of ongoing operations.*

(7) (U) Risk Reduction Control Measures. *Provide the required information listed below.*

(a) (U) *Air and Missile Defense Warning*

(b) (U) *Air and Missile Defense Weapon Control Status*

(c) (U) *Operational Exposure Guidance*

(d) (U) *Mission-Oriented Protective Posture*

(e) (U) *Force Protection Level*

(f) (U) *Operations Security*

[page number]

[CLASSIFICATION]

Figure E-5. Sample Annex E (Protection) format (continued)

[CLASSIFICATION]

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

4. (U) *Sustainment.* *Identify priorities of sustainment for key protection tasks and specify additional instructions as required. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Use subparagraphs to identify priorities and specific instructions for protection logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical treatment and hospitalization. Address medical treatment and medical evacuation issues affecting protection forces. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and key protection leaders.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault").*

b. (U) Signal. *Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

[page number]

[CLASSIFICATION]

Figure E-5. Sample Annex E (Protection) format (continued)

[CLASSIFICATION]

ANNEX E (PROTECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits). When an attachment required by doctrine or a standard operating procedure is unnecessary, label it "Omitted." Unit standard operating procedures will dictate attachment development and format. Common attachments include the following:*

Appendix 1–Area Security

Appendix 2–Risk Management

Appendix 3–Operations Security

Appendix 4–Populace and Resource Control

Appendix 5–Physical Security

Appendix 6–Antiterrorism

Appendix 7–Police Operations

Appendix 8–Survivability

Appendix 9–Force Health Protection

Appendix 10–Chemical, Biological, Radiological, and Nuclear Operations

Appendix 11–Explosive Ordnance Disposal

Appendix 12–Detention Operations

Appendix 13–Cyberspace Security and Defense

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-5. Sample Annex E (Protection) format (continued)

ANNEX F (SUSTAINMENT) FORMAT AND INSTRUCTIONS

E-36. This annex provides fundamental considerations, formats, and instructions for developing Annex F (Sustainment) to the base plan or order. This annex follows the five-paragraph attachment format.

E-37. Commanders and staffs use Annex F (Sustainment) to describe how sustainment operations support the concept of operations described in the base plan or order. The assistant chief of staff, logistics (G-4) or battalion or brigade logistics staff officer (S-4) is responsible for developing Annex F (Sustainment). The assistant chief of staff, personnel (G-1) or battalion or brigade personnel staff officer (S-1), command surgeon or medical support officer, and assistant chief of staff, financial management (G-8) assist and provide input to Annex F. (See figure E-6 on pages 258 through 264 for the Annex F format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX F (SUSTAINMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for sustainment include ADP 4-0, FM 3-09, FM 4-02, FM 5-0, and FM 6-0.*

(U) Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (to include attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting the sustainment operations that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to sustainment. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations) as required.*

(1) (U) Terrain. *Describe the aspects of terrain that impact sustainment operations. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION

Figure E-6. Sample Annex F (Sustainment) format

[CLASSIFICATION]

ANNEX F (SUSTAINMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(2) (U) Weather. *Describe the aspects of weather that impact sustainment operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy sustainment units for one echelon up and two echelons down. List enemy maneuver and other capabilities that will impact friendly sustainment operations. State expected enemy sustainment courses of action and employment of enemy sustainment assets. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' sustainment plan. List designation, location, and outline of plan of higher, adjacent, and other sustainment assets that support or impact the issuing headquarters or require coordination and additional support.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interorganizational-Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact sustainment operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any sustainment-specific assumptions that support the annex development.*

2. (U) Mission. *State the mission of sustainment in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Sustainment. *Describe how sustainment supports the commander's intent and concept of operations. Establish the priorities of sustainment support to units for each phase of the operation. Refer to Annex C (Operations) as required.*

b. (U) Tasks to Subordinate Units. *List sustainment tasks assigned to specific subordinate units not contained in the base order.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order.*

4. (U) Sustainment. *Identify priorities of sustainment for key tasks and specify additional instructions as required.*

a. (U) Materiel and Services. *Provide materiel and services information in the following subparagraphs.*

(1) (U) Maintenance. *Provide maintenance information for each subparagraph, including priority of maintenance, location of facilities and collection points, repair time limits at each level of maintenance, and evacuation procedures. Post maintenance collection points and command posts to the sustainment overlay at Tab A (Sustainment Overlay) to Appendix 1 (Logistics) to Annex F (Sustainment). Refer to Tab B (Maintenance) to Appendix 1 (Logistics) to Annex F (Sustainment) as required.*

(a) (U) Ground. *Identify the proper procedures to request ground recovery and maintenance.*

[page number]

[CLASSIFICATION

Figure E-6. Sample Annex F (Sustainment) format (continued)

[**CLASSIFICATION]**

ANNEX F (SUSTAINMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(b) (U) Watercraft. *Identify the proper procedures to request watercraft recovery and maintenance.*

(c) (U) Aircraft. *Identify the proper procedures to request aircraft recovery and maintenance.*

(d) (U) Field Maintenance. *Identify, list, and describe the recovery plan and types of recovery vehicles available; Class IX parts support; the locations of maintenance collection points; logistic civil augmentation program capabilities and availability; and field maintenance support relationships at each phase of the operation.*

(e) (U) Sustainment Maintenance. *Identify, list, and describe the location of sustainment maintenance units and services; the locations of maintenance collection points; the logistic civil augmentation program capabilities and availability; and sustainment maintenance support relationships at each phase of the operation.*

(2) (U) Transportation. *Provide transportation information for each subparagraph. Identify facility locations, traffic control, regulation measures, main supply routes, alternate supply routes, transportation critical shortages, and other essential transportation data not provided elsewhere. Post main supply routes, alternate supply routes, and transportation facilities to the logistic synchronization matrix and the overlay at Tab A (Sustainment Overlay) to Appendix 1 (Logistics) to Annex F (Sustainment). Identify and list transportation request procedures. Refer to Tab C (Transportation) to Appendix 1 (Logistics) to Annex F (Sustainment) as required.*

(a) (U) Ground. *Identify the proper procedures to request ground transportation.*

(b) (U) Sea/River/Water. *Identify the proper procedures to request sea, river, and water transportation.*

(c) (U) Air. *Identify the proper procedures to request air transportation.*

(d) (U) Container Management. *Describe the container management plan.*

(3) (U) Supply. *Provide information by class of supply in each subparagraph. Identify and list maps, water, special supplies, and excess and salvage materiel, as applicable. For each subparagraph, list supply point locations and state supply plan and procedures. Post supply points and facilities to the logistic synchronization matrix and the overlay at Tab A (Sustainment Overlay) to Appendix 1 (Logistics) to Annex F (Sustainment). Refer to Tab D (Supply) to Appendix 1 (Logistics) to Annex F (Sustainment) as required. Coordinate with the surgeon for information for subparagraph 4.a(3) (h) in this annex on medical materiel. Refer to Appendix 3 (Health Service Support) to Annex F (Sustainment) for additional information on medical logistics.*

(a) (U) Class I Rations. *Identify and list the issue and ration cycle, ration stockage objectives, and the bulk water locations.*

(b) (U) Class II Organizational Clothing and Individual Equipment and Maps. *Identify and list organizational clothing and individual equipment available for this operation. Submit classified map requests through G-2 or S-2 channels.*

(c) (U) Class III Bulk Fuel; Class III Package Petroleum, Oils, and Lubricants. *Identify and list quantities of petroleum, oil, and lubricant; locations of the retail and bulk fuel points; and types of products available at each site available to support the operation.*

(d) (U) Class IV Construction and Fortification Material. *Identify and list construction and fortification or barrier material available for this operation including command-controlled items.*

[page number]

[CLASSIFICATION]

Figure E-6. Sample Annex F (Sustainment) format (continued)

[CLASSIFICATION]

ANNEX F (SUSTAINMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(e) (U) Class V Munitions. *Identify and list available ammunition and the controlled supply rates. List the procedures to request explosive ordnance disposal support. Refer to Annex E (Protection) as required for explosive ordnance disposal support.*

(f) (U) Class VI Personal Demand Items. *Describe the Class VI plan. Identify and list items available.*

(g) (U) Class VII Major End Items. *Identify and list major end items available for this operation.*

(h) (U) Class VIII Medical Materiel. *Identify and list medical materiel available for this operation.*

(i) (U) Class IX Repair Parts. *Identify and list all critical shortage repair part and command controlled items available for this operation. State the approving authority for controlled exchange of parts.*

(j) (U) Class X Material for Nonmilitary or Civil Affairs Operations. *Identify and list material available for this operation.*

(k) (U) Miscellaneous. *Identify and list any other available materiel and supplies not mentioned in the above subparagraphs available for this operation.*

(4) (U) Field Services. *Identify and list key field services available during this operation. At a minimum, this paragraph and subparagraphs must contain the location and the responsible unit for each separate field service activity. Identify and list locations and operating hours for laundry facilities, shower facilities, clothing repair facilities, food services facilities, billeting facilities, and field sanitation facilities. Highlight field sanitation requirements for each service, such as water purification and trash removal. Post field service facilities to the logistic synchronization matrix and the overlay at Tab A (Sustainment Overlay) to Appendix 1 (Logistics) to Annex F (Sustainment). Refer to Tab E (Field Services) to Appendix 1 (Logistics) to Annex F (Sustainment) as required.*

(a) (U) Construction. *Identify and list available construction material. Provide essential information as appropriate.*

(b) (U) Light Textile Repair and Showers, Laundry, and Clothing Repair. *Identify and list locations of showers, laundry, and clothing repair available for this operation.*

(c) (U) Food Preparation. *Identify and list food preparation available for this operation.*

(d) (U) Water Purification. *Identify and list water purification locations and units available for this operation.*

(e) (U) Aerial Delivery. *Identify and list aerial delivery available for this operation.*

(f) (U) Installation Services. *Identify and list installation services available for this operation.*

(5) (U) Distribution. *Provide information about distribution support. Refer to Tab F (Distribution) to Appendix 1 (Logistics) to Annex F (Sustainment) as required.*

(a) (U) Distribution Nodes' Locations. *Identify and list the location of distribution nodes (seaport of debarkation and arrival/departure airfield control group).*

(b) (U) Tracking Procedures. *Identify and discuss the tracking procedures.*

(c) (U) Distribution Modes. *Identify and list the various distribution modes: land, sea, or air.*

[page number]

[CLASSIFICATION]

Figure E-6. Sample Annex F (Sustainment) format (continued)

[CLASSIFICATION]

ANNEX F (SUSTAINMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(d) (U) Movement Request Format. *Discuss the movement request format and processing requirements.*

(e) (U) Container Operations. *Discuss container management and operations.*

(f) (U) Movement Control Responsibility. *Identify units at each level responsible for movement control.*

(6) (U) Contract Support Integration. *Identify and list key contract support integration functions for this operation. Identify the location and contract support unit responsible at each level. Identify contract support capabilities, limitations, and priority of support. Refer to Annex W (Operational Contract Support) as required.*

(7) (U) Mortuary Affairs. *Provide information about mortuary affairs support. Refer to Tab H (Mortuary Affairs) to Appendix 1 (Logistics) to Annex F (Sustainment) as required.*

(8) (U) Labor. *Provide information about contract labor. Refer to Appendix 1 (Logistics) to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Provide personnel information. Outline plans for unit-strength maintenance; personnel management; morale development and maintenance; discipline, law, and order; headquarters management; force provider; religious support; and legal and finance support. Post personnel services unit locations to the logistic synchronization matrix and the overlay at Tab A (Sustainment Overlay) to Appendix 1 (Logistics) to Annex F (Sustainment). Refer to Appendix 2 (Personnel Services Support) to Annex F (Sustainment) as required.*

(1) (U) Human Resources Support. *Provide human resources support information. Refer to Tab A (Human Resources Support) to Appendix 2 (Personnel Services Support) to Annex F (Sustainment) as required.*

(2) (U) Financial Management. *Provide financial management support information. Refer to Tab B (Financial Management) to Appendix 2 (Personnel Services Support) to Annex F (Sustainment) as required.*

(3) (U) Legal Support. *Provide legal support information. Refer to Tab C (Legal Support) to Appendix 2 (Personnel Services Support) to Annex F (Sustainment) as required.*

(4) (U) Religious Support. *Provide religious support information. Refer to Tab D (Religious Support) to Appendix 2 (Personnel Services Support) to Annex F (Sustainment) as required.*

(5) (U) Band Operations. *Provide band operations support information. Refer to Tab E (Band Operations) to Appendix 2 (Personnel Services Support) to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Provide health service support information. Identify availability, priorities, and instructions for medical treatment and hospitalization. Describe the plan for collection and medical evacuation, medical treatment and hospitalization of sick, injured, or wounded U.S., multinational, and joint force Soldiers, enemy prisoners of war, detainees, and, when authorized, civilians. Describe support requirements for medical logistics (including medical maintenance and blood management) Identify medical treatment facility locations on the logistic synchronization matrix and the overlay at Tab A (Sustainment Overlay) to Appendix 1 (Logistics) to Annex F (Sustainment). Refer to Appendix 3 (Health Service Support) to Annex F (Sustainment) as required.*

[page number]

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Figure E-6. Sample Annex F (Sustainment) format (continued)

[CLASSIFICATION]

ANNEX F (SUSTAINMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Medical Treatment. *Provide medical treatment information (organic and area support), which includes chemical, biological, radiological, or nuclear patients. Provide information on tactical combat casualty care as well as routine sick call to promote casualty prevention measures. Identify patient holding capability and the location of Role 2 medical treatment support.*

(2) (U) Hospitalization. *Provide hospitalization information and guidelines. List the locations of medical treatment facilities. Identify and list area units without organic medical resources requiring support and describe how to support these units. Describe the procedures for mass casualty operations and patient decontamination operations. Identify and list roles of medical care (1, 2, and 3) by treatment facility and location. Refer to Tab A (Sustainment Overlay) to Appendix 1 (Logistics) to Annex F (Sustainment) and Appendix 3 (Health Service Support) to Annex F (Sustainment) as required.*

(3) (U) Medical Evacuation. *Provide medical evacuation information. Address the theater evacuation policy, en route care, medical regulating (if appropriate), casualty evacuation, and the medical evacuation of casualties contaminated with chemical, biological, radiological, and nuclear hazards.*

(4) (U) Medical Logistics. *Provide special procedures for Class VIII resupply and medical maintenance request procedures. Include the location of the medical supply support activities, and blood support units supporting the operation and the means of communicating requests for medical materiel, blood and blood products, medical devices, medical maintenance support and optical fabrication orders.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

e. (U) Foreign Nation and Host-Nation Support. *Provide host-nation support information. Refer to Annex P (Host-Nation Support) as required.*

f. (U) Resource Availability. *Identify significant competing demands for sustainment resources where expected requirements may exceed resources.*

g. (U) Miscellaneous. *Provide any general miscellaneous information not covered in this annex.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and sustainment area leaders.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault").*

b. (U) Signal. *Address any sustainment-specific communications requirements. Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

[page number]

[CLASSIFICATION

Figure E-6. Sample Annex F (Sustainment) format (continued)

[CLASSIFICATION]

ANNEX F (SUSTAINMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachments (appendixes, tabs, and exhibits).*

Appendix 1–Logistics

Appendix 2–Personnel Services Support

Appendix 3–Health Service Support

Appendix 4–Financial Management

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-6. Sample Annex F (Sustainment) format (continued)

ANNEX G (ENGINEER) FORMAT AND INSTRUCTIONS

E-38. This annex provides fundamental considerations, formats, and instructions for developing Annex G (Engineer) to the base plan or order. This annex follows the five-paragraph attachment format.

E-39. Commanders and staffs use Annex G (Engineer) to describe how the engineer plan supports the concept of operations described in the base plan or order. The engineer officer develops Annex G (Engineer).

E-40. Engineers use this annex to define engineer support to the maneuver commander's intent, coordinating instructions to subordinate commanders, and essential tasks for mobility, countermobility, and survivability. This annex is not intended to function as the internal order for an engineer organization, where the engineer commander will articulate intent, concept of operations, and coordinating instructions to subordinate, supporting, and supported commanders. This annex seeks to clarify engineer support to the base plan or order. Guidance to maneuver units on obstacle responsibilities should be listed in the body of the base plan or order, not in this annex. (See figure E-7 on pages 265 through 269 for the Annex G format.)

CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX G (ENGINEER) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding this attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for this annex are ATP 3-34.5, ATP 3-34.22, ATP 3-34.40, ATP 3-34.80, ATP 3-34.81, ATP 3-37.34, ATP 3-90.8, FM 3-34, FM 5-0, FM 6-0, and TM 3-34.85.*

(U) Time Zone Used Throughout the Operation Plan or Operation Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (to include attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting engineer support that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

[page number]
[CLASSIFICATION]

Figure E-7. Sample Annex G (Engineer) format

[CLASSIFICATION]

ANNEX G (ENGINEER) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to engineer operations. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations) as required.*

(1) (U) Terrain. *Describe the aspects of terrain that impact engineer operations. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact engineer operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy engineer units for one echelon up and two echelons down. List enemy maneuver and other capabilities that will impact engineer operations. State expected enemy courses of action and employment of enemy engineer assets. Give a detailed description of enemy engineer units, assets, and any known obstacles. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' engineer operation plan. List designation, location, and outline of plan of higher, adjacent, and other engineer assets that support or impact the issuing headquarters or require coordination and additional support.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the critical aspects of the civil situation that impact engineer operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any engineer-specific assumptions that support the annex development.*

2. (U) Mission. *State the engineer mission in support of operations, derived from base plan or order.*

3. (U) Execution.

a. (U) Scheme of Engineer Support. *Describe how engineer operations support the commander's intent and concept of operations. Establish the priorities of engineer support to units for each phase of the operation. Refer to the base plan or order and Annex C (Operations) as required.*

(1) (U) Mobility. *Describe the plan to maintain freedom of movement and maneuver. Refer to Appendix 1 (Mobility/Countermobility) to Annex G (Engineer) as required.*

(a) (U) Mobility Support. *State the scheme of support to include task and purpose. This includes the point of breach, priority of reduction capability, primary proofing technique, and lane marking method. It also includes the priority of route maintenance and route clearance capability and capacity and unit responsible. For gap crossing operations, refer to Appendix 4 (Gap Crossing Operations) to Annex C (Operations).*

[page number]

[CLASSIFICATION

Figure E-7. Sample Annex G (Engineer) format (continued)

[CLASSIFICATION]

ANNEX G (ENGINEER) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(b) (U) Countermobility Support. *State the scheme of countermobility including task and purpose, unit responsible for task, priority of effort, obstacle intent, obstacle zone/belt/group number, planned obstacle grid coordinates, and obstacle restrictions. Operations requiring obstacle emplacement are included in Tab A (Obstacle Overlay) to Appendix 1 (Mobility/Countermobility) to Annex G (Engineer).*

(2) (U) Survivability. *Describe how survivability operations support the commander's intent and concept of operations. Establish the priorities of survivability support to units for each phase of the operation. Refer to the base plan or order, Annex C (Operations) and Appendix 2 (Survivability) to Annex G (Engineer) as required.*

(3) (U) General Engineering. *Describe how general engineering assets support the commander's intent and concept of operations. Establish the priorities of support to subordinate units for each phase of the operation. Refer to the base plan or order and Annex C (Operations) and refer to Appendix 3 (General Engineering) to Annex G (Engineer) as required.*

(4) (U) Geospatial Engineering. *Describe how geospatial engineering capabilities will support the operation. Expand the scheme of engineering in Annex G (Engineer) with any additional information that clarifies the geospatial engineering tasks, purposes, and priorities in support of each phase of the scheme of maneuver. The four primary functions of geospatial engineering (generate, analyze, manage, and disseminate) may be used to structure this narrative. Refer to Appendix 4 (Geospatial Engineering) to Annex G (Engineer) as required.*

(5) (U) Environmental Considerations. *Summarize the commander's scheme of environmental actions required to support the operation plan, operation order, or concept plan. Identify issues and actions that should be addressed during all phases of the operation. Refer to Appendix 5 (Environmental Considerations) to Annex G (Engineer) as required.*

(6) (U) Engineer Reconnaissance. *State the scheme of engineer reconnaissance by task and purpose for engineer tactical and technical reconnaissance including infrastructure reconnaissance requirements.*

b. (U) Tasks to Subordinate Units. *List engineering tasks to specific units that are not assigned in the base plan or order. List tasks specific to engineering and mobility, countermobility, and survivability assets only as necessary to ensure unity of effort. Specific and detailed task descriptions should be done in each respective appendix as applicable.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order. Provide additional coordinating instructions for the following:*

(1) (U) *Identify and list the times or events when obstacle control measures become effective.*

(2) (U) *List supported unit information requirements focused on mobility, countermobility, and survivability that must be considered by subordinate engineer staff officers or that the supported unit requires. This includes engineer-related commander's critical information requirements and perhaps the requests for information that have already been submitted to higher.*

(3) (U) *Explain and describe the countermobility and survivability timelines.*

4. (U) Sustainment. *Identify sustainment priorities for engineer key tasks and specify additional sustainment instructions as necessary, and, at a minimum, address engineer Class IV and V locations. Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-7. Sample Annex G (Engineer) format (continued)

[CLASSIFICATION]

ANNEX G (ENGINEER) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

a. (U) Logistics. *Use subparagraphs to identify priorities and specific instructions for engineer logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

(1) (U) Command-Regulated Classes of Supply. *Identify command-regulated classes of supply. Highlight supported unit allocations that affect engineer support (such as Class IV barrier material allocated to other efforts).*

(2) (U) Supply Distribution Plan. *Establish Class IV and Class V (obstacle) supply distribution plan. State method of supply for each class and for each supported unit subordinate element. List supply linkup points. Identify and list all allocations of Class IV and Class V by support unit element by obstacle control measure or combination. Summarize in a matrix or table as necessary.*

(3) (U) Transportation. *List any transportation coordination to include supported troop movements, Class IV building materials, and Class V materials.*

b. (U) Personnel. *Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical care. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and key engineer leaders. Designate the headquarters that controls the mobility, countermobility, and survivability effort within work lines on an area basis. Clearly identify release authority for special munitions, such as the Intelligent Munitions System (Scorpion).*

(2) (U) Succession of Command. *State the succession of command or leadership if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault").*

b. (U) Signal. *Describe the concept of signal support as it pertains to engineer support operations, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

[page number]

[CLASSIFICATION]

Figure E-7. Sample Annex G (Engineer) format (continued)

[CLASSIFICATION]

OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: List lower-level attachment (appendixes, tabs, and exhibits). If a particular attachment is not used, place "not used" beside the attachment number. Unit standard operating procedures will dictate attachment development and format. Common attachments include the following:

Appendix 1–Mobility and Countermobility

Appendix 2–Survivability

Appendix 3–General Engineering

Appendix 4–Geospatial Engineering

Appendix 5–Environmental Considerations

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-7. Sample Annex G (Engineer) format (continued)

ANNEX H (SIGNAL) FORMAT AND INSTRUCTIONS

E-41. This annex provides fundamental considerations, formats, and instructions for developing Annex H (Signal) to the base plan or order. This annex follows the five-paragraph attachment format.

E-42. Commanders and staffs use Annex H (Signal) to describe how signal supports the concept of operations described in the base plan or order. The assistant chief of staff, signal (G-6) or battalion or brigade signal staff officer (S-6) develops Annex H (Signal). (See figure E-8 on pages 270 through 273 for the Annex H format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

Copy ## of ## copies
Issuing headquarters
Place of issue
Date-time group of signature
Message reference number

Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX H (SIGNAL) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the annex.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for signal support include. ATP 6-02.2, ATP 6-02.12, ATP 6-02.45, ATP 6-02.53, ATP 6-02.54, ATP 6-02.60, ATP 6-02.61, ATP 6-02.62, ATP 6-02.70, ATP 6-02.71, ATP 6-02.75, and FM 6-02.*

(U) Time Zone Used throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting signal support that paragraph 1 of the operation plan or operation does not cover, or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to signal support. Refer to Annex B (Intelligence) as required. This is an opportunity to define the area of interest in cyberspace, which does not always align with the physical area of interest. Include key concentration points of network (regional hub node, regional cyber center, joint regional security stack locations, and tactical hub node placement, if outside the assigned area).*

[page number]
[CLASSIFICATION]

Figure E-8. Sample Annex H (Signal) format

[CLASSIFICATION]

ANNEX H (SIGNAL) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

b. (U) Assigned Area. *Describe the assigned area of operation, zone, or sector as it relates to signal support. Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact signal support. Refer to Annex B (Intelligence) and Appendix 12 (Cyberspace Electromagnetic Activities) to Annex C (Operations) as required.*

(2) (U) Weather. *Describe all critical weather aspects that impact signal support such as precipitation, wind, and solar weather that also may impact network availability or reliability in the assigned area. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy communications, cyberspace, and electromagnetic warfare units that may influence the assigned area or area of interest. List enemy capabilities (including electromagnetic attack, cyberspace operations, and electromagnetic warfare) that impact signal support. State expected enemy courses of action that may impact friendly ability to communicate. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Briefly identify the signal mission of friendly forces and the objectives, goals, and missions of civilian organizations that impact support. Refer to Annex A (Task Organization) and Annex C (Operations) as required.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

(4) (U) Signal Support Impact of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters' signal support.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Risk. *State the risk to mission, risk to network, and risk to personnel. Identify entry points into cyberspace which are higher vulnerability areas, such as physical nodes connected to commercial networks and virtual local area network traffic and how to mitigate these risks.*

2. (U) Mission. *Support [State the mission of the functional area in support of the base plan or order.].*

3. (U) Execution.

a. (U) Scheme of Signal Support. *Describe how signal elements support the commander's intent and concept of operations, by phase, as described in the base plan or order. Describe the templated locations of all command and control nodes including command posts and retransmission sites needed to support the concept of operations. Describe the systems and capabilities residing at each of the command posts to enable primary, alternate, contingency, and emergency communication to higher, subordinate, and adjacent units as required. Define the primary, alternate, contingency, and emergency communication plan as it is nested within the concept of signal support. Define triggers to transition command and control and technical channels across the various command posts throughout the operation. Establish the priorities of support to units for each phase of the operation. Refer to Annex C (Operations) as required.*

[page number]

[CLASSIFICATION]

Figure E-8. Sample Annex H (Signal) format (continued)

[CLASSIFICATION]

ANNEX H (SIGNAL) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) Scheme of Department of Defense Information Network Operations. *Describe how Department of Defense information network operations (including cyberspace security and communications security) support each phase of the operation in the base plan or order. When working with unified action partners, describe how they are incorporated into Department of Defense information network operations. (Refer to the joining, membership, and exiting instruction tabs as required.)*

(2) Scheme of Network Transport and Information Services. *Describe how network transport systems (satellite, line of sight, radio, radio retransmission, cable, and wire) and information services support each phase of the operation in the base plan or order. When working with unified action partners, describe how they are incorporated into the network transport systems and information services. (Refer to the joining, membership, and exiting instruction tabs as required.)*

(3) Scheme of Spectrum Management Operations. *Describe how spectrum management and frequency deconfliction support each phase of the operation in the base plan or order. When working with unified action partners, describe how they are incorporated into spectrum management operations. (Refer to the joining, membership, and exiting instruction tabs as required.)*

b. (U) Tasks to Subordinate Units. *Further description of tasks nested in the base order. List signal support tasks assigned to subordinate signal units not contained in the base order. Each task must include who (the subordinate unit assigned the task), what (the task itself), when, where, and why (purpose). Include tasks for supporting interagency, intergovernmental, and nongovernmental organizations. Use a separate subparagraph for each unit. List units in task organization sequence. Place tasks that affect two or more units in paragraph 3c (Coordinating Instructions).*

c. (U) Tasks to Staff. *Include specific staff tasks which must be completed to execute the mission. This could include account validation or creation requirements, computer imaging tasks, nomination of guard and taboo frequencies, validation exercise requirements, or other key events.*

d. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order such as timelines for communications exercises, validation exercises, and communications specific rehearsals.*

4. (U) Sustainment. *Identify priorities of sustainment for key signal support capabilities and specify additional instructions as required in the paragraph below. Refer to Annex F (Sustainment) as required.*

a. (U) *Logistics. Use subparagraphs to identify priorities and specific instructions for signal logistic support by phase and by communications site. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) *Personnel. Define plan for rotating personnel through communications sites.*

c. (U) *Health Service Support. Refer to Annex F (Sustainment) as required.*

d. (U) *Financial Management. Refer to Annex F (Sustainment) as required.*

e. (U) *Maintenance Plan. Describe field service representative support plan, maintenance evacuation plan, resourcing plan for non-mission capable items, locations of unit spares for critical communications systems, scheduled network outages, and authorized service interruptions.*

[page number]

[CLASSIFICATION]

Figure E-8. Sample Annex H (Signal) format (continued)

[CLASSIFICATION]

ANNEX H (SIGNAL) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of Key Signal Leaders. *State the locations of the assistant chief of staff, signal or battalion or brigade signal staff officer and key signal unit commanders and staff officers during each phase of the operation.*

(2) (U) Succession of Technical Control. *State the succession of technical control authority, if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault").*

b. (U) Signal. *Describe the scheme of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits). If a particular attachment is not used, place "not used" beside the attachment number. Unit standard operating procedures will dictate attachment development and format. Common attachments include the following:*

Appendix 1 – Concept of Signal Support Overlay.

Appendix 2 – Department of Defense Information Network Operations.

Appendix 3 – Network Transport and Information Services.

Appendix 4 – Spectrum Management Operations.

Appendix 5 – Communications Security.

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-8. Sample Annex H (Signal) format (continued)

ANNEX I (AIR AND MISSILE DEFENSE) FORMAT AND INSTRUCTIONS

E-43. This annex provides fundamental considerations, formats, and instructions for developing Annex I (Air and Missile Defense) to the base plan or order. This annex follows the five-paragraph attachment format.

E-44. Commanders and staffs use Annex I (Air and Missile Defense) to describe how air defense supports the concept of operations described in the base plan or order. The supporting air defense artillery commander in coordination with the air and missile defense officer (or the air defense support officer in brigades), develops Annex I (Air and Missile Defense). In the absence of a supporting air defense artillery (ADA) unit, the air defense officer within the staff develops the annex. (See figure E-9 on pages 274 through 280 for the Annex I format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

ANNEX I (AIR AND MISSILE DEFENSE) to OPERATION PLAN or ORDER [number] [(code name)]— [issuing headquarters] [(classification of title)]

Copy ## of ## copies

Issuing headquarters

Place of issue

Date-time group of signature

Message reference number

Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for this annex include JP 3-01, ADP 3-19, FM 3-0, FM 3-01, and FM 3-01.44.*

(U) Time Zone Used Throughout the Plan or Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting air and missile defense that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest, which includes the area of influence, as it relates to air and missile defense. Identify area of interest characteristics and potential locations and capabilities of threats which can affect air defense artillery systems or assets. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Annex C (Operations) as required.*

(1) (U) Terrain. *Describe the aspects of terrain that impact air and missile defense operations. Terrain information considers vegetation, type of terrain features, trafficability of roads, cross-country movement, and local water features. Refer to Annex B (Intelligence)as required.*

[page number]

[CLASSIFICATION]

Figure E-9. Sample Annex I (Air and Missile Defense) format

[CLASSIFICATION]

ANNEX I (AIR AND MISSILE DEFENSE) to OPERATION PLAN or ORDER __ [number] [code name]— [issuing headquarters] (classification of title)

(2) (U) Weather. *Describe the aspects of weather that will impact air and missile defense systems. State the weather forecast for next 48 to 72 hours (including the daily highs, lows, and chance of precipitation). Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List the types, location, activity, and strength of enemy air and missile systems, to include ballistic missile, cruise missile, manned and unmanned aircraft, and indirect fire. Identify number of aircraft sorties available per day by type of aircraft and known and estimated loiter and turnaround times. Develop templates presenting known and suspected airfields and forward arming and refueling points. List enemy ground force, electromagnetic warfare threats, and other capabilities that will impact friendly air and missile defense operations. State expected enemy courses of action and employment of enemy air and ballistic assets per the air and missile defense intelligence preparation of the operational environment. Include projected air avenues of approach, an event template, and situational template. Develop and present in Appendix 2. Refer to Annex B (Intelligence) as required.*

d. Friendly Forces. *Identify the mission of higher air defense artillery headquarters; locations and planned actions of units on left, right, front, and rear; joint and multinational air and missile defense systems available; supported forces; surveillance and intelligence provided by intelligence, surveillance, and reconnaissance platforms; and security of fixed, semi-fixed, and mobile air defense artillery units provided by supported units, as applicable. Enhance continual situational understanding by frequently updating data of friendly forces. Describe the method and timing of the data updates. Outline the higher headquarters' air and missile defense plan. List designation, location, and outline the plan of higher, adjacent, and other air and missile defense organizations and assets (for example, non-dedicated Stinger man-portable air defense system teams) that support or impact the issuing headquarters or require coordination and additional support. Develop an arrayal of friendly forces and include in Appendix 3.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the next higher headquarters mission, commander's intent, and concept of operations.*

(3) (U) Missions of Adjacent Units. *State the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

(4) (U) Attachment and Detachments. *Identify units that are to be attached or detached in creating task forces by phase of operation.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the area of operations that may impact the conduct of air and missile defense operations or impact air and missile defense-specific equipment and tactics. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact air and missile defense operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any air and missile defense-specific assumptions that support the annex development.*

2. (U) Mission. *State the air and missile defense mission in support of the base plan or order.*

[page number]

[CLASSIFICATION]

Figure E-9. Sample Annex I (Air and Missile Defense) format (continued)

[CLASSIFICATION]

ANNEX I (AIR AND MISSILE DEFENSE) to OPERATION PLAN or ORDER __ [number] [code name]— [issuing headquarters] (classification of title)

3. (U) Execution. This paragraph contains the commander's visualization of the execution of an operation from start to completion.

a. (U) Scheme of Air and missile Defense. *Describe how air and missile defense supports the commander's intent (commander's vision of the battle, how the commander expects to fight, and what is expected to be accomplished) and concept of operations. State the priorities for, allocation of, and restrictions on air defense artillery units (and non-dedicated Stinger man-portable air defense system teams) by phase of the operation. The scheme of air and missile defense must be concise but specific enough to clearly state what air defense artillery units are to accomplish in the operation. It must answer the "who, what, when, where, and why" of the air defense artillery units to be provided but provide enough flexibility to allow subordinate commanders to determine the "how" to the maximum extent possible by ensuring necessary procedural and positive control. It may include a general narrative for the entire operation that should address the air and missile defense support tasks, allocation of assets, positioning guidance for air defense artillery units, identification and engagement authorities (by area, type of air and missile threat, or phase of operation) and rules of engagement. Cite applicable air and missile defense principles and employment tenets to be implemented in the narrative. Refer to the base plan or order and Annex C (Operations) as required.*

(1) (U) Task, Purpose, Execution, and Assessment: *The example given in Appendix 1 (Air and Missile Defense Execution Matrix) provides a sample matrix for task, purpose, execution, and assessment, to be used at the discretion of the commander. See local standard operating procedures for additional guidance and details.*

(2) (U) Priorities for Air Defense. *Expect priorities and levels of protection to change during succeeding phases of operations per the mission variables.*

(3) (U) Concept of Employment. *Provide direction for subordinate force arrayal, including unit designations, nomenclatures, tactical tasks, and future missions. Establish the scheme of maneuver that supports the maneuver commander. Designate unit locations and primary and secondary target lines. Use Appendix 2 to show the locations of air defense artillery units and other supporting air and missile defense elements in the area of operations. Enact passive air and missile defense measures; include movements to alternate sites and survivability moves in coordination with the supported unit. Refer to unit standard operating procedures and supported unit operation plans and orders.*

b. (U) Engagement and Identification Authorities. *Identify the designated engagement and identification authority (authorities). Refer to the area air defense plan, airspace control plan, and special instructions. Ensure all subordinate air defense artillery units understand who has the authority to direct an engagement.*

c. (U) Support Relationships. *List the support relationships of subordinate air defense artillery units to maneuver forces and other assets as applicable. Develop a matrix and post as Appendix 4 when discussions of the relationships are too lengthy to include in this paragraph.*

[page number]

[CLASSIFICATION]

Figure E-9. Sample Annex I (Air and Missile Defense) format (continued)

[CLASSIFICATION]

ANNEX I (AIR AND MISSILE DEFENSE) to OPERATION PLAN or ORDER __ [number] [code name]— [issuing headquarters] (classification of title)

d. (U) Airspace Management. *Keep air defense artillery units and supporting elements aware of friendly and neutral airspace users. Determine the most effective, but least restrictive, airspace control measures in coordination with other airspace management entities and organizations. Advise subordinate air defense artillery, other Army units (for counter-unmanned aircraft system elements and non-dedicated Stinger man-portable air defense system teams), and other supporting joint and multinational air and missile defense forces of the airspace control measures in effect in the assigned area. Support the clearance of airspace and deconfliction of air users as required. Support the establishment of restricted operating zones. Present the airspace management measures in effect in Appendix 5. Refer to the airspace control plan, Appendix 10 (Airspace) to Annex C (Operations), and the aviation plan for any local airspace control measures. All air defense artillery airspace management operations are conducted with other airspace users, such as field artillery and aviation; planning elements, such as an air defense and airspace management cell, protection cell and joint air-ground integration center; and external airspace entities, such as the U.S. Air Forces' control and reporting center.*

e. (U) Joint and Multinational Air and Missile Defense. *Describe concepts for including joint and multinational air and missile defense forces and systems in defenses in the assigned area. Address their capabilities and potential missions. Identify limitations inherent in multinational capabilities and in operating with multinational air and missile defense forces, such as restrictions in disseminating some classified information.*

f. (U) Early Warning. *Develop a comprehensive sensor plan, by phase of operation, based on the air and missile defense intelligence preparation of the operational environment to detect all aerial threats and present in Appendix 6. Employ unit sensors to detect aerial threats. Establish an air threat warning system with the supported commander. Coordinate with other air and missile defense elements whose sensors can enhance early warning; coordination should be effected through the air defense coordinator/deputy air defense coordinator or the air defense artillery fire control officer. Use procedures in standard operating procedures for instructions on voice and data transmittals. Establish an early warning frequency to transmit warnings and alerts only to at-risk units, bases, or areas and all-clear notifications once the threat is over. Develop an emission control plan.*

g. (U) Essential Elements of Friendly Information. *Provide additional information necessary for planning not already mentioned, including the following—*

(1) (U) Date-time group, location, size, disposition, and flight path of aviation units (manned and unmanned aircraft) in the assigned area.

(2) (U) Date-time group, location, size, disposition, and mobility of units in the assigned area.

(3) (U) Location and disposition of command nodes.

(4) (U) Sustainment plans and sustainment operations.

(5) (U) Sustainment, operational, intelligence, command, control, and communication limitations and vulnerabilities.

(6) (U) Vulnerabilities that could be exploited to jeopardize multinational support of ongoing operation.

[page number]

[CLASSIFICATION]

Figure E-9. Sample Annex I (Air and Missile Defense) format (continued)

[CLASSIFICATION]

ANNEX I (AIR AND MISSILE DEFENSE) to OPERATION PLAN or ORDER __ [number] [code name]— [issuing headquarters] (classification of title)

h. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order. Identify any nonstandard operating procedure type of information that will enhance coordinated air and missile defense actions. Use an appendix (appendices) for lengthy presentations.*

(1) (U) Operational timeline. *List time or condition when the operation order becomes effective. List critical times. Refer to Appendix 3 (Decision Support Products) to Annex C (Operations) as required.*

(2) (U) Rules of Engagement. *Identify the right of self-defense, identification criteria (applied to friendly, neutral, and hostile platforms), fire control orders, weapons control status, and levels of control in effect.*

(3) (U) Alert States. *List the manning and equipment resources required to achieve various operational statuses of operation per unit standard operating procedures. Include times to achieve ready-to-fire status and desired radar emissions. Designate units for maintenance and training.*

(4) (U) Air Defense Warning Conditions. *List the three air defense warning conditions. Identify the warning condition in effect. Note that subordinate air defense artillery commanders may issue higher, but not lower, conditions for their area of operation.*

(5) (U) Firing Doctrine. *Identify the method of fire to be used by each type of available air defense artillery system against air and missile threats.*

(6) (U) Coordinating Altitude. *Identify the coordinating altitude in the supported unit's (or higher echelon, as applicable) area of operation and address which commander is responsible for air traffic and management above and below it. Update as necessary in accordance with airspace control orders, airspace tasking orders, and special instructions to ensure currency*.

(7) (U) Non-Dedicated Air Defense. *Transmit air defense warning conditions and rules of engagement to supported units to guide aerial engagements. Direct the air defense coordinator and deputy air defense coordinator to ensure the supported commander is aware of the aerial operational environment.*

4. (U) Sustainment. *Identify sustainment priorities for air and missile defense key tasks and specify additional sustainment instructions as necessary. Describe critical or unusual sustainment actions that might occur before, during, and after the battle to support the air defense artillery commander's scheme of operations. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Use subparagraphs to identify priorities and specific instructions for logistics support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

(1) (U) Supply. *Identify the location of ammunition transfer holding points and ammunition supply points and petroleum, oils, and lubricants sites. Identify other critical items of supply. List the air defense specific munitions (Patriot, Stinger, and 30mm by type and load out) required supply and controlled supply rates for planning and prioritization purposes. State which unit is missioned to deliver the supplies and the coordination needed to be effected with higher air defense artillery headquarters and applicable supporting units. Refer to Annex F (Sustainment) as required.*

(2) (U) Allocation of Ammunition. *List the priorities for allocation/resupply of missile and gun munitions for each phase of the operation based on the amount of Class V available. Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-9. Sample Annex I (Air and Missile Defense) format (continued)

[CLASSIFICATION]

ANNEX I (AIR AND MISSILE DEFENSE) to OPERATION PLAN or ORDER __ [number] [code name]— [issuing headquarters] (classification of title)

(3) (U) Maintenance. *List maintenance actions to be performed internally or by a higher air defense artillery headquarters and those required by a supported force or installation. Designate and prioritize contact teams and personnel for support of air defense artillery systems, motors, and communications.*

b. (U) Personnel. *Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal. *This paragraph contains instructions relative to command and to the operation of communications equipment.*

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the chain of command and locations of the commander and key air and missile defense leaders, to include joint air commanders such as the area air defense commander and regional and sector air defense commander as appropriate.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U) Command Posts. *Describe the employment of command posts, including the location of each command post and its time of opening and closing, as appropriate. State the primary controlling command post for specific tasks or phases of the operation and designated alternate in the event the primary command post is moving or unable to continue to operate.*

b. (U) Signal. *Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Include the supported unit frequency; convoy frequency, if applicable; challenge, password, signals, and code words; early warning frequency; IFF code book number; and listening silence instructions. Refer to Annex H (Signal) as required. Present the plan/architecture in Appendix 8.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

[page number]

[CLASSIFICATION]

Figure E-9. Sample Annex I (Air and Missile Defense) format (continued)

[CLASSIFICATION]

ANNEX I (AIR AND MISSILE DEFENSE) to OPERATION PLAN or ORDER __ [number] [code name]— [issuing headquarters] (classification of title)

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1– Air and Missile Defense Execution Matrix

Appendix 2– Enemy Force Arrayal

Appendix 3– Friendly Force Arrayal

Appendix 4– Support Relationships

Appendix 5– Airspace Management Measures

Appendix 6– Sensor Plan

Appendix 7– Air and Missile Defense Communications Architecture

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachment.*

[page number]

[CLASSIFICATION]

Figure E-9. Sample Annex I (Air and Missile Defense) format (continued)

ANNEX J (PUBLIC AFFAIRS) FORMAT AND INSTRUCTIONS

E-45. This annex provides fundamental considerations, formats, and instructions for developing Annex J (Public Affairs) to the base plan or order. This annex follows the five-paragraph attachment format.

E-46. Commanders and staffs use Annex J (Public Affairs) to describe how public affairs activities support the concept of operations described in the base plan or order. The public affairs officer develops Annex J (Public Affairs). (See figure E-10 on pages 281 through 284 for the Annex J format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX J (PUBLIC AFFAIRS) TO OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for public affairs activities include FM 3-61, FM 5-0, and JP 3-61.*

(U) Time Zone Used Throughout the Operation Plan or Operation Order: Write the time zone established in the base plan or order.

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting public affairs that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to public affairs. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

[page number]

[CLASSIFICATION]

Figure E-10. Sample Annex J (Public Affairs) format

[CLASSIFICATION]

ANNEX J (PUBLIC AFFAIRS) TO OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

(1) (U) Terrain. *Describe the aspects of terrain that impact public affairs activities. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact public affairs. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *Identify enemy forces' general communications and media capabilities. Describe the enemy's disposition, location, strength, and probable public affairs courses of actions, including disinformation, rumors, and propaganda. Refer to Appendix B (Intelligence) as required.*

(1) (U) Enemy Communications and Media Capabilities. *Identify enemy forces' general communications and media capabilities, including television, radio, and print mediums and online and social media capabilities.*

(2) (U) Enemy Courses of Action. *Describe enemy's employment of communications and media capabilities that would impact friendly operations and public affairs operations.*

d. (U) Friendly Forces. *Outline the higher headquarters' plan (and public affairs annex) and adjacent unit public affairs plans. Provide information on friendly coalition forces, which may impact the public affairs' mission. Note public affairs resources supporting the unit (who, where, when) and higher, allied, and adjacent headquarters.*

(1) (U) Higher Headquarters Public Affairs Mission Two Levels Up. *State the public affairs' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters Public Affairs Mission One Level Up. *State the public affairs' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Public Affairs Mission of Adjacent Units. *Identify and state the public affairs' missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact the conduct of operations of public affairs operations or implementation of public affairs activities. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe critical aspects of the civil situation, to include informational considerations, that impact public affairs operations. Refer to Annex K (Civil Affairs Operations) as required.*

g. (U) Media. *Identify media in the area (who, where, and pools) including U.S., international, and host nation.*

h. (U) Assumptions. *List any additional assumptions or information not included in the general situation that will impact the public affairs mission.*

2. (U) Mission. *State the mission of public affairs in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Public Affairs. *Describe how public affairs supports the commander's intent and concept of operations. Summarize how the commander visualizes executing the public affairs plan. Include public affairs priorities: Intent (access, information, welfare, morale, and will to win), concept (who, where, what, why, and when), specifics (tasks to a subordinate; who is to do what, where, and when, including nonpublic affairs activities), and actions with media (credential, train, and transport).*

[page number]

[CLASSIFICATION]

Figure E-10. Sample Annex J (Public Affairs) format (continued)

[CLASSIFICATION]

ANNEX J (PUBLIC AFFAIRS) TO OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

(1) (U) Outline of Public Affairs Objectives. *Describe clearly defined public affairs objectives that the commander intends to achieve.*

(2) (U) Outline of Public Affairs Tasks. *Identify and assign supporting public affairs tasks to each objective. Assign specific tasks to elements of the command charged with public affairs tasks. Establish priorities of support for each phase of the operation.*

(b) (U) Tasks to Subordinate Units. *Identify and list public affairs tasks assigned to subordinate units not contained in the base order including maneuver and augmenting public affairs units. Also identify unit public affairs representatives' requirements.*

(c) (U) Coordinating Instructions. *Give details on coordination, task organization, and groupings. List instructions that apply to two or more subordinate elements or units. Refer to supporting appendixes (public affairs running estimate) not referenced elsewhere (public affairs guidance, media in country, media en route with U.S. forces, media contact report, handover checklist, task organization, and public affairs synchronization requirements).*

4. (U) Sustainment. *Identify priorities of sustainment for public affairs key tasks and specify additional instructions as required by the paragraph below. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Use subparagraphs to identify priorities and specific instructions for maintenance, transportation, supply, field services, distribution, contracting, and general engineering support. Outline requirements for establishing a media operations center (if required) and embedded journalists. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of Commander and Key Leaders. *State where the commander and key leaders intend to be during the operation, by phase if the operation is phased.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault.").*

b. (U) Signal. *Address any public affairs specific communication requirements (such as commercial internet or Defense Visual Information Distribution Systems) and reports. Describe the scheme of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

[page number]

[CLASSIFICATION]

Figure E-10. Sample Annex J (Public Affairs) format (continued)

[**CLASSIFICATION]**

ANNEX J (PUBLIC AFFAIRS) TO OPERATION PLAN or ORDER [number] [(code name)]—[(classification of title)]

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1–Public Affairs Running Estimate

Appendix 2–Public Affairs Guidance

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-10. Sample Annex J (Public Affairs) format (continued)

ANNEX K (CIVIL AFFAIRS OPERATIONS) FORMAT AND INSTRUCTIONS

E-47. This annex provides fundamental considerations, formats, and instructions for developing Annex K (Civil Affairs Operations) to the base plan or order. This annex follows the five-paragraph attachment format.

E-48. Commanders and staffs use Annex K (Civil Affairs Operations) to describe how civil affairs operations, in coordination with other military and civil organizations, support the concept of operations described in the base plan or order. The assistant chief of staff, civil affairs operations (G-9) or battalion or brigade civil affairs operations staff officer (S-9) is responsible for developing Annex K (Civil Affairs Operations). (See figure E-11 on pages 285 through 290 for the Annex K format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX K (CIVIL AFFAIRS OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding this attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs such as the civil affairs operations annex of higher headquarters, relevant civilian agency operations guides and standard documents, relevant plans of participating civilian organizations, coordinated transition plans, international treaties and agreements, and civil information management plans.*

c. *Doctrinal references for civil affairs operations include FM 3-57, FM 5-0, FM 6-0, and JP 3-57.*

(U) Time Zone Used Throughout the Operation Plan or Operation Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting civil affairs operations that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to civil affairs operations. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-11. Sample Annex K (Civil Affairs Operations) format

[CLASSIFICATION]

ANNEX K (CIVIL AFFAIRS OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact civil affairs operations such as population centers, likely movement corridors of dislocated civilians, and terrain that channels dislocated civilians. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact civil affairs operations such as seasonal events (rain, flooding, wind storms, and snow) that may impact commercial mobility, agricultural production, farmer to market access, and populace and resources control in the assigned area. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy civil affairs operations units for one echelon up and two echelons down. Identify enemy forces and appraise their general capabilities and impacts on the indigenous population and civil affairs operations. State expected enemy courses of action and employment of enemy civil affairs operations assets. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' civil affairs operation plan. Briefly identify the mission of friendly forces and the objectives, goals, and mission of civilian organization that impact civil affairs operations. List designation, location, and outline of plan of higher, adjacent, and other civil affairs organizations and assets that support or impact the issuing headquarters or require coordination and additional support.*

(1) (U) Higher Headquarters Two Levels Up. *Identify and state the civil affairs operations higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify and state the civil affairs operations higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the civil affairs operations missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

(1) (U) Interagency Organizations. *Identify and state the objectives and primary tasks of those interagency organizations that impact the unit's civil affairs operations mission. Briefly describe the capabilities and capacity of each organization if not listed in Annex V (Interagency Coordination).*

(2) (U) Intergovernmental Organizations. *Identify and state the objectives and primary tasks of those intergovernmental organizations that impact the unit's civil affairs operations mission. Briefly describe the capabilities and capacities of each organization.*

(3) (U) Nongovernmental Organizations. *Identify and state the objectives and primary tasks of those nongovernmental organizations that impact the unit's civil affairs operations mission. Briefly describe the capabilities and capacities of each organization.*

f. (U) Civil Considerations. *Describe the critical aspects of the civil situation that impact civil affairs operations using the memory aid ASCOPE (areas, structures, capabilities, organizations, people, and events). Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-11. Sample Annex K (Civil Affairs Operations) format (continued)

[CLASSIFICATION]

ANNEX K (CIVIL AFFAIRS OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Areas. *List the key civilian areas such as political boundaries; locations of government centers; social, political, religious, or criminal enclaves; agricultural and mining regions; trade routes; possible sites for the temporary settlement of dislocated civilians in the area of interest. Describe how these civilian areas affect the mission and how military operations may affect these areas.*

(2) (U) Structures. *List the locations of existing civil structures (critical infrastructure) such as ports, air terminals, transportation networks, bridges, communications towers, power plants, and dams. Identify churches, mosques, national libraries, hospitals, and other cultural sites generally protected by international law or other agreements. Other infrastructure includes governance and public safety structures (national, regional, and urban government facilities, record archives, judiciary, police, fire, and emergency medical services) and economic and environmental structures (banking, stock and commodity exchanges, toxic industrial facilities, and pipelines). Identify facilities with practical applications—such as jails, warehouses, schools, television stations, radio stations, and print plants—which may be useful for military purposes.*

(3) (U) Capabilities. *Describe civil capabilities by assessing the population's capabilities of sustaining itself through public safety, emergency services, and food and agriculture. Include whether the population needs assistance with public works and utilities, public health, public transportation, economics, and commerce. Refer to the civil affairs preliminary area assessment.*

(4) (U) Organizations. *Identify and list civil organizations that may or may not be affiliated with government agencies, such as religious groups, ethnic groups, multinational corporations, fraternal organizations, patriotic or service organizations, intergovernmental organizations, or nongovernmental organizations. Do not repeat those listed in Annex V (Interagency Coordination) or paragraph 1e (Interagency, Intergovernmental, and Nongovernmental Organizations) of this annex. Include host-nation organizations capable of forming the nucleus for humanitarian assistance programs, interim-governing bodies, civil defense efforts, and other activities.*

(5) + (U) People. *List key personnel and their linkage to the population, leaders, figureheads, clerics, and subject matter experts such as plant operators and public utility managers. Categorize groups of civilians using local nationals (town and city dwellers, farmers and other rural dwellers, and nomads), local civil authorities (elected and traditional leaders at all levels of government), expatriates, tribal or clan figureheads and religious leaders, third-nation government agency representatives, foreign employees of intergovernmental organizations or nongovernmental organizations, contractors (American citizens, local nationals, and third-nation citizens providing contract services), the media (journalists from print, radio, and visual media), and dislocated civilians (refugees, displaced persons, evacuees, migrants, and stateless persons) with considerations for different sexes).*

Note. This list may extend to personnel outside of the area of operation, zone, or sector whose actions, opinions, and influence can affect the commander's assigned area.

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(6) (U) Events. *Determine what events, military and civilian, are occurring and analyze the events for their political, economic, psychological, environmental, moral, and legal implications. Categorize civilian events that may affect military missions. Events may include harvest seasons, elections, riots, voluntary and involuntary evacuations, holidays, school years, and religious periods.*

g. (U) Assumptions. *List key assumptions that pertain to civil affairs operations that were used to form the civil affairs operations running estimate and develop the operation plan or operation order and this annex.*

[page number]

[CLASSIFICATION]

Figure E-11. Sample Annex K (Civil Affairs Operations) format (continued)

[CLASSIFICATION]

ANNEX K (CIVIL AFFAIRS OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

2. (U) Mission. *State the mission of civil affairs operations in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Civil Affairs Operations. *Describe how civil affairs operations support the commander's intent and concept of operations described in the base plan or order. Outline the effects the commander wants civil affairs operations to achieve while prioritizing civil affairs tasks. Identify and list civil-military objectives and the primary tasks to achieve those objectives.*

(1) (U) Execution Matrix. *Provide the execution matrix. Refer to Appendix 1 (Execution Matrix) to Annex K (Civil Affairs Operations).*

(2) (U) Populace and Resources Control Plan. *Provide the populace and resources control plan. Refer to Appendix 2 (Populace and Resources Control Plan) to Annex K (Civil Affairs Operations).*

(3) (U) Civil Information Management Plan. *Provide the civil information management plan. Refer to Appendix 3 (Civil Information Management Plan) to Annex K (Civil Affairs Operations).*

b. (U) Tasks to Subordinate Units. *State the civil affairs operations tasks assigned to each unit that report directly to the headquarters issuing the order. Each task must include who (the subordinate unit assigned the task), what (the task itself), when, where, and why (purpose). Include interagency, intergovernmental organization, or nongovernmental organization supporting tasks. Use a separate subparagraph for each unit. List units in task organization sequence. Place tasks that affect two or more units in paragraph 3c (Coordinating Instructions) of this annex.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order.*

(1) (U) Environmental Considerations. *Review environmental planning guidance and, if available, the Environmental Management Support Plan for implied civil affairs operations tasks that support environmental activities. For example, establishing and supporting camps for dislocated civilians may require air and water purification, hazardous waste and material disposal, sanitation facilities and personal hygiene facilities, and identification of toxic industrial materials (such as pesticides), and historic or cultural resources for preservation. Refer to Annex G (Engineer)and Annex E (Protection) as required.*

(2) (U) Stability Tasks. *Describe how civil affairs operations support the command's identified minimum-essential stability tasks—civil control, civil security, and restoration of essential services. Units responsible for an assigned area must execute the minimum-essential tasks with available resources if no civilian agency or organization is capable. Address course of action support to governance and economic stability if required by mission taskings of the higher headquarters.*

4. (U) Sustainment. *Identify priorities of sustainment for civil affairs operations key tasks and specify additional instructions as required. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support civil affairs teams and operations. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for civil affairs operations logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Identify unique personnel requirements and concerns associated with civil affairs operations, including global sourcing support and contracted linguist requirements. Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-11. Sample Annex K (Civil Affairs Operations) format (continued)

[CLASSIFICATION]

ANNEX K (CIVIL AFFAIRS OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical care. Refer to Annex F (Sustainment) as required. Provide additional information on the following:*

(1) (U) *Identify and list locations, capabilities, and capacity of nonmilitary medical treatment facilities that can or will support civil affairs operations.*

(2) (U) *Identify and list unique problems, challenges, and legal considerations of providing health service support to the indigenous population.*

(3) (U) *Identify and list host-nation medical support capabilities if not addressed in Annex P (Host-Nation Support).*

(4) (U) *Identify and list areas requiring capacity-building activities, such as in veterinary services or agriculture realms.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *List the location of the commander and key civil affairs leaders.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault.").*

b. (U) Signal. *Describe the scheme of signal support, for civil affairs operations, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

(1) (U) Describe the networks to monitor for reports.

(2) (U) Address any civil affairs operations specific communications or digitization connectivity requirements or coordination necessary to meet functional responsibilities (consider telephone listing). Provide instructions regarding maintenance and update of the civil information management database.

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

[page number]

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Figure E-11. Sample Annex K (Civil Affairs Operations) format (continued)

[CLASSIFICATION]

ANNEX K (CIVIL AFFAIRS OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1–Execution Matrix

Appendix 2–Populace and Resources Control Plan

Appendix 3–Civil Information Management Plan

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachment.*

[page number]

[CLASSIFICATION]

Figure E-11. Sample Annex K (Civil Affairs Operations) format (continued)

ANNEX L (INFORMATION COLLECTION) FORMAT AND INSTRUCTIONS

E-49. This annex provides considerations, formats, and instructions for developing Annex L (Information Collection), also referred to as collection management or intelligence, surveillance, and reconnaissance operations. Information collection uses a mix of ground, air, and space collection platforms at the joint, operational, and strategic levels, articulated in Army plans and orders. This annex provides a format that can be modified to meet the requirements of the base order and operations. Paragraphs throughout this annex are applicable to all formation types, unless annotated. This annex follows the five-paragraph attachment format.

E-50. The information collection annex clearly describes how information collection activities support the offensive, defensive, and stability operations or defense support of civil authorities tasks throughout the conduct of the operations described in the base order. It synchronizes activities in time, space, and purpose to achieve objectives and accomplish the commander's intent for information collection (including military intelligence disciplines). The G-3 or S-3, in conjunction with the G-2 or S-2, is responsible for this annex. (See figure E-12 on pages 291 through 296 for the Annex L format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX L (INFORMATION COLLECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding Annex L.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. List other references in subparagraphs labeled as shown.

c. Doctrinal references for this annex include FM 2-0 and FM 6-0.

(U) Time Zone Used Throughout the Operation Plan or Operation Order: *Write the time zone established in the base plan or order.*

[page number]

[CLASSIFICATION]

Figure E-12. Sample Annex L (Information Collection) format

[CLASSIFICATION]

ANNEX L (INFORMATION COLLECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

1. (U) Situation.

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it applies to information collection. Refer to Annex B (Intelligence) as required or Appendix 2 (Operation Overlay) to Annex C (Operations).*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact information collection. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact information collection. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Refer to base order, Annex A (Task Organization) and Annex C (Operations) as required.*

e. (U) Interagency, Governmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact the conduct of operations or implementation of information collection-specific equipment and tactics. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the critical aspects of the civil situation that impact information collection activities. Refer to Appendix 1 (Intelligence Estimate) to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Attachments and Detachments. *If pertinent, list units or assets attached to or detached from the issuing headquarters. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve) if different from the effective time of the base plan or order. Do not repeat information already listed in Annex A (Task Organization).*

h. (U) Assumptions. *List any information collection-specific assumptions that support the annex development.*

2. (U) Mission. *State the mission of information collection in support of the operation—a short description of the who, what (task), when, where, and why (purpose) that clearly indicates the action to be taken and the reason for doing so.*

3. (U) Execution.

a. (U) Concept of Operations. *This is a statement of the overall information collection objective. Describe how the tasks or missions of reconnaissance, surveillance, security, intelligence operations, and so forth support the commander's intent and the maneuver plan. Direct the manner in which each element of the force cooperates to accomplish the key information collection tasks and ties that to support of the operation with task and purpose statement. Must describe, at minimum, the overall scheme of maneuver and concept of fires. Refer to Appendix 1 (Information Collection Plan) to Annex L (Information Collection). The following subparagraphs are examples. Omit what is unnecessary for brevity.*

(1) (U) Movement and Maneuver. *Provide the scheme of movement and maneuver for collection assets and any other unit given a key information collection task, in accordance with the concept of operations in the base order (paragraph 3b) and Annex C (Operations). Describe the employment of information collection assets in relation to the rest of the force and state the method forces will enter the assigned area.*

[page number]

[CLASSIFICATION]

Figure E-12. Sample Annex L (Information Collection) format (continued)

[CLASSIFICATION]

ANNEX L (INFORMATION COLLECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(2) (U) Intelligence. *Describe the intelligence concept for supporting information collection. Refer to Annex B (Intelligence) as required.*

(3) (U) Fires. *Describe the concept of fires in support of information collection. Identify which information collection assets have priority of fires and the coordinating purpose of, priorities for, allocation of, and restrictions on fire support and fire support coordinating measures. Refer to Annex D (Fires) as required.*

(4) (U) Protection. *Describe protection support to information collection. Refer to Annex E (Protection) as required.*

(5) (U) Engineer. *Describe engineer support, if applicable, to information collection. Identify priority of mobility and survivability assets. Refer to Annex G (Engineer) as required.*

(6) (U) Sustainment. *Describe sustainment support to information collection as required. Refer to Annex F (Sustainment).*

(7) (U) Signal. *Describe signal support to information collection as required. Refer to Annex H(Signal).*

(8) (U) Soldier and Leader Engagement. *State overall concept for synchronizing information collection with Soldier and leader engagement. Refer to coordinating instructions in Annex C (Operations).*

(9) (U) Assessment. *If required, describe the priorities for assessment for the information collection plan and identify the measures of effectiveness used to assess end state conditions and objectives. Refer to Annex M (Assessment) as required.*

b. (U) Tasks to Subordinate Units. *State the information collection task assigned to each unit not identified in the base order. Refer to Appendix 1 (Information Collection Plan) to Annex L (Information Collection) as required.*

(1) (U) Information Collection Support Tasks for Maneuver Units.

(a) (U) Tasks to Maneuver Unit 1.

(b) (U) Tasks to Maneuver Unit 2.

(c) (U) Tasks to Maneuver Unit 3.

(2) (U) Information Collection Support Tasks for Support Units. *Direct units to observe and report in accordance with Appendix 1 (Information Collection Plan) to Annex L (Information Collection).*

(a) (U) Military Intelligence. *Refer to Annex B (Intelligence) as required.*

(b) (U) Engineer. *Refer to Annex G (Engineer) as required.*

(c) (U) Fires. *Refer to Annex D (Fires) as required.*

(d) (U) Signal. *Refer to Annex H (Signal) as required.*

(e) (U) Sustainment. *Refer to Annex F (Sustainment) as required.*

(f) (U) Protection. *Refer to Annex E (Protection) as required.*

(g) (U) Civil Affairs. *Refer to Annex K (Civil Affairs Operations) as required.*

c. (U) Coordinating Instructions. *List only instructions applicable or not covered in unit standard operating procedures.*

[page number]

[CLASSIFICATION]

Figure E-12. Sample Annex L (Information Collection) format (continued)

[CLASSIFICATION]

ANNEX L (INFORMATION COLLECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Time or Condition When the Plan Becomes Effective.

(2) (U) Priority Intelligence Requirements. *List priority intelligence requirements here, the information collection tasks associated with them, and the latest time information is of value for each priority intelligence requirement.*

(3) (U) Essential Elements of Friendly Information. *List essential elements of friendly information here.*

(4) (U) Fire Support Coordination Measures. *List fire support coordination measures. Establish no fire areas.*

(5) (U) Intelligence Handover *Lines with Adjacent Units. Identify handover guidance and parameters; refer to necessary graphics or attachments as required.*

(6) (U) Limits of Advance, Limits of Reconnaissance, and Quick Reaction Force Response Instructions. *Identify as required, referencing graphical depictions in attachments or instructions as needed.*

(7) (U) Airspace Coordinating Measures. *List airspace coordinating measures.*

(8) (U) Intelligence Coordination Measures. *List information such as restrictions on international borders or other limitations and the coordination or special instructions that apply. Identify what unit is responsible for coordinating information collection activities in relation to the area of operations.*

(9) (U) Rules of Engagement. *Refer to Appendix 11 (Rules of Engagement) to Annex C (Operations) as required.*

(10) (U) Risk Reduction Control Measures. *State reconnaissance, surveillance, and security-specific guidance such as fratricide prevention measures not included in standard operating procedures, referring to Annex E (Protection) as required.*

(11) (U) Environmental Considerations. *Refer to Appendix 5 (Environmental Considerations) to Annex G (Engineer) as required.*

(12) (U) Other Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order.*

4. (U) Sustainment. *Describe any specific sustainment requirements or refer to Annex F (Sustainment), subparagraphs may include:*

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support information collection. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for information collection logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Identify unique personnel requirements and concerns associated with information collection, including global sourcing support and contracted linguist requirements. Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-12. Sample Annex L (Information Collection) format (continued)

[CLASSIFICATION]

ANNEX L (INFORMATION COLLECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

c. (U) Health Service Support. *Provide information including the health threat (endemic and epidemic diseases, state of health of the enemy forces, and medical capabilities of the enemy force and the civilian population). Identify availability, priorities, and instructions for medical care, medical evacuation routes, barriers, and significant terrain features. Refer to Appendix 3 (Health System Support) to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *List the location of the commander and key information collection leaders and staff officers.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U) Liaison Requirements. *Identify collection liaison requirements not covered in the unit's SOPs.*

b. (U) Control.

(1) (U). Command Posts. *Describe the employment of command posts, including the location of each command post and when operational and non-operational, as appropriate. State the primary controlling command post for specific tasks or phases of the operation.*

(2) (U) Reports. *List reports not covered in standard operating procedures. Describe information collection reporting requirements for subordinate units. Refer to Annex R (Reports) as required.*

c. (U) Signal. *List signal operating instructions for information collection as needed. Consider operations security requirements. Address any information collection specific communications and digitization connectivity requirements. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base plan or order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

[page number]

[CLASSIFICATION]

Figure E-12. Sample Annex L (Information Collection) format (continued)

[CLASSIFICATION]

ANNEX L (INFORMATION COLLECTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1—Information Collection Plan

Appendix 2— Information Collection Overlay

DISTRIBUTION: *(if distributed separately from the base order).*

[page number]

[CLASSIFICATION]

Figure E-12. Sample Annex L (Information Collection) format (continued)

ANNEX M (ASSESSMENT) FORMAT AND INSTRUCTIONS

E-51. This annex provides fundamental considerations, formats, and instructions for developing Annex M (Assessment) to the base plan or order. This annex uses the five-paragraph attachment format.

E-52. Commanders and staffs use Annex M (Assessment) to quantify and qualify the effectiveness of mission success or task accomplishment. The G-3, S-3, or G-5 is responsible for the development of Annex M (Assessment).

E-53. This annex describes the assessment concept of support objectives. This annex includes a discussion of the overall assessment concept of support, with the specific details in element subparagraphs and attachments. (See figure E-13 on pages 297 through 300 for the Annex M format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

Copy ## of ## copies

Issuing headquarters

Place of issue

Date-time group of signature

Message reference number

Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX M (ASSESSMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown. List available assessment products that are produced external to this unit. This includes classified and open-source assessment products of the higher headquarters, adjacent units, key government organizations (such as the Department of State), and any other relevant military or civilian organizations.*

c. *Doctrinal references for assessment include ADP 5-0 and FM 5-0.*

(U) Time Zone Used Throughout the Plan or Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *See the base order or use the following subparagraphs. Include information affecting assessment that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to assessment. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-13. Sample Annex M (Assessment) format

[CLASSIFICATION]

ANNEX M (ASSESSMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact assessment. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact assessment. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy assessment units for one echelon up and two echelons down. List enemy maneuver and other area capabilities that will impact friendly operations. State expected enemy courses of action and employment of enemy assessment assets. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' assessment plan. List designation, location, and outline of plans of higher, adjacent, and other assessment organizations and assets that support or impact the issuing headquarters or require coordination and additional support.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact assessment. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any assessment-specific assumptions that support the annex development.*

2. (U) Mission. *State the mission of assessment in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Operational Assessment. *State the overall concept for assessing the operation. Include priorities of assessment, quantitative and qualitative indicators, and the general concept for how the recommendations produced by the assessment process will reach decision makers at the relevant time and place.*

(1) (U) Nesting with Higher Headquarters. *Provide the concept of nesting of unit assessment practices with lateral and higher headquarters (include military and interagency organizations, where applicable). Use Appendix 1 (Nesting of Assessment Efforts) to Annex M (Assessment) to provide a diagram or matrix that depicts the nesting of headquarters assessment procedures.*

[page number]

[CLASSIFICATION]

Figure E-13. Sample Annex M (Assessment) format (continued)

[CLASSIFICATION]

ANNEX M (ASSESSMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(2) (U) Information Requirements (Data Collection Plan). *Information requirements for assessment are synchronized through the information collection process and may be commander's critical information requirements. Provide a narrative that describes the plan to collect the data needed to inform the status on metrics and indicators developed. The data collection plan should include a consideration to minimize impact on subordinate unit operations. Provide diagrams or matrixes that depict the hierarchy of assessment objectives with the underlying measures of effectiveness, measures of performance, indicators, and metrics. Provide measures of effectiveness with the underlying data collection requirements and responsible agency for collecting the data.*

(3) (U) Battle Rhythm. *Establish the sequence of regularly occurring assessment activities. Explicitly state frequency of data collection for each data element. Include requirements to higher units, synchronization with lateral units, and products provided to subordinate units.*

(4) (U) Reframing Criteria. *Identify key assumptions, events, or conditions that staffs will periodically assess to refine understanding of the existing problem and, if appropriate, trigger a reframe.*

b. (U) Tasks to Subordinate Units. *Identify the unit, agency, or staff section assigned responsibility for collecting data, conducting analysis, and generating recommendations for each condition or measure of effectiveness. Refer to paragraph 3a(2) (Information Requirements) of this annex as necessary.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order. Use Appendix 3 (Assessment Working Group) to Annex M (Assessment) to include quad charts that provide details about meeting location, proponentcy, members, agenda, and inputs or outputs.*

4. (U) Sustainment. *Identify priorities of sustainment assessment key tasks and specify additional instructions as required. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support assessment teams. Use subparagraphs to identify priorities and specific instructions for assessment logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical care. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command. *State the location of key assessment cells. State assessment liaison requirements not covered in the unit's standard operating procedures.*

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and key assessment leaders.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

[page number]

[CLASSIFICATION]

Figure E-13. Sample Annex M (Assessment) format (continued)

[CLASSIFICATION]

ANNEX M (ASSESSMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)] OFFICIAL:

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault".)*

b. (U) Signal. *Address any assessment-specific communications requirements. Describe the scheme of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1–Nesting of Assessment Efforts

Appendix 2–Assessment Framework

Appendix 3–Assessment Working Group

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-13. Sample Annex M (Assessment) format (continued)

ANNEX N (SPACE OPERATIONS) FORMAT AND INSTRUCTIONS

E-54. This annex provides fundamental considerations, formats, and instructions for developing Annex N (Space Operations) to the base plan or order. This annex uses the five-paragraph attachment format.

E-55. Commanders and staffs use Annex N (Space Operations) to describe how space operations support the concept of operations described in the base plan or order. The space operations officer develops the Annex N (Space Operations).

E-56. This annex is used to coordinate early with the staff, including the G-2, S-2, G-6, S-6, air defense artillery officer, and the special technical operations element to synchronize efforts and avoid duplication of information. While the G-2 or S-2 may want to produce and include the enemy space assessment portion in Annex B (Intelligence), there are products space professionals may uniquely contribute. This annex requests space orders of battle through the Joint Space Operations Center prior to deployment. (See figure E-14 on pages 301 through 305.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Date-time group of signature

Message reference number

Include heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX N (SPACE OPERATIONS) TO OPERATION PLAN (OPLAN)/OPERATION ORDER (OPORD) [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names, or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for space operations include FM 3-14, FM 6-0, and JP 3-14.*

(U) Time zone used throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the overall general approach Army space operations will use to support mission requirement, the likelihood of operating in a denied, degraded, and disrupted space operational environment, the impact on equipment and to the mission, risk mitigation actions, and how to counter enemy actions to place friendly forces in this environment. Refer to Annex A (Task Organization) if long or complicated.*

1.(U) Situation. *Include information affecting space operations that paragraph 1 of the OPLAN or OPORD does not cover or that needs expansion.*

[page number]

[CLASSIFICATION]

Figure E-14. Sample Annex N (Space Operations) format

[CLASSIFICATION]

ANNEX N (SPACE OPERATIONS) TO OPERATION PLAN (OPLAN)/OPERATION ORDER (OPORD) [number] [(code name)]—[issuing headquarters] [(classification of title)]

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to space operations. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact space operations such as terrain masking and obscuration. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of terrestrial and space weather that impact space operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known locations and activities of enemy space capable assets and units. List enemy space capabilities that can impact friendly operations. State expected enemy courses of action and employment of enemy and commercial space assets. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' plan for space operations and space support teams including but not limited to space support elements, Army space support teams, and an organic space weapons officer. List designation, location, and outline of plans of higher, adjacent, and other space operations-related assets that support or impact the issuing headquarters or require coordination and additional support. For example, the space coordinating authority and specified processes established for the area of responsibility.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' space mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' space mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact the conduct of space operations or implementation of space-specific equipment, tactics, and capabilities. Consider all multinational, civil, and nongovernmental organizations such as civilian relief agencies and other customers and providers of space-based capabilities. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact space operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List space operations-specific assumptions that support the annex development.*

2. (U) Mission. *State the mission of space operations in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Space Operations. *Describe how space capabilities support the commander's intent and concept of operations. Establish the priorities of space support to units for each phase of the operation. For example, electromagnetic interference resolution and defended asset list. Also address unique space reliance's or vulnerabilities related to unit systems and capabilities. Refer to Annex C (Operations) as required.*

(1) (U) Description. *Describe how space capabilities and services support the operations. Emphasize the aspects of the Base plan that will require/affect space capabilities and services. Consider deployment timelines when on-orbit assets must be moved or deployed into the area of responsibility.*

[page number]

[CLASSIFICATION]

Figure E-14. Sample Annex N (Space Operations) format (continued)

[CLASSIFICATION]

ANNEX N (SPACE OPERATIONS) TO OPERATION PLAN (OPLAN)/OPERATION ORDER (OPORD) [number] [(code name)]—[issuing headquarters] [(classification of title)]

(2) (U) Employment. *If operations are phased, discuss the employment of space assets during each phase. Include discussion of priorities of access, usage, and capabilities in each phase.*

b. (U) Tasks. *Identify space tasks assigned to specific subordinate units, supporting command, or agency that provides support to the plan. Refer to any tasks in base order. Provide a concise statement of the task with sufficient detail to ensure all elements essential to the operational scheme are described properly. If the operation is phased, discuss the tasks of both supported and supporting commands/agencies during each phase. Identify space capabilities required to support the operation plan, including the following specific areas as applicable:*

(1) (U) Space Situational Awareness. *Address all capabilities and effects related to space situational awareness [understanding] requirements.*

(2) (U) Positioning, Navigation, and Timing. *Provide navigational capabilities that would aid the transit of ships, aircraft, personnel, or ground vehicles and determine the course and distance traveled or position location. Provide Global Positioning System accuracy to support Global Positioning System-aided munitions.*

(3) (U) Space Control. *Provide information on space- capabilities performed by space forces, air assets, or surface assets that ensure friendly forces and deny enemy forces the unrestricted use of space and space capabilities. Identify targetable enemy assets and limitations of targeting. Address all capabilities, effects, and limitations, related to offensive or defensive space control and navigation warfare requirements. Coordinate all plans and activities with cyberspace and electromagnetic warfare to ensure complimentary, not redundant operations, including:*

(a) (U) Defensive Space Control. *Capabilities and effects related to defensive space control.*

(b) (U) Offensive Space Control. *Capabilities and effects related to offensive space control.*

(c) (U) Navigation Warfare. *Capabilities and effects related to navigation warfare.*

(4) (U) Satellite Communication. *Describe the space operations communications plan. Ensure defensive space priorities for satellite communication links are established and coordinated based on operational priorities. Refer to Annex H (Signal) as required.*

(5) (U) Theater Missile Warning. *Provide information on the notification of enemy ballistic missile or space-weapon attacks evaluated from available sensor and sources and the possible effect on the operational area. Provide notification of friendly ballistic missile launches and the impacts on the operational areas that would require early warning of affected friendly forces and an estimated point of impact for each launch. Establish provisions, in coordination with the air defense artillery officer, to disseminate information quickly throughout the assigned areas. Refer to Annex B (Intelligence), Annex D (Fires), and Annex E (Protection) as required.*

(6) (U) Remote Sensing and Environmental Monitoring. *Identify and list meteorological, oceanographic, geodetic, and other environmental support information provided by space capabilities which affect space, air, surface, or subsurface activities and assets. Refer to Annex G (Engineer) as required.*

(7) (U) Information Collection. *Provide information pertaining to friendly and enemy forces in or external to the operational areas that would aid in operations and force positioning. Refer to Annex L (Information Collection) as required.*

(8) (U) Nuclear Detonation. *Provide information on the notification of detected nuclear detonations that might affect the operation and require evaluation as to yield and location. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-14. Sample Annex N (Space Operations) format (continued)

[CLASSIFICATION]

ANNEX N (SPACE OPERATIONS) TO OPERATION PLAN (OPLAN)/OPERATION ORDER (OPORD) [number] [(code name)]—[issuing headquarters] [(classification of title)]

(9) (U) Special Technical Operations. *Provide information on the organization and synchronization of the integrated Army and integrated joint special technical operations and alternate compensatory control measures plans in support of the commander's objectives. Refer to Annex S (Special Technical Operations) as required.*

(10) (U) Command and Control. *Provide information and an assessment on friendly space reliance upon satellite communications, missile warning, and network architectures. Determine how organic unit systems and equipment rely upon these communications paths (architectures).*

(11) (U) Cyberspace Electromagnetic Activities. *Integrate cyberspace electromagnetic activities to optimally synchronize their effects. Refer to Annex C (Operations) as required.*

c. (U) Tasks to Subordinate Units. *List space tasks assigned to specific subordinate units not contained in the base plan or order. Refer to any tasks in base order.*

d. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order. Document coordination and reach back support requests in accordance with space coordinating authority guidance such as "Space Coordinating Plans" and other directives for the area of responsibility; include unique equipment sustainment and technical points of contact.*

4. (U) Sustainment. *Identify priorities of sustainment for space operations key tasks and specify additional instructions as required. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support space operations teams and operations. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for space operations logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health System Support. *Identify availability, priorities, and instructions for medical care. Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and key space leaders such as the space coordinating authority, director of space forces, Combined Space Operations Center, cyber electromagnetic warfare officers, and other key reachback leaders.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U) Command Posts. *Describe the employment of space-related command and control and functional chains including their location and contact information. Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault").*

(4) (U) Liaison Requirements. *State the space liaison requirements not covered in the unit's standard operating procedures, such as air component coordination element or multinational space officers.*

[page number]

[CLASSIFICATION]

Figure E-14. Sample Annex N (Space Operations) format (continued)

[**CLASSIFICATION]**

ANNEX N (SPACE OPERATIONS) TO OPERATION PLAN (OPLAN)/OPERATION ORDER (OPORD) [number] [(code name)]—[issuing headquarters] [(classification of title)]

b. (U) Signal.

(1) Reports. *List space related reports not covered in standard operating procedures. Refer to any space coordinating authority concept of operations or guidance and Annex R (Reports) as required.*

(2) Communications. *Address any space-specific communications requirements such as secure chat communications applications. These often require a lengthy approval process to tunnel through existing networks and should be specified well in advance. Describe the scheme of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: I*nclude only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication, and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachments (appendices, tabs, and exhibits).*

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachment.*

[page number]

[CLASSIFICATION]

Figure E-14. Sample Annex N (Space Operations) format (continued)

ANNEX O (SPARE)

ANNEX P (HOST-NATION SUPPORT) FORMAT AND INSTRUCTIONS

E-57. This annex provides fundamental considerations, formats, and instructions for developing Annex P (Host-Nation Support) to the base plan or order. This annex uses the five-paragraph attachment format.

E-58. Commanders and staffs use Annex P (Host-Nation Support) to describe how sustainment operations support the concept of operations described in the base plan or order. The G-4 or S-4 is the staff officer responsible for Annex P (Host-Nation Support).

E-59. Host-nation support is the civil and military assistance provided by the host nation to the forces located in or transiting through that host-nation's territory. Efficient use of available host-nation support can greatly aid forces and augment the deployed sustainment structure. (See figure E-15 on pages 307 through 311 for the Annex P format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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ANNEX P (HOST-NATION SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for host-nation support include FM 3-16, FM 5-0, and FM 6-0.*

(U) Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting host-nation support that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to host nation support. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-15. Sample Annex P (Host-Nation Support) format

[CLASSIFICATION]

ANNEX P (HOST-NATION SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact host-nation support operations. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact host-nation support operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy host-nation support for one echelon up and two echelons down. List enemy maneuver and other area capabilities that will impact friendly host-nation support operations. State expected enemy courses of action and employment of enemy host-nation support assets. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' host-nation support plan. List designation, location, and outline of plans of higher, adjacent, and other host-nation support assets that support or impact the issuing headquarters or require coordination and additional support.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact the conduct of host-nation support operations or implementation of host-nation support-specific equipment and tactics. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact host-nation support operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any host-nation support-specific assumptions that support the annex development. State assumptions concerning host-nation support and the operational impact if the assumptions are inaccurate.*

h. (U) Host-Nation Support Agreements. *List host-nation support agreements, unreliable or doubtful agreements, and presumed host-nation support agreements.*

2. (U) Mission. *State the mission of host-nation support in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Host-Nation Support. *Describe how the commander's intent and concept of operations is supported by host-nation support. Cover the overall status of negotiations and agreements, including customs requirements, by country or treaty organization, presumed host-nation support, and the reliability of host-nation support. Identify peacetime and pre-conflict military information support operations that would develop support in foreign countries for the provision of host-nation support. Establish the priorities of support to units for each phase of the operation. Refer to Annex C (Operations) as required.*

b. (U) Host-Nation Support Considerations. *The subparagraphs below are not an all-inclusive list. Each host-nation agreement is unique. Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-15. Sample Annex P (Host-Nation Support) format (continued)

[CLASSIFICATION]

ANNEX P (HOST-NATION SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Accommodations. *Describe host-nation accommodation considerations for the following: billeting; offices; stores and warehouses; workshops, vehicle parks, gun parks; medical; hardstands; fuel; weapons and ammunition; transportation, including aircraft; firing ranges; training areas and facilities; recreational areas and facilities; and laundry and dry-cleaning facilities.*

(2) (U) Ammunition and Weapons. *Describe host-nation considerations for ammunition and weapons security, storage, and collection or delivery.*

(3) (U) Communications. *Describe host-nation considerations for local and international communications and security.*

(4) (U) Finance. *Describe host-nation considerations and payment for accommodations, supplies, communications, equipment, local labor, maintenance, medical treatment facilities, movement facilities, emergency facilities, and personnel facilities.*

(5) (U) Fuel. *Describe host-nation fuel considerations for aircraft, vehicles, ships, methods of delivery, storage, interoperability of refueling equipment, and common use of refueling installations.*

(6) (U) Local Labor. *Describe host-nation local labor considerations for method of hiring, method of payment, and administration.*

(7) (U) Maintenance. *Describe host-nation maintenance considerations for accommodations, vehicles, ships, equipment, roads, fixed and rotary wing aircraft, provision of assembly areas, damage control, emergency facilities for visitors' vehicles and equipment, and evacuation of disabled vehicles and equipment.*

(8) (U) Medical. *Describe host-nation medical considerations for medical treatment facilities, veterinary treatment facilities, reciprocal national health agreements, and availability of medical material and medical devices, standards of care, public health facilities, accessibility to care, and medical and casualty evacuation.*

(9) (U) Movement. *Describe host-nation movement considerations for airheads (facilities, alternates, equipment, and refueling), ports (facilities, alternates, ships, draft, bunkering, fueling, and repair), road and rail movement (personnel, equipment, security, and traffic control), and pipeline movement.*

(10) (U) Rations. *Describe host-nation rations considerations for fresh food, packaged foods, and potable water.*

(11) (U) Supplies and Equipment. *Describe host-nation supplies and equipment considerations for common use items other than ammunition, fuel, or rations.*

(12) (U) Translation. *Describe host-nation translation considerations for interpreters, linguists, language specialists, and document translation.*

(13) (U) Transportation Equipment. *Describe host-nation transportation equipment considerations for use of host-nation military vehicles, equipment, ships, and aircraft; locally hired vehicles and equipment, ships, and aircraft; and the policy on drivers and handlers of the military and locally hired vehicles.*

(14) (U) Water. *Describe host-nation water considerations for production and purification capability (municipal and other water treatment systems), distribution capability (trucks, pipeline, and hose line), storage capability, receipt and issue capability, available water sources (wells, surface, and subsurface), and host-nation water quality standards.*

[page number]

[CLASSIFICATION]

Figure E-15. Sample Annex P (Host-Nation Support) format (continued)

[CLASSIFICATION]

ANNEX P (HOST-NATION SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

c. (U) Tasks to Subordinate Units. *List host-nation support tasks assigned to specific subordinate units not contained in the base order. Identify the office of primary responsibility for each type of host-nation support managed separately within the command.*

d. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order.*

4. (U) Sustainment. *Identify priorities of sustainment for host-nation support key tasks and specify additional instructions as required. Outline support limitations that are due to lack of host-nation water agreements, operational impact, status of any current negotiations, and prospects for availability of the required support on an emergency basis. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support host-nation support teams and operations. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for host-nation logistic support. Refer to Annex F (Sustainment) as required.*

b. (U) Personnel. *Identify host-nation support unique personnel requirements and concerns, including global sourcing support and contracted linguist requirements. Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical treatment. Determine if locally available medical material and medical devices meet U.S. and Food and Drug Administration standards for use with U.S. Forces. Determine if the host-nation blood supply is tested and considered safe (if not, where will blood products be obtained), and determine the availability of medical maintenance. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and key host-nation support leaders.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U) Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault.").*

b. (U) Signal. *Address any host-nation support-specific communications requirements or reports. Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

[page number]

[CLASSIFICATION]

Figure E-15. Sample Annex P (Host-Nation Support) format (continued)

[CLASSIFICATION]

ANNEX P (HOST-NATION SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

The commander or authorized representative signs the original copy of attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENT: *List lower-level attachments (appendixes, tabs, and exhibits).*

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-15. Sample Annex P (Host-Nation Support) format (continued)

ANNEX Q (KNOWLEDGE MANAGEMENT) FORMAT AND INSTRUCTIONS

E-60. This annex provides a format for the knowledge management annex. This annex describes how knowledge management supports the commander's intent and concept of operations. It also describes how knowledge management creates shared understanding through the alignment of people, processes, and tools within the organizational structure. The knowledge management officer is responsible for this annex. This annex uses the five-paragraph attachment format. (See figure E-16 on pages 312 through 315 for the Annex Q format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX Q (KNOWLEDGE MANAGEMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.

b. List other references in subparagraphs labeled as shown.

c. Doctrinal references for this annex include ADP 3-0, ADP 5-0, ADP 6-0, ATP 6-01.1, FM 5-0, and FM 6-0.

(U) Time Zone Used Throughout the Plan or Order: *Write the time zone established in the base plan or order.*

(U) **Task Organization:** *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting the functional area that paragraph 1 of the operation plan or operation order does not cover or needs to be expanded.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to knowledge management. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations) as required.*

[page number]

[CLASSIFICATION]

Figure E-16. Sample Annex Q (Knowledge Management) format

[CLASSIFICATION]

ANNEX Q (KNOWLEDGE MANAGEMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

c. (U) Enemy Forces. *Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the knowledge management and information management structure, including higher headquarters. This will include the joint force commander involved with the operation.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact knowledge management (data sharing and collaboration capabilities). Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Refer to Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any knowledge management integration assumptions that support the annex development.*

2. (U) Mission. *State the mission of knowledge management in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Knowledge Management Support. *Describe how knowledge management supports the commander's intent and concept of operations. Describe how knowledge management will create shared understanding through the alignment of people, processes, and tools within the organizational structure and culture to increase collaboration and interaction between leaders and subordinates, enabling decisions through improved flexibility, adaptability, integration, and synchronization to achieve a position of relative advantage. Describe how knowledge management enhances shared understanding, learning, and decision making during the phases of the operation. Specify the authority exercised at each echelon for each phase of the operation. Describe the roles and relationships between knowledge management elements in the organization and how they will coordinate with joint, combined, and intergovernmental knowledge management elements. Describe how units' knowledge management elements and assets are integrated into the unit battle rhythm, operations process, and during execution.*

b. (U) Tasks to Subordinate Units. *List knowledge management critical tasks assigned to subordinate units not contained in the base plan or order. This may include tasks to combat units and other functional organizations.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base order that affect knowledge management procedures (for example, commander's critical information requirements).*

4. (U) Sustainment. *Identify and list sustainment priorities for knowledge management key tasks and specify additional sustainment instructions as necessary, to include contractor support. Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-16. Sample Annex Q (Knowledge Management) format (continued)

[CLASSIFICATION]

ANNEX Q (KNOWLEDGE MANAGEMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support knowledge management. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for knowledge management logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Identify knowledge management unique personnel requirements and concerns, including global sourcing support and contracted linguist requirements. Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical care. Identify medical-unique automation requirements for medical records and other medical documentation and support requirements for medical unit interoperability. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and key knowledge management leaders. Identify who is authorized to make knowledge management decisions for the commander.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U) Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault.").*

b. (U) Signal. *Address any knowledge management support-specific communications requirements or reports. Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

[page number]

[CLASSIFICATION]

Figure E-16. Sample Annex Q (Knowledge Management) format (continued)

[CLASSIFICATION]

ANNEX Q (KNOWLEDGE MANAGEMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

Appendix 1–Knowledge Management Decision Support Matrix

Appendix 2–Common Operational Picture Configuration Matrix

Appendix 3–Command and Control Information Systems Integration Matrix

Appendix 4–Content Management

Appendix 5–Battle Rhythm

DISTRIBUTION: Show only if distributed separately from the base order or higher-level attachments.

[page number]

[CLASSIFICATION]

Figure E-16. Sample Annex Q (Knowledge Management) format (continued)

ANNEX R (REPORTS) FORMAT AND INSTRUCTIONS

E-61. This annex provides fundamental considerations, formats, and instructions for developing Annex R (Reports) to the base plan or order. This annex does not follow the five-paragraph attachment format. Unit SOPs will dictate the development and format for this annex.

E-62. Commanders and staffs use Annex R (Reports) to list and catalog all unit reports and their respective formats. The G-3, S-3, or G-5 in coordination with the knowledge management officer, develops Annex R (Reports). (See figure E-17 on pages 316 through 317 for the Annex R format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX R (REPORTS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.

b. List other references in subparagraphs labeled as shown.

c. Doctrinal references for this annex include FM 5-0, FM 6-0, and FM 6-99.

(U) Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

(U) Reports. *List all reports (formats, submission standards and times) not covered in unit standard operating procedures. Specify reporting requirements for all assigned, attached, operational control, and tactical control command relationships.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

[page number]

[CLASSIFICATION]

Figure E-17. Sample Annex R (Reports) format

[CLASSIFICATION]

ANNEX R (REPORTS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

The commander or authorized representative signs the original copy of attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-17. Sample Annex R (Reports) format (continued)

ANNEX S (SPECIAL TECHNICAL OPERATIONS) FORMAT AND INSTRUCTIONS

E-63. This annex provides fundamental considerations, formats, and instructions for developing Annex S (Special Technical Operations) to the base plan or order. This annex follows the five-paragraph attachment format.

E-64. Commanders and staffs use Annex S (Special Technical Operations) to expand the plan or order and provide the mission, scheme, and tasks to units for special technical operations. The special technical operations officer is the staff officer responsible for developing Annex S (Special Technical Operations). Due to classification, this annex may be produced separately from the base order and other annexes, with access restricted to personnel authorized to view its content. (See figure E-18 on pages 318 through 321 for the Annex S format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Message reference number

Include heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX S (SPECIAL TECHNICAL OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.

b. List other references in subparagraphs labeled as shown.

c. Doctrinal references for this annex include the CJCSM 3122.05, FM 5-0, and FM 6-0.

(U) Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) *Situation*. *Include information affecting special technical operations that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to special technical operations. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

[page number]

[CLASSIFICATION]

Figure E-18. Sample Annex S (Special Technical Operations) format

[CLASSIFICATION]

ANNEX S (SPECIAL TECHNICAL OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Terrain. *Describe the aspects of terrain that impact special technical operations. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact special technical operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy special technical operations units for one echelon up and two echelons down. List enemy maneuver and other area capabilities that will impact friendly operations. State expected enemy courses of action and employment of enemy special technical operations assets. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' special technical operation plan. List designation, location, and outline of plans of higher, adjacent, and other special technical operations assets that support or impact the issuing headquarters or require coordination and additional support.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe other organizations in the assigned area that may impact the conduct of special technical operations. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact special technical operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any special technical operations-specific assumptions that support the annex development.*

2. (U) Mission. *State the mission of special technical operations in support of the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Special Technical Operations. *Describe how the special technical operations support the commander's intent and concept of operations. List and describe the commander's objective for each special technical operations target set or functional area in separately numbered subparagraphs. Establish the priorities of support to units for each phase of the operation. Refer to Annex C (Operations) as required.*

(1) (U) Capabilities Integration Matrix. *Refer to Appendix 1 (Special Technical Operations Capabilities Integration Matrix) to Annex S (Special Technical Operations) as required.*

(2) (U) Objective for Functional Area I. *Describe commander's objective for this functional area. Refer to Appendix 2 (Functional Area I Program and Objectives) to Annex S (Special Technical Operations) as required.*

(3) (U) Objective for Functional Area II. *Describe commander's objective for this functional area. Refer to Appendix 3 (Functional Area II Program and Objectives) to Annex S (Special Technical Operations) as required.*

page number]

[CLASSIFICATION]

Figure E-18. Sample Annex S (Special Technical Operations) format (continued)

[CLASSIFICATION]

ANNEX S (SPECIAL TECHNICAL OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

b. (U) Tasks to Subordinate Units. *List special technical operations tasks assigned to specific subordinate units not contained in the base order.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base order.*

4. (U) Sustainment. *Identify priorities of sustainment for special technical operations key tasks and specify additional instructions as required. Provide general instructions concerning the movement, support, and maintenance of special technical operations capabilities. Provide additional information on equipment to support special technical operation planning and operations. Provide any additional guidance on special technical operations-specific administrative matters. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support special technical operations teams and operations. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for special technical operations logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical care. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *State the location of the commander and key special technical operations leaders. Provide guidance on specific approval authorities for deployment and employment of special technical operations capabilities.*

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault.").*

b. (U) Signal. *Address any special technical operations-specific communications requirements or reports. Provide guidance on the communication methods authorized to transmit planning, coordination, deconfliction, deployment, and employment information for special technical operations capabilities included in this annex. Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

[page number]

[CLASSIFICATION]

Figure E-18. Sample Annex S (Special Technical Operations) format (continued)

[CLASSIFICATION]

ANNEX S (SPECIAL TECHNICAL OPERATIONS) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENT: *List lower-level attachments (appendixes, tabs, and exhibits).*

Appendix 1–Special Technical Operations Capabilities Integration Matrix

Appendix 2–Functional Area I Program and Objectives

Appendix 3–Functional Area II Program and Objectives

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-18. Sample Annex S (Special Technical Operations) format (continued)

ANNEX T (SPARE)

ANNEX U (INSPECTOR GENERAL) FORMAT AND INSTRUCTIONS

E-65. This annex provides fundamental considerations, formats, and instructions for developing Annex U (Inspector General) to the base plan or order. This annex follows the five-paragraph attachment format.

E-66. The inspector general uses Annex U (Inspector General) to describe and outline the inspector general support to the concept of operations described in the base plan or order. Staffs include this annex when they need to expand the inspector general functions beyond the base plan or order. The inspector general is responsible for developing Annex U (Inspector General). (See figure E-19 on pages 323 through 326 for the Annex U format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX U (INSPECTOR GENERAL) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Policy references for this annex include AR 1-201 and AR 20-1. Doctrinal references for this annex include FM 5-0 and FM 6-0.*

(U) Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (to include attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting inspector general operations that paragraph 1 of the operation plan or operation order does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to inspector general operations. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact inspector general operations. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-19. Sample Annex U (Inspector General) format

[CLASSIFICATION]

ANNEX U (INSPECTOR GENERAL) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(2) (U) Weather. *Describe the aspects of weather that impact inspector general operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *Describe the possible or anticipated impact of enemy activities and courses of action on inspector general operations. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *Outline the higher headquarters' inspector general plan. List designation, location, and outline of plan of higher, adjacent, and other inspector general assets that support or impact the issuing headquarters or require coordination and additional support.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and describe the objectives or goals of those non-Department of Defense organizations that have a significant role that may impact the conduct of inspector general operations within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact inspector general operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List inspector general-specific assumptions that support the annex development.*

2. (U) Mission. *State the mission of the inspector general in support of the base plan or order. For example, "On order, the inspector general provides the full range of inspector general functions (inspections, assistance, investigations, teaching, and training) in support of assigned and attached units of (unit name) for the duration of this operation."*

3. (U) Execution.

a. (U) Scheme of Inspector General Support. *Describe how the inspector general supports the commander's intent and concept of operations. Establish the priorities of support to units, or the concept for inspector general employment, for each phase of the operation. Focus on the commander's guidance, mission, and intent, and emphasize how inspector general operations reduce friction that affects readiness and warfighting capability. List any general areas the commander has asked the inspector general to assess in any travels. Refer to Annex C (Operations) as required.*

[page number]

[CLASSIFICATION]

Figure E-19. Sample Annex U (Inspector General) format (continued)

[CLASSIFICATION]

ANNEX U (INSPECTOR GENERAL) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(1) (U) Inspections. *Outline inspection plan by phase based on the commanding general's guidance and the compressed inspection plan for unanticipated inspection topics when directed. Inspection plans should focus on high-payoff issues for the commander related to each phase of the operation (such as mobilization, deployment, employment, and sustainment). Include command guidance on requirements for the Organizational Inspection Program in the theater of operations, to include command inspections, staff inspections, inspector general inspections, intelligence oversight inspections, and audits. Include request and tasking procedures for subject-matter experts to serve as temporary assistant inspectors general. List upcoming outside agency assessments—Government Accountability Office and Department of Defense—that may impact the command's resources.*

(2) (U) Assistance and Investigations. *Develop assistance coverage plan for subordinate units with considerations for geographically dispersed units and split-based operations. Description of coverage should include unit visitation plans and plans for use of acting inspectors general for assistance. Emphasize the inspector general's role of underwriting the chain of command in addressing issues and allegations, including handling of law of war violations. The inspector general assistance plan should also address support for units under the operational control or direct-supporting role of the inspector general's organization (such as assistance support on an area-support basis).*

(3) (U) Teaching and Training. *Detail plans for deliberate teaching and training tools, such as deployment and reception briefs, inspector general bulletins and newsletters, and new commander orientations.*

b. (U) Tasks to Subordinate Units. *List inspector general tasks assigned to specific subordinate units not contained in the base order, and areas of responsibility for inspectors general and acting inspector general elements geographically separated from the command inspector general.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base order. Include instructions for coordination between inspector general elements conducting split-based operations and coordination for reach back assistance from non-deployed supporting inspectors general at home station. List coordination and reporting requirements to the higher command inspector general and other inspector general technical channels. List the unit's reporting process for questionable intelligence activities (QIAs), law of war violations, whistle-blower reprisals, and other Department of Defense-level critical information requirements. List the standard "before you see the inspector general" checklist.*

4. (U) Sustainment. *Identify priorities of sustainment for inspector general key tasks and specify additional instructions as required. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support inspector general teams and operations. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for inspector general logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Identify inspector general-unique personnel requirements and concerns, including global sourcing support and contracted linguist requirements. Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-19. Sample Annex U (Inspector General) format (continued)

[CLASSIFICATION]

ANNEX U (INSPECTOR GENERAL) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical care. Identify inspector general-unique inspection requirements for medical personnel, medical units, and medical functional areas. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. Refer to Annex F (Sustainment) as required.

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of the Commander and Key Leaders. *Identify current or future command post locations or map coordinate locations of inspectors general. Identify the inspector general chain of command if not addressed in the unit standard operating procedures.*

(2) (U) Succession of Leadership. *State the succession of leadership if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault").

b. (U) Signal. *Address any inspector general-specific communications requirements or reports. List signal instructions and network-centric instructions, to include call signs, phone numbers, and addresses to reach the inspector general. Address unique digitization connectivity requirements or coordination to meet functional responsibilities. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer (normally the command inspector general) requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENT: *List lower-level attachments (appendixes, tabs, and exhibits).*

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-19. Sample Annex U (Inspector General) format (continued)

ANNEX V (INTERAGENCY COORDINATION) FORMAT AND INSTRUCTIONS

E-67. This annex provides fundamental considerations, formats, and instructions for developing Annex V (Interagency Coordination) to the base plan or order. This annex follows the five-paragraph attachment format.

E-68. Annex V (Interagency Coordination) provides military and interagency personnel with detailed information (mission, scheme, and tasks) to direct the necessary coordination and interaction between Army forces and interagency organizations. It describes how the commander intends to cooperate, provide support, and receive support from interagency organizations throughout the operation. This annex follows the five-paragraph order format; however, some subparagraphs are modified to accommodate communication with the interagency. The G-3 or S-3, in conjunction with the G-9 or S-9, develops Annex V (Interagency Coordination). (See figure E-20 on pages 327 through 330 for the Annex V format.)

E-69. There are many interagency organizations of the United States government. They may include the following:

- Central Intelligence Agency.
- Department of Commerce.
- Department of Defense.
- Department of Energy.
- Department of Homeland Security.
- Department of Justice.
- Department of State.
- Department of the Treasury.
- Department of Transportation.
- Environmental Protection Agency.
- National Security Council.
- Peace Corps.
- United States Agency for International Development/Office of Foreign Disaster Assistance.
- United States Department of Agriculture.

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX V (INTERAGENCY COORDINATION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

[page number]
[CLASSIFICATION]

Figure E-20. Sample Annex V (Interagency Coordination) format

[CLASSIFICATION]

ANNEX V (INTERAGENCY COORDINATION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references for interagency coordination include ADP 3-07, FM 5-0, FM 6-0, and JP 3-08.*

(U) Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

(U) Task Organization: *Describe the organization of forces (to include attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting interagency coordination that paragraph 1 of the operation plan or operation does not cover or that needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to interagency coordination. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of terrain that impact interagency coordination. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact interagency coordination. Refer to Annex B (Intelligence) as required.*

c. (U) Political-Military Situation. *Describe the political-military situation in the area of interest and assigned area. Identify U.S. national security objectives and interests applicable to the plan or order.*

d. (U) Enemy Forces. *Summarize the threat to interagency personnel. Identify enemy forces and appraise their general capabilities and impacts on interagency coordination operations. Refer to Annex B (Intelligence) as required.*

e. (U) Friendly Forces. *Outline the higher headquarters' interagency coordination plan. Identify and state the objectives or goals and primary tasks of those interagency organizations involved in the operations in subparagraphs below.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

f. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

g. (U) Civil Considerations. *Describe the aspects of the civil situation that impact interagency coordination. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

h. (U) Assumptions. *List any interagency coordination-specific assumptions that support the annex development.*

i. (U) Legal Considerations. *List any legal considerations that may affect interagency participation, such as applicable international law or the authorities established under U.S. Code.*

[page number]

[CLASSIFICATION]

Figure E-20. Sample Annex V (Interagency Coordination) format (continued)

[CLASSIFICATION]

ANNEX V (INTERAGENCY COORDINATION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

2. (U) Mission. *State the mission of interagency coordination in support of the concept of operations in the base plan or order.*

3. (U) Execution.

a. (U) Scheme of Interagency Coordination. *Summarize the concept of operations in the base plan or order including an outline of the primary objectives and desired effects of each phase. Describe the concept of interagency coordination and how it supports the concept of operations. Describe the areas of responsibility from U.S. government agencies by major areas of response: humanitarian, economic, political or diplomatic, and others as required. The operational variables are another method to organize major areas of response; they are political, military, economic, social, information, infrastructure, physical environment, and time.*

(1) (U) Humanitarian. *Define, in broad terms, the desired actions and responsibilities for United States government agencies in rebuilding and shaping the humanitarian structure and health of the affected nation. Coordinate these requested actions with the commander's phase development.*

(2) (U) Economic. *Define, in broad terms, the desired actions and responsibilities for United States government agencies in rebuilding and shaping the economic structure and health of the affected nation. Coordinate these requested actions with the supported commander's phase.*

(3) (U) Political and Diplomatic. *Define, in broad terms, the desired actions and responsibilities for United States government agencies in rebuilding and shaping the political and diplomatic structure of the affected nation. Coordinate these requested actions with the supported commander's phase development.*

(4) (U) Others. *As required.*

b. (U) Tasks to Subordinate Units and Milestones. *Identify tasks and required milestones of the issuing headquarters and interagency organizations during the conduct of operations.*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order. Identify and list general instructions applicable to other United States government agencies, such as agreements with the host country and multinational forces.*

4. (U) Sustainment. *Identify priorities of sustainment for interagency coordination key tasks and specify additional instructions as required. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Use subparagraphs to identify availability, priorities, and specific instructions for interagency coordination logistic support. Refer to Annex F (Sustainment) and Annex P (Host-Nation Support) as required.*

b. (U) Personnel. *Use subparagraphs to identify availability, priorities, and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical care. Identify specialized medical and veterinary requirements for interagency operations. Identify availability, priorities, and instructions for medical care. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

[page number]

[CLASSIFICATION]

Figure E-20. Sample Annex V (Interagency Coordination) format (continued)

[CLASSIFICATION]

ANNEX V (INTERAGENCY COORDINATION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

5. (U) Command and Signal.

a. (U) Command. *Identify any unique command relationships established for the purpose of interagency coordination. Identify any interagency coordination forms or bodies such as an interagency coordination working group.*

(1) (U) Location of Interagency Coordination Leaders. *Identify current or future locations of key interagency coordination leaders.*

(2) (U) Succession of Command. *State the succession of leadership if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault.").*

b. (U) Signal. *Describe the communication plan used among the issuing force and interagency organizations to include the primary and alternate means of communications. Consider operations security requirements. Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Either the commander or coordinating staff officer responsible for the functional area may sign attachments.

ATTACHMENT: *List lower-level attachments (appendixes, tabs, and exhibits).*

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-20. Sample Annex V (Interagency Coordination) format (continued)

ANNEX W (OPERATIONAL CONTRACT SUPPORT) FORMAT AND INSTRUCTIONS

E-70. This annex provides fundamental considerations, formats, and instructions for developing Annex W (Operational Contract Support) to the base plan or order. This annex follows the five-paragraph attachment format.

E-71. Commanders and staffs use Annex W (Operational Contract Support) to describe how operational contract support is integrated into the overall concept of operations and other support functions described in the base plan or order and applicable annex. The G-4 or S-4 is the staff officer responsible for this annex.

E-72. Order writers describe the operational contract support concept of support objectives. A complex operational contract support concept of support may require a schematic to show the operational contract support objectives and task relationships. Order writers then include a discussion of the overall operational contract support organizational structure, command guidance, and subordinate unit responsibilities with the specific details in element subparagraphs, tabs, appendixes, or exhibits. Order writers include operational contract support-related assumptions and constraints, as appropriate.

E-73. A detailed description of specific contract support requirements and guidance will be addressed in the appropriate appendix, tab, or exhibit. (See figure E-21 on pages 331 through 334 for the Annex W format.)

CLASSIFICATION

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

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Include the full heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX W (OPERATIONAL CONTRACT SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]-[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding the attachment.*

a. List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.

b. List other references in subparagraphs labeled as shown. At a minimum, include higher level headquarters Annex W (Operational Contract Support) and any operational contract support related standard operating procedures.

c. Doctrinal and policy references for this attachment include AR 715-9, ATP 4-10, ATP 4-10.1, FM 5-0, and FM 6 0.

(U) Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

[page number]

[CLASSIFICATION]

Figure E-21. Sample Annex W (Operational Contract Support) format

[CLASSIFICATION]

ANNEX W (OPERATIONAL CONTRACT SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]-[issuing headquarters] [(classification of title)]

(U) Task Organization: *Describe the organization of forces (including attachments and detachments to and from the issuing headquarters) and their command and support relationships. State when each attachment or detachment is effective (for example, on order, on commitment of the reserve). Refer to Annex A (Task Organization) if long or complicated.*

1. (U) Situation. *Include information affecting operational contract support that Paragraph 1 of the operation plan or operation order does not cover or needs expansion.*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence as it relates to operational contract support, including general business climate and information on existing U.S. government contracts. Refer to Annex B (Intelligence) as required.*

b. (U) Assigned Area. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations) as required.*

(1) (U) Terrain. *Describe the aspects of terrain that impact operational contract support operations. Refer to Annex B (Intelligence) as required.*

(2) (U) Weather. *Describe the aspects of weather that impact operational contract support operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List enemy maneuver and other capabilities that could impact friendly operational contract support operations. Refer to Annex B (Intelligence) as required.*

d. (U) Friendly Forces. *List supporting contracting (contracting support brigade) and contract support units (for example, team logistic civil augmentation program forward or Defense Contract Management Agency) as necessary to clarify operational contract support related task organization.*

(1) (U) Higher Headquarters Two Levels Up. *Identify the higher headquarters' mission and commander's intent two echelons above.*

(2) (U) Higher Headquarters One Level Up. *Identify the higher headquarters' mission, commander's intent, and concept of operations one echelon above.*

(3) (U) Missions of Adjacent Units. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *Identify and state the objectives or goals of those non-Department of Defense organizations that have a significant role within the assigned area. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the aspects of the civil situation that impact operational contract support operations. Refer to Annex B (Intelligence) and Annex K (Civil Affairs Operations) as required.*

g. (U) Assumptions. *List any operational contract support-specific assumptions and constraints that support the annex development.*

2. (U) Mission. *State the mission of operational contract support in support of the base plan or order.*

[page number]

[CLASSIFICATION]

Figure E-21. Sample Annex W (Operational Contract Support) format (continued)

[CLASSIFICATION]

ANNEX W (OPERATIONAL CONTRACT SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]-[issuing headquarters] [(classification of title)]

3. (U) Execution.

a. (U) Scheme of Operational Contract Support. *Describe how operational contract support will be used to support the commander's intent and concept of operations. Provide initial guidance on suitability, availability, acceptability, and any restrictions on contracted support by major support or sustainment function or commodity. Include any contract priorities of support that are different than priorities of support described in the base plan. Refer to Annex C (Operations), Annex F (Sustainment), or Annex P (Host-Nation Support) as required.*

b. (U) Tasks to Subordinate Units. *List operational contract support tasks assigned to specific subordinate units not contained in the base order to include activity responsibilities by major support or sustainment functions. This includes base life support, transportation, and linguists. Include any mission specific contract management assist responsibilities (contracting officer representative requirements support to award fee boards, and any other mission specific operational contract support related tasks and reporting requirements. State the tasks assigned to each unit that reports directly to the headquarters issuing the order. Each task must include who (the subordinate unit assigned the task), what (the task itself), when, where, and why (purpose). Use a separate subparagraph for each unit. List units in task organization sequence. Place tasks that affect two or more units in paragraph 3d (Coordinating Instructions).*

c. (U) Coordinating Instructions. *List only instructions applicable to two or more subordinate units not covered in the base plan or order. Include any operational contract support-specific reports not covered in standard operating procedures.*

4. (U) Sustainment. *Identify and list sustainment priorities for operational contract support key tasks and specify additional sustainment instructions as necessary, including contractor support. Refer to Annex F (Sustainment) as required.*

a. (U) Logistics. *Identify unique sustainment requirements, procedures, and guidance to support operational contract support teams and operations. Specify procedures for specialized technical logistic support from external organizations as necessary. Use subparagraphs to identify priorities and specific instructions for operational contract support logistic. Refer to Annex F (Sustainment) and Annex P (Host Nation Support) as required.*

b. (U) Personnel. *Identify operational contract support unique personnel requirements and concerns, including global sourcing support and contracted linguist requirements. Use subparagraphs to identify priorities and specific instructions for human resources support, financial management, legal support, and religious support. Refer to Annex F (Sustainment) as required.*

c. (U) Health Service Support. *Identify availability, priorities, and instructions for medical care. Identify medical contract support requirements which will be coordinated through the medical logistic management center. Identify availability, priorities, and instructions for medical care. Refer to Annex F (Sustainment) as required.*

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required.*

5. (U) Command and Signal.

a. (U) Command.

(1) (U) Location of Commander and Key Leaders. *State where the commander and key leaders intend to be during the operation, by phase if the operation is phased.*

[page number]

[CLASSIFICATION]

Figure E-21. Sample Annex W (Operational Contract Support) format (continued)

[CLASSIFICATION]

ANNEX W (OPERATIONAL CONTRACT SUPPORT) TO OPERATION PLAN or ORDER [number] [(code name)]-[issuing headquarters] [(classification of title)]

(2) (U) Succession of Command. *State the succession of command if not covered in the unit's standard operating procedures.*

(3) (U). Command Posts. *Describe the employment of command posts, including their locations and when operational and non-operational. State the primary controlling command post for specific tasks or phases of the operation (for example, "The division tactical command post will control the air assault.").*

b. (U) Signal. *Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. State the primary, alternate, contingency, and emergency communications plan. Refer to Annex H (Signal) as required.*

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of the attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Use only if the commander does not sign the original attachment. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ATTACHMENTS: *List lower-level attachment (appendixes, tabs, and exhibits).*

DISTRIBUTION: *Show only if distributed separately from the base order or higher-level attachments.*

[page number]

[CLASSIFICATION]

Figure E-21. Sample Annex W (Operational Contract Support) format (continued)

ANNEX X (SPARE)

ANNEX Y (SPARE)

ANNEX Z (DISTRIBUTION) FORMAT AND INSTRUCTIONS

E-74. This annex provides fundamental considerations, formats, and instructions for developing Annex Z (Distribution) to the base plan or order. This annex does not follow the five-paragraph attachment format. Unit SOPs dictate the development and format.

E-75. Commanders and staffs use Annex Z (Distribution) to track the distribution of the operation plan and operation order and attachments. The G-3 or S-3, in coordination with the knowledge management officer, is responsible for developing Annex Z (Distribution).

E-76. An important information management task is determining what organizations receive copies of the unit's operation plan and order. Normally, the distribution list is located at the end of the base plan or order. If the distribution plan is lengthy or complicated, use Annex Z (Distribution). (See figure E-22 on pages 337 through 338 for the Annex Z format.)

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the attachments. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to AR 380-5 and DODM 5200.01V2 for classification and release marking instructions.

Copy ## of ## copies

Issuing headquarters

Place of issue

Date-time group of signature

Message reference number

Include heading if attachment is distributed separately from the base order or higher-level attachment.

ANNEX Z (DISTRIBUTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

(U) References: *List documents essential to understanding Annex Z.*

a. *List maps and charts first. Map entries include series number, country, sheet names or numbers, edition, and scale.*

b. *List other references in subparagraphs labeled as shown.*

c. *Doctrinal references include AR 25-50, AR 380-10, CJCSM 3122.05, FM 5-0, and FM 6-0.*

Time Zone Used Throughout the Order: *Write the time zone established in the base plan or order.*

(U) Distribution: *Furnish distribution copies either for action or for information. List in detail those who are to receive the plan or order. When referring to a standard distribution list, also show distribution to reinforcing, supporting, and adjacent units, since that list does not normally include these units. Refer to Annex A (Task Organization) as a guide to major subordinate commands involved in the operation and the base operation order for description of adjacent units. When units from multinational forces or host-nation forces are involved, ensure distribution is in accordance with theater foreign disclosure policies and AR 380 10.*

[page number]

[CLASSIFICATION]

Figure E-22. Sample Annex Z (Distribution) format

[CLASSIFICATION]

ANNEX Z (DISTRIBUTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

Distribution lists for paper copies should include the following information:

Duty Position, Unit, Location, Copy Number(s)

Example: Commander, C/1-503/173 Airborne Battalion, Patrol Base Rock, #10-11

Electronic distribution and posting on a secure unit Web-portal (such as SECRET Internet Protocol Router Network) may also be used. Ensure all recipients have required privileges to access Web-portal and acknowledge in accordance with instructions provided in the base order.

ACKNOWLEDGE: *Include only if attachment is distributed separately from the base order.*

[Commander's last name]

[Commander's rank]

The commander or authorized representative signs the original copy of attachment. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains in the headquarters' files.

OFFICIAL:

[Authenticator's name]

[Authenticator's position]

Either the commander or coordinating staff officer responsible for distribution may sign attachments.

DISTRIBUTION: Show only if distributed separately from the base order or higher-level attachments.

[page number]

[CLASSIFICATION]

Figure E-22. Sample Annex Z (Distribution) format (continued)

Appendix F
Decision Tools

This appendix provides information on decision tools and their role in the operations process. It defines key terms throughout and concludes by describing how and when decision tools are developed within the military decision-making process.

DECISION SUPPORT TEMPLATE AND MATRIX

F-1. Decision tools assist commanders and staffs in leading and executing operations. Among some of the most important tools are the decision support template (DST) and associated decision support matrix (DSM), execution matrix, and execution checklist. These tools help control operations and determine when anticipated decisions are required for execution. Decision support products are found in Annex C, Appendix 3 of the Army operation order (OPORD) format. (See ATP 2-01.3 for more information on decision support tools.)

F-2. The DST and the DSM are tools to help decision makers when synchronizing actions to execute a friendly course of action (COA). These products are usually produced together as an operational graphic with a data matrix. Separately they are known by their respective names, but together they are more commonly known as simply the DST and matrix.

DECISION SUPPORT TEMPLATE

F-3. The *decision support template* is a combined intelligence and operations graphic based on the results of wargaming that depicts decision points, timelines associated with movement of forces and the flow of the operation, and other key items of information required to execute a specific friendly course of action (JP 2-0). The DST is an output of analysis completed in step four of the military decision-making process (MDMP) and products from the first four steps of the intelligence preparation of the operational environment (IPOE).

F-4. The DST provides commanders with specific points in time and space where decisions will be required to successfully execute the plan. Such decisions may include changing scheme of maneuver, committing the reserve, executing a fire plan (schedule), or executing a branch plan. These decisions are aligned with significant operational events, such as the crossing of phase lines, enemy actions, or events that affect the maneuvering forces. There are several products that are needed for DST development. These products include—

- Modified combined obstacle overlay (MCOO).
- Avenue of approach overlay.
- Threat template.
- Event template.
- Named areas of interest (NAIs).
- Target areas of interest (TAIs).
- Friendly COAs.
- Decision points.

These products are discussed in paragraphs F-5 through F-9.

F-5. The first product which supports DST development is the MCOO. It is created during mission analysis. The MCOO and the avenue of approach overlay identify friendly and enemy avenues of approach and terrain and obstacles that may impact maneuver.

F-6. The second product in developing the DST requires building a threat template. The threat template identifies enemy COAs. Each COA should be developed in the same amount of detail. Enemy COAs should each address—

- Who? It describes the elements that will be involved.
- What? It describes the type of operation.
- When? It explains the time the action will begin.

- Where? It describes the battlefield framework, including boundaries, routes, zones, or avenues of approach.
- How? It explains the methods enemy forces will use to employ their assets.
- Why? It determines the threat objective.

Additionally, each COA should include a list of high-value targets (HVTs) that staffs use in the wargaming and targeting process. The set of enemy COAs provides a basis for formulating friendly COAs.

F-7. As planning continues, the staff builds on previous products and develops the event template which is the third product that supports DST development. An *event template* is a guide for collection planning that depicts the named areas of interest where activity, or lack of activity, will indicate which course of action the enemy and/or adversary has adopted (JP 2-0). The event template is an evolution of the avenue of approach overlay, and it will become a guide for development of the collection plan and the reconstruction and stabilization plan. The event template builds upon the avenues of approach from the MCOO, and it informs step four, which adds the NAIs and TAIs to the enemy COAs identified in the threat template. The NAIs and TAIs will be used for friendly COA development, wargaming, and targeting.

F-8. The next products are friendly COAs. Friendly COAs are based on the commander's guidance and facts and assumptions identified during mission analysis. Friendly COAs are shaped by the MCOO, enemy threat template, event template, and identified NAIs and TAIs from previous steps.

F-9. Some outputs of wargaming are refined COAs, decision points, and critical events. The identification of decision points and critical events are the final components which feed the DST development process. This is the point where the staff has all the information and products required to build the operational graphic with a matrix known as the DST. The completed DSM and template can be found in Annex C, Appendix 3, Tab B of the Army OPORD format. (See figure F-1 on page 341 for an example of a DST.)

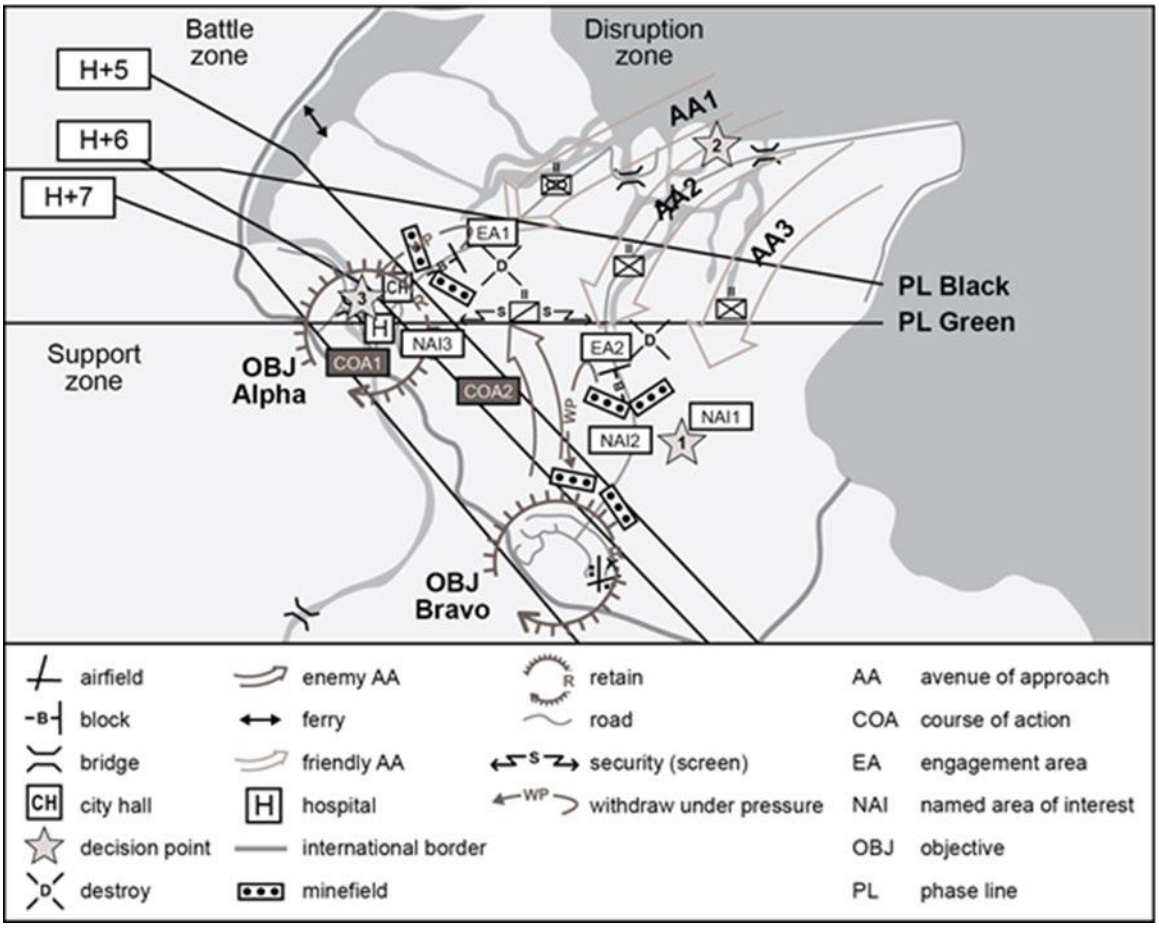

Figure F-1. Decision support template example

DECISION SUPPORT MATRIX

F-10. The *decision support matrix* is a written record of a war-gamed course of action that describes decision points and associated actions at those decision points (ADP 5-0). The DSM lists decision points, decisions to be made, conditions to be evaluated at decision points, information requirements for decision points, and actions to be taken at decision points.

F-11. The DSM provides the text for expected events, planned friendly actions, and decision points. A decision point is a point in space and time, identified during the planning process, where it is anticipated that the commander must make a decision concerning a specific COA. It describes where and when a decision must be made if a specific action is to occur. It ties decision points to NAIs, TAIs, commander's critical information requirements (CCIRs), collection assets, and potential friendly response options. The staff refines the DSM with the DST as planning progresses and during execution.

F-12. The DSM is used to determine the need and timing for execution decisions. This involves assessing the progress of the operation and evaluating if the criteria for upcoming decision points have been met or not. A single operation or planning event may have more than one DST. A DSM with template can be made for each COA, or for individual operations within the larger operation such as an airborne operation, a wet gap crossing, or a branch plan. The DSM and template maybe found in Annex C, Appendix 3, Tab B of the Army OPORD format. (See table F-1 on page 342 for an example of a DSM.)

Table F-1. Decision support matrix example

Decision support matrix for operation XXX, course of action 1					
Decision point number	**Decision.** What decision must be made?	**Condition.** The CCIRs that, when met, require the decision to be made. If the enemy does……. And my forces are….	**CCIR Number.** What CCIRs are linked to the decision point?	**NAI Number.** What NAIs are linked to the decision point?	**Action.** The action is the response to the criteria once the decision has been made. Then we….
1	Commit the reserve.	If the enemy penetrates PL BLACK and 1st Battalion is at 60 percent combat power.	2	1	Commit the reserve to 1st Battalion's AO.
2	Transition to the defense.	If greater than a reinforced company of enemy forces on OBJ Bravo.	3	2	1st and 2nd battalions go into a hasty defense until DIV attack AVN sets conditions for the attack.
3	Initiate the attack.	If OBJ Alpha is at less than a company strength and cavalry squadron is prepared to screen along PL GREEN, 1st and 2nd battalion are in their AAs and FA battalion is established in AA 2.	5	3	1st and 2nd battalions begin their attack.

AA	assembly area
AO	area of operations
AVN	aviation
CCIR	commander's critical information requirement
DIV	division
FA	field artillery
NAI	named area of interest
OBJ	objective
PL	phase line

DELEGATED AUTHORITIES MATRIX

F-13. The delegated authorities matrix (DAM) is a tool used by commanders and staffs to understand what decisions have been delegated by the commander to other leaders, commanders, and staff positions to execute activities or change the level of support between subordinate units. It is developed during mission analysis and in accordance with the unit tactical standard operating procedure (SOP) on what personnel are located across the various command posts and their focus. The DAM is informed by the operation order, unit tactical SOP, the rules of engagement (ROE), and staff running estimates. It establishes the hierarchy of leaders authorized to make decisions when the commander is not available or cannot be reached. It allows the commander to delegate authority for actions that may be time sensitive, and it enables the commander to more freely move across the battlefield.

F-14. Examples of DAM topics include authorizing the division chief of operations to retask intelligence, surveillance, and reconnaissance platforms during the conduct of operations, or a deputy commanding general having the ability to authorize the firing of a family of scatterable mines (also known as FASCAM) minefield as part of a counteraction to an enemy attack. Staff primaries provide input into the DAM to recommend what decisions would be time sensitive or would be required when key leaders are unavailable. These decisions may become apparent during wargaming, and they inform the conduct of the operation. Some decisions may be aligned to only one portion of the battlefield framework (deep, close, rear) or a command post, but may have second and third order effects to the remainder of the phase or operation and must be transmitted and understood by all. (See table F-2 on page 344 for an example of a DAM.)

Table F-2. Delegated authorities matrix example

Delegated Authorities Matrix									
#	Action or decision	Higher HQ	CG	DCG-O	DCG-S	COS	G-3	G-4	G-33
1	Retask subordinate units during operations		1	2			3		
2	Exceed bypass criteria			1			2		
3	Approve media release (strategic level importance)				1	2			
4	Waive medical ROE				1	2		3	
5	Change MSR priority				1	2		3	
6	Initiate 15-6 investigation		1			2			
7	Change priority of support		1	2	3	4	5		6
8	Authorize destruction of sensitive equipment		1	2	3	4	5		6
9	Retask close air support						1		2
10	Approve ATACAMS target		1	2			3		
11	Change MOPP level		1	2	3		4		5
12	Authorize destruction of HN infrastructure	1							
13	Attack target on the no-strike list	1							
14	Conduct cross-boundary fires	1							
15	Bypass a WMD or CBRN site	1							
16	SCAM release (4- hours-48 hours)		1	2					
17	Employ the division reserve		1	2			3		
18	Cross-FLOT operation		1	2			3		
19	Investigation of a CF or HN partner		1			2			
20	High value EPW transfer		1		2	3			
21	Employ riot control agents		1	2			3		
22	Change priority of fires		1	2			3		
23	Cross boundary fires planning						1		2
24	Change decision support matrix criteria			1			2	3	
25	Change priority of AVN support						1		2
26	Conduct offensive EW employment						1		2
27	Change CCIR or EEFI		1	2	3		4		
28	Dynamic retasking or assets (within ATO)						1		2

ATACMS	Army tactical missile system	G-33	current operations officer
ATO	air tasking order	HN	host nation
AVN	aviation	HQ	headquarters
CBRN	chemical, biological, radiological, or nuclear	EEFI	essential element of friendly information
CCIR	commander's critical information requirements	EPW	enemy prisoners of war
CF	conventional forces	EW	electromagnetic warfare
CG	commanding general	FLOT	forward line of troops
COS	chief of staff	MOPP	mission oriented protective posture
DCG-O	deputy commanding general-operations	MSR	main supply route
DCG-S	deputy commanding general-support	ROE	rules of engagement
G-3	assistant chief of staff, operations	SCAM	scatterable mines
G-4	assistant chief of staff, logistics	WMD	weapons of mass destruction

Appendix G

Integrating Processes Support to Planning

This appendix summarizes the integrating processes and identifies key inputs and outputs of each of these processes within the steps of the military decision-making process (MDMP).

INTEGRATING PROCESSES

G-1. The operations process—plan, prepare, execute, and assesses—is the overarching process commanders and staffs use for the exercise of command and control. Within the operations process, commanders and staffs use several integrating processes to develop situational understanding and to integrate the warfighting functions with each other and the concept of operations. An integrating process consists of a series of steps that incorporate multiple disciplines to achieve a specific end. Integrating processes begin in planning and continue during preparation and execution. Key integrating processes include—

- Intelligence preparation of the operational environment (IPOE). (See ATP 2-01.3 for more information on IPOE.)
- Information collection. (See FM 3-55 for more information on information collection.)
- Targeting (See FM 3-60 for more information on targeting.)
- Risk management. (See ATP 5-19 for more information on risk management.)
- Knowledge management (See ATP 6-01.1 for more information on knowledge management.)

G-2. Details on how commanders and staffs perform the integrating processes throughout the operations process are contained in the doctrinal publications listed in paragraph G-1. Figure G-1 on page 346 shows key products produced and outputs from the integrating processes of IPOE, targeting, and information collection in relation to each other and the MDMP. While the figure discusses key products, the remainder of this appendix provides a more detailed summary of each integrating process and describes how they are applied within the MDMP. (See Chapter 5 for a detailed discussion of the MDMP.)

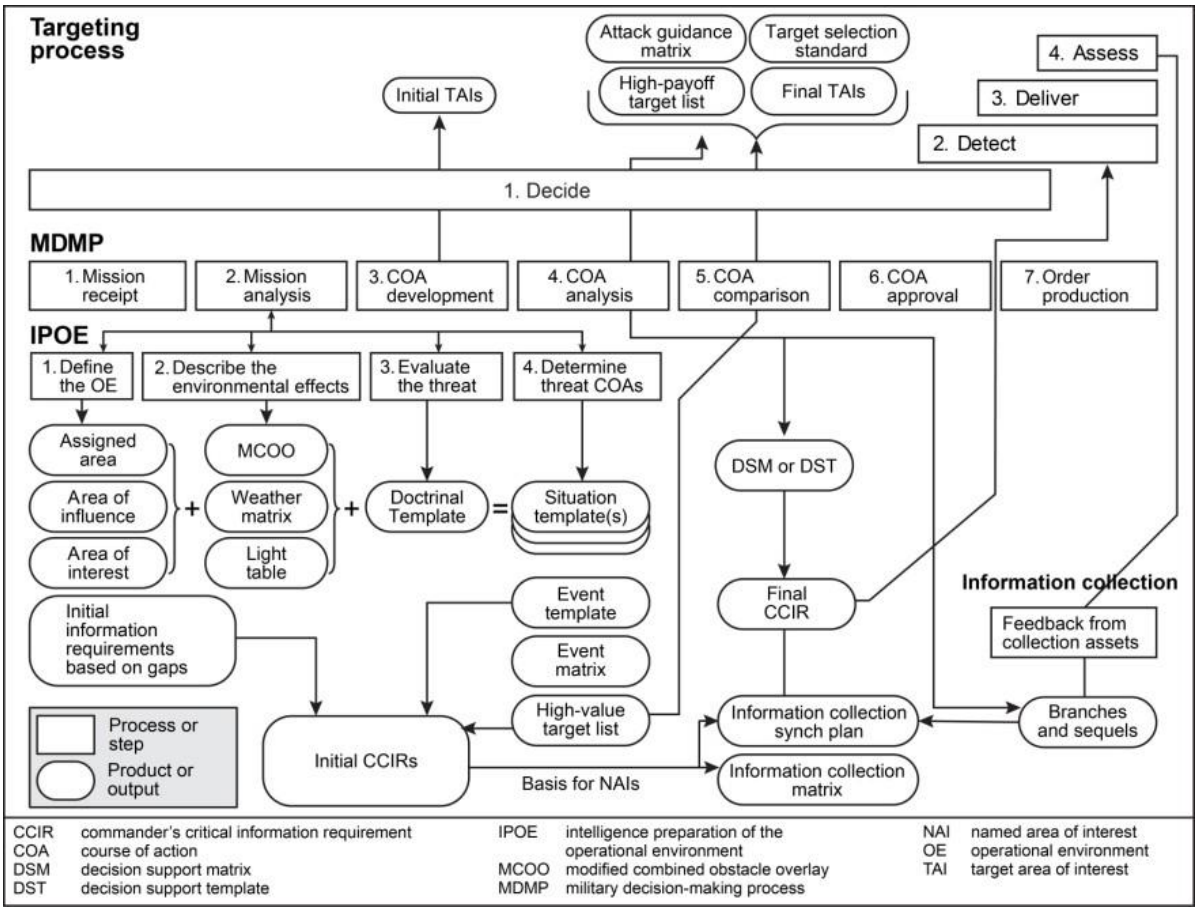

Figure G-1. MDMP, IPOE, targeting, and information collection relationships

INTELLIGENCE PREPARATION OF THE OPERATIONAL ENVIRONMENT

G-3. IPOE is a collaborative, whole staff effort led by the assistant chief of staff, intelligence (G-2) or battalion or brigade intelligence staff officer (S-2). IPOE products that are developed and continuously updated facilitate situational understanding and assist commanders and staffs in identifying relevant aspects within the assigned area and area of interest that can affect mission accomplishment.

G-4. IPOE is a key aspect of mission analysis resulting in products that aid in developing friendly courses of action (COAs) and decision points. Additionally, the conclusions reached, information gaps identified, and products created during IPOE are critical to planning information collection and targeting operations. A key aspect of IPOE is refinement in preparation and execution. The four IPOE steps are—

- Step 1: Define the operational environment (OE).
- Step 2: Describe environmental effects on operations.
- Step 3: Evaluate the threat.
- Step 4: Determine threat COAs.

(See ATP 2-01.3 for a detailed description to each step of IPOE and examples of associated IPOE products.)

G-5. Figure G-2 lists the key inputs and outputs of IPOE in relationship to the steps of the MDMP. As shown in figure G-2, most IPOE products are developed during step 2 (mission analysis) of the MDMP. These products are continually refined and are critical to shaping staff recommendations and commander decisions in steps 3 through 7 of the MDMP.

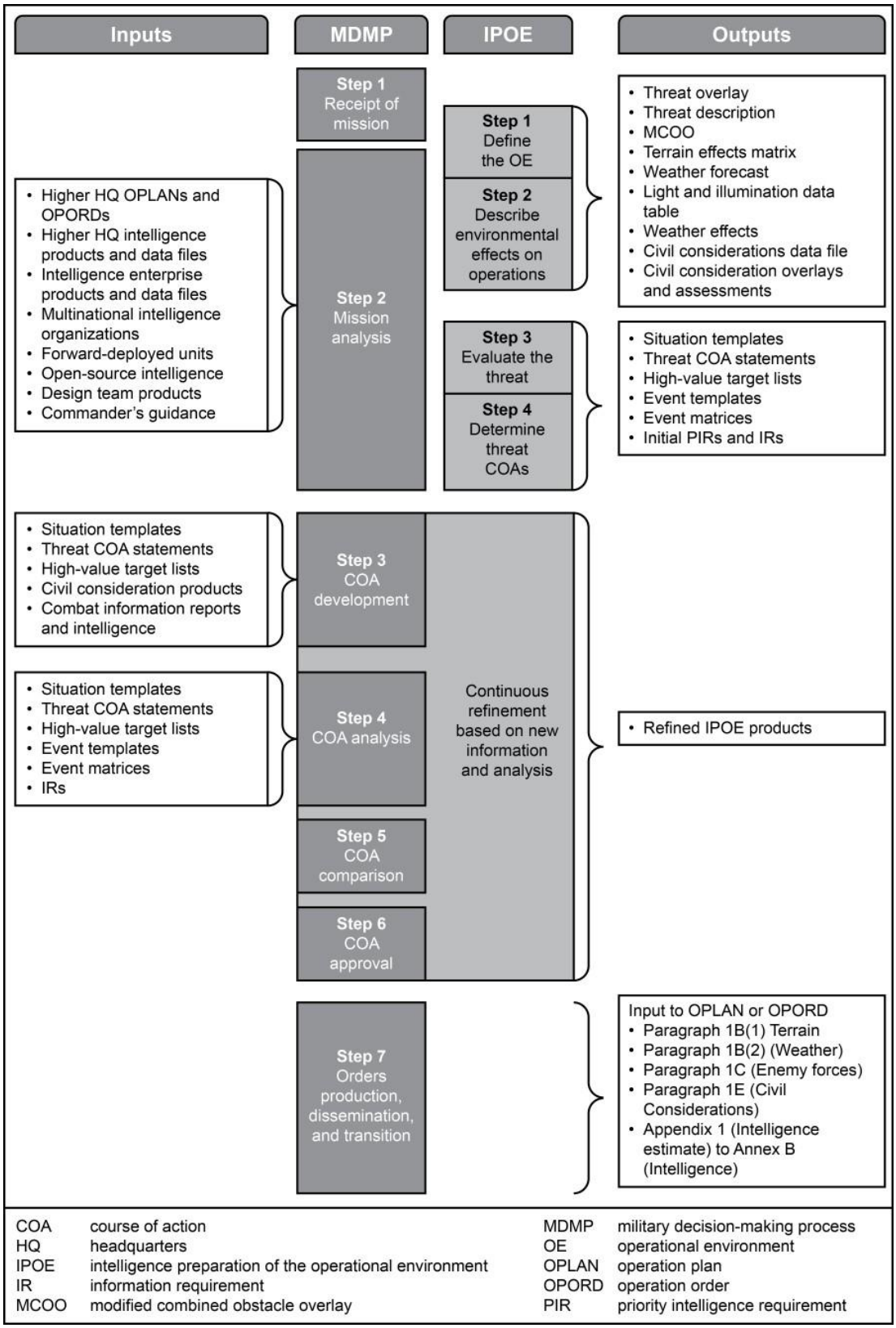

Figure G-2. Intelligence preparation of the operational environment within the MDMP

DEFINE THE OPERATIONAL ENVIRONMENT

G-6. The define the OE step of IPOE begins upon receipt of mission and continues into mission analysis. This step assists commanders and staffs in identifying and defining relative aspects of an OE in time and space, including how the mission variables are relevant to the mission. During this step, the assigned area and area of interest are identified. The staff then identifies specific characteristics of the assigned area and area of interest for further analysis, including—

- Enemy (including identity, location, size, and disposition).
- Terrain (including natural and man-made features).
- Weather (including visibility, wind, precipitation, cloud cover, temperature, humidity, and space weather).
- Civil considerations (areas, structures, capabilities, organizations, people, and events).
- Informational considerations (as they relate to each of the previous mission variables).

G-7. The define the OE step also identifies what the staff does not know. The staff evaluates current operations and intelligence to determine additional information needed to complete IPOE. This evaluation results in identified information gaps. Staff sections submit requests for information and collection to acquire necessary information. (See paragraphs G-17 to G-48 for a discussion of information collection.)

DESCRIBE THE ENVIRONMENTAL EFFECTS ON OPERATIONS

G-8. During step 2 of IPOE, the intelligence staff describes how significant characteristics of the environment affect friendly operations. The intelligence staff also describes how terrain, weather, civil considerations, and friendly forces affect threat forces. This evaluation focuses on the general capabilities of each force until the development of threat COAs in step 4 of IPOE and development of friendly COAs later in the MDMP. The entire staff determines the effects of friendly and threat force actions on the population.

Note. If the intelligence staff does not have the information required to form conclusions, it uses assumptions to fill information gaps—always careful to ensure the commander understands when assumptions are used in place of facts to form conclusions. (See Chapter 1 for further discussion on assumptions.)

G-9. Key IPOE products resulting from step 2 include the modified combined obstacle overlay (MCOO) and the threat overlay. The MCOO is used to portray the militarily significant aspects of the OE, including avenues of approach, mobility corridors, obstacles, and key terrain. The threat overlay depicts the threat's current physical location in the assigned area and area of influence, including the threat's identity, size, location, and strength.

EVALUATE THE THREAT

G-10. Step 3 of IPOE occurs during mission analysis to determine threat force capabilities and the doctrinal principles and tactics, techniques, and procedures threat forces prefer or are likely to employ. Key products resulting from this step include threat models and threat templates. Threat models convert threat doctrine or patterns of operation to graphics; describe the threats' preferred tactics and options; identify high-value targets (HVTs), and identify enemy dispositions, compositions, and strengths. Threat templates portray how threat forces prefer to use their capabilities to accomplish their objectives. Threat templates include locations of threat units two echelons below the collecting unit; the distances and times between threat forces; and graphic control measures associated with threat operation, including unit frontages; unit depths, boundaries, engagement areas, and obstacles.

DETERMINE THREAT COURSES OF ACTION

G-11. Step 4 of IPOE is conducted in mission analysis and refined during the remaining steps of the MDMP. Determining threat COAs is a two-step process consisting of the substeps and the outputs shown in figure G-3 on page 349.

G-12. Developing a threat COA is based on the understanding of threat characteristics and understanding the effects of terrain, weather, and civil consideration on operations. A threat COA consists of the situation template and a threat COA statement. A situation template depicts a potential threat COA as part of a

particular threat operation. The threat COA statement is a narrative that describes the situation template. The staff also identifies HVTs—targets the enemy commander requires for the successful completion of the mission—for each threat COA. The staff uses the HVT list developed for each threat COA to develop the HPTL during the COA development step of the MDMP.

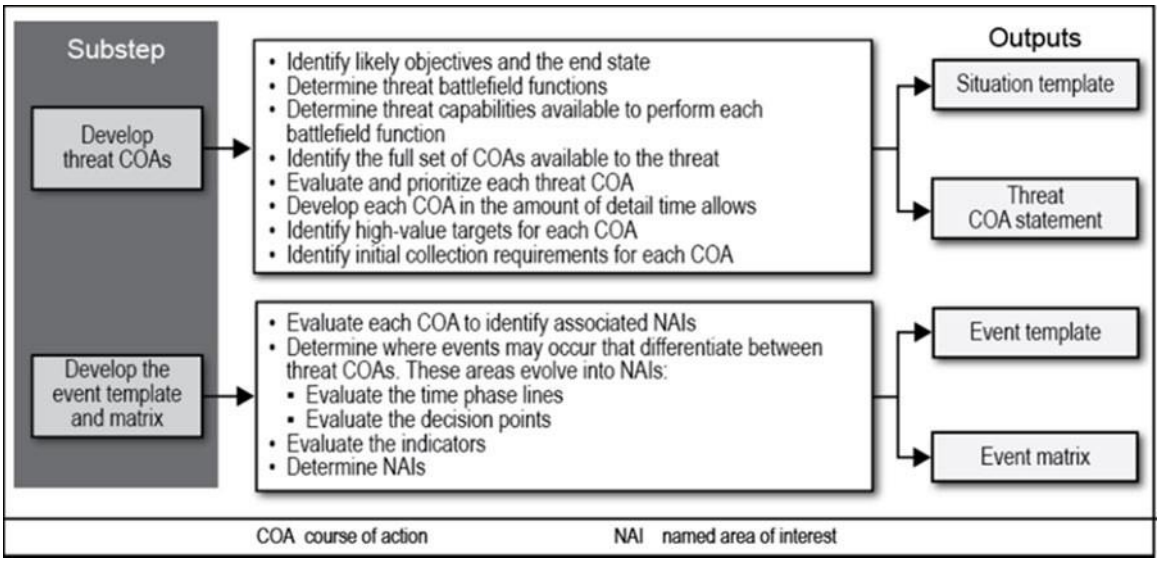

Figure G-3. Determine threat courses of action

G-13. After identifying and developing as many potential threat COAs as time allows, the commander, or the commander's designee, selects the threat COAs that the staff will plan against. When lacking specific guidance, the staff commonly uses what the unit intelligence officer designates as the threat's most likely and most dangerous COAs. Since a threat COA is unknown, the intelligence staff develops information requirements and indicators to help determine the threat's actual COA. These information requirements, including priority intelligence requirement (PIRs), form the basis of the information collection plan. To help guide the development of the information collection plan, the intelligence staff develops event templates and event matrices.

G-14. An event template is a graphic overlay used during the COA analysis step of the MDMP to confirm or deny threat COAs throughout wargaming. Additionally, an event template is used to develop the collection overlay or matrix and the decision support template (DST) during COA analysis. The event template is used during execution to assist in determining which COA the threat has adopted. An event template is accompanied by an event matrix.

G-15. An event matrix is a cross-referenced description of the indicators and activity expected to occur in each named area of interest. Constructing an event matrix is an analytical process that involves associating named areas of interest (NAIs) and threat decision points identified on the event template. (See ATP 2-01 for more information on event matrixes.)

Staff Input to Intelligence Preparation of the Operational Environment

G-16. IPOE is far more effective when all staff sections participate with the intelligence staff. All staff sections provide their subject matter expertise in the development of IPOE products and enhance the overall understanding of the OE. Time constraints often hinder full staff participation in key intelligence tasks like IPOE; however, the lack of staff participation during initial IPOE efforts may put a unit's mission at risk. (For a detailed discussion on how each staff section supports IPOE refer to FM 2-0 and ATP 2-01.3.)

INFORMATION COLLECTION

G-17. Information collection is a combined intelligence and operations activity focused on acquiring information on the threat, terrain, and civil considerations to facilitate understanding and decision making.

Information collection is directly linked to IPOE and supports planning, targeting, risk management, and decision making throughout the operations process.

G-18. Information collection helps the commander understand and visualize the operation by aligning reconnaissance, surveillance, security, and intelligence assets to collect information on identified information gaps. It begins early in planning and continues throughout the operations process. Information collection consists of the following tasks:

- Collection management.
- Direct information collection.
- Execute collection.
- Conduct intelligence-related missions and operations.

COLLECTION MANAGEMENT

G-19. Collection management involves analyzing information and collection requirements, evaluating available collection assets (both internal and external), recommending to the operations staff taskings for information collection assets, submitting requests for information for adjacent and higher echelon collection support, and assessing the effectiveness of the information collection plan. It is a coordinated staff effort led by the assistant chief of staff, intelligence (G-2) or battalion or brigade intelligence staff officer (S-2.)

G-20. Key outputs of collection management include the information collection matrix, information collection synchronization matrix, and information collection overlay. Collection management tools address all assets the operations officer can task or request and the coordinating mechanisms needed to ensure adequate coverage of the area of interest. The operations officer uses these supporting tools during the direct information collection task to develop the information collection plan. (See ATP 2-01 for more information on collection supporting tools.)

DIRECT INFORMATION COLLECTION

G-21. The assistant chief of staff, operations (G-3) or battalion or brigade operations staff officer (S-3) develops the information collection plan based on the analysis performed by the entire staff. Through analysis, the staff determines the best way to satisfy each requirement. The staff receives information collection tasks and requests for information from subordinate and adjacent units and higher echelon headquarters. The information collection plan aligns assets to collection tasks for the assets that the G-3 or S-3 can task or request. Additionally, the plan provides coordinating instructions to ensure adequate coverage in the area of interest.

G-22. As the current tactical situation changes, staffs adjust the overall information collection plan to synchronize collection tasks. This optimizes collection and exploitation capabilities. The staff constantly updates requirements to ensure information collection efforts synchronize with current operations and support future operations planning. As collected information answers requirements, the staff updates the information collection plan.

EXECUTE COLLECTION

G-23. Collection activities often begin soon after receipt of mission and continue throughout preparation and execution of the operation. At the tactical level, reconnaissance, surveillance, security operations, and intelligence operations are the primary means by which a commander executes information collection to answer the commander’s critical information requirements (CCIRs) and other information requirements.

G-24. Reconnaissance produces information about the assigned area. Reconnaissance identifies terrain characteristics, enemy and friendly obstacles to movement, and the disposition of enemy forces and civilians, so commanders can maneuver forces freely to gain and maintain the initiative. Successful units combine three methods to perform reconnaissance: dismounted, mounted, and aerial. All units and personnel conduct reconnaissance; however, units that are primarily tasked to conduct reconnaissance have tailored and specialized capabilities that include air cavalry and attack helicopter units, ground cavalry and scout units, chemical, biological, radiological, or nuclear (CBRN) reconnaissance elements, engineer reconnaissance team, and special operations forces.

G-25. Surveillance involves observing an area to collect information. In observing a given area, the focus and tempo of the collection effort comes primarily from the commander's intent and guidance. Surveillance involves observing threat forces and the local population in an NAI or target area of interest (TAI). Surveillance may be a stand-alone mission or part of a reconnaissance mission (particularly area reconnaissance). Surveillance is tiered and layered with technical assets that collect information. It is passive and continuous. Surveillance tasks can be performed by a variety of assets (including air, land, maritime, space, and cyberspace), means (including Soldiers and systems such as artillery and air defense radars), and mediums (throughout the electromagnetic spectrum).

G-26. Security operations are enabling operations that can occur during all operations. Commanders undertake these operations to provide early and accurate warning of enemy operations, to provide the force being protected with time and maneuver space to react to the enemy, and to develop the situation so commanders can favorably employ the protected force. Commanders may conduct security operations to the front, flanks, and rear of their forces, which may be moving or stationary. The ultimate goal is determining the enemy force's COA and assisting the main body in defeating enemy forces. The security force will have a mixture of reconnaissance and surveillance assets to accomplish its mission.

G-27. Intelligence operations are the tasks undertaken by military intelligence units and Soldiers to obtain information to satisfy validated requirements. Intelligence operations align intelligence assets and resources against requirements to collect information and intelligence to inform the commander's decisions. Through intelligence operations, military intelligence collection personnel and systems collect information about capabilities, activities, disposition, and all threat characteristics within an OE. Intelligence professionals follow the guidance outlined in the intelligence disciplines (such as signals intelligence) and complementary intelligence capabilities (such as cyberspace-enabled intelligence) to ensure all tasks are accomplished successfully and in accordance with intelligence regulations and policies. (See ADP 2-0 for a description of the intelligence disciplines and complementary intelligence capabilities.)

G-28. Military intelligence collection personnel are trained and certified. Military intelligence sensors, operated by military intelligence personnel, can be directed to collect information. The military intelligence collection capabilities are distinct from other Army information collection capabilities, such as reconnaissance or surveillance. The distinction is required because intelligence collection must comply with all applicable U.S. laws and policies.

CONDUCT INTELLIGENCE-RELATED MISSIONS AND OPERATIONS

G-29. Conducting normal, day-to-day intelligence tasks (for example, intelligence support to personnel recovery) facilitates the conduct of reconnaissance and surveillance. These tasks also include specialized missions (such as exploitation of a site) that provide intelligence and information outside the traditional information collection construct. The conduct intelligence-related missions and operations tasks are—

- Establish a mission intelligence briefing and debriefing program.
- Support site exploitation.
- Conduct explosive ordnance disposal support.
- Provide intelligence support to personnel recovery.

INFORMATION COLLECTION PLANNING

G-30. Collection management and direct information collection tasks are associated with information collection planning. These tasks are a key part of the MDMP that results in an information collection plan (Annex L) to an operation plan (OPLAN) or operation order (OPORD). This section describes developing the information collection plan within the steps of the MDMP.

Receipt of Mission

G-31. During the receipt of mission step, the staff gathers tools needed for the MDMP, updates its running estimates, and performs an initial assessment of the time available. Since information and intelligence are required early to inform planning, commanders may initiate information collection shortly after receipt of mission and before mission analysis is complete. Based on the commander's guidance, initial information collection tasks may be included in the first warning order (WARNORD) to subordinate units.

Mission Analysis

G-32. Several subtasks of mission analysis are directly related to information collection planning. They are discussed in paragraphs G-33 through G-44.

Analyze the Higher Headquarters' Order

G-33. The staff analyzes the higher echelon headquarters' order to identify information collection tasks and constraints such as limits of reconnaissance. The higher order also contains details on the availability of information collection assets from higher echelons and any allocation of those assets to the unit.

Perform Intelligence Preparation of the Operational Environment

G-34. IPOE is an important prerequisite to information collection planning as discussed in paragraphs G-3 through G-16. During IPOE, staffs develop several key products that aid information collection planning. One of the most useful products is the event template and associated matrix. Once developed, the event template helps develop the information collection plan. Likely threat locations, avenues of approach, infiltration routes, support areas, and areas of activity become NAIs or TAIs where collection assets focus their collection efforts.

Determine Specified, Implied, and Essential Tasks

G-35. The staff also identifies specified, implied, and essential information collection tasks. Specified tasks are directed towards subordinate units, systems, sensors, and Soldiers. Implied tasks determine how a system or sensor is initialized for collection. Essential information collection tasks are derived from specified and implied tasks. These tasks are the focus of the information collection effort.

Review Available Assets

G-36. The staff reviews all available collection assets and creates an inventory of capabilities to apply against collection requirements. Building the inventory of assets and resources begins with Annex A (Task Organization) of the higher echelon headquarters' order. Staffs evaluate the availability of collection assets and know the collectors and processors available at their own echelon and echelons above and below them.

Determine Constraints

G-37. When determining constraints, the staff considers legal, political, operational, and rules of engagement constraints that might constrain reconnaissance, security, intelligence operations, and surveillance. The staff must consider planning constraints such as limits of reconnaissance, earliest time information is of value, and not earlier than times. In some cases, the commander may impose constraints on using certain collection assets. In other cases, system constraints such as the weather, crew rest, or maintenance cycle limitations may impose limits the staff must consider.

Identify Critical Facts and Assumptions

G-38. When staffs identify critical facts and assumptions, they identify critical facts and assumptions pertinent to information collection planning that they will use later in COA development. For example, a critical fact might be that imagery requests may take 72 to 96 hours to fulfill, or that the human intelligence effort requires significant time before a good source network is fully developed.

G-39. Developing assumptions for planning includes the availability and responsiveness of organic assets and resources from higher echelons. For example, the staff might use a certain percentage (representing hours) of unmanned aircraft system support available per day, weather and maintenance permitting.

Perform Risk Assessment

G-40. When performing a risk assessment, the staff considers the asset's effectiveness versus the protection requirements and risk to the asset. For example, placing a sensor forward enough on the battlefield that it can return valuable data and information may put the asset at high risk of being compromised, captured, or

destroyed. The calculus of payoff versus loss will be determined by mission variables and the commander's decision.

Determine Initial CCIRs and EEFIs

G-41. Determining initial CCIRs and essential elements of friendly information (EEFIs) is the most important prerequisite for information collection planning. The staff nominates information requirements to the commander that become CCIRs and EEFIs. Commanders alone decide what information is critical based on their experience, the mission, the higher echelon commander's intent, and input from the staff. The CCIRs are the primary focus for information collection activities.

Develop the Initial Information Collection Plan

G-42. The initial information collection plan is crucial to begin or adjust the collection effort to help answer information requirements necessary to develop effective plans. The initial information collection plan sets information collection in motion. Staffs may issue it as part of a WARNORD, a fragmentary order (FRAGORD), or an OPORD. As more information becomes available, staffs incorporate it into a complete information plan to the OPORD.

G-43. At this point in the MDMP, the initial information plan is somewhat generic because the staff members must still develop friendly COAs. The basis for the plan is the commander's initial information collection guidance, the primary information gaps identified by the staff during mission analysis, and the enemy situational template developed during IPOE.

G-44. The intelligence staff creates the collection management tools (including the information collection matrix, information collection synchronization matrix, and information collection overlay) for the information collection plan. The operations staff is responsible for the information collection plan. In developing the plan, the operations staff considers—

- Requirements for collection assets in subsequent missions.
- The time available to develop and refine the initial information collection plan.
- The risk the commander is willing to accept if information collection missions begin before the information collection plan is fully integrated into the scheme of maneuver.
- Insertion and extraction methods for reconnaissance, security, surveillance, and intelligence units.
- Contingencies for inclement weather to ensure coverage of key NAIs or TAIs.
- The communications plan for transmission of reports from assets to tactical command posts (CPs).
- The inclusion of collection asset locations and movements into the fire support plan.
- The reconnaissance handover with higher or subordinate echelons.
- The sustainment support.
- Legal support requirements.

Issue Warning Order

G-45. Upon completion of the mission analysis brief and the issuance of commander's planning guidance, the staff issues the second WARNORD. This WARNORD includes the initial information collection plan which may be an annex to the WARNORD.

Course of Action Development

G-46. The operations and intelligence staffs collaborate to develop a scheme of information collection for each friendly COA. The scheme of information collection describes how the commander intends to use reconnaissance and surveillance in support of the concept of operations. It includes primary reconnaissance objectives. The scheme of information collection is developed in detail during COA analysis (war gaming).

Course of Action Analysis (War Gaming), Comparison, and Decision

G-47. The action-reaction-counteraction process within COA analysis is extremely helpful in fully developing and synchronizing the information collection plan with the scheme of maneuver and scheme of fires. The results of COA analysis are briefed to the commander as part of the COA decision brief.

Commanders decide on the friendly COA and issue final planning guidance (including information collection guidance) for development of the OPLAN or OPORD.

Orders Production, Dissemination, and Transition

G-48. The staff prepares the order by turning the selected COA into a clear, concise concept of operations and supporting information. A scheme of information collection is addressed in paragraph 3 (Execution) to the base order. Specific reconnaissance, surveillance, and security tasks are addressed in tasks to subordinate units. Details of the unit's information collection effort are located in Annex L (Information Collection) to the OPLAN or OPORD.

TARGETING

G-49. A *target* is an entity or object that performs a function for the threat considered for possible engagement or other action (JP 3-60). Targets include a wide array of mobile and stationary forces, equipment, and capabilities that a threat can use to conduct operations. A target's importance is determined by its potential contribution to achieving a commander's objectives or otherwise accomplishing assigned tasks. Targets are continuously refined or adjusted as an operation unfolds.

G-50. *Targeting* is the process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities (JP 3-0). It is an integral part of the operations process that organizes the efforts of the commander and staff to integrate and synchronize fires in operations. Targeting seeks to create specific desired effects through lethal and nonlethal actions. There are four functions associated with the Army's targeting process. They are—

- Decide.
- Detect.
- Deliver.
- Assess.

G-51. This methodology (also known as D3A) facilitates engagement of the right target, at the right time, with the most appropriate assets to meet the commander's targeting guidance. It optimizes integration and synchronization of maneuver, fire support, intelligence, command and control, and information-related capabilities from battalion through corps echelon operations.

G-52. The chief of staff (COS) or executive officer (XO) normally leads the targeting team. Fire support, G-2 or S-2, G-3 or S-3, and Air Force representatives form its core. Other coordinating and special staffs participate as required. Examples of these representatives include the information operations officer, chief of protection, the cyber electromagnetic warfare officer, the military information support operations officer, the civil affairs officer, the public affairs officer, and the staff judge advocate.

G-53. The targeting process is cyclical. The unit's battle rhythm determines when the targeting team meets. Targeting begins in planning and continues throughout the operations process. The decide function occurs concurrently with planning. The detect function occurs during preparation and execution. The deliver function occurs primarily during execution, although some targets may be engaged while the command is planning or preparing for the overall operation. The assess function occurs throughout the operations process, but it is most intense during execution. (See FM 6-0 for further discussion on battle rhythm.)

DECIDE

G-54. Decide is part of the planning activity of the operations process. It occurs concurrently with the MDMP. During the decide function, the targeting team focuses and sets priorities for information collection and attack planning. Based on the commander's intent and concept of operations, the targeting team establishes targeting priorities for each phase or critical event of an operation. The following products reflect these priorities:

- **High-payoff target list (HPTL).** The HPTL is a prioritized list of targets whose loss to the threat will significantly contribute to the success of the friendly COA.
- **Information collection plan.** The plan to synchronize the entire collection effort, including all assets the commander controls, assets of lateral units, and higher echelon units and organizations to answer the CCIRs.

- **Target selection standards.** Target selection standards establish criteria for deciding when targets are located accurately enough to attack.
- **Attack guidance matrix (AGM).** The AGM lists which targets or target sets to attack, how and when to attack them, and the desired effects.
- **Target synchronization matrix.** The target synchronization matrix combines data from the HPTL, information collection plan, and AGM. It lists high-payoff targets (HPTs) by category and the agencies responsible for detecting them, attacking them, and assessing the effects of the attacks.

G-55. The targeting team develops these products throughout the MDMP. As the MDMP is conducted, targeting becomes more focused based on the commander's guidance and intent. The commander approves targets during the COA approval. (See table G-1 for information on integrating the decide function into the MDMP.)

Table G-1. The military decision-making process decide function integration

Integration of the decide function in the MDMP						
Receipt of Mission	**Mission analysis**	**COA development**	**COA analysis (war game)**	**COA comparison**	**COA approval**	**Orders production, dissemination, and approval**
Gather the tools: Running estimates Blank TSM Blank asset chart Blank AGM, HPTL, and target selection standard matrix	Perform target value analysis to identify potential HVTs Develop initial targeting objectives Draft input to commander's targeting guidance Develop initial information requirements	Develop HVTL Nominate potential HPTs Develop HPTL Establish target selection standards Develop AGM Develop assessment criteria Refine information requirements	Refine HPTL for each COA Refine target selection standards Refine AGM Develop TSM Develop FSCM Develop ACM Develop joint targets Refine information requirements Refine assessment criteria		Finalize HPTL Finalize target selection standards Finalize AGM Finalize the TSM Finalize assessment criteria Submit joint target nominations Submit information requirements	Appendix 3, Targeting to Annex D Tab A–target selection standards Tab B–TSM Tab C–AGM Tab D–target list worksheet Tab E–battle damage assessment

ACM	airspace coordinating measure	HPTL	high-payoff target list
AGM	attack guidance matrix	MDMP	military decision-making process
COA	course of action	HVT	high-value target
FSCM	fire support coordination measure	HVTL	high-value target list
HPT	high-payoff target	TSM	target synchronization matrix

Receipt of Mission and Mission Analysis

G-56. The major targeting-related products of mission analysis are HVTs—targets the enemy requires for the successful completion of the mission—and the commander's targeting guidance. HVTs are identified during IPOE.

G-57. IPOE includes preparing threat models that portray adversary forces and assets unconstrained by the environment. The G-2 or S-2 adjusts threat models based on terrain and weather to create situational templates that portray possible adversary COAs. A complete threat model identifies HVTs, and the situation template predicts the location of the HVT assets that the threat commander requires for the successful completion of a specific COA. The process that identifies HVTs is target value analysis. The targeting team performs target value analysis for each enemy COA. The initial target value analysis sources are target spreadsheets and target sheets.

- **Target spreadsheets.** Target spreadsheets identify target sets associated with adversary functions that could interfere with each friendly COA or that are key to adversary success. The fire support element usually prepares them.
- **Target sheets.** A target sheet contains the information required to engage a target. It is a locally produced product. Target sheets state how attacking the target will affect the adversary operation.

G-58. **Targeting guidance.** The commander's guidance, issued at the end of mission analysis, includes targeting guidance. Targeting guidance describes the desired lethal and nonlethal effects. Targeting guidance focuses on essential adversary capabilities and functions, such as the ability to exercise command and control of forward units, mass artillery fires, or (in stability operations) form a hostile crowd. Capabilities associated with one desired effect may also contribute to other desired effects. For example, delay can result from disrupting, diverting, or destroying enemy capabilities on targets. Terms that are used to describe effects include—

- Deceive.
- Defeat.
- Degrade.
- Delay.
- Deny.
- Destroy.
- Destruct.
- Disrupt.
- Divert.
- Exploit.
- Interdict.
- Neutralize.
- Suppress.

(Refer to FM 3-60 for a complete discussion of these effects.)

G-59. The commander can also provide restrictions as part of his targeting guidance. Depending on the situation, the commander may place targets on a no-strike or restricted target list. A no-strike list consists of objects or entities protected by—

- Law of armed conflict.
- International laws.
- Rules of engagement.
- Other considerations.

G-60. A restricted target list contains valid targets with specific restrictions. A restriction may be—

- Collateral damage limitations.
- Selected ammo preservation for final protective fires.
- Prohibitions on daytime strikes.
- Weapons selection criteria.
- Attack avoidance due to proximity to protected facilities and locations.

Course of Action Development

G-61. During COA development, the staff prepares feasible COAs that integrate the effects of all dynamics of combat power to accomplish the mission. The targeting team identifies which HVTs are potential HPTs for each COA. It coordinates and deconflicts targets and establishes assessment criteria.

Course of Action Analysis

G-62. COA analysis is a disciplined process that staffs use to visualize the flow of a battle. During a war game, the staff decides or determines—

- Which HVTs are HPTs for each COA. When listed in priority, the HPTs for the approved COA compose the HPTL.
- When to engage each HPT.

- Which system to use against each HPT.
- The desired effects of each attack, expressed in terms of the targeting objectives.
- Which HPTs require battle damage assessment.
- Which HPTs require special instructions or require coordination.

G-63. Based on the war game, the targeting team produces draft targeting products. The products for each COA include—

- HPTL.
- Target selection standards.
- AGM.

G-64. **HPTL.** The HPTL is a prioritized list of HPTs. A *high-payoff target* is a target whose loss to the enemy will contribute to the success of the friendly course of action (JP 3-60). During the war game, the staff determines which HVTs are HPTs for each COA. HPTs are critical to both the adversary's needs and the friendly concept of operations. They support achieving the commander's intent and executing the concept of operations. They are determined based on the commander's targeting guidance.

G-65. **Target selection standards.** Target selection standards are criteria applied to adversary activity (acquisitions or combat information) to decide whether the activity can be engaged as a target. Target selection standards are usually disseminated as a matrix that includes—

- HPT. This refers to the designated HPTs that the collection manager is tasked to acquire.
- Timeliness. Valid targets are reported to attack systems within the designated timeliness criteria.
- Accuracy. Valid targets must be reported to the attack system meeting the required target location error criteria. The criterion is the least restrictive target location error considering the capabilities of available attack systems.

G-66. Military intelligence analysts use target selection standards to determine targets from combat information and pass them to fire support elements for attack. Attack systems managers, such as fire control elements and fire direction centers, use target selection standards to determine whether to attack a potential target.

G-67. **Attack guidance matrix.** The targeting team recommends attack guidance based on the results of the war game. Attack guidance is normally disseminated as an AGM. An AGM includes the following information, listed by target set or HPT:

- Timing of attacks (expressed as immediate, planned, or as acquired).
- Attack systems assigned.
- Attack criteria (expressed as neutralize, suppress, harass, or destroy).
- Restrictions or special instructions.

G-68. Only one AGM is produced for execution at any point in the operation; however, each phase of the operation may have its own matrix. To synchronize lethal and nonlethal effects, all lethal and nonlethal attack systems, including psychological operations and electromagnetic attack, are placed on the AGM. The AGM is a synchronization and integration tool. It is normally included as part of the fires annex. However, it is not a tasking document. Attack tasks for unit assets are identified as taskings to subordinate units and agencies in the body or appropriate annexes or appendices of the OPLAN or OPORD.

G-69. **Target synchronization matrix.** The target synchronization matrix lists HPTs by category and the agencies responsible for detecting them, attacking them, and assessing the effects of the attacks. It combines data from the HPTL, intelligence collection plan, and AGM. A completed target synchronization matrix allows the targeting team to verify that assets have been assigned to each target. The targeting team may prepare a target synchronization matrix for each COA, or it may use the HPTL, target selection standards, and AGM for the war game and prepare a target synchronization matrix for only the approved COA.

COA Comparison, COA Approval, and Orders Production, Dissemination, and Approval

G-70. After war-gaming all COAs, the staff compares them and recommends one to the commander for approval. When the commander approves a COA, the targeting products for that COA become the basis for targeting for the operation. The targeting team meets to finalize the HPTL, target selection standards, AGM, and input to the intelligence collection plan. The team also performs any additional coordination required.

After accomplishing these tasks, targeting team members ensure that targeting factors that fall within their functional areas are placed in the appropriate part of the plan or order.

DETECT

G-71. The detect function involves locating HPTs accurately enough to engage them. It primarily entails execution of the information collection plan. The information collection plan focuses on identifying HPTs and answering PIRs. These are prioritized based on the importance of the target or information to the concept of operations and commander's intent. Thus, there is some overlap between the detect and assess functions. Detecting targets for nonlethal attacks may require intelligence, surveillance, and reconnaissance support from higher headquarters. The targeting team adjusts the HPTL and AGM to meet changes as the situation develops.

DELIVER

G-72. The deliver function involves engaging targets located with the target selection standards according to the guidance in the AGM. HPTs that are located within the target selection standards are tracked and engaged at the time designated in the order or the AGM. Other collection assets look at HPTs that are not located accurately enough or for targets within priority target sets. When one of these is located within the target selection standards, its location is sent to the system that the AGM assigns to attack it. Not all HPTs will be identified accurately enough before execution. Some target sets may not have very many targets identified. Collection assets and the intelligence system develop information that locates or describes potential targets accurately enough to engage them. The HPTL sets the priority in which they accomplish this task.

ASSESS

G-73. In large-scale combat operations, the effectiveness of targeting is determined through combat assessment. *Combat assessment* is the determination of the overall effectiveness of force employment during military operations (JP 3-60). Combat assessment is composed of three major components:

- Battle damage assessment.
- Munitions effectiveness assessment.
- Reattack recommendations.

Battle Damage Assessment

G-74. Battle damage assessment provides an estimate of the damage or effect created on a target, and it includes an assessment of both lethal and nonlethal engagements. Effective battle damage assessment requires a coordinated effort between the intelligence cell and other members of the targeting team.

Munitions Effectiveness Assessment

G-75. Munitions effectiveness assessment is conducted concurrently with battle damage assessment. It provides an assessment of the effects created in terms of the weapon system and effectiveness of the munitions used to attack a target. A munitions effectiveness assessment may result in changes to the AGM or target selection standards.

Reattack Recommendations

G-76. Based on the battle damage assessment and munitions effectiveness assessment analysis, the intelligence officer, in conjunction with the targeting team, considers the level to which targeting objectives have been achieved and makes recommendations to the commander. Failure to achieve battle damage assessment, or failure to achieve necessary effects as determined by battle damage assessment, may result in a reattack recommendation. (See FM 3-60 for more information on targeting.)

RISK MANAGEMENT

G-77. The exposure of someone or something valued to danger, harm, or loss is inherent in all military operations. Because accomplishment of a mission is the priority, risk cannot be totally avoided. Identifying,

mitigating, and accepting risk is a function of command and a key consideration during planning and execution.

G-78. Effective risk management during operations depends on full integration into the MDMP and the overall operations process. It is not a stand-alone process. Commanders and staffs use risk management throughout the operations process to identify and mitigate risks associated with hazards (including ethical risks and moral hazards) that have the potential to cause friendly and civilian casualties, damage or destroy equipment, or otherwise impact mission effectiveness. Like targeting, risk management begins in planning and continues through preparation and execution. Risk management consists of these steps—

- Identify hazards.
- Assess hazards.
- Develop controls and make risk decisions.
- Implement controls.
- Supervise and evaluate.

G-79. Commanders and staffs apply each of the five steps of risk management into operational planning. Each of the five steps of risk management tends to require emphasis at different times during the MDMP. (See table G-2 on page 360 for a listing of how risk management is integrated into the MDMP.) The representation in table G-2 is illustrative; the steps of risk management are dynamic and cyclical. Risk management is an adaptable integrating process. Army planners use risk management to identify, assess, and control hazards, reducing their effect on operations and readiness.

Table G-2. Risk management in the military decision-making process

	Risk management steps				
Military decision-making process steps	Identify the hazards	Assess the hazards	Develop controls and make risk decisions	Implement controls	Supervise and evaluate
Receipt of mission	X				
Mission analysis	X	X			
Course of action development	X	X	X		
Course of action analysis	X	X	X		
Course of action comparison			X		
Course of action approval			X		
Orders production, dissemination, and transition	X	X	X	X	X

G-80. Commanders and staffs normally identify hazards in each sequential step of the MDMP. They determine existing and potential hazards through the steps of mission receipt, mission analysis, COA development, and COA analysis. During orders production, preparers clearly describe significant hazards in the published orders so they are documented, and friendly forces can precisely understand them. Results of risk assessments (including residual levels of risk and controls selected for mitigating hazards) may be included with the orders. Commanders and staffs develop controls and make risk decisions during COA development, COA analysis, COA comparison, and COA approval. Staffs implement risk management controls during the last step of the MDMP. This step includes orders production, dissemination, and transition. Army leaders continuously assess the effectiveness of controls and the risks of unexpected situations or events. They adjust operations as necessary to remain within acceptable risk. When risk to the mission or force can no longer be mitigated by the unit, commanders should discuss risk with higher echelon headquarters to gain assistance in mitigating risk.

G-81. All staff elements incorporate risk assessments and recommended mitigations into their running estimates. The operations officer coordinates risk management throughout the operations process. Units also develop contingency plans to account for different outcomes based on identified or known high-risk operations. (See ATP 5-19 for a detailed discussion of the risk management process.)

KNOWLEDGE MANAGEMENT

G-82. *Knowledge management* is the process of enabling knowledge flow to enhance shared understanding, learning, and decision making (ADP 6-0). The purpose of knowledge management is to align people, processes, and tools within the organizational structure and culture to achieve shared understanding. This alignment improves collaboration and interaction between leaders and subordinates and information sharing with subordinate units, higher echelon headquarters, and unified action partners.

G-83. Led by the COS or XO and knowledge management officer, knowledge management facilitates the transfer of knowledge among commanders, staffs, and forces to build and maintain situational understanding during the MDMP and throughout the operations process. Commanders and staffs employ knowledge

management techniques to add clarity to information, speed its dissemination, and support situational understanding and decision making. The five steps of knowledge management are—

- Assess.
- Design.
- Develop.
- Pilot.
- Implement.

The assess, design, and develop steps occur in planning. The pilot and implement steps occur during preparation and execution. (See ATP 6-01.1 for details on each step.)

G-84. Rarely does a unit start from scratch in developing its knowledge management plan. The unit's knowledge management standard operating procedure (SOP) is the base document the unit adjusts from upon receipt of a new mission. All staff sections designate knowledge management representatives that together form the knowledge management working group. Led by the knowledge management officer, the knowledge management working group participates in the MDMP and adjusts the knowledge management plan based on the new mission. This may include changes in reporting requirements, the unit's battle rhythm, and ways to display the unit's common operational picture.

G-85. Knowledge management leads to better decisions and increases flexibility, integration, and synchronization. Sound knowledge management practices include collaboration among personnel at different locations and rapid knowledge transfer between units and individuals. When properly implemented, knowledge management improves staff coordination throughout the MDMP, enhances the other integrating processes, and provides commanders with the right information necessary to make timely and effective decisions. The primary knowledge management output from the MDMP is the knowledge management annex to the OPLAN or OPORD.

G-86. All personnel must know and understand their roles and the roles of other staff sections for conducting the integrating processes. To be effective in integrating processes, staff members must be both actively engaged and proactive. They must not automatically assume that another staff section is solely responsible for a function. For example, the intelligence staff is not the only staff section responsible for IPOE input, and nearly everyone with access to government end user applications plays a role in knowledge management.

G-87. As with other staff products and processes, formats and techniques vary from one organization to another. Ultimately, staffs must determine how best to integrate these and other processes based on the situation, mission, and commander's intent. The staff must also understand the commander's desired end state and focus their efforts to achieve it.

G-88. Changes in mission, directives from higher headquarters, changes in the enemy's COA, or a variety of other factors may restart or significantly modify the planning process and integrating processes. Staffs must be adaptive and able to plan for new requirements on short notice.

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Glossary

The glossary lists acronyms and terms with Army and joint definitions. Where Army and joint definitions differ, (Army) precedes the definition. Terms for which FM 5-0 is the proponent are marked with an asterisk (*). The proponent publication for other terms is listed in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

ABCT	armored brigade combat team
AD	armored division
ADA	air defense artillery
ADCON	administrative control
ADM	Army design methodology
ADP	Army doctrine publication
AGM	attack guidance matrix
AJP	allied joint publication
AMD	air and missile defense
AO	area of operations
AOR	area of responsibility
AR	armor
AR	Army regulation
ASCC	Army Service component command
ASCOPE	areas, structures, capabilities, organizations, people, and events
ATP	Army techniques publication
BCT	brigade combat teams
C	CONFIDENTIAL
CAV	cavalry
CBRN	chemical, biological, radiological, or nuclear
CCDR	combatant commander
CCIR	commander's critical information requirement
CCMD	combatant command
CCP	combatant command campaign plans
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff instruction
CJCSM	Chairman of the Joint Chiefs of Staff manual
COA	course of action
COCOM	combatant command (command authority)
COS	chief of staff
CP	command post
CPG	contingency planning guidance

CUI	CONTROLLED UNCLASSIFIED INFORMATION
DA	Department of the Army
DAM	delegated authorities matrix
DOD	Department of Defense
DODI	Department of Defense instruction
DODM	Department of Defense manual
DS	direct support
DSM	decision support matrix
DST	decision support template
EEFI	essential element of friendly information
FA	field artillery
FFIR	friendly force information requirements
FM	field manual
FRAGORD	fragmentary order
FULLCOM	full command
G-1	assistant chief of staff, personnel
G-2	assistant chief of staff, intelligence
G-3	assistant chief of staff, operations
G-4	assistant chief of staff, logistics
G-5	assistant chief of staff, plans
G-6	assistant chief of staff, signal
G-8	assistant chief of staff, financial management
G-9	assistant chief of staff, civil affairs operations
GFMIG	Global Force Management Implementation Guidance
GS	general support
HPT	high-payoff target
HPTL	high-payoff target list
HVT	high-value target
IN	infantry
IPOE	intelligence preparation of the operational environment
JFC	joint force commander
JP	joint publication
JSCP	joint strategic campaign plan
MCOO	modified combined obstacle overlay
MCTP	Marine Corps training publication
MCWP	Marine Corps warfighting publication
MDMP	military decision-making process
METT-TC (I)	mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations
MLRS	multiple launch rocket system
MOE	measures of effectiveness
MOP	measures of performance

NAI	named area of interest
NATO	North Atlantic Treaty Organization
NDS	National Defense Strategy
NMS	National Military Strategy of the United States
NOFORN	Not Releasable To Foreign Nationals
NSS	National Security Strategy of the United States of America
OE	operational environment
OAKOC	observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment
OPCOM	operational command
OPCON	operational control
OPLAN	operation plan
OPORD	operation order
OPSEC	operations security
PACE	primary, alternate, contingency, and emergency
PIR	priority intelligence requirement
PSOP	planning standard operating procedure
RDSP	rapid decision-making and synchronization process
ROE	rules of engagement
S	SECRET
S-1	battalion or brigade personnel staff officer
S-2	battalion or brigade intelligence staff officer
S-3	battalion or brigade operations staff officer
S-4	battalion or brigade logistics staff officer
S-6	battalion or brigade signal staff officer
S-8	battalion or brigade financial management officer
S-9	battalion or brigade civil affairs operations staff officer
SOP	standard operating procedure
TACOM	tactical command
TACON	tactical control
TAI	target area of interest
TF	task force
TLP	troop leading procedures
TM	technical manual
TPFDD	time-phased force deployment data
TRA	training and readiness authority
TRO	training and readiness oversight
TS	TOP SECRET
U	UNCLASSIFIED
UCP	Unified Command Plan
U.S.	United States
USC	United States Code

WARNORD	warning order
XO	executive officer

SECTION II – TERMS

agility

The ability to move forces and adjust their dispositions and activities more rapidly than the enemy. (FM 3-0)

ARFOR

The Army component and senior Army headquarters of all Army forces assigned or attached to a combatant command, subordinate joint force command, joint functional command, or multinational command. (FM 3-94)

Army design methodology

A methodology for applying critical and creative thinking to understand, visualize, and describe problems and approaches to solving them. (ADP 5-0)

assessment

Determination of the progress toward accomplishing a task, creating a condition, or achieving an objective. (JP 3-0)

avenue of approach

A path used by an attacking force leading to its objective or to key terrain. Avenues of approach exist in all domains. (ADP 3-90)

battle

A set of related engagements that lasts longer and involves larger forces than an engagement. (ADP 3-90)

***be-prepared mission**

A mission assigned to a unit that might be executed.

branch

The contingency options built into the base plan used for changing the mission, orientation, or direction of movement of a force to aid success of the operation based on anticipated events, opportunities, or disruptions caused by enemy actions and reactions. (JP 5-0)

campaign plan

A joint operation plan for a series of related major operations aimed at achieving strategic or operational objectives within a given time and space. (JP 5-0)

C-day

The unnamed day on which a deployment operation commences or is to commence. (JP 5-0)

center of gravity

The source of power that provides moral or physical strength, freedom of action, or will to act. (JP 5-0)

civil considerations

The influence of man-made infrastructure, civilian institutions, and activities of the civilian leaders, populations, and organizations within an area of operations on the conduct of military operations. (ADP 6-0)

close support

Action of the supporting force against targets or objectives that are sufficiently near the supported force as to require detailed integration or coordination of the supporting action with fire, movement, or other actions of the supported force. (JP 3-31)

collaborative planning

Two or more echelons planning together in real time, sharing information, perceptions, and ideas to develop their respective plans simultaneously. (ADP 5-0)

combatant command (command authority)

Nontransferable command authority, which cannot be delegated, of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces; assigning tasks; designating objectives; and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command. (JP 1, Volume 2)

combat assessment

The determination of the overall effectiveness of force employment during military operations. (JP 3- 60)

combat power

The total means of destructive and disruptive force that a military unit/formation can apply against an enemy at a given time. (JP 3-0)

commander's critical information requirement

Specific information identified by the commander as being essential to facilitate timely decision making. (JP 3-0)

commander's estimate

The commander's initial assessment in which options are provided in a concise statement that defines who, what, when, where, why, and how the course of action will be implemented. (JP 5-0)

commander's intent

A clear and concise expression of the purpose of the operation and the desired objective and military end state. (JP 3-0)

commander's visualization

The mental process of developing situational understanding, determining a desired end state, and envisioning an operational approach by which the force will achieve that end state. (ADP 6-0)

concealment

Protection from observation or surveillance. (FM 3-96)

concept of operations

(Army) A statement that directs the manner in which subordinate units cooperate to accomplish the mission and establishes the sequence of actions the force will use to achieve the end state. (ADP 5-0)

***constraint**

(Army) A restriction placed on the command by a higher command.

contingency plan

A branch of a campaign plan that is planned based on hypothetical situations for designated threats, catastrophic events, and contingent missions outside of crisis conditions. (JP 5-0)

control measure

A means of regulating forces or warfighting functions. (ADP 6-0)

coordinating authority

A commander or individual who has the authority to require consultation between the specific functions or activities involving forces of two or more Services, joint force components, or forces of the same Service or agencies but does not have the authority to compel agreement. (JP 1, Volume 2)

course of action

A scheme developed to accomplish a mission. (JP 5-0)

cover

Protection from the effects of fires. (FM 3-96)

***critical event**

An event that directly influences mission accomplishment.

critical information

Specific facts about friendly intentions, capabilities, and activities needed by an enemy or adversary for them to plan and act effectively so as to guarantee failure or unacceptable consequences for friendly mission accomplishment. (JP 2-0)

culminating point

The point at which a force no longer has the capability to continue its form of operations, offense or defense. (JP 5-0)

D-day

The unnamed day on which a particular operation commences or is to commence. (JP 3-02)

decision point

A point in space and the latest time when the commander or staff anticipates making a key decision concerning a specific course of action. (JP 5-0)

decision support matrix

A written record of a war-gamed course of action that describe decision points and associated actions at those decision points. (ADP 5-0)

decision support template

A combined intelligence and operations graphic based on the results of wargaming that depicts decision points, timelines associated with movement of forces and the flow of operations, and other key items of information required to execute a specific friendly course of action. (JP 2-0)

decisive point

Key terrain, key event, critical factor, or function that, when acted upon, enables commanders to gain a marked advantage over an enemy or contribute materially to achieving success. (JP 5-0)

decisive terrain

Key terrain whose seizure and retention is mandatory for successful mission accomplishment. (ADP 3- 90)

defeat mechanism

The method through which friendly forces accomplish their mission against enemy opposition. (ADP --3-0)

depth

The extension of operations in time, space, or purpose to achieve definitive results. (ADP 3-0)

direct liaison authorized

That authority granted by a commander (any level) to a subordinate to directly consult or coordinate an action with a command or agency within or outside of the granting command. (JP 1, Volume 2)

direct support

A mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance. (JP 3-09.3)

direct support

(Army) A support relationship requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance. (FM 3-0)

end state

The set of required conditions that defines achievement of the commander's objectives. (JP 3-0)

endurance

The ability to persevere over time throughout the depth of an operational environment. (FM 3-0)

engagement

A tactical conflict, usually between opposing lower echelon maneuver forces. (JP 3-0)

essential element of friendly information

A critical aspect of a friendly operation that, if known by a threat, would subsequently compromise, lead to failure, or limit success of the operation and therefore should be protected from enemy detection. (ADP 6-0)

***essential task**

(Army) A specified or implied task that must be executed to accomplish the mission.

evaluating

Using indicators to judge progress toward desired conditions and determining why the current degree of progress exists. (ADP 5-0)

event template

A guide for collection planning that depicts the named areas of interest where activity, or lack of activity, will indicate which course of action the enemy and/or adversary has adopted. (JP 2-0)

exterior lines

Lines on which a force operates when its operations converge on the enemy. (ADP 3-0)

field of fire

The area that a weapon or group of weapons may cover effectively from a given position. (FM 3-90)

fragmentary order

An abbreviated operation order issued as needed to change or modify an order or to execute a branch or sequel. (JP 5-0)

friendly force information requirement

Information the commander and staff need to understand the status of friendly force and supporting capabilities. (JP 3-0)

general support

Support given to the supported force as a whole and not to any particular subdivision thereof. (JP 3-09.3)

general support-reinforcing

A support relationship assigned to a unit to support the force as a whole and to reinforce another similar-type unit. (FM 3-0)

graphic control measure

A symbol used on maps and displays to regulate forces and warfighting functions. (ADP 6-0)

H-hour

The specific hour on D-day at which a particular operation commences. (JP 5-0)

high-payoff target

A target whose loss to the enemy will contribute to the success of the friendly course of action. (JP 3-60)

human dimension

Encompasses people and the interaction between individuals and groups, how they understand information and events, make decisions, generate will, and act within an operational environment (FM 3-0).

***implied task**

A task that must be performed to accomplish a specified task or mission but is not stated in the higher headquarters' order.

indicator

In the context of assessment, a specific piece of information that infers the condition, state, or existence of something, and provides reliable means to ascertain performance or effectiveness. (JP 5-0)

informational considerations

Those aspects of the human, information and physical dimensions that affect how humans and automated systems derive meaning from, use, act upon, and are impacted by information. (FM 3-0)

information collection

An activity that synchronizes and integrates the planning and employment of sensors and assets as well as the processing, exploitation, and dissemination systems in direct support of current and future operations. (FM 3-55)

intelligence preparation of the operational environment

The systematic process of analyzing the mission variables of enemy, terrain, weather, and civil considerations in an area of interest to determine their effect on operations. (ATP 2-01.3)

interior lines

Lines on which a force operates when its operations diverge from a central point. (ADP 3-0)

isolate

To separate a force from its sources of support in order to reduce its effectiveness and increase its vulnerability to defeat. (ADP 3-0)

key tasks

Those significant activities the force must perform as a whole to achieve the desired end state. (ADP 6-0)

key terrain

Any locality, or area, the seizure or retention of which affords a marked advantage to either combatant. (JP 2-0)

knowledge management

The process of enabling knowledge flow to enhance shared understanding, learning, and decision making. (ADP 6-0)

levels of warfare

A framework for defining and clarifying the relationship among national objectives, the operational approach, and tactical tasks. (ADP 1-01)

L-hour

The specific hour on C-day at which a deployment operation commences or is to commence. (JP 5-0)

line of operations

(Army) A line that defines the directional orientation of a force in time and space in relation to the enemy and links the force with its base of operations and objectives. (ADP 3-0)

main effort

A designated subordinate unit whose mission at a given point in time is most critical to overall mission success. (ADP 3-0)

measure of effectiveness

An indicator used to measure a current system state, with change indicated by comparing multiple observations over time. (JP 5-0)

measure of performance

An indicator used to measure a friendly action that is tied to measuring task accomplishment. (JP 5-0)

military decision-making process

An iterative planning methodology to understand the situation and mission, develop a course of action, and produce an operation plan or order. (ADP 5-0)

mission

The essential task or tasks, together with the purpose, that clearly indicates the action to be taken and reason for the action. (JP 3-0)

mission command

(Army) The Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation. (ADP 6-0)

mission orders

Directives that emphasize to subordinates the results to be attained, not how they are to achieve them. (ADP 6-0)

mission statement

A short sentence or paragraph that describes the organization's essential task(s), purpose, and action containing the elements of who, what, when, where, and why. (JP 5-0)

monitoring

The continuous observation of those conditions relevant to the current operation. (ADP 5-0)

mutual support

That support which units render each other throughout joint operations, because of their assigned tasks, their position relative to each other and to the enemy, or their inherent capabilities. (JP 3-31)

national strategic level of warfare

The level of warfare at which the U.S. government formulates policy goals and ways to achieve them by synchronizing action across government and unified action partners and employing the instruments of national power. (FM 3-0)

objective

The clearly defined, decisive, and attainable goal toward which an operation is directed. (JP 5-0)

observation

The condition of weather and terrain that permits a force to see the friendly, enemy, and neutral personnel and systems, and the key aspects of the environment. (FM 1-02.1)

obstacle

Any barrier designed or employed to disrupt, fix, turn, or block the movement and maneuver, and to impose additional losses in personnel, time, and equipment. (JP 3-15)

***on-order mission**

A mission to be executed at an unspecified time.

operational approach

A broad description of the mission, operational concepts, tasks, and actions required to accomplish the mission. (JP 5-0)

operational art

The cognitive approach by commanders and staffs—supported by their skill, knowledge, experience, creativity, and judgment—to develop strategies, campaigns, and operations to organize and employ military forces by integrating ends, ways, and means. (JP 3-0)

operational control

The authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. (JP 1, Volume 2)

operational environment

The aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

operational framework

A cognitive tool used to assist commanders and staffs in clearly visualizing and describing the application of combat power in time, space, purpose, and resources in the concept of operations. (ADP 1-01)

operational level of warfare

The level of warfare in which campaigns and operations are planned, conducted, and sustained to achieve operational objectives to support achievement of strategic objectives. (JP 3-0)

operational reach

The distance and duration across which a force can successfully employ military capabilities. (JP 3-0)

operational variables

A comprehensive set of information categories used to describe an operational environment. (ADP 1-01)

operation order

A directive issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation. (JP 5-0)

operation plan

A complete and detailed plan containing a full description of the concept of operations, all annexes applicable to the plan, and a time-phased force and deployment list. (JP 5-0)

operations process

The major command and control activities performed during operations: planning, preparing, executing, and continuously assessing the operation. (ADP 5-0)

parallel planning

Two or more echelons planning for the same operations nearly simultaneously facilitated by the use of warning orders by the higher headquarters. (ADP 5-0)

phase

(Army) A planning and execution tool used to divide an operation in duration or activity. (ADP 3-0)

***P-hour**

The specific hour on D-day at which a parachute assault commences with the exit of the first Soldier from an aircraft over a designated drop zone. P-hour may or may not coincide with H-hour planning horizon.

planning

The art and science of understanding a situation, envisioning a desired future, and determining effective ways to bring that future about. (ADP 5-0)

planning horizon

A point in time commanders use to focus the organization’s planning efforts to shape future events. (ADP 5-0)

priority intelligence requirement

The intelligence component of commander’s critical information requirements used to focus the employment of limited intelligence assets and resources against competing demands for intelligence support. (JP 2-0)

priority of support

A priority set by the commander to ensure a subordinate unit has support in accordance with its relative importance to accomplish the mission. (ADP 5-0)

reinforcing

A support relationship requiring a force to support another supporting unit. (FM 3-0).

reserve

(Army) That portion of a body of troops that is withheld from action at the beginning of an engagement to be available for a decisive movement. (ADP 3-90)

risk management

The process to identify, assess, and control risks and make decisions that balance risk cost with mission benefits. (JP 3-0)

running estimate

The continuous assessment of the current situation used to determine if the current operation is proceeding according to the commander's intent and if planned future operations are supportable. (ADP 5-0)

sequel

The subsequent operation or phase based on the possible outcomes of the current operation or phase. (JP 5-0)

situational understanding

The product of applying analysis and judgment to relevant information to determine the relationships among the operational and mission variables. (ADP 6-0)

***specified task**

(Army) A task specifically assigned to a unit by its higher headquarters.

stability mechanism

The primary method through which friendly forces affect civilians in order to attain conditions that support establishing a lasting, stable peace. (ADP 3-0)

supporting effort

A designated subordinate unit with a mission that supports the success of the main effort. (ADP 3-0)

supporting plan

An operation plan prepared by a supporting commander, a subordinate commander, or an agency to satisfy the requests or requirements of the supported commander's plan. (JP 5-0)

synchronization

The arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time. (JP 2-0)

system

A functionally, physically, and/or behaviorally related group of regularly interacting or interdependent elements; that group of elements forming a unified whole. (JP 3-0)

tactical control

The authority over forces that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish assigned missions or tasks assigned. (JP 1, Volume 2)

tactical level of warfare

The level of warfare at which forces plan and execute battles and engagements to achieve military objectives. (JP 3-0)

tactical mission task

The specific activity a unit performs while executing a tactical operation or form of maneuver. (FM 90)

tactics

(Army) The employment, ordered arrangement, and directed actions of forces in relation to each other. (ADP 3-90)

target

An entity or object that performs a function for the threat considered for possible engagement or other action. (JP 3-60)

targeting

The process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities. (JP 3-0)

task

A clearly defined action or activity specifically assigned by an appropriate authority to an individual or organization, or derived during mission analysis, that must be accomplished. (JP 1, Volume 1)

task organization

(Army) A temporary grouping of forces designed to accomplish a particular mission. (ADP 5-0)

task-organizing

The act of designing a force, support staff, or sustainment package of specific size and composition to meet a unique task or mission. (ADP 3-0)

tempo

The relative speed and rhythm of military operations over time with respect to the enemy. (ADP 3-0)

theater strategic level of warfare

The level of warfare at which combatant commanders synchronize with unified action partners and employ all elements of national power to fulfill policy aims within the assigned theater in support of the national strategy. (FM 3-0)

troop leading procedures

A dynamic process used by small-unit leaders to analyze a mission, develop a plan, and prepare for an operation. (ADP 5-0)

unified action

The synchronization, coordination, or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort. (JP 1, Volume 1)

warning order

A preliminary notice of an order or action that is to follow. (JP 5-0)

References

All websites accessed on 19 September 2024.

REQUIRED PUBLICATIONS

These documents must be available to intended users of this publication.

DOD Dictionary of Military and Associated Terms. July 2024.

FM 1-02.1. *Operational Terms*. 28 February 2024.

FM 1-02.2. *Military Symbols*. 28 February 2024.

RELATED PUBLICATIONS

These documents contain relevant supplemental information.

JOINT AND DEPARTMENT OF DEFENSE PUBLICATIONS

Most Department of Defense issuances are available at https://www.esd.whs.mil/DD. Most joint publications are available online https://www.jcs.mil/Doctrine/Joint-Doctrine-Pubs/.

CJCSI 3100.01F. *Joint Strategic Planning System*. 29 January 2024.

CJCSM 3122. 05. *Operating Procedures for Joint Operation Planning and Execution System (JOPES)-Information Systems (IS) Governance*. 15 December 2011.

CJCSM 3130.03(A). *Planning and Execution Formats and Guidance*. 04 February 2019.

DODI 5200.48. *Controlled Unclassified Information*. 06 March 2020.

DODM 5200.01, Volume 2. *DoD Information Security Program: Marking of Information*. 24 February 2012.

JP 1, Volume 1. *Joint Warfighting*. 27 August 2023.

JP. 1, Volume 2. *The Joint Force*. 19 June 2020.

JP 2-0. *Joint Intelligence*. 26 May 2022.

JP 3-0. *Joint Campaigns and Operations*. 18 June 2022.

JP 3-01. *Countering Air and Missile Threats*. 06April 2023.

JP 3-02. *Amphibious Operations*. 04 January 2019.

JP 3-08. *Interorganizational Cooperation*. 12 October 2016.

JP 3-09.3. *Close Air Support*. 10 June 2019.

JP 3-14. *Joint Space Operations*. 23 August 2023.

JP 3-15. *Barriers, Obstacles, and Mines in Joint Operations*. 26 May 2022.

JP 3-16. *Multinational Operations*. 17 June 2024.

JP 3-31. *Joint Land Operations*. 03 October 2019.

JP 3-33. *Joint Force Headquarters*. 09 June 2022.

JP 3-34. *Joint Engineer Operations*. 06 January 2016.

JP 3-57. *Civil-Military Operations*. 09 July 2018.

JP 3-60. *Joint Targeting*. 20 September 2024.

JP 3-61. *Public Affairs*. 17 November 2015.

JP 5-0. *Joint Planning*. 01 July 2024.

ARMY PUBLICATIONS

Unless otherwise indicated, Army publications are available online: https://armypubs.army.mil/.

ADP 1-01. *Doctrine Primer*. 31 July 2019.

ADP 2-0. *Intelligence*. 31 July 2019.

ADP 3-0. *Operations*. 31 July 2019.

ADP 3-07. *Stability*. 31 July 2019.

ADP 3-13. *Information*. 27 November 2023.

ADP 3-19. *Fires*. 31 July 2019.

ADP 3-37. *Protection*. 10 January 2024.

ADP 3-90. *Offense and Defense*. 31 July 2019.

ADP 4-0. *Sustainment*. 31 July 2019.

ADP 5-0. *The Operations Process*. 31 July 2019.

ADP 6-0. *Mission Command: Command and Control of Army Forces*. 31 July 2019.

ADP 6-22. *Army Leadership and the Profession*. 31 July 2019.

AR 1-201. *Army Inspection Policy*. 01 November 2023.

AR 20-1. *Inspector General Activities and Procedures*. 23 March 2020.

AR 25-50. *Preparing and Managing Correspondence*. 10 October 2020.

AR 380-5. *Army Information Security Program*. 25 March 2022.

AR 380-10. *Foreign Disclosure and Contacts with Foreign Representatives*. 14 July 2015.

AR 385-10. *The Army Safety and Occupational Health Program*. 24 July 2023.

AR 525-13. *Antiterrorism*. 03 December 2019.

AR 525-28. *Personnel Recovery*. 05 March 2010.

AR 530-1. *Operations Security*. 26 September 2014.

AR 715-9. *Operational Contract Support Planning and Management*. 20 June 2011.

ATP 1-0.1. *Techniques for Human Resources Support to Operations*. 16 November 2023.

ATP 2-01. *(U) Collection Management*. 17 August 2021.

ATP 2-01.3. *Intelligence Preparation of the Operational Environment*. 01 March 2019.

ATP 2-91.7. *Intelligence Support to Defense Support of Civil Authorities*. 29 June 2015.

ATP 3-13.3. *Army Operations Security for Division and Below*. 16 July 2019.

ATP 3-16.02. *Write for Release*. 26 September 2023.

ATP 3-34.5/MCRP 3-40B.2. *Environmental Considerations*. 10 August 2015.

ATP 3-34.22. *Engineer Operations—Brigade Combat Team and Below*. 14 April 2021.

ATP 3-34.40/MCTP 3-40D. *General Engineering*. 14 April 2023.

ATP 3-34.80. *Geospatial Engineering*. 26 March 2024.

ATP 3-34.81/MCWP 3-17.4. *Engineer Reconnaissance*. 01 March 2016.

ATP 3-37.2. (U) *Antiterrorism*. 19 July 2021.

ATP 3-37.10/MCRP 3-40D.13. *Base Camps*. 27 January 2017.

ATP 3-37.34/MCTP 3-34C. *Survivability Operations*. 16 April 2018.

ATP 3-39.10. *Police Operations*. 24 August 2021.

ATP 3-39.32. *Physical Security*. 08 March 2022.

ATP 3-50.10/MCRP 3-05.3/NTTP 3-57.6/AFTTP 3-2.90. *PR: Multi-Service Tactics, Techniques, and Procedures for Personnel Recovery*. 20 October 2022.

ATP 3-57.10. *Civil Affairs Support to Populace and Resources Control*. 06 August 2013.

ATP 3-90.8/MCTP 3-34.B. *(U) Combined Arms Countermobility (CUI)*. 30 November 2021.

ATP 3-93. *Theater Army Operations*. 27 August 2021.

ATP 4-02.7/MCRP 4-11.1F/NTTP 4-02.7/AFTTP 3-42.3. *Multi-Service Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment*. 15 March 2016.

ATP 4-02.19. *Dental Services*. 14 August 2020.

ATP 4-02.55. *Army Health System Support Planning*. 30 March 2020.

ATP 4-10/MCRP 3-40B.6/NTTP 4-09.1/AFTTP 3-2.41. *Multi-Service, Tactics Techniques, and Procedures for Operational Contract Support*. 16 December 2021.

ATP 4-10.1. *Logistics Civil Augmentation Program Support to Operations*. 28 November 2023.

ATP 4-32. *Explosive Ordinance Disposal (EOD) Operations*. 12 May 2022.

ATP 5-0.1. *Army Design Methodology*. 01 July 2015.

ATP 5-0.2-1. *Staff Reference Guide Volume I Unclassified Resources*. 07 December 2020.

ATP 5-0.3/MCRP 5-10.1/NTTP 5-01.3/AFTTP 3-2.87. *Operation Assessment: Multi-Service Tactics, Techniques, and Procedures for Operation Assessment*. 07 February 2020.

ATP 5-19. *Risk Management*. 09 November 2021.

ATP 6-01.1. *Knowledge Management*. 11 March 2024.

ATP 6-02.2. *Signal Platoon*. 30 December 2020.

ATP 6-02.12. *Department of Defense Information Network-Army Planning Techniques*. 17 November 2021.

ATP 6-02.45. *Techniques for Tactical Signal Support to Theater Operations*. 07 November 2019.

ATP 6-02.53. *Techniques for Tactical Radio Operations*. 13 February 2020.

ATP 6-02.54. *Techniques for Satellite Communications*. 05 November 2020.

ATP 6-02.60. *Tactical Networking Techniques for Corps and Below*. 09 August 2019.

ATP 6-02.61. *Expeditionary Mission Partner Network Operations*. 06 December 2023.

ATP 6-02.62. *Expeditionary Mission Partner Network Techniques for Joining, Membership, and Exiting Instructions*. 06 December 2023.

ATP 6-02.70. *Techniques for Spectrum Management Operations*. 16 October 2019.

ATP 6-02.71. *Techniques for Department of Defense Information Network Operations*. 30 April 2019.

ATP 6-02.75. *Techniques for Communications Security*. 18 May 2020.

DA Pamphlet 385-10. *Army Safety and Occupational Health Procedures*. 24 July 2023.

FM 2-0. *Intelligence*. 01 October 2023.

FM 3-0. *Operations*. 01 October 2022.

FM 3-01. *U.S. Army Air and Missile Defense Operations*. 22 December 2020.

FM 3-01.44. *Short-Range Air Defense Operations*. 21 July 2022.

FM 3-09. *Fire Support and Field Artillery Operations*. 12 August 2024.

FM 3-11. *Chemical, Biological, Radiological, and Nuclear Operations*. 23 May 2019.

FM 3-12. *Cyberspace Operations and Electromagnetic Warfare*. 24 August 2021.

FM 3-13. *Information Operations*. 06 December 2016.

FM 3-14. *Army Space Operations*. 30 October 2019.

FM 3-16. *The Army in Multinational Operations*. 15 July 2024.

FM 3-34. *Engineer Operations*. 18 December 2020.

FM 3-39. *Military Police Operations*. 09 April 2019.

FM 3-50. *Army Personnel Recovery*. 02 September 2014.

FM 3-55. *Information Collection*. 03 May 2013.

FM 3-57. *Civil Affairs Operations*. 28 July 2021.

FM 3-60. *Army Targeting*. 11 August 2023.

FM 3-61. *Communication Strategy and Public Affairs Operations*. 25 February 2022.

FM 3-63. *Detainee Operations*. 02 January 2020.

FM 3-90. *Tactics*. 01 May 2023.

FM 3-94. *Armies, Corps, and Division Operations*. 23 July 2021.

FM 3-96. *Brigade Combat Team*. 19 January 2021.

FM 4-02. *Army Health System*. 17 November 2020.

FM 6-0. *Commander and Staff Organization and Operations*. 16 May 2022.

FM 6-02. *Signal Support to Operations*. 13 September 2019.

FM 6-27/MCTP 11-10C. *The Commander's Handbook on the Law of Land Warfare*. 07 August 2019.

FM 6-99. *U.S. Army Report and Message Formats*. 17 May 2021.

TM 3-34.85/MCRP 3-17A. *Engineer Field Data*. 17 October 2013.

MARINE CORPS PUBLICATION

Most Marine Corps publications are available at https://www.marines.mil/News/Publications.aspx.

MCWP 5-10. *Marine Corps Planning Process*. 10 August 2020.

NORTH ATLANTIC TREATY ORGANIZATION PUBLICATIONS

Most North Atlantic Treaty Organization publications are available at https://assistca.dla.mil/. NATO publications require an account to access.

AJP-3. *Allied Joint Doctrine for the Conduct of Operations*. 11 February 2019.

AJP-5. *Allied Joint Doctrine for the Planning of Operations*. 24 May 2019.

APP-28. *Tactical Planning Process*. 07 March 2024.

Allied Tactical Publication-3.2.2. (U) *Command and Control of Allied Land Forces*. (C) 15 December 2016.

OTHER PUBLICATIONS

Executive Order 12333. *United States Intelligence Activities*. 4 December 1981. Available at https://dpcld.defense.gov/Portals/49/Documents/Civil/eo-12333-2008.pdf.

National Military Strategy of the United States. June 2015. Available at https://www.jcs.mil/Portals/36/Documents/Publications/2015_National_Military_Strategy.pdf

National Security Strategy of the United States of America. 12 October 2022. Available at https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf.

UNITED STATES LAW

Most acts and public laws are available at http://uscode.house.gov/.

Title 10, U.S. Code. *Armed Forces, Section 113*.

Title 10, U.S. Code. *Armed Forces, Section 153*.

Title 10, U.S. Code. *Armed Forces, Section 161*.

Title 10, U.S. Code. *Armed Forces, Section 162*.

Title 10, U.S. Code. *Armed Forces, Section* 164.

Title 10, U.S. Code. *Armed Forces, Section* 7013.

Title 10, U.S. Code. *Armed Forces, Section* 7074.

Title 50, U.S. Code. *War and National Defense*.

WEBSITES

The U.S. Army Directorate of Force Management at https://fmsweb.fms.army.mil.

The Combined Arms Support Command planning branch at https://cascom.army.mil/g_staff/g3/SUOS/site-sustainment/pages/hot-topics.htm.

PRESCRIBED FORMS

This section contains no entries.

REFERENCED FORMS

Unless otherwise indicated, DA forms are available on the Army Publishing Directorate website at https://armypubs.army.mil/.

DA Form 2028. *Recommended Changes to Publications and Blank Forms*.

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08 August 2025

By Order of the Secretary of the Army:

RANDY A. GEORGE
General, United States Army
Chief of Staff

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