FM 5-0

PLANNING AND ORDERS PRODUCTION

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This publication supersedes chapters 4, 8, 9, 10, 14, and 15 and appendixes A, B, C, and D of FM 6-0, dated 5 May 2014.

HEADQUARTERS, DEPARTMENT OF THE ARMY

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Headquarters
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PLANNING AND ORDERS PRODUCTION

Contents

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Figures

Tables

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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 Joint Publication (JP) 5-0. When planning operations as part of a North Atlantic Treaty Organization operation, readers should refer to Allied Joint Publication (AJP) 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 war and the rules of engagement. (See the *Department of Defense Law of War Manual for more information on the law of war*.)

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 laying out 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 serves as a framework of anticipated actions that guide 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.

The intent of this version of FM 5-0 is to consolidate information on planning and orders production into a single document to support planning at all echelons. As such, this version of FM 5-0 supersedes the planning and assessment doctrine found in the 2014 edition of FM 6-0. FM 5-0 also incorporates and updates the doctrine on Army design methodology found in ATP 5-0.1.

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—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 is a new chapter that 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 and its application for units with a staff. 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 of the seven steps of the MDMP with adjustments made in steps 3 and 4 to better align the process. 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.

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 and their relationship to the MDMP. 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 Application Center (known as ALSA) 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 operation. 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 military decision making process.

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

FM 5-0 is now the proponent for several terms. (See the introductory table for FM 5-0 terms.)

Introductory table. Modified terms

Term	*Remarks*
be-prepared mission	FM 5-0 becomes proponent
constraint	FM 5-0 becomes proponent
essential task	FM 5-0 becomes proponent
implied task	FM 5-0 becomes proponent
on-order mission	FM 5-0 becomes proponent
P-hour	FM 5-0 becomes proponent
specified task	FM 5-0 becomes proponent

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. Next, it defines and describes planning. A discussion of the functions of planning follows. The chapter then describes integrated planning, including 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.

THE NATURE OF OPERATIONS

1-1. To understand the fundamentals of planning, Soldiers first must appreciate the general nature of operations. Military operations are human endeavors—a contest of wills characterized by violence and continuous adaptation among all participants. During operations, 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 also 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 dynamic and uncertain nature of war, making precise cause-and-effect determinations difficult or delayed. For example, the 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. Leaders who understand the dynamic and uncertain nature of operations are better prepared to develop effective and ethically reasoned plans than those who do not.

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 threats 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 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 for which the force can adjust from 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.

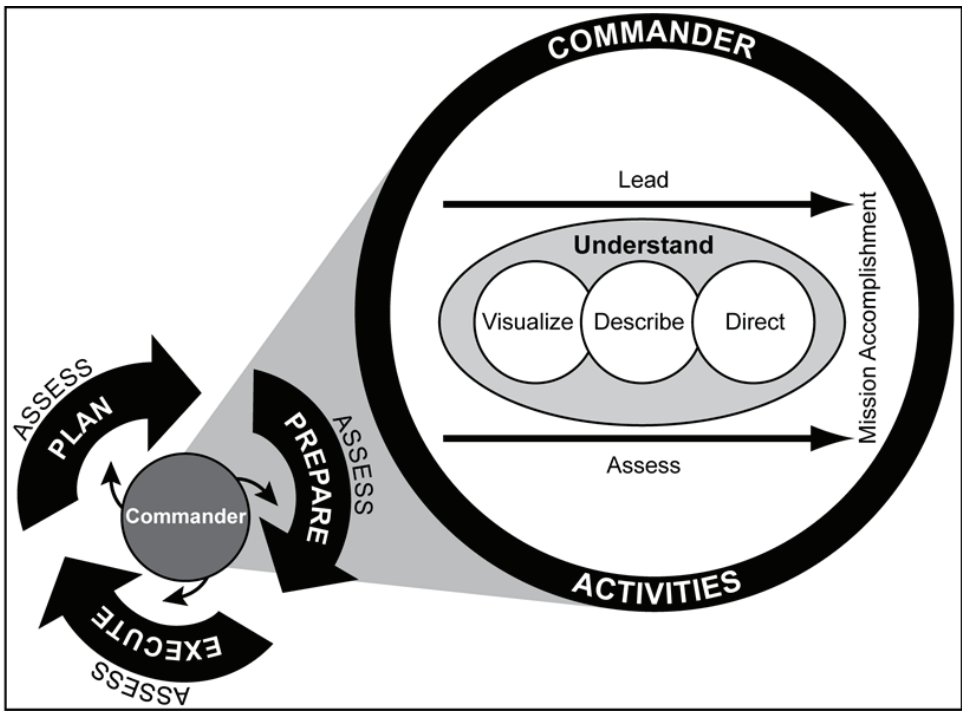

Figure 1-1. The operations process

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 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 military 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 which 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 which 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 support system planning.
- Army technique publications on Russian, Chinese, North Korean, and Iranian forces.

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 3-90-1) 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 and develop solutions to problems.
- Understand, describe, 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 and the situation as it relates to the unit's mission.

1-18. An *operational environment* is a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander (JP 3-0). An OE encompasses the air, land, maritime, space, and cyberspace domains; the information environment; the electromagnetic spectrum; and other factors. Included within these areas are the enemy, friendly, and neutral systems and actors who are relevant to a specific operation.

1-19. Planners analyze and describe an OE in terms of eight interrelated operational variables: political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT). The operational variables not only help leaders understand the land domain, but they help leaders understand

how relevant actors and capabilities in the air, maritime, space, and cyberspace domains and the relevant information aspects that impact operations on land and vice versa. (See Appendix A for a detailed discussion of the operational variables.)

1-20. 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). The informational considerations are generally the human, information and physical aspects of an OE that affect how humans and automated systems derive meaning from, use, act upon, and are impacted by information.

Note. METT-TC (I) represents the mission variables leaders use to analyze and understand a situation in relationship to the unit's mission. The first six variables are not new. However, the increased use of information (both military and civilian) to generate cognitive effects requires leaders to continuously assess the informational aspects and impacts on operations. Because of this, informational considerations, represented with (I) has been added to the familiar METT-TC mnemonic. 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.

IDENTIFY AND DEVELOP SOLUTIONS TO PROBLEMS

1-21. 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 actually is 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 1-43 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.

1-22. Throughout operations, Army leaders face various problems, often 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 actually 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 as a whole. In general, the more complex a situation is, the more important and involved the planning effort becomes.

1-23. 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.

DIRECT, COORDINATE, AND SYNCHRONIZE ACTIONS

1-24. 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.

1-25. 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 control measure symbols.)

1-26. *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. Synchronization is a means of control, not an end. Commanders balance necessary synchronization against desired agility and initiative. Overemphasizing 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 1-59 to 1-62.

TASK-ORGANIZE THE FORCE AND PRIORITIZE EFFORTS

1-27. When developing their concept of operations, commanders, and typically their staff, visualize the decisive operation that directly accomplishes the mission. They then visualize how shaping and sustaining operations support the decisive operation. The decisive operation prioritizes effort, and it is the focal point around which the plan is developed. When developing associated tasks to subordinate units, commanders ensure subordinates have the capabilities and resources to accomplish their assigned tasks. They do this by task-organizing the force and establishing priorities of support.

1-28. *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 the force, commanders visualize capabilities of units two echelons down, based on their visualization of tasks to subordinates one echelon down. Some assets are retained under the commander's immediate control to retain flexibility to exploit opportunities or counter threats.

1-29. 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 Appendix B for a detailed discussion of joint, multinational, and Army command and support relationships.)

1-30. 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 formats in Army plans and orders.)

1-31. In addition to task-organizing, commanders 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 use to weight the decisive operation or the main effort if the operation is phased.

1-32. 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). The main effort is weighted with the preponderance of *combat power*—the total means of destructive, constructive, and information capabilities that a military unit or formation can apply at a given time (ADP 3-0). Designating a main effort temporarily gives that unit the preponderance of support. Commanders shift resources and priorities to the main effort as circumstances require. Commanders may shift the main effort several times during an operation. The force executing the decisive operation is always the main effort.

ANTICIPATE EVENTS

1-33. 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. 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.

1-34. 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 the enemy.

1-35. During execution planners continue to develop or refine options for potential enemy action and friendly opportunities. By anticipating potential events 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.

1-36. A *decision point* is a point in space and 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). Example friendly actions associated to a decision point range from a single task to a subordinate unit or 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 F for a sample DST and DSM.)

1-37. 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. Such situations could result from enemy action, friendly action, or weather. Commanders build flexibility into their plans and orders by developing branches to preserve freedom of action in rapidly changing conditions.

1-38. 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

1-39. Planning activities occupy a continuum ranging 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.)

1-40. 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 the staff, 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.

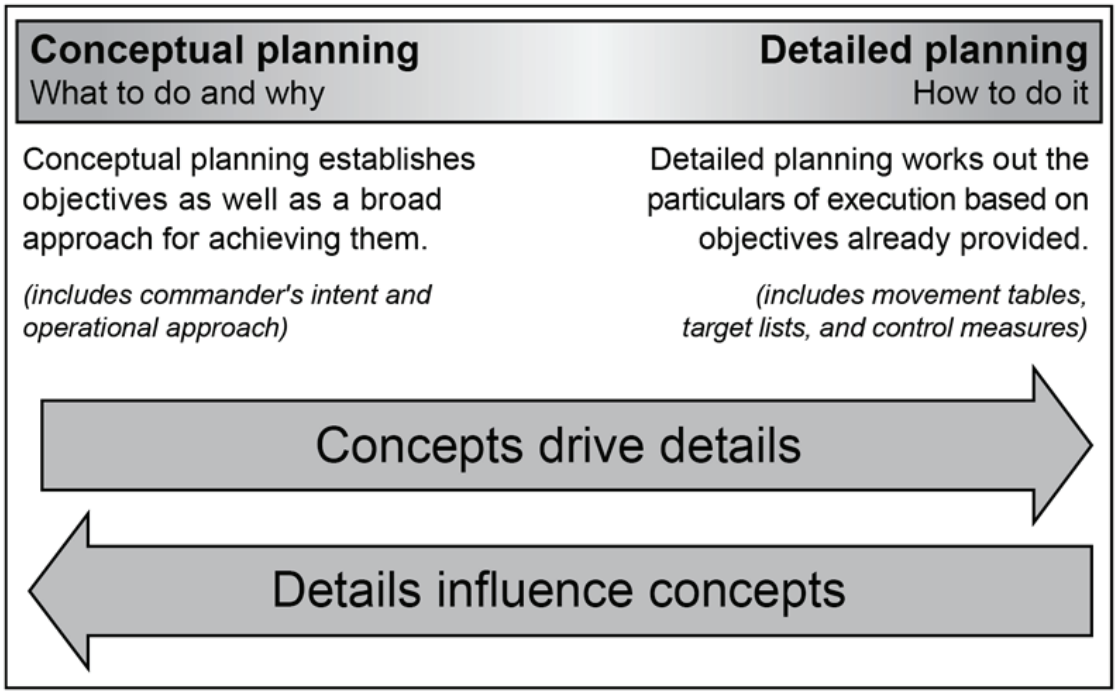

Figure 1-2. Integrated planning

1-41. The commander personally leads the conceptual component of planning. While commanders are engaged in parts of detailed planning, they leave most specifics to the staff. 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).

1-42. 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

1-43. 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 for more information on conducting Army problem solving.)

ARMY DESIGN METHODOLOGY

1-44. 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 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).

1-45. 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

1-46. 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.

1-47. The MDMP consists of seven steps. Each step has inputs, a series of substeps, 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.)

1-48. 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.

1-49. Commanders and staff 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 battlefield.
- 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

1-50. The RDSP is a decision-making and planning technique that commanders and staffs commonly use during execution when available planning time is limited. While the MDMP seeks an 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 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

1-51. The MDMP and TLP are similar but not identical. Troop leading procedures are a dynamic process used by small-unit leaders to analyze a mission, develop a plan, and prepare for an operation. Commanders with a coordinating staff use the MDMP as their primary planning process. Company-level and smaller units 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, first sergeants, forward observers, supply sergeants, and other specialists in the unit.

1-52. TLP enable small-unit leaders to maximize available planning time while developing plans and preparing their units for an operation. TLP consists 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 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.

(See Chapter 7 for information on conducting TLP.)

PLANS AND ORDERS

1-53. 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 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 to the enemy 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

1-54. *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.

1-55. 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 combat power 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

1-56. 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

1-57. The *mission* is the task, together with the purpose, that clearly indicates the action to be taken and the reason therefore (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 (area of operations [AO], 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)?

1-58. 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

1-59. The *commander's intent* is a clear and concise expression of the purpose of the operation and the desired military end state that supports mission command, provides focus to the staff, and helps subordinate and supporting commanders act to achieve the commander's desired results without further orders, even when the operation does not unfold as planned (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 commander's intent two levels up. During planning, the initial commander's intent drives COA development. During execution, the commander's intent establishes the limits within which a subordinate may exercise initiative.

1-60. 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.

1-61. *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 the enemy. Commanders often include the purpose of each associated key task to facilitate subordinate decision making and initiative.

1-62. 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

1-63. 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). The concept of operations describes how the commander visualizes the actions of subordinate units fitting together to accomplish the mission within an AO. Planners use components of the operational framework and integrate elements of operational art as appropriate to describe the concept of operations by—

- Area—establishing the close, deep, rear, support, and consolidation areas within an AO.
- Purpose—designating and sequencing the decisive operation, shaping operations, and sustaining operations.
- Priority—designating the main and supporting efforts.

(See ADP 3-0 for a detailed description of the operational framework and its components. See Chapter 2 for further discussion on elements of operational art.)

1-64. In developing the concept of operations, commanders and staffs ensure their concept nests with that of their higher echelon headquarters. Nested concepts 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 the forces will support a mission of the higher headquarters and how the actions of subordinate units fit together to accomplish a mission.

PLANNING CELLS AND TEAMS

1-65. 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 on page 1-14.

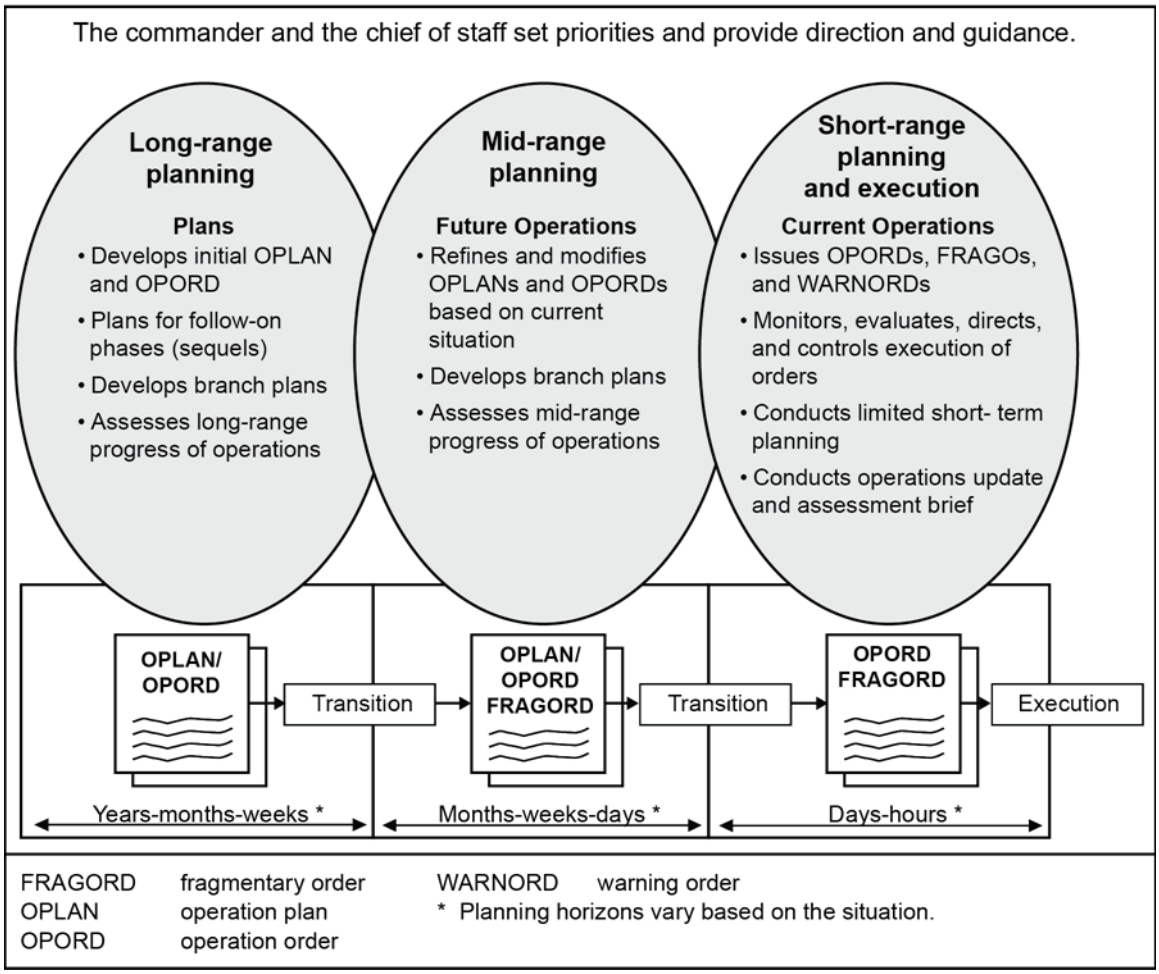

Figure 1-3. Integrating cells

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

1-66. The plans cell is responsible for planning operations in the long-range planning horizon (See paragraphs 1-101 through 1-103 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 and lower echelons the plans cell is led by the battalion or brigade operations staff officer (S-3). Staff sections support the plans cell with representatives as required. Battalions are not resourced a dedicated plans cell.

FUTURE OPERATIONS CELL

1-67. 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 in order 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.

1-68. 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.

1-69. 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 shaping operations in the deep area.

CURRENT OPERATIONS INTEGRATING CELL

1-70. 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

1-71. 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.

1-72. 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 operation order, 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 should identify standard planning teams based on common planning requirements to rapidly facilitate alerting and forming planning teams.

1-73. 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

1-74. 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.
- 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.

COMMANDERS FOCUS PLANNING

1-75. 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.

1-76. Generally, the more involved commanders are in planning, the faster staffs can plan. Through personal involvement, commanders learn from the staff 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. During planning, commanders focus their activities on understanding, visualizing, and describing. While depicted sequentially, the activities of understanding and visualizing are iterative.

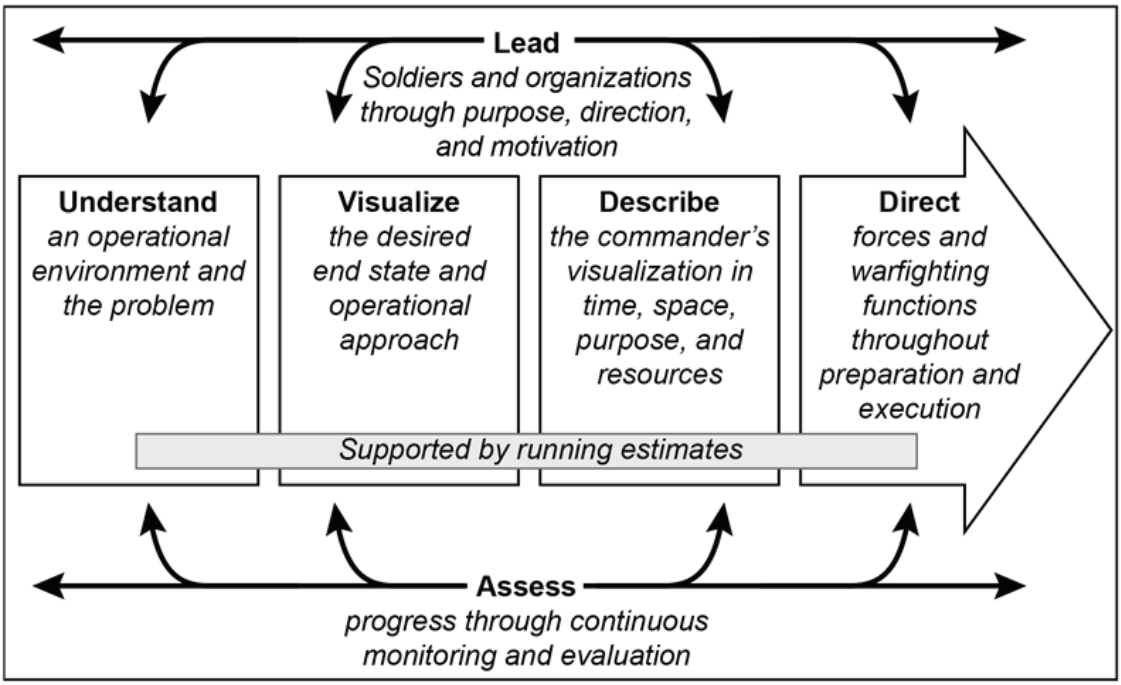

Figure 1-4. Commander's role in the operations process

Understand

1-77. 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

1-78. 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).

1-79. 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 1-18 depicts activities associated with developing the commander's visualization.

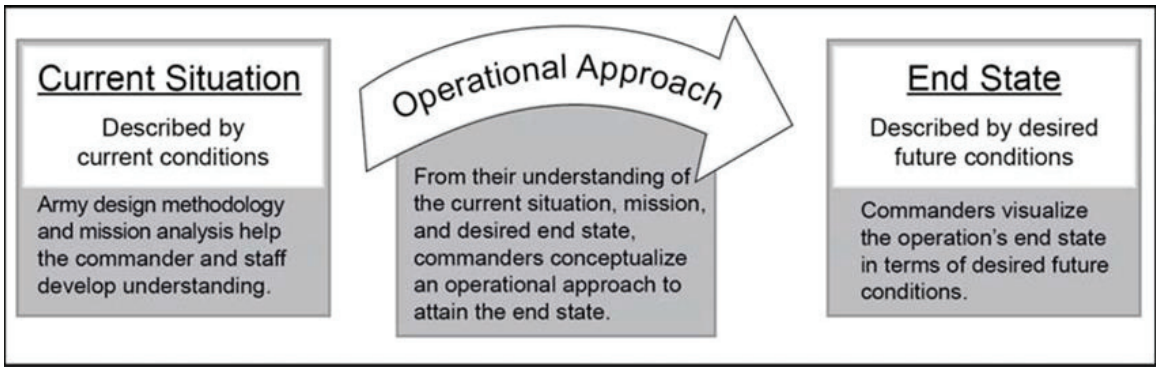

Figure 1-5. Commander's visualization

Describe

1-80. 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. 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 doctrinal terms, refining and clarifying it, as circumstances require. Commanders describe their visualization in terms of—

- Commander's intent (discussed in paragraphs 1-59 through 1-62).
- Planning guidance, including an operational approach.
- CCIRs.
- Essential elements of friendly information (EEFIs).

Commander's Planning Guidance

1-81. 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 modify planning guidance based on staff and subordinate input and changing conditions during different stages of planning and throughout the operations process.

Commander's Critical Information Requirements

1-82. A *commander's critical information requirement* is an information requirement identified by the commander as being critical to facilitating timely decision making (JP 3-0). A CCIR is directly tied to a decision that facilitates the successful execution of military operations. 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.

1-83. Always 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. Commanders 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).

1-84. A *priority intelligence requirement* is an intelligence requirement that the commander and staff need to understand the threat and other aspects of the operational environment (JP 2-01). 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. In coordination with the staff, the intelligence officer manages PIRs for the commander as part of the intelligence staff responsibilities.

1-85. 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). Friendly force information requirements identify the information about the mission, troops and support available, and time available for friendly forces that the commander considers most important. In coordination with the staff, the operations officer manages friendly force information requirements for the commander.

Essential Elements of Friendly Information

1-86. Commanders also describe information they want protected as 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. Their identification is the first step in the operations security process and central to the protection of information. (See Chapter 5 for further discussion on information requirements.)

APPLY CRITICAL THINKING

1-87. Thinking includes awareness, perception, reasoning, and intuition. Much thinking, however, is 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.

1-88. 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

1-89. 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

1-90. 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.

APPLY CREATIVE THINKING

1-91. 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 in order 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

1-92. Collaboration and dialogue facilitates critical and creative thinking and helps 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.

1-93. 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.

1-94. 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.

1-95. 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

1-96. 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.

1-97. 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.

1-98. 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.

1-99. *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 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 intelligence preparation of the battlefield [IPB] products) help subordinate headquarters plan.

1-100. Commanders are careful not to burden subordinates with planning requirements too far into the future. Generally, the higher the headquarters, the more time and resources staff 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

1-101. 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.

1-102. 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.

1-103. 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 to plan 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 a number of 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

1-104. 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.

1-105. Because a commander may need an estimate at any time, staffs must 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.

1-106. Each staff section maintains a running estimate within its specified area of expertise (for example, intelligence, fires, logistics, 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 status, including location, activity, and combat power of subordinate units from two echelons down.
- Enemy status, including composition, disposition, and strength.
- Civil considerations.
- Conclusions and recommendations with associated risk.

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

1-107. 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.

1-108. 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.

1-109. Commanders and staffs use care with assumptions to ensure they are not based on preconceptions; bias; false historical analogies; or simple, wishful thinking. Additionally, effective planners recognize any unstated assumptions. 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.
- An unstated assumption may often prove more dangerous than a stated assumption proven wrong.

1-110. Running estimates always 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

1-111. Commanders stress the importance of developing simple, flexible plans and orders. Developing and using a planning standard operating procedure assists in more effectively and efficiently developing complete plans and orders. Simplicity is a principle of war; it is key 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.

1-112. 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 ahead of time—combined with a clear commander's intent—helps create flexible plans.

PLANNING PITFALLS

1-113. 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.

1-114. The first pitfall is the lack of commander involvement in the development of the plan. As discussed in paragraphs 1-74 through 1-85, 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 in the development of plans and orders.

1-115. 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.

1-116. 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. Effective plans include sufficient branches and sequels to account for the nonlinear nature of events.

1-117. 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 over planning 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.

1-118. 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.

1-119. The sixth pitfall is the danger of institutionalizing rigid planning methods that leads 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.

1-120. 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.

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 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 three levels are 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).

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.

STRATEGIC LEVEL

2-4. The *strategic level of warfare* is the level of warfare at which a nation, often as a member of a group of nations, determines national or multinational (alliance or coalition) strategic security objectives and guidance, then develops and uses national resources to achieve those objectives (JP 3-0). The focus at this level is on the development of *strategy*—a prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theater, national, and/or multinational objectives (JP 3-0).

2-5. United States federal law and policy provides 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 (diplomatic, information, military, and economic). The specifics of strategic direction address long-term, emergent, and anticipatory issues or concerns that may quickly evolve due to rapidly changing circumstances. Regardless, strategic direction is neither fixed nor transient. Rather, strategic direction is always evolving and adapting.

2-6. 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), presidential directives, and strategic plans (such as the Unified Command Plan). Figure 2-1, on page 2-2, shows several key strategic guidance documents that provide direction to the Armed Forces to promote *unified action*—the synchronization, coordination, and/or

integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort (JP 1). (See JP 5-0 for a detailed discussion of strategic guidance and joint planning.)

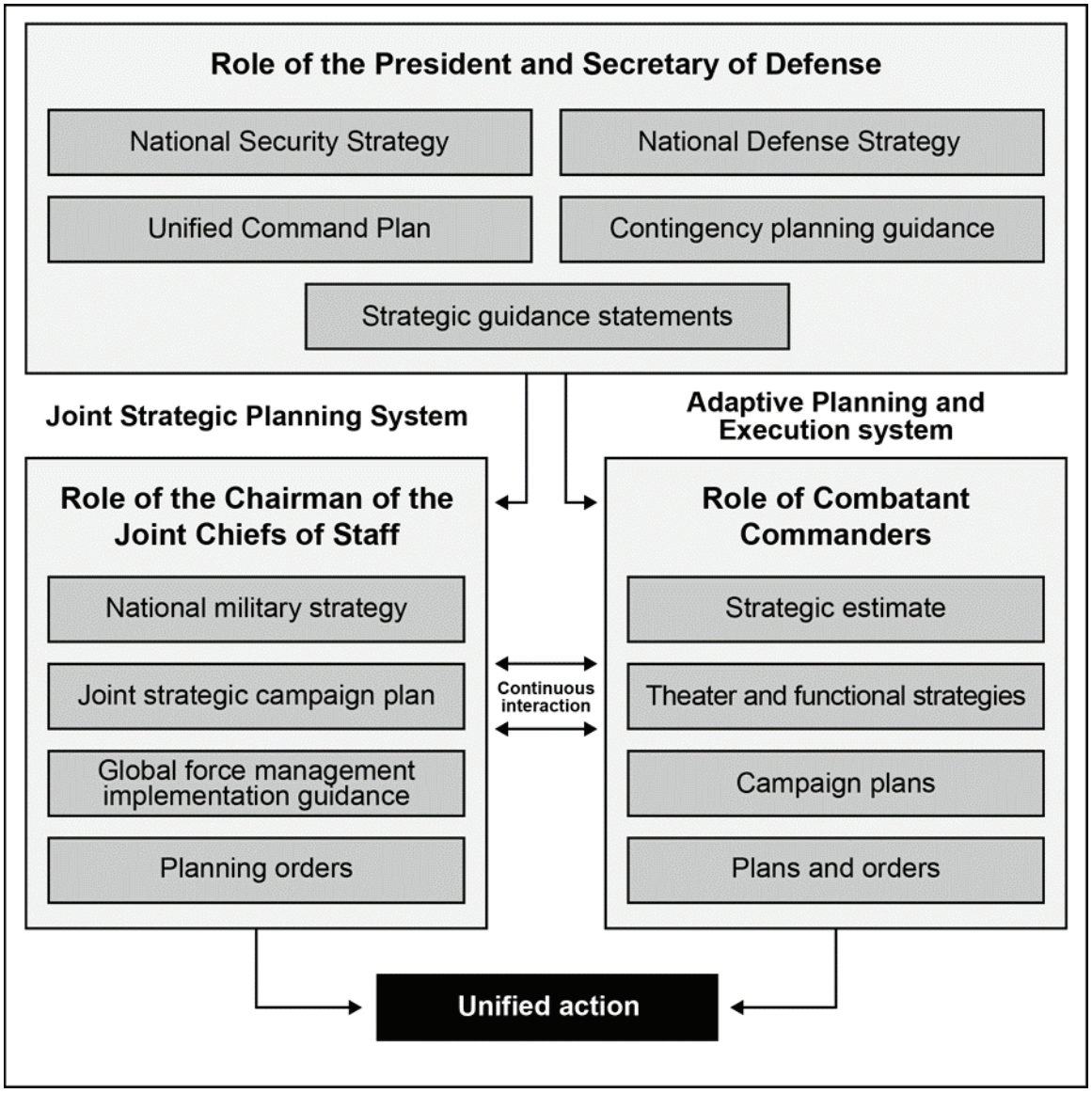

Figure 2-1. Strategic direction

National Strategies

2-7. There are numerous national-level strategies that address areas ranging from immigration to public health. Overarching strategies that address national security and defense include—

- The 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

2-8. 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

2-9. 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

2-10. The CJCS, in coordination with other members of the Joint Chiefs of Staff, combatant commanders, 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), how to achieve these objectives (ways), and 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.

2-11. 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 combatant commanders, conducts deliberate planning and provides military advice to the President and Secretary of Defense. (See CJCSI 3100.01E for information on the joint strategic planning system.)

Key Strategic Plans and Directives

2-12. 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

2-13. Prepared by DOD and approved by the President, the UCP provides guidance to all unified combatant commanders; establishes their missions, responsibilities, and force structures; delineates the general geographical area of responsibility (AOR) for geographic combatant commanders; and specifies functional responsibilities for functional combatant commanders. The unified command structure identified in the UCP is flexible and changes as required to accommodate evolving U.S. national security needs. Title 10, U.S. Code tasks the 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. The UCP provides broad guidance from which combatant commanders derive objectives, missions, and tasks.

Contingency Planning Guidance

2-14. Prepared by DOD and approved by the President, the CPG conveys guidance (including prioritization) to the CJCS and combatant commanders for contingency planning. The CPG fulfills the statutory duty of the Secretary of Defense to furnish written policy guidance annually to the CJCS for contingency planning. Contingency plans are branches of global, functional, regional, and 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 2-24 through 2-26 for more information on contingency planning.)

Joint Strategic Campaign Plan

2-15. The JSCP fulfills the CJCS's statutory responsibilities to assist the President and the Secretary of Defense in providing for strategic direction to the Armed Forces and implementing strategic guidance in the NSS, NDS, NMS, and the CPG. The JSCP is a five-year global strategic plan (reviewed every two years) that operationalizes the NMS. The JSCP is the CJCS's primary document to guide and direct the preparation and integration of joint force campaign plans and associated contingency plans. The three types of campaign plans addressed in the JSCP are—

- **Global campaign plans.** A global campaign plan is the primary means by which the CJCS or designated combatant commanders arrange for unity of effort through which they guide the planning, integration, and coordination of joint operations across combatant command AORs and functional responsibilities. Global campaign plans address the most pressing transregional and multi-functional strategic challenges across all domains. Each global campaign plan has an assigned coordinating authority which is a combatant commander with the primary responsibility for a global campaign plan. Contingency plans to a global campaign plan are called integrated contingency plans.
- **Functional campaign plans.** 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** (CCPs). CCPs are the primary planning documents that combatant commanders (both geographic and functional) 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.

2-16. 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.

2-17. 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

2-18. 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. (Further discussion of the global force management allocation process can be found in FM 5-0.)

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 combatant commanders as directed. They routinely coordinate with the Joint Staff, combatant commanders, 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 Strategies

2-19. Based on strategic guidance, geographic combatant commanders (GCCs) 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 a broad statement of a GCC's long-term vision that bridges national strategic guidance and the joint planning required to achieve national and theater 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.

2-20. The Department of State and the United States Agency for International Development also provide direction to combatant commanders 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 combatant commanders and planners to say abreast of these products in the development of their theater strategies and plans. This includes applicable country specific security cooperation plans.

OPERATIONAL LEVEL

2-21. The *operational level of warfare* is the level of warfare at which campaigns and major operations are planned, conducted, and sustained to achieve strategic objectives within theaters or other operational areas (JP 3-0). 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.)

2-22. 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 2-2 on page 2-6. The supported combatant commander 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.

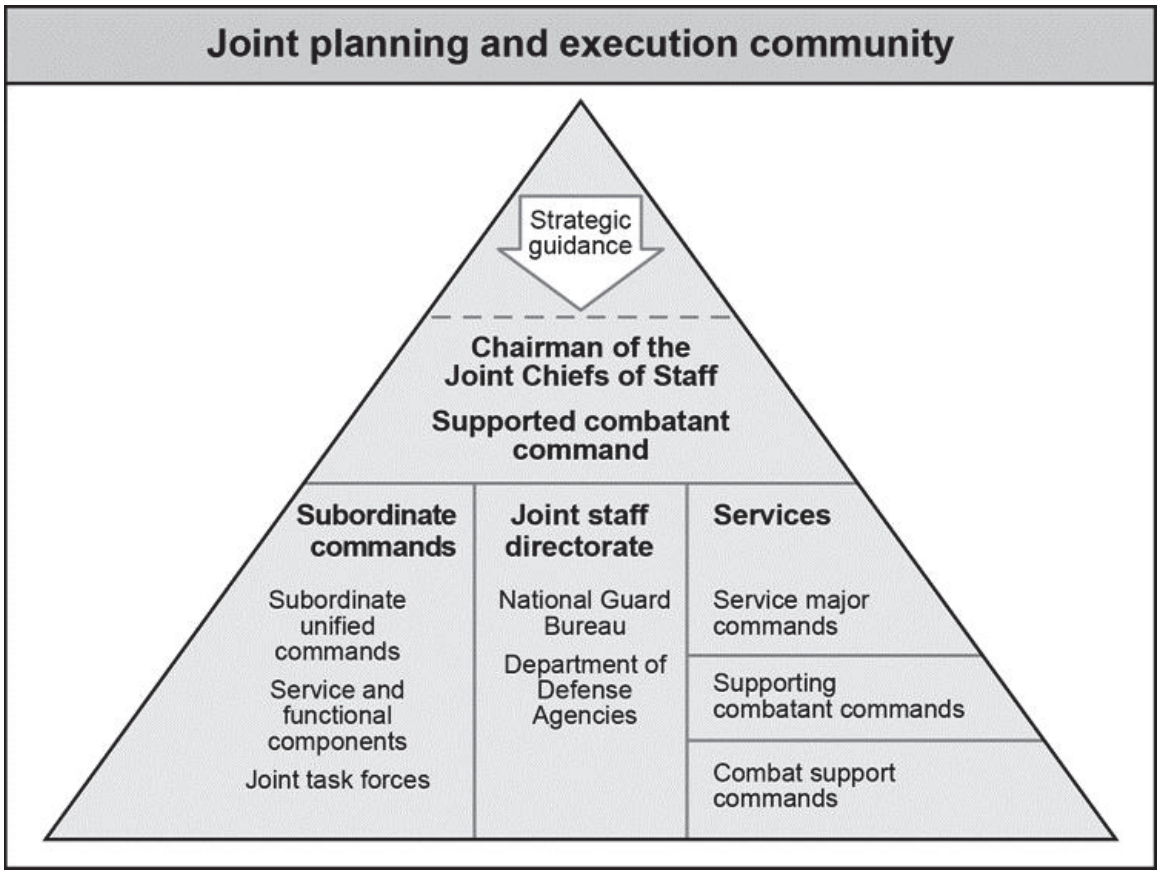

Figure 2-2. Joint integrated planning

Combatant Command Campaign Plan

2-23. The centerpiece for operational-level planning within a geographic combatant command is the CCP. Formally known as the theater campaign plan, the CCP operationalizes the GCC'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 the GCC conducts security cooperation activities and military engagement with regional partners.

Note. The theater army commander and staff assist the GCC 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 for a detailed discussion of the roles, responsibilities and organization of theater armies.)

Contingency Plans

2-24. 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 combatant commanders responsibilities for developing specific contingency plans. Combatant commanders also develop contingency plans to their CCPs based on theater estimates.

2-25. 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.

2-26. 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 2-27 through 2-30. Although laid out 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

2-27. 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

2-28. A base plan, at planning level 2, describes the concept of operations, major forces, concepts 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

2-29. 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—OPLAN

2-30. 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 time-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 GCC 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

2-31. 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.

2-32. Planning joint campaigns and operations includes organizing the joint force, organizing the joint force headquarters, and organizing the operational area. Depending on the situation, the GCC may choose to command and control operations within the existing combatant command structure (through combatant command headquarters and assigned Service and functional component command headquarters). This was the command and control structure the United States Central Command employed during the 1991 Gulf War. Figure 2-3 shows the linkage of the levels of warfare during OPERATION DESERT STORM and how Army forces are employed at both the operational and tactical levels.

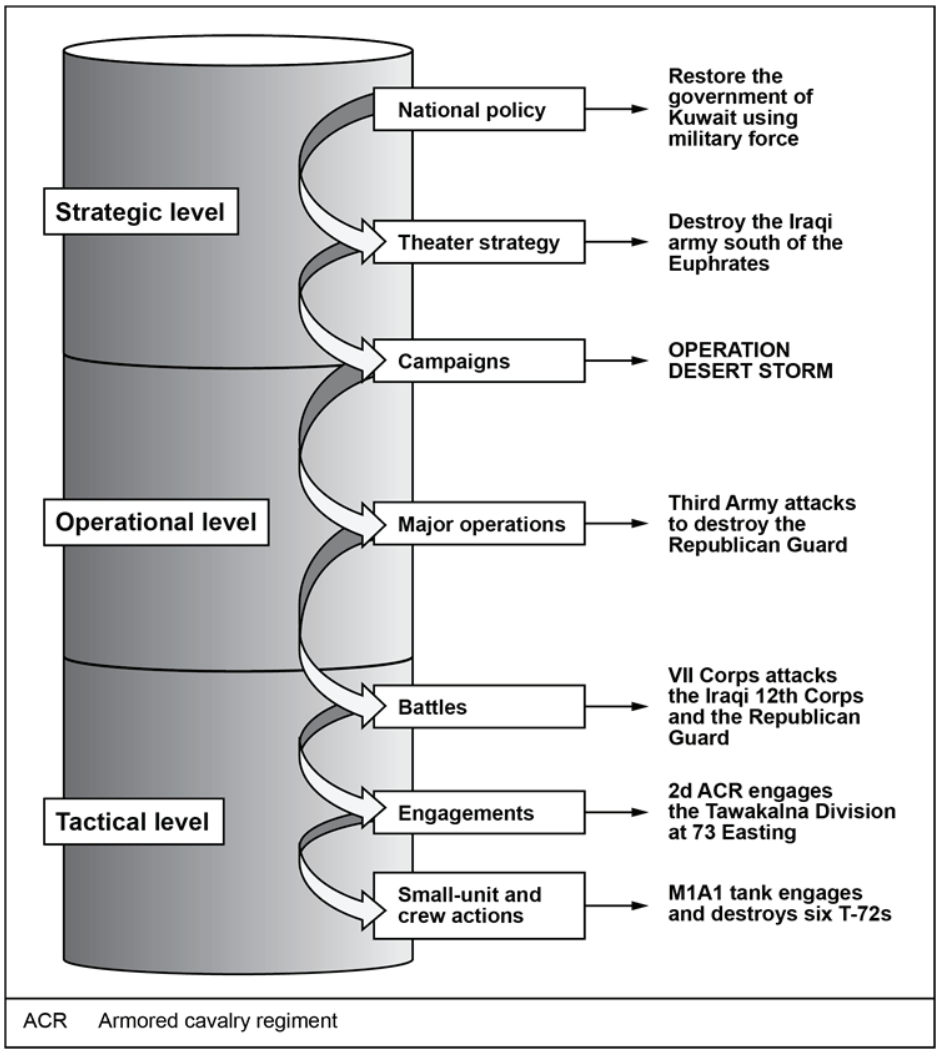

Figure 2-3. Levels of warfare

Note. Figure 2-3 illustrates the linkage of the levels of warfare during OPERATION DESERT STORM. Based on strategic guidance, United States Central Command developed OPERATION DESERT STORM as the coalition campaign plan to liberate Kuwait. Third Army served as an operational-level land force headquarters to United States Central Command. Consisting of two corps (seven U. S. divisions and two armored cavalry regiments, one British division, and one French Division), Third Army was the main strike force for United States Central Command for the encirclement and destruction of Iraqi Republican Guard divisions. Third Army plans and orders guided the scheme of maneuver of its two corps and subordinate divisions in numerous battles and engagements, resulting in the defeat of the Iraqi Army in a 100-hour ground offensive.

2-33. In other instances, the GCC 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.)

2-34. 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

2-35. The *tactical level of warfare* is the level of warfare at which battles and engagements are planned and executed to achieve military objectives assigned to tactical units or task forces (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 echelons maneuver forces (JP 3-0). Engagements are typically conducted at brigade echelons and below.

2-36. 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.)

2-37. 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, areas of operation (AOs) are prescribed, objectives and available forces are identified, and a general sequence of activities is specified for tactical-level commanders.

2-38. 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 6) to plan and prepare for operations.

OPERATIONAL ART

2-39. Military operations require integrating ends, ways, means, and risks across the levels of warfare. Joint and Army commanders and staff 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.

2-40. As stated in paragraph 2-1, 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.

2-41. 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 understanding of inherent risk. Always within the context of a higher echelon joint plan or order, operational art helps Army commanders and staffs understand, visualize, and describe operations, as shown in figure 2-4.

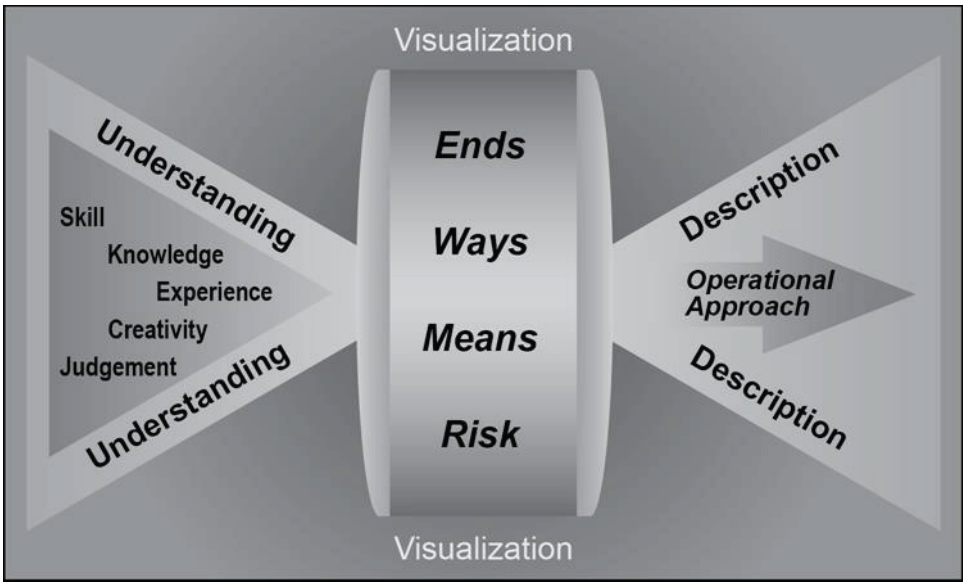

Figure 2-4. Operational art

2-42. 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)?

2-43. 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 operational environment (OE), frame ill-defined problems, and develop an operational approach to resolve identified problems. The understanding and products of ADM inform more detailed planning conducted during the MDMP.

2-44. 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

2-45. The elements of operational design and the elements of operational art listed in figure 2-5 assist commanders and staffs in employing operational art. Other tools include the principle of joint operations, principles of unified land operations, and tenants of unified land operations. (See ADP 3-0 for more information on unified land operations.) During planning, these tools help commanders understand, visualize, and describe operations and develop their commander's intent, operational approach, and planning guidance.

Joint elements of operational design consist of –		
• Termination • Military end state • Objectives • Effects • Center of gravity	• Decisive points • Lines of operation and lines of effort • Direct and indirect approach • Anticipation	• Operational reach • Culmination • Arranging operations • Forces and functions
Army elements of operational art consist of –		
• End state and conditions • Center of gravity • Decisive points • Lines of operations and lines of effort	• Tempo • Phasing and transition • Culmination	• Operational reach • Basing • Risk

Figure 2-5. Elements of operational art

2-46. 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, termination), 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 2-47 through 2-76 describe the Army's elements of operational art used in the development of Army plans and orders.

END STATE AND CONDITIONS

2-47. 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.

2-48. 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

2-49. 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 often is associated with a threat's military capabilities such as a powerful element of the armed forces. The loss of a center of gravity forces a change in the ends, ways, or means, and it often results in defeat.

2-50. 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

2-51. 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. Examples of such events include commitment of an enemy operational reserve and reopening a major oil refinery. Identifying decisive points helps commanders to select clear, conclusive, attainable objectives that directly contribute to achieving the end state.

2-52. 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 key to attacking or protecting centers of gravity. A decisive point's importance may cause 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, eventually leading to an attack on the center of gravity itself.

2-53. Generally, more decisive points exist in a given 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'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.

2-54. 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 decisive operation. 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

2-55. Lines of operations and lines of effort link objectives in time, space, and purpose to achieve end state conditions as shown in figure 2-6. 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.

2-56. 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.

2-57. 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 based on the fact that 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.

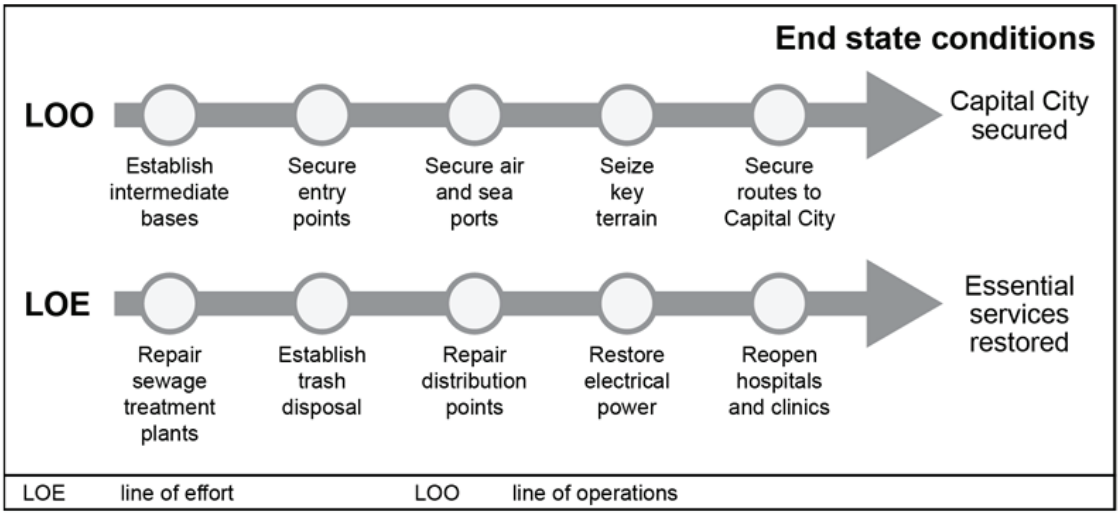

Figure 2-6. Sample line of operations and line of effort

2-58. *Exterior lines* are lines on which a force operates when its operations converge on the enemy (ADP 3-0).This requires the attacking 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 the enemy. Exterior lines facilitate seizing opportunities to encircle and destroy the weaker or less mobile enemy.

2-59. A *line of effort* is a line that links multiple tasks using the logic of purpose rather than geographical reference to focus efforts toward establishing a desired end state (ADP 3-0). 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

2-60. Commanders and staff consider tempo both when planning and 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 in order to disrupt the enemy's decision making, create multiple dilemmas, and overwhelm the enemy's ability to counter friendly actions.

2-61. 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.

2-62. 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

2-63. 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 the AO. 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.

2-64. 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.

2-65. 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.

2-66. Unplanned transitions present the force with the most danger. Whenever possible, leaders must anticipate transitions through effective planning and preparation, 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.

2-67. 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.

2-68. 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

2-69. 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

2-70. 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.

2-71. 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 distance and time. 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

2-72. 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 (JP 4-0). 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.

2-73. 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 areas of operations 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

2-74. 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 with regard to the importance of an objective, time available, and anticipated cost.

2-75. Inadequate planning and preparation puts 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.

2-76. 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.

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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 staff 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 depicted in Figure 3-1, on page 3-2, assists staff officers in identifying and considering key factors relevant to the problem. It also provides the more intuitively gifted and experienced officer 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.

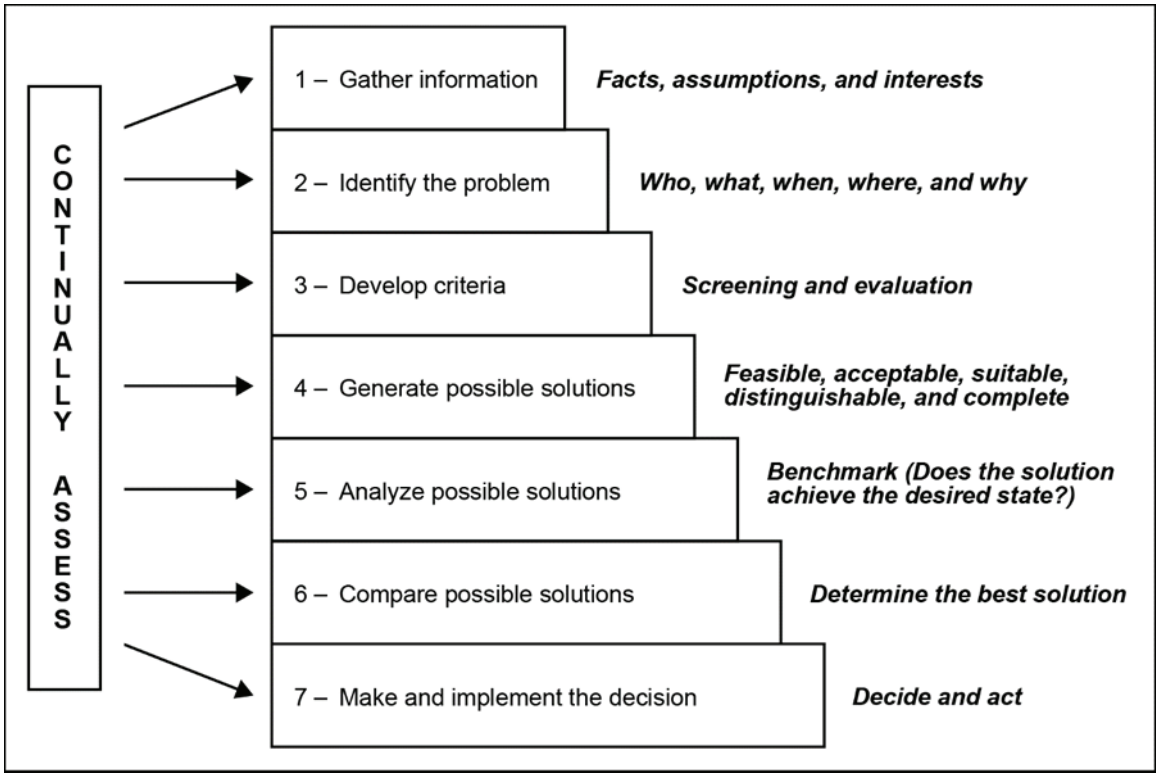

Figure 3-1. Seven step problem-solving process

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 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 where 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 the 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 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. The military decision-making process (MDMP) and troop leading procedures (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 the 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 operational environment (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 staff bases 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 in order 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).

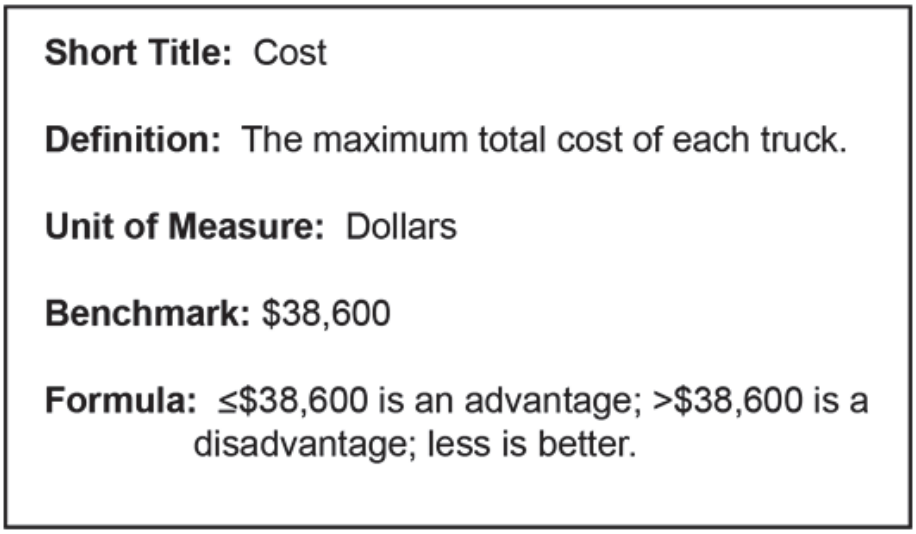

Figure 3-2. Sample evaluation criterion

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 risks creating more problems from factors not considered.

3-37. When developing solutions, leaders generate options. They then summarize solutions in writing, sketches, or both.

GENERATE OPTIONS

3-38. 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 is the risks associated with the solution?

3-39. 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.

3-40. 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.

3-41. 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

3-42. 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

3-43. 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.

3-44. 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, the leader judges 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.

3-45. 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.

3-46. 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

3-47. 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.)

3-48. 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

3-49. 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 both) 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.

3-50. 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.

3-51. 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.

3-52. 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.

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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).

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.)

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

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. In doing so, system 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.

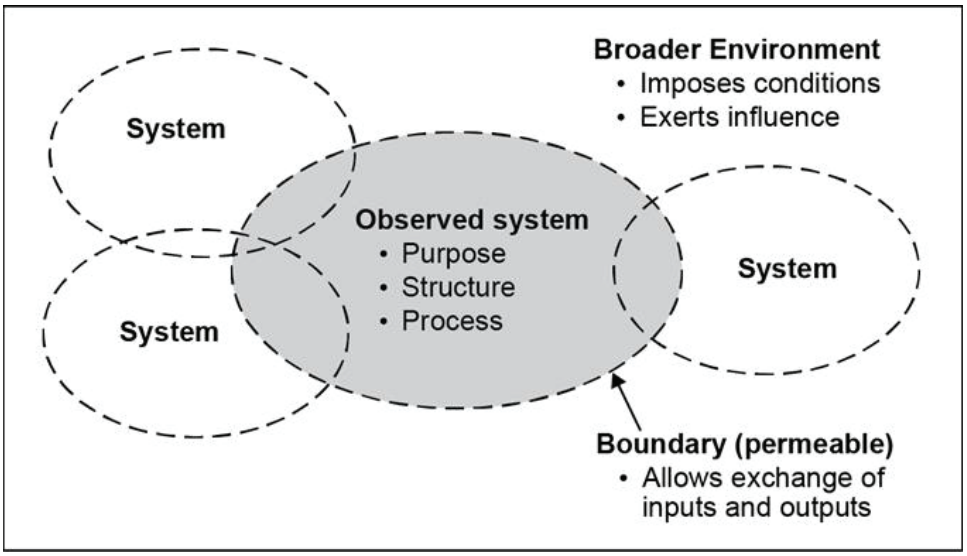

Figure 4-1. Systems thinking

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 but 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 between the commander and staff and externally with other commanders and unified action partners.

4-14. During ADM, and throughout the operations process, the commander promotes and encourages collaboration and dialogue. Effective collaboration and dialogue are not possible unless the commander ensures it. Commanders establish a culture of collaboration and dialogue in their organization. They recognize that they do not know everything and 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. (See paragraphs 1-92 through 1-95 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 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 understand the situation fully. 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. Political parties, social organizations, and government institutions, for example, all have stories bound to them chronologically and spatially. They incorporate symbols, historical events, and artifacts tied together with a logic that explains their reason for being. To narrate is to engage in the production of a story—an explanation of things and events—by proposing a question or questions. These questions may include—

- What is the meaning of what I see?
- 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 available to the team 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 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 operations. The may also initiate ADM to address specific problems within the 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 consists of 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) operations section, or battalion or brigade plans staff officer (S-5), plans section, 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 require attention and energy to manage for a quality outcome. Selecting the right individuals to serve on the 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 subteams to complete tasks (for example, conducting research) then come together to dialogue 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 the planning team are. It may only be after engaging in framing an operational environment 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, they 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 human terrain teams, 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 in nature. 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 encompasses physical areas and factors of the air, land, maritime, and space domains; the electromagnetic spectrum; and aspects of the information dimension and cyberspace. Included within these areas are the adversary, friendly, and neutral 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 area of operations (AO).

4-40. 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?

4-41. 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

4-42. 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 headquarters or a higher joint force headquarters. As such, it is essential commanders and staffs understand how their higher headquarters perceives an OE, its problems, and the operational approach.

4-43. To understand higher echelon guidance and direction, the planning team reviews relevant orders, directives, policy documents, written and oral guidance, and estimates of their higher and next higher headquarters. They also study strategic directives and guidance (described in paragraphs 2-4 through 2-18), international mandates, and other products that influence their 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

4-44. 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, they understand 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.

4-45. 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 they relate to other systems and actors in an OE.

4-46. 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.

4-47. Figure 4-2 on page 4-10 is an example influence diagram of relevant actors followed by a supporting narrative. This example includes relevant actors and the influences between them. This is 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, would accompany a presentation diagram.

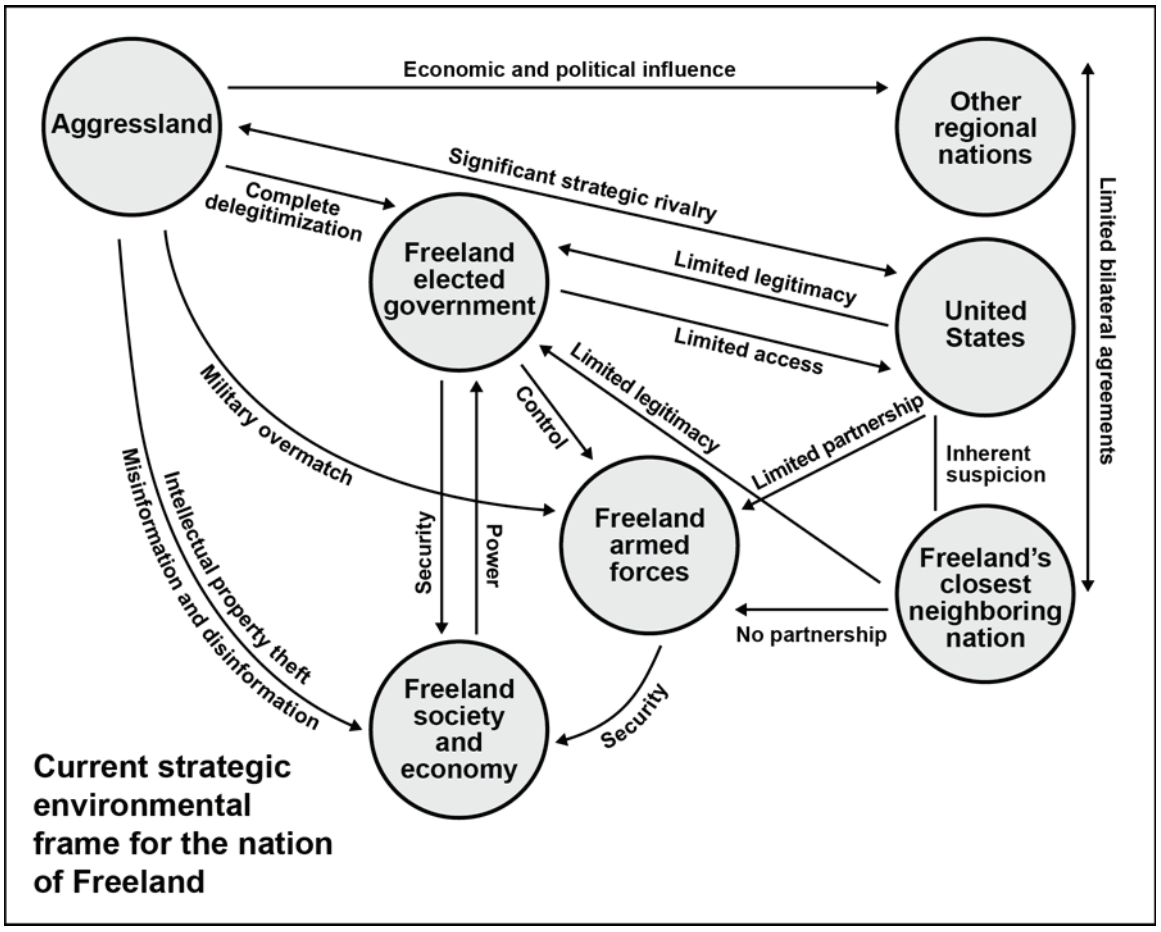

Figure 4-2. Current state of the strategic operational environment

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. 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. The authoritarian Aggressland regime maintains a strict anti-U.S. policy stance. 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 information and cyberattacks 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. 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. 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.

4-48. 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

4-49. 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 to better define the desired end state and development of an operational approach to promote or alter identified tendencies.

Discern Desired Future States of Other Actors

4-50. 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. Further, some desired conditions of other actors converge with the command's desired conditions, with a possibility of exploiting this convergence. 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

4-51. 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.

4-52. 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.

4-53. Commanders 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. 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 the desired end state followed by a supporting narrative.

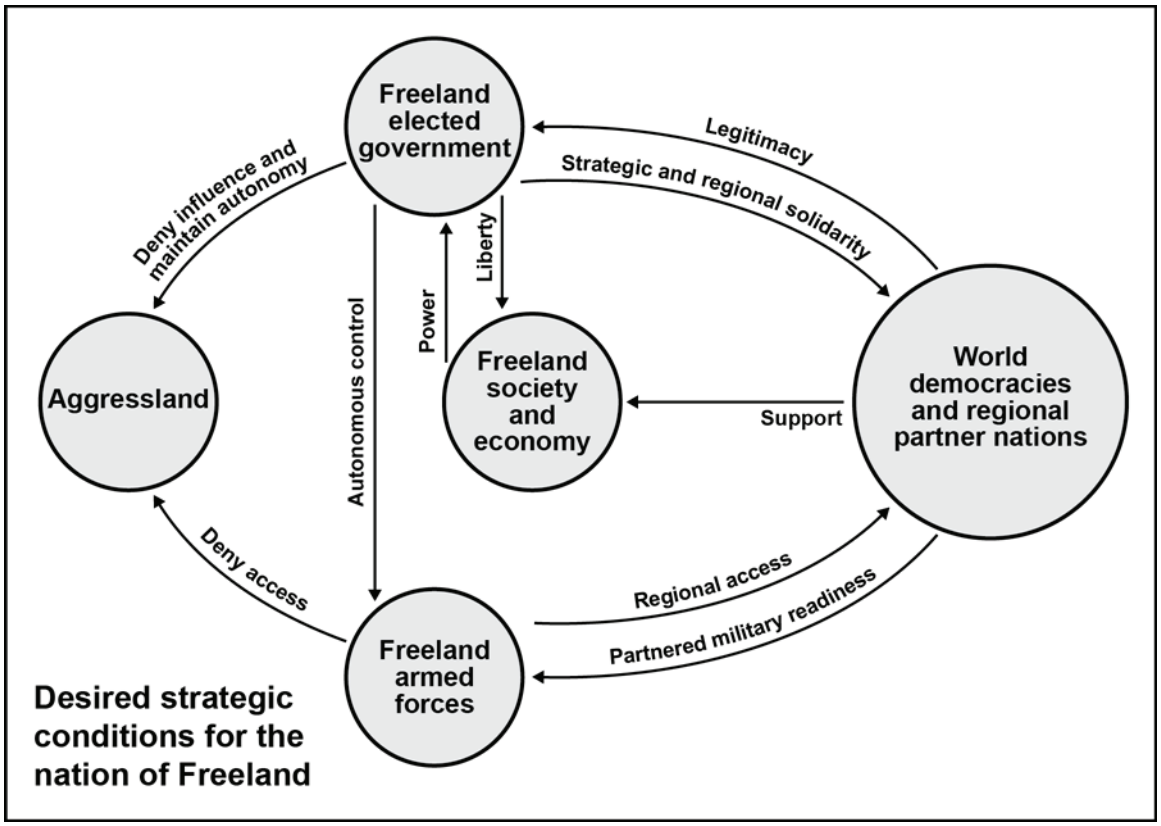

Figure 4-3. Desired strategic end state

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

4-54. 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.

4-55. 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?

4-56. 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.

4-57. Like framing an OE, there is no "one way" or set of steps for framing problems. Some activities that may help the commander and staff develop a problem frame include—

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

Review the Environmental Frame

4-58. The problem frame is an extension of the environment 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 Army design methodology sessions.

Identify Problems and Map Out Their Relationships

4-59. 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?

4-60. The team also identifies the differences between the desired end state and alternative future states (the natural tendency of an OE and desired end states 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.

4-61. To help understand the system of problems, it is helpful to map the relationships of the problems identified. 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 useful information in itself, the planning team understands and explains why the group does not participate. As the planning team maps out the various problems and related causes, they see 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 is an example of relationship mapping that focuses on the military problems that could be used to further describe a problem frame.

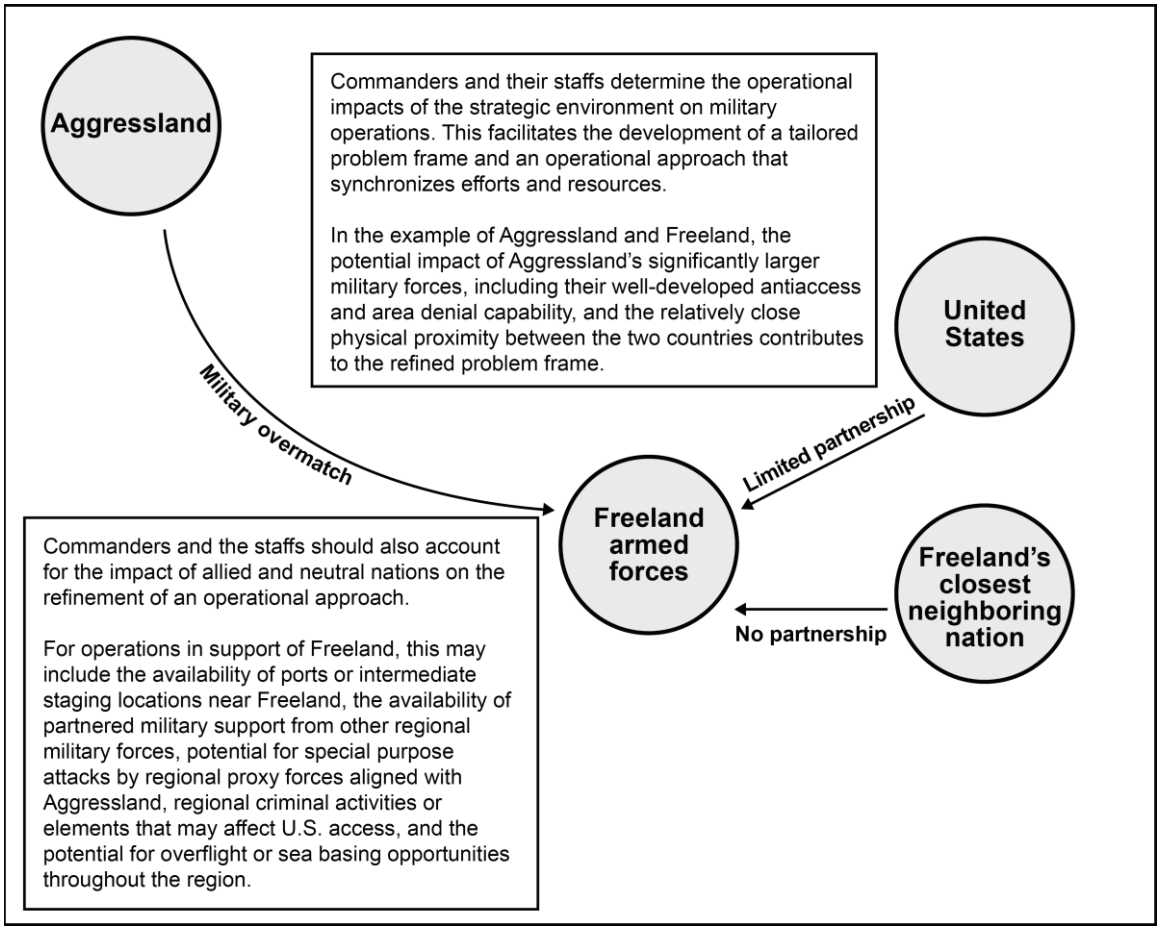

Figure 4-4. Refined operational frame based on strategic frame

4-62. 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 AO 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.
- Population's level of 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, rear area, or intermediate staging bases outside the area of responsibility (AOR).
- The size of the AO.
- Tasks assigned versus troops available.
- Limited unity of effort among some unified action partners.

Develop a Problem Frame

4-63. 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 in an attempt 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.

4-64. 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

4-65. 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.

4-66. 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.

Note. 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 4 for more details on developing courses of action.)

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, problem, and 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 center of gravity, decisive points, objectives, line 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 2-76 for a detailed discussion of each element of operational art.)

Determine Enemy and Friendly Center 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. That entity is a likely center of gravity.

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 and JP 2-01.3 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. Examples include port facilities, distribution networks and nodes, and bases of operations. Events and elements of an enemy force are decisive points. Examples of these events include commitment of the enemy operational reserve or 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. Army forces at all echelons use combinations of four defeat mechanisms:

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

4-75. 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 force the enemy 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, rendering the enemy's disposition less valuable, perhaps even irrelevant. Disintegrate means to disrupt the enemy's command and control system, degrading its ability to conduct operations while leading to a rapid collapse of the enemy's capabilities or will to fight. Isolate means to deny an enemy or adversary access to capabilities that enable the exercise of coercion, influence, potential advantage, and freedom of action.

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. In the context of stability, control means imposing civil order. It includes securing borders, routes, sensitive sites, population centers, and individuals. It also involves physically occupying key terrain and facilities. Influence means to alter the opinions and attitudes of a population. It changes behaviors through nonlethal means. Support means establishing, reinforcing, or setting the conditions necessary for other instruments of national power to function effectively.

4-78. Normally, there are more decisive points in a given 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 center 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 designate one line as the decisive operation and others as shaping operations. 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.

Refine the Operational Approach

4-80. While an operational approach is broad in nature, 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. Commanders and planning teams develop the operational approach in anticipated resource constraints considered in framing an operational environment. To help visualize ways to sustain and protect the force, commanders and planning teams consider operational reach, basing, and culmination.

4-82. 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, the enemy, 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.

4-83. 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.

4-84. 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 AO or units lacking resources to achieve the end state.

Tempo

4-85. 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. It is the key to achieving a temporal advantage during operations. During operations dominated by stability tasks, commanders control events and deny the enemy positions of advantage. By acting faster than the situation deteriorates, commanders change the dynamics of a crisis and restore stability.

4-86. 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

4-87. 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.

4-88. 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.

4-89. 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

4-90. 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 the OE as 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

4-91. Similar to an environmental frame and a problem frame, commanders and staffs use graphics and text to describe the operational approach. Figure 4-5 is an example of an operational approach using lines of effort, defeat and stability mechanisms, objectives, and end-state conditions.

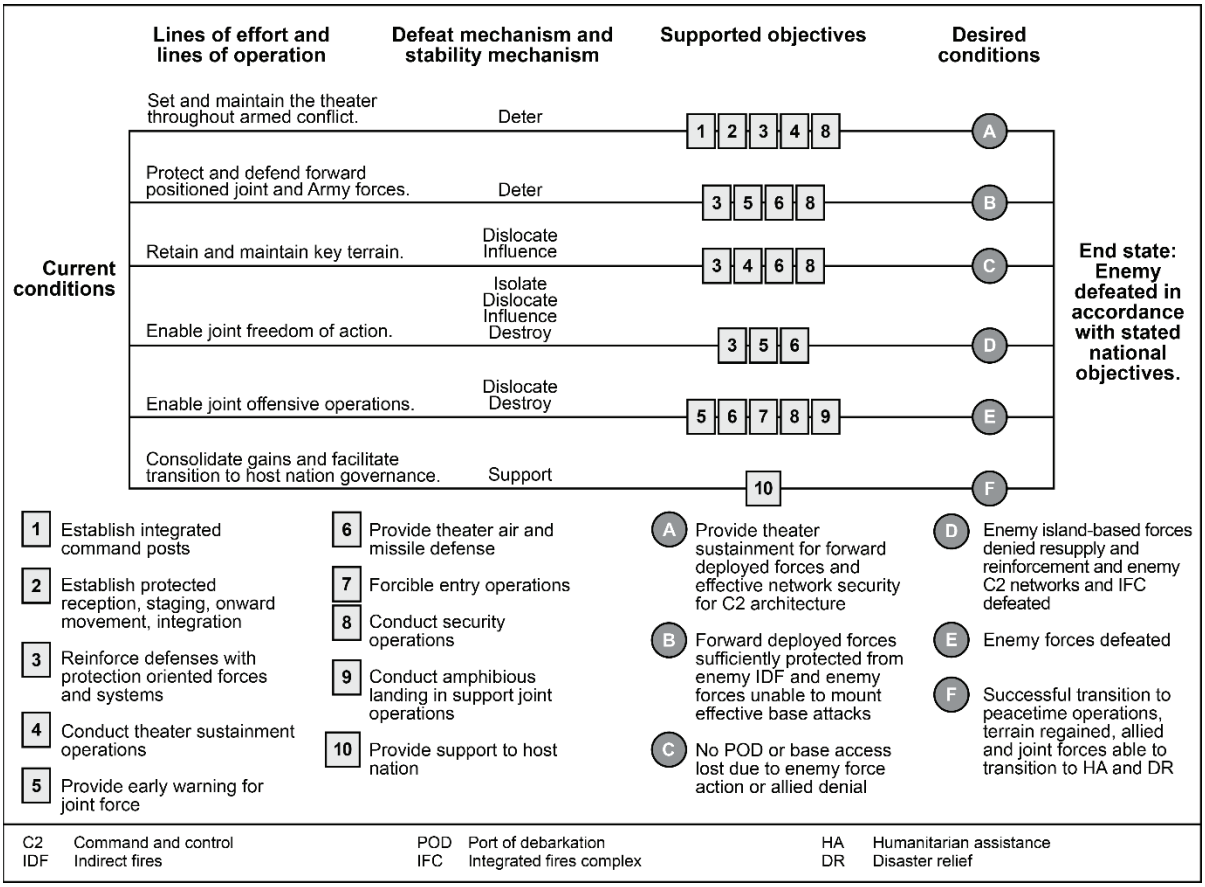

Figure 4-5. Sample operational approach

Transitioning to Detailed Planning

4-92. 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.

4-93. 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.

4-94. 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 courses of action.

REFRAMING

4-95. 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.

4-96. 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.

4-97. 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.

4-98. 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

4-99. 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 requirements (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 in spite of an earlier assumption 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

4-100. The assessment plan incorporates reframing criteria in the form of measures of effectiveness (MOEs) and measures of performance (MOPs), 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 operations plan (OPLAN) or operations order (OPORD). The MDMP is applicable across the range of military operations from military engagement, large scale combat operations, and security cooperation activities to crisis response. 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. NATO allied headquarters uses the operational planning process described in AJP 5 or the tactical planning process described in Allied Procedural Publication (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. Depending on the situation and the complexity of the planning effort, commanders can initiate Army design methodology (ADM) before conducting the MDMP. Army design methodology 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 understanding and products resulting from ADM can then guide more detailed planning during the MDMP. (See Chapter 3 and ATP 5-0.1 for more information on ADM.)

5-3. The MDMP facilitates collaborative 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.

5-4. 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.

MODIFYING THE MILITARY DECISION-MAKING PROCESS

5-5. The MDMP should be as detailed as time, resources, experience, and the situation permit. Performing all the steps of the MDMP is detailed, deliberate, and time-consuming. 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. When ADM was previously conducted, the products developed serve as a baseline and help mitigate the risk of not conducting the full MDMP while reducing the time necessary to develop an understanding of the situation and mission. 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.

5-6. The full MDMP provides the foundation on which planning in a time constrained environment is based. Before a staff can effectively abbreviate the MDMP, it should first master the steps of the full 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.

5-7. The primary disadvantage of using the full MDMP is 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 enemies to improve their posture. This may lead to yielding the initiative, resulting in a loss of momentum or lost opportunities for the friendly force.

COMMANDER, STAFF, AND SUBORDINATE HEADQUARTERS INTERACTION

5-8. 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

5-9. The commander is the most important participant in the MDMP. More than simply decision makers in this process, commanders use their experience, knowledge, and judgment to guide staff planning efforts. While unable to devote all their time to the MDMP, commanders follow the status of the planning effort, participate during critical periods of the process, provide guidance, and make decisions based on the

detailed work of their staff. During the MDMP, commanders focus their activities on understanding, visualizing, and describing their commander's visualization as discussed in Chapter 1.

5-10. 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.

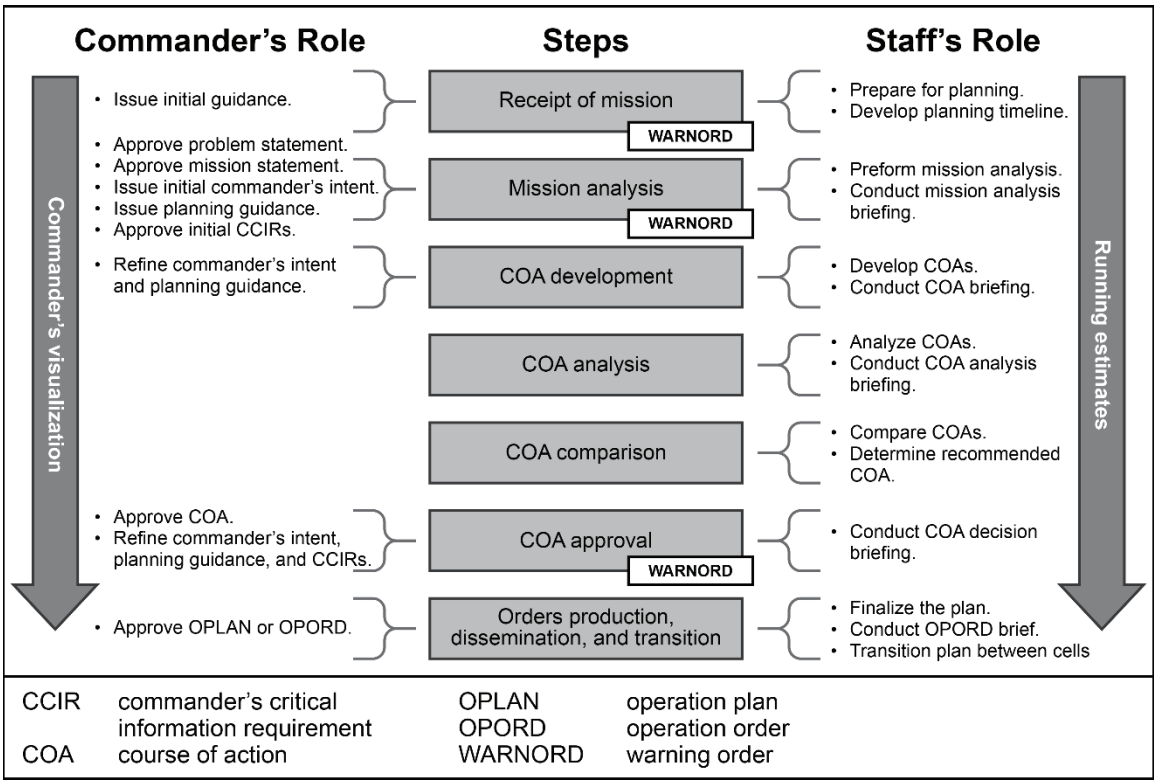

Figure 5-1. Commander and staff interaction

Role of the Staff

5-11. 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 1-65 through 1-73 for a discussion of planning cells and teams.)

5-12. 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 makes a decision, 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 on page 5-3.

STEPS OF THE MILITARY DECISION-MAKING PROCESS

5-13. 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; however, they may revisit steps. 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. (See ATP 5-0.2-1 for further information on detailed planning factors, offensive considerations, and defensive considerations.)

STEP 1-RECEIPT OF MISSION

5-14. 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, 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.

5-15. 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.

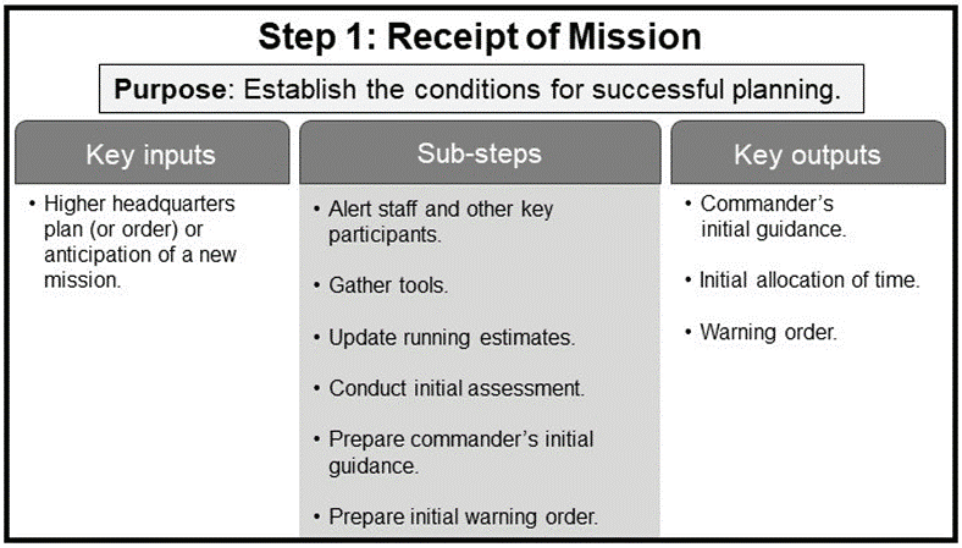

Figure 5-2. Receipt of mission

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 intelligence preparation of the battlefield (IPB), for example, should begin as early as possible.

Alert the Staff and Other Key Participants

5-16. 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 the staff 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 (from large to small) 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; administrative support; 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. (See Chapter 1 for a discussion of planning teams.)

Gather the Tools

5-17. 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 area of operations (AO), 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.
- Army design methodology products, including products describing the OE, problem, and operational approach (if applicable).
- Appropriate doctrinal publications.

5-18. 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

5-19. 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. Running estimates contribute to a unit's *common operational picture*, a display of relevant information within a commander's area of interest tailored to the user's requirements and based on common data and information shared by more than one command (ADP 6-0).

The running estimates that contribute to the common operational picture facilitate collaborative planning and shared understanding (See ADP 6-0 and ATP 5-0.2-1 for more information on the common operational picture.) While listed at the beginning of the MDMP, updating running estimates continues throughout the MDMP and the operations process. (See Appendix C for more information on running estimates.)

Conduct Initial Assessment

5-20. 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 informally briefs 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
- Guidance on a planning approach to include conducting ADM, abbreviating the MDMP, or using the rapid decision-making and synchronization process (RDSP).
- 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.

5-21. 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.

5-22. The commander and staff balance a desire for detailed planning against a need for more immediate action. 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. Time, more than any other factor, determines the detail to which the commander and staff can plan.

5-23. Commanders and staffs consider their higher echelon headquarters' timeline, their operational timeline, their planning timeline, anticipated enemy timelines, light and weather, and other essential factors. Based on the commander's initial allocation of time, the COS or XO approves a 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, 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.

Note. This is just an initial timeline to start planning. The commander and staff continue to adjust it as they gain a better understanding of time available during the following steps of the MDMP.

5-24. Table 5-1 provides an example planning timeline for a division. It shows how much time can be devoted to each step of the MDMP, based on the time between receipt of mission and execution. This example timeline is based on one-third, two-thirds general rule and uses as an example the following percentages to determine how much time is allocated to each step:

- Receipt of mission - 5%.
- Mission analysis - 30%.

- COA development - 20%.
- COA analysis/comparison/decision - 25%.
- Orders production, dissemination, and transition - 20%.

5-25. Since subsequent planning relies on a detailed understanding of the situation and problem, a significant amount of time is allocated for mission analysis. Additionally, significant time should also be allocated to COA analysis as this step aids the commander and staff in thinking through the synchronization, coordination, difficulties, and opportunities of a tentative plan. These are only recommended times, and they will vary based on a variety of factors such as experience of the planning staff, products already available, or commander involvement.

5-26. The "R" in table 5-1 represents the receipt of mission time. All R+ times represent the time that the action should be completed. For example, given 48 hours to plan and prepare for a mission, mission analysis should be completed by 4 hours, 48 minutes after the mission is received. Unit planning SOPs should contain generic planning timelines to assist decision makers to quickly develop the staff planning timeline. Example timelines serve as a guide are adjusted based on mission variables of METT-TC (I): mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations.

Table 5-1. Example military decision-making process time allocation.

	Time Available Before Execution									
	8 hours		***24 Hours***		***48 hours***		***72 hours***		***96 hours***	
	Time For	R+	Time For	R+	Time For	R+	Time For	R+	Time For	R+
Mission Analysis	0:45	0:45	2:24	2:24	4:48	4:48	7:12	7:12	9:36	9:36
COA Development	0:30	1:15	1:36	4:00	3:12	8:00	4:48	12:00	6:24	16:00
COA Analysis and Comparison Decision	0:45	2:00	2:24	6:24	4:48	12:48	7:12	19:12	9:36	25:36
Orders Production	0:30	2:30	1:36	8:00	3:12	16:00	4:48	24:00	6:24	32:00
Total Time Used	2:30		8:00		16:00		24:00		32:00	

COA course of action
R receipt of mission time

Issue Commander's Initial Guidance

5-27. 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, abbreviate the MDMP, or conduct RDSP).
- Necessary coordination to perform, including liaison officers to exchange.
- Authorized movements to initiate.
- Information collection guidance, including reconnaissance and surveillance instructions.
- Initial information requirements.
- Additional staff tasks.

Issue the Initial Warning Order

5-28. The last task 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. (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.
- Initial information requirements or commander's critical information requirements (CCIRs).
- Initial information collection tasks.

STEP 2-MISSION ANALYSIS

5-29. 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*—he 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 5-3 lists the key inputs, activities, and key outputs for this step.

Step 2: Mission Analysis

Purpose: Understand the situation, problem, and mission.

Key inputs	Sub-steps	Key outputs
• Commander's initial guidance. • Higher headquarters' plan or order. • Higher headquarters' intelligence products. • Higher headquarters' assessments and estimates. • Running estimates. • Army design products (if applicable).	• Analyze higher headquarters' plan or order. • Perform IPB. • Determine specified, implied, and essential tasks. • Identify resource shortfalls. • Determine constraints. • Identify critical facts and develop assumptions. • Begin risk management. • Develop initial CCIRs and EEFIs. • Develop the initial information collection plan. • Update plan for use of available time. • Develop a proposed problem statement. • Develop a proposed mission statement. • Develop initial commander's intent. • Present mission analysis briefing. • Develop and issue planning guidance. • Develop COA evaluation criteria. • Develop warning order.	• Updated IPB. • Identified specified and implied tasks. • Identified resource shortfalls. • Approved constraints. • Approved facts and assumptions. • Approved initial CCIRs and EEFIs. • Approved Initial information collection plan. • Updated timeline. • Approved problem statement. • Approved mission statement. • Approved initial commander's intent. • Commander's planning guidance. • Approved evaluation criteria. • Warning order.

CCIR commander's critical information requirement
COA course of action
IPB intelligence preparation of the battlefield
EEFI essential element of friendly information

Figure 5-3. Mission analysis

Analyze the Higher Headquarters' Plan or Order

5-30. 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 AO.
- 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.

5-31. When developing the concept of operations, commanders ensure their concept is nested in that of their higher headquarters. They also ensure subordinate unit missions are unified by task and purpose to accomplish the mission. A way for the commander and staff 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 horizontal and vertical relationships of units within the higher echelon commander's concept. A nesting diagram provides a snapshot of the relationship of shaping operations to the decisive operation. The staff may choose to use this technique as a possible way to help analyze the higher headquarters' order and understand its mission, the commander's intent, and concept of operations. (See figure 5-4 for an example of a nesting diagram.)

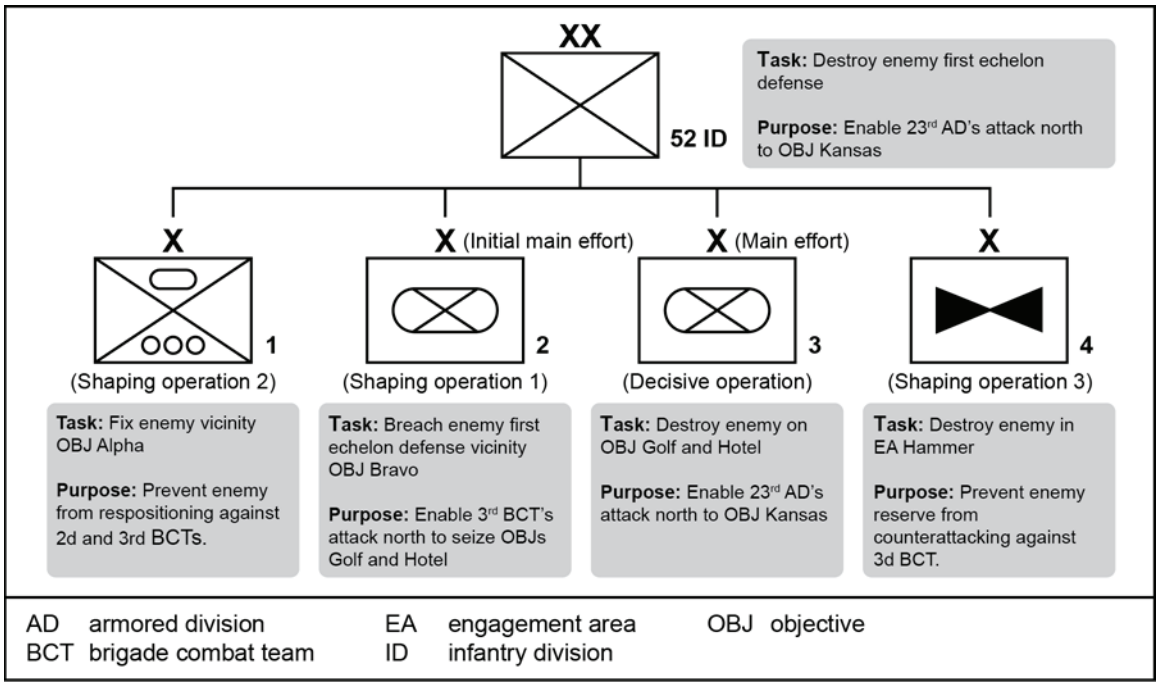

Figure 5-4. Example nesting diagram

Perform Initial Intelligence Preparation of the Battlefield

5-32. *Intelligence preparation of the battlefield* is the systematic process of analyzing the mission variables of enemy, terrain, weather, civil considerations, and informational considerations in each of the other factors, in an area of interest to determine their effect on operations (ATP 2-01.3). The IPB process provides numerous outputs used throughout the MDMP and consists of four steps—

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

5-33. In addition to developing understanding, IPB 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. IPB 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, will use IPB 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.

5-34. The intelligence staff, in collaboration with other staffs, develops other IPB products during mission analysis and uses them throughout the MDMP. That collaboration should result in the drafting of initial priority intelligence requirements (PIRs), the production of a complete modified combined obstacle overlay (MCOO), a list of high value targets, and unrefined event templates and matrices. IPB 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. When preceded by ADM, the center of gravity analysis should be reviewed and used as a starting point for discussion and incorporation into IPB. (See ATP 2-01.3 for details on conducting IPB.)

5-35. During defining the OE step of the IPB process, the intelligence staff identifies for further analysis the significant characteristics or activities within the OE that may influence friendly and threat COAs and command decisions. An OE for any specific operation has numerous interacting variables. It involves interconnected influences from the global or regional perspective (such as politics and economics) that affect OE conditions and operations. Thus, each commander's OE is part of a higher echelon commander's OE. Defining the OE results in the identification of significant characteristics of the OE that can affect friendly and threat operations, and it identifies gaps in intelligence holdings to determine additional information needed to complete IPB, initiating processes necessary to acquire the information necessary to complete IPB. The outputs of this step include recommended changes to the area of interest, identification of information gaps, assumptions for information gaps, staff requests for information, and information collection.

5-36. During the describing environmental effects on operations step of the IPB process, the staff determines how significant characteristics of the OE can affect friendly and threat operations. Characteristics of the OE include terrain, weather, and civil considerations. The outputs of this step include threat overlay, threat description chart, MCOO, terrain effects matrix, operational climatology chart, light and illumination data table, weather effects matrix, civil considerations data file, civil considerations overlays and assessments, and initial objectives for reconnaissance, surveillance, intelligence, and security operations.

5-37. During the evaluate the threat step of the IPB, the staff determines threat force capabilities and the doctrinal principles and tactics, techniques, and procedures threat forces prefer to employ. This may include threats that create multiple dilemmas for friendly maneuver forces by simultaneously employing regular, irregular, and terrorist forces and criminal elements using a variety of traditional and nontraditional tactics. The outputs of this step include threat data files, the threat template, the high-value target list, and the threat capability statement.

5-38. During the determine the threat COA step of the IPB process the staff identifies and describes threat COAs that can influence friendly operations. The outputs of this step include a situation template, threat COA statement, event template, and event matrix. (See Appendix G for further discussion on integrating IPB within the MDMP.)

Determine Specified, Implied, and Essential Tasks

5-39. 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 to an individual or organization that must be done as it is imposed by an appropriate authority (JP 1). The "what" of a mission statement is always a task. From the list of specified and implied tasks, the staff determines which ones are essential tasks for inclusion in the recommended mission statement.

5-40. 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 directives from the higher echelon commander.

5-41. 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.

5-42. 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.** 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.

5-43. Once staff members have identified specified and implied tasks, they ensure understanding of each task's requirements and purpose. The staff then identifies 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 and reviewed after COA development, as they help define mission success.

Review Available Assets and Identify Resource Shortfalls

5-44. 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, special operations, and multinational) that operate within their unit's AO or are otherwise designated to support. During planning it is challenging, and at times prohibited, to discuss classified capabilities, activities, or programs in unclassified venues. Discussing the technical effects as describing one or more capabilities, activities, or programs planned, coordinated, or executed that use classified means to accomplish an objective or operation assists planners with this challenge. They consider relationships among specified, implied, and essential tasks and available assets. From this analysis, staffs conduct an initial assessment to determine if they have the resources needed to complete all tasks. If obvious shortages are identified, they request from higher headquarters additional resources believed necessary for mission success. Staffs also identify any deviations from the normal task organization and provide them to the commander to understand and consider when developing the planning guidance. A more detailed analysis of available assets occurs during COA development.

Determine Constraints

5-45. 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.

5-46. 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

5-47. Plans and orders are based on facts and assumptions. Commanders and staffs gather facts and develop assumptions as they build their plan. 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.

5-48. 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 challenged if they appear unrealistic. Staffs continually review and collect information on assumptions to turn into facts as quickly as possible. Subordinate commanders must not develop assumptions that contradict valid higher echelon headquarters assumptions during planning. 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.

5-49. 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. This includes linking to the information collection plan and conducting reconnaissance as needed and when possible until replaced by a fact. 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 Assessment and Management

5-50. 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. Identifying, mitigating, and accepting risk is a function of command, supported by the staff, and it is a key consideration during planning. (See paragraphs 2-74 through 2-76 for a discussion of risk as an element of operational art.)

5-51. Planners conducting a preliminary risk assessment must identify the obstacles or actions that may preclude mission accomplishment and then assess the impact of these impediments to the upcoming mission. Determining military risk is more an art than an exact science. Planners use historical data,

intuitive analysis, and judgment to determine risk. Based on judgment, military risk assessment is an integration of probability and consequence of an identified impediment.

5-52. Risk is characterized by both the probability and severity of a potential loss that may result from the presence of an adversary or a hazardous condition. The probability is generally categorized as—

- Very likely—occurs often, continuously experienced.
- Likely—occurs several times.
- Questionable—unlikely, but could occur at some time.
- Unlikely—can assume it will not occur.

A method to assess risk is based on probabilities, military risk (consequence) may be—

- High—critical objectives cannot be achieved.
- Significant—only the most critical objectives can be achieved.
- Moderate—can partially achieve all objectives.
- Low—can fully achieve all objectives.

5-53. Planners and commanders must be able to explain risk to both military commanders and civilian leaders as necessary. Since military risk is often a matter of perspective and personal experience, commanders must be able to describe how they evaluated the probability of accomplishing objectives and the characterization and sources of risk.

5-54. *Risk management* is the process to identify, assess, and control risks and make decisions that balance risk cost with mission benefits (JP 3-0). During mission analysis, the commander and staff focus on identifying and assessing hazards to the mission. They developing 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 FM 6-0 for staff organization and responsibilities.)

5-55. Units conduct the first four steps of risk management in the MDMP. Steps 1 and 2 make up risk assessment. In step 1, the commander and staff identify the hazards that may be encountered during a mission. In step 2, they determine the direct impact of each hazard on the operation. The commander issues planning guidance at the end of mission analysis with risk mitigation measures for the staff to incorporate into its COA development. Risk assessment enhances situational understanding and contributes to complete planning guidance. (See Appendix G for further discussion of conducting risk management within the MDMP.)

Develop Initial CCIRs and EEFIs

5-56. Mission analysis, including IPB, identifies gaps in information required for further planning and decision making during preparation and execution. During mission analysis, the staff develops information requirements. Some information requirements are of such importance that staffs recommend them to the commander to become a commander's CCIR. (See Appendix G for further discussion on the IPB process.)

5-57. 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. 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 information the commander needs to make decisions during preparation and execution. Typically, commanders seek to minimize the number of CCIRs to assist in prioritizing the allocation of limited resources. The two elements are PIRs and friendly force information requirements (FFIRs). A CCIR directly influences decision-making and facilitates the successful execution of military operations. 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.

5-58. A PIR is an intelligence requirement, stated as a priority for intelligence support, which the commander and staff need to understand about the threat or the OE. The intelligence officer, in coordination with the staff, manages PIRs for the commander. PIRs serve as the framework for the information collection plans.

5-59. An FFIR is information the commander and staff need to understand on the status of friendly forces and supporting capabilities. FFIRs identify the information about the mission, troops, support, and time available for friendly forces that the commander considers most important. In coordination with the staff, the operations officer manages FFIRs for the commander.

5-60. In addition to recommending CCIRs to the commander, the staff also identifies and recommends essential elements of friendly information (EEFIs). An EEFI establishes an element of information to protect rather than one to collect. EEFIs identify those elements of friendly force information that, if compromised, would jeopardize mission success. Commanders and planners consider those operations security measures necessary to protect this information. The operations security (OPSEC) process is used to develop measures to protect EEFI from compromise. Although EEFIs are not CCIRs, they have the same priority as CCIRs and require approval by the commander. Like CCIRs, EEFIs change as an operation progresses.

5-61. 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. The approval also supports early collection of assumptions which are often CCIRs, as they are critical to the development of the 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

5-62. *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 gaps identified during IPB to identify information collection requirements. The initial information gaps are generally identified from the entire staff analysis and input during IPB.

5-63. The initial information collection plan is crucial to help answer 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, and intelligence operations in motion. The initial information collected and analyzed is then incorporated into COA development to further refine and develop the plan. The initial information collection plan issued by the operations staff tasks units and may be issued as part of a WARNORD, a fragmentary order (FRAGORD), or an OPORD. As more information is analyzed, it is incorporated into a fully developed and complete information collection plan (Annex L) to the order or plan.

5-64. 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.

5-65. The operations and intelligence staff consider several factors when developing the initial information collection plan. These include—

- 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 or target areas of interest.
- The communication plan for transmission of reports to command posts.
- 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 Planning Timeline

5-66. As more information becomes available, the commander and staff refine their initial plan for the use of available time. They compare the time needed to accomplish tasks to the higher headquarters' timeline to ensure mission accomplishment is possible in the allotted time. They compare the 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.

5-67. The commander and COS, XO, or planning lead also refine the staff planning timeline. The refined timeline reflects an understanding of time available and the battle rhythm of the commander to ensure briefings and updates are best planned. 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

5-68. 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.

Note. The commander, staff, and other partners may develop a problem statement as part of ADM. If identified, the problem statement is reviewed during mission analysis and revised as necessary based on the increased understanding of the situation. If ADM activities did not precede mission analysis, then the commander and staff should develop and approve a problem statement prior to moving to Step 3—COA Development.

5-69. 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 proposed or revised problem statement.

5-70. A problem statement, while required during problem framing in ADM, is typically developed during the MDMP. However, when the situation, tasks, and mission from higher headquarters are clearly defined, it may be unnecessary to develop a problem statement as it is already framed. 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.

Develop a Proposed Mission Statement

5-71. The COS, XO, operations officer, or planning lead prepares a proposed mission statement for the unit based on the mission analysis. 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 receives and approves, modifies, or rejects the unit'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. 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 five elements of a mission statement answer these questions:

- Who will execute the operation (unit or organization)?
- What is the unit's essential task (tactical mission task)?
- When will the operation begin (by time or event) or what is the duration of the operation?
- Where will the operation occur (AO, objective, or grid coordinates)?
- Why will the force conduct the operations (for what purpose)?

Example 1. 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**).

Example 2. 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**).

5-72. The mission statement may have more than one essential task. 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**).

5-73. 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 it is expressed in terms of action verbs. 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 or the decisive operation. 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.

5-74. Commanders should use tactical mission tasks, or other doctrinally approved tasks contained in combined arms field manuals or training plans, in mission statements. These tasks have specific military definitions that differ from standard dictionary definitions. A *tactical mission task* is the specific activity

performed by a unit while executing a form of tactical operation or form of maneuver. It may be expressed as either an action by a friendly force or effects on an enemy force (FM 3-90-1). FM 3-90-1 describes each tactical mission task. FM 3-07 provides a list of primary stability tasks which military forces must be prepared to execute. Planners should carefully choose the task that best describes the commander's intent and planning guidance.

Develop and Issue Initial Commander's Intent

5-75. The initial commander's intent, as defined and discussed in Chapter 1, is a short and concise statement that describes the purpose of the operation, initial key tasks, and the desired end state which in planning guides COA development (See ADP 5-0 for more details on commander's intent.) When ADM was 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.

5-76. The higher echelon commander's intent provides the basis for unity of effort throughout the force. Each commander's intent nests within the higher echelon commander's intent. The commander's intent explains the broader purpose of the operation beyond that of the mission statement. This explanation allows subordinate commanders and Soldiers to gain insight into what is expected of them, what constraints apply, and most importantly, why the mission is being conducted.

5-77. Based on their situational understanding, commanders summarize their visualization in their initial commander's intent statement. The initial commander's intent links the operation's purpose with conditions that define the desired end state. Commanders may change their intent statement as planning progresses and more information becomes available. 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.

Present the Mission Analysis Briefing

5-78. 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. Throughout the mission analysis briefing, the commander, staff, and other partners discuss the various facts and assumptions about the situation. The 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 the commander and staff as a whole to focus on the interrelationships among the mission variables and to develop a deeper understanding of the situation. The commander 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.

5-79. Ideally, the commander holds several informal meetings with key staff members before the mission analysis briefing, including meetings to assist the commander in developing CCIRs, or the mission statement as examples. These meetings enable commanders to issue guidance for activities (such as reconnaissance, surveillance, security, and intelligence operations) and develop their initial commander's intent and planning guidance.

5-80. A comprehensive mission analysis briefing, with discussion and feedback, helps the commander, staff, subordinates, and other partners develop a shared understanding of the requirements of the upcoming operation. To ensure a common understanding, the staff briefs the commander on the results of its mission analysis which can be modified based on preferences of the commander. The mission analysis briefing 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 IPB 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 commander's intent for approval or commander's intent issuance.
- Proposed CCIRs and EEFIs.
- Initial information collection plan.
- Initial risk assessment.
- Recommended collaborative planning sessions.
- Proposed COA evaluation criteria.
- Updated timeline.
- Review or issue commander's planning guidance.

5-81. During the mission analysis briefing or shortly thereafter, commanders generally approve the mission statement, problem statement, initial information collection plan, and CCIRs. They also develop and issue their initial commander's intent and planning guidance.

Develop Course of Action Evaluation Criteria

5-82. 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 or shortly after the mission analysis brief helps to eliminate a source of bias prior to COA analysis and comparison and identifies what data needs to be captured in COA analysis. Evaluation criteria addresses 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 starting COA analysis (or war gaming).

5-83. To adopt into a plan, a COA is evaluated against two sets of criteria. The first set of criteria requires that a COA is feasible, acceptable, suitable, complete, and distinguishable, which is discussed in further detail in COA development starting on paragraph 5-91. This second set is intended to identify which COA among those that passed the first test is best based on an analysis of the criteria developed. This second set of criteria may include—

- Limitations on casualties.
- Defeat of enemy forces or adversary COAs.
- Speed.
- Opportunity to maneuver.
- Risk.
- Logistic supportability.
- Force protection.
- Time available and timing of the operation.
- Political considerations.

5-84. 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 member responsible for a functional area ranks each COA using those criteria. The staff presents the proposed evaluation criteria to the commander at 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 Chapter 3 for further discussion on developing COAs. See table 5-2 for an example of operational evaluation criteria.)

Table 5-2. Example operational 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.

5-85. 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.

Develop and Issue Continued Planning Guidance

5-86. Commanders provide planning guidance along with their initial commander's intent. This guidance may be broad or detailed, depending on the situation. The initial planning guidance outlines an operational approach which is a broad description of the mission, operational concepts, tasks, and actions required to accomplish it. The initial planning guidance may outline specific COAs the commander directs the staff to analyze, or it identifies COAs the commander will not accept. That clear guidance allows the staff to develop several COAs without wasting effort on things that the commander will not consider. It reflects how the commander sees the operation unfolding. It broadly describes when, where, and how the commander intends to employ combat power to accomplish the mission within the higher echelon commander's intent.

5-87. 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, commanders may modify planning guidance based on staff and subordinate input and changing conditions.

5-88. Commanders issue additional planning guidance after mission analysis which guides COA development. This is not the only time the commander issues guidance during the MDMP. 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).
- Following COA development (revised planning guidance for COA refinements).

- COA approval (revised planning guidance to complete the plan).
- Receipt of new information that invalidates assumptions or changes understanding of the OE.

5-89. Table 5-3 on page 5-22 lists example commander's planning guidance by warfighting function. This list is not intended to meet the needs of all situations nor be all-inclusive, and 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 does not always fit neatly in a particular warfighting function, as it may be shared by more than one warfighting function. For example, although rules of engagement fall under the command and control warfighting function, each warfighting function chief has a vested interest in gaining guidance on rules of engagement.

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

Command and Control	Commander's intent Course of action development guidance Number of courses of action to consider or not consider Phasing considerations Operational framework considerations Commanders critical information requirements Critical events Task organization Rules of engagement	Risk acceptance guidance Planning and operational guidance timeline Type of order and rehearsal Branches and sequels Commander's location Succession of command Command post positioning, survivability, and displacement Liaison officer guidance Communications guidance Civil affairs operations Emission control and status Requests for information
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	Task and purpose of maneuver units Scheme of maneuver including forms of maneuver Reserve composition, priorities, and control measures Passage of lines Reconnaissance and surveillance	Tactical deception Friendly decision points Information collection direction Collateral damage or civilian casualties Any condition that affects achievement of end state Mobility and countermobility
Fires	Priority 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 Task and purpose of fires	Scheme of fires Suppression of enemy air defenses Fire support coordination measures Attack guidance No strike list Restricted target list Information operations Cyberspace electromagnetic activities and electromagnetic warfare Desired enemy perception of friendly forces Initial themes and messages
Protection	Protection priorities Scheme of protection development Priorities for survivability assets Air and missile defense positioning Operations security 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, nuclear, and explosives guidance Force health protection measures Cyberspace network protection measures
Sustainment	Sustainment priorities Health service support 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, and V

Issue a Warning Order

5-90. 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.
- The approved mission statement.
- The commander's intent.
- Changes to task organization.
- The unit AO (using a sketch, overlay, or some other description).
- Tasks to subordinate units as applicable.
- CCIRs and EEFIs.
- Risk guidance.
- Priorities by warfighting function.
- Deception guidance. (If for military deception, it is sent separately as need to know information.)
- Essential stability tasks as appropriate.
- IPB results.
- Initial information collection plan.
- Specific priorities.
- Updated planning and operational timelines.
- Movements.

STEP 3-COURSE OF ACTION DEVELOPMENT

5-91. 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 take action. (See figure 5-5 on page 5-24 for a depiction of COA development.)

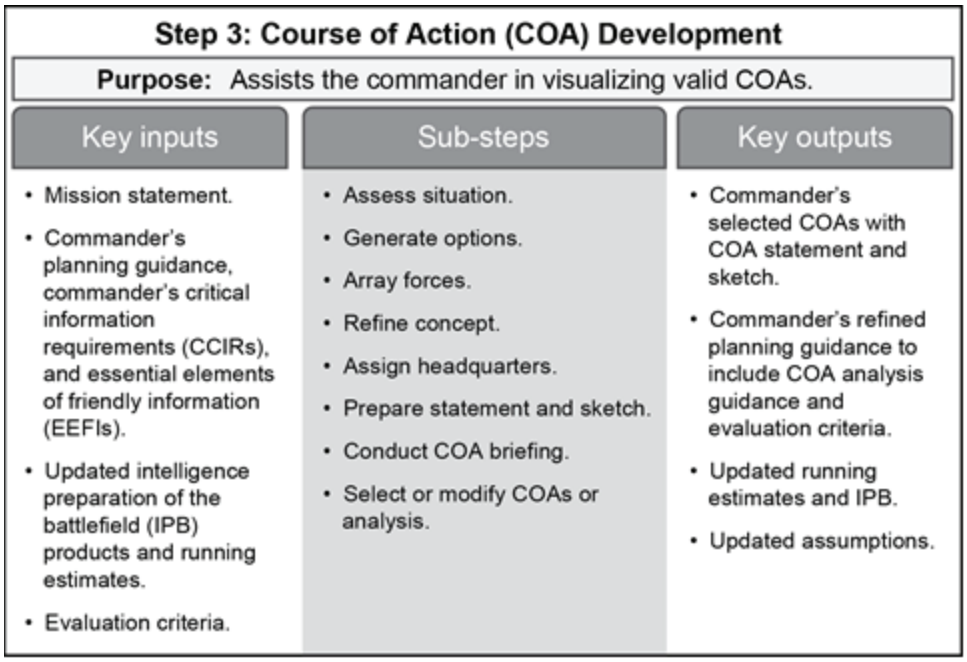

Figure 5-5. Step 3-course of action development

5-92. 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 meeting 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 decisive operation leads to mission accomplishment.
  - How shaping operations create and preserve conditions for success of the decisive operation or effort.
  - How sustaining operations enable shaping and decisive operations or efforts.
  - How to account for offensive, defensive, stability, or defense support of civil authorities tasks.
  - How it describes transforming current conditions to the desired end-state.

5-93. 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. Some problems that commanders face are straightforward, as when clearly defined guidance is provided from higher echelon headquarters, or when resources required for a mission are available and can easily be allocated. In such cases, the COA is often self-evident. However, for problems that are unfamiliar or ambiguous, ADM (described in Chapter 4) may assist commanders in better understanding the nature of the problem and afford both the commander and staff a better level of understanding coupled with completion of mission analysis to more effectively complete COA development. Staffs tend to focus on specific COAs for specific sets of circumstances, when it is usually

best to focus on flexible COAs that provide the greatest options to account for the widest range of circumstances.

5-94. Commanders and staffs must 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. Even when there are few facts available, it is often possible to reduce key issues to either an ability to do "X", or an inability to do "X" as a starting point. Such a reduction is preferred over trying to derive a wide range of possibilities. It is just as important not to see facts as constraining flexibility, but seek to use them to generate flexibility. Staffs work to confirm or deny facts and as many assumptions as possible before developing options. Staffs must also determine what risks are associated with various COAs.

5-95. As an example, a commander may know with reasonable certainty that an enemy force is positioned on the outskirts of a town. The commander may not be certain of the exact size of the enemy force, all the resources available to the enemy force, or actions the enemy may take over time. Such unknowns are a reality in an ambiguous OE. But, by focusing on the known information, that is, the position of the enemy at a point in time, the staff can develop COAs that provide maximum flexibility for the commander. 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. 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.

5-96. To provide the commander with additional time before making a decision, COA development should also identify decision points, the authority responsible for making decisions, and what measures to take. These decisions are then captured in a decision support template and matrix. Good COAs provide commanders with options based on anticipated and unanticipated changes in the situation. Staffs should highlight to the commander options that 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. In all cases, staffs provide commanders and senior leaders with options that are flexible while clearly identifying risks associated with committing to options. 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 in execution.)

5-97. 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.

Assess Relative Combat Power

5-98. Combat power includes the total means of destructive, constructive, and information capabilities that a formation or unit can apply at a given time. It is a command's ability to fight and win in large-scale combat or accomplish the mission in stability operations or defense support of civil authorities. Commanders combine the elements of intelligence, movement and maneuver, fires, sustainment, protection, command and control, information, and leadership to meet constantly changing situations and defeat the enemy. The goal is to generate overwhelming combat power at the decisive point to accomplish the mission at the least cost.

5-99. Several variables can stand between a unit and mission accomplishment, such as enemy forces, restrictive terrain, or unit limitations. A way to visualize the interaction of the variables is to create a sketch. Planners can create a sketch in a variety of ways, including a white board, digital systems, a slide, an overlay on a map, or even chalk on the side of a vehicle as examples. When using a sketch, it normally

includes the area to cover, easily identified physical terrain, key known higher headquarters' graphics, significant obstacles, dense urban areas, and other population areas that would impact the COA. Based on output of IPB, a sketch also includes the known threat COA. The sketch then aides the planning team in understanding and visualizing the assessment of relative combat power and COAs. Using information to visualize the variables in an OE is more important than the method used to present the information.

5-100. Planners should ensure they update the current friendly situation prior to moving forward with COA development, which was initially assessed during mission analysis. This helps commanders and staffs understand the starting point for the operation, and it identifies potential challenges planners must identify and assess as part of COA development. It is best to depict friendly forces using task organization graphics. With a better developed sketch, planners can better assess relative combat power and make better estimates.

5-101. 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) that directly or indirectly affect the potential outcome of an operation. It is important to consider external planning processes and cycles, such as the development of the air tasking order, and the unit 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. Although some numerical relationships are used, assessing relative combat power is not 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.

5-102. Planners initially make a rough estimate of force ratios of combat maneuver units two levels below their echelon. Other types of units such as field artillery, air defense, aviation, enablers, and sustainment may be broken down further. For example, corps level planners compare all types of brigade combat teams, while at division level planners compare all types of combat battalions with equivalent enemy combat battalions. Corps separate brigades may be broken down to the battalion level, while division units may be broken down to the battalion or company level. Planners then compare friendly strengths against enemy weaknesses, and vice versa, for each element of combat power. At the brigade and battalion level planners may study, in detail, the personnel and weapons of each side. From these comparisons, they may deduce particular 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.

5-103. 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. In such operations, the elements of security, sustainment, movement and maneuver, nonlethal effects, and information may dominate.

5-104. 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. Planner 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. Assessing combat power requires assessing both tangible and intangible factors, such as morale, levels of training, or will to fight. Often the human factors are more important than the number of tanks or tubes of artillery.

5-105. After computing force ratios, the staff analyzes the intangible aspects of combat power. A technique for this analysis is comparing friendly strengths against enemy weaknesses, and vice versa for each element of combat power. By comparing strengths against enemy weaknesses, planners may identify

vulnerabilities of each force that may be exploitable or may need protection. This can lead to planner's effectively identifying decision points for the effective employment of forces.

5-106. A relative combat power assessment identifies exploitable enemy weaknesses, identifies unprotected friendly weaknesses, and determines the combat power necessary to conduct essential stability or defense support of civil authorities' tasks. This assessment provides insight into options available and identifies resource shortfalls. In such operations, the elements of maneuver, nonlethal fires, leadership, and information may dominate.

Generate Options

5-107. 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 while accounting for essential stability tasks and ensuring the unit is positioned to meet unanticipated events during execution 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. The commander's intent helps determine whether the force is terrain or enemy focused, which is critical for planners to understand. Options focus on enemy COAs arranged in order of their probable adoption.

5-108. Brainstorming can be used for generating options. It requires 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.

5-109. In developing COAs, planners determine the doctrinal requirements for each proposed operation, including tasks for subordinate units. For example, a deliberate breach requires a breach force, a support force, and an assault force. Essential stability tasks require the ability to provide a level of civil security, civil control, and certain essential services. In addition, the staff considers possibilities created by attachments and other unified action partners.

5-110. Commanders and leaders are responsible for clearly articulating their visualization of operations in time, space, purpose, and resources to generate acceptable options. ADP 3-0 describes the Army operational framework as a visualization tool. The operational framework provides an organizing construct for how commanders intend to organize their AO geographically (in deep, close, rear, and support areas), by purpose (in decisive, shaping, and sustaining operations), and by effort (main and supporting). When establishing their operational framework commanders consider the physical, temporal, virtual, and cognitive factors that impact their AOs. Collectively, these considerations allow commanders and staffs to better account for the multidomain capabilities of friendly and threat forces.

5-111. The operational framework has four components. They include—

- Commanders are typically assigned an AO for the conduct of operations.
- Commanders can designate deep, close, rear, and support areas to describe the physical arrangement of forces in time, space, and focus.
- Commanders designate decisive, shaping, and sustaining operations to provide a broad conceptual understanding of an operation and describe it in terms of purpose.
- Commanders designate the main and supporting efforts to establish clear priorities of support and resources among subordinate units.

5-112. To develop options, planners begin with the decisive operation identified in their planning guidance. The decisive operation must be nested within the higher echelon headquarters' concept of operations. The staff determines the decisive operation's purpose (if not stated by the commander) and considers ways to mass the effects of combat power to achieve it. The decisive operation's purpose directly relates to accomplishing the unit mission. When executed, the unit with the primary responsibility for the decisive operation becomes the main effort.

5-113. Next, the staff considers shaping operations. The staff establishes a purpose for each shaping operation that is tied to creating or preserving a condition for the decisive operation's success. Shaping operations may occur before, concurrently with, or after the decisive operation. A shaping operation may be executed before, during, or after the decisive operation, and it may temporarily receive several priorities

of support. The commander may shift the main effort during execution. Commanders may designate a unit conducting a shaping operation as the main effort until the decisive operation commences. Examples of typical shaping operations include economy of force actions, security operations, actions to limit enemy freedom of action, destruction of enemy capabilities, tactical deception operations, information operations, and civil-military operations. Planners list the purpose of each shaping operation against an enemy, piece of terrain, or other actor on their planning sketch.

5-114. The staff then determines sustaining operations necessary to create and maintain the combat power required for the decisive operation and shaping operations. After developing the basic operational organization for a given COA, the staff then determines the essential tasks for each decisive, shaping, and sustaining operation. The identified task's symbol, and if space allows, purpose, is then placed on the planning sketch.

5-115. After determining tasks and purposes, the planning team sequences separate actions together to ensure the decisive operation is successful. To help with this, the planning team picks a form of maneuver (if one was not directed in the planning guidance) and determines if a requirement exists to phase the operation. Evaluating the conditions required for a successful decisive operation and planning backwards ensure the right conditions are in place for execution.

5-116. Once staff members have explored possibilities for each COA, they examine each COA to determine if it satisfies the screening criteria stated in paragraph 5-92. In doing so, they change, add, or eliminate COAs as appropriate. During this process, staffs avoid focusing on the development of one good COA among several throwaway COAs. Often commanders combine COAs or move elements from one COA to another after development.

Array Forces

5-117. 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.

5-118. Arraying forces allows planners to see combat power currently available to plan with and ensures all available units and capabilities are used as part of COA development. When arraying forces, planners should first list all available units two levels below their echelon along with any key equipment or capabilities, for example air defense artillery (ADA) systems or bridging assets.

5-119. Planners determine the relative combat power necessary to accomplish each task. Often, planners use planning ratios as a starting point. 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 5-4 for a list of recommended planning ratios.)

Table 5-4. 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 to1
Penetration (lead element)	Prepared or fortified	18 to 1

5-120. Planners assess whether these 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, such as impact of past engagements, quality of leaders, morale, maintenance of equipment, and time in position. Levels of electromagnetic support, fire support, close air support, civilian support, and many other factors also affect arraying forces.

5-121. In counterinsurgency operations, planners can develop force requirements by gauging troop density—the ratio of security forces (including host-nation military and police forces and foreign counterinsurgents) to inhabitants. Most density recommendations fall within a range of 20 to 25 counterinsurgents for every 1,000 residents in an AO. A ratio of twenty counterinsurgents per 1,000 residents is often considered the minimum troop density required for effective counterinsurgency operations; however, as with any fixed ratio, such calculations largely depend on the situation. (See FM 3-24 for more information on insurgency and counterinsurgency planning.)

5-122. 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.

5-123. Planners then proceed to initially array friendly forces starting with the decisive operation and continuing with all shaping and sustaining operations. Planners array ground forces two levels below their echelon. The initial array focuses on generic ground maneuver units without regard to specific type or task organization and then considers all appropriate intangible factors. For example, at corps level, planners array generic brigades. During this step, planners do not assign missions to specific units; they only consider which forces are necessary to accomplish their task. In this step, planners also array assets to accomplish essential stability tasks.

5-124. The initial array identifies the total number of units needed, and it identifies possible methods of dealing with enemy forces and stability tasks. If the number 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 AO, or executing tasks required for the COA sequentially rather than simultaneously. Commanders should also consider requirements to minimize and relieve civilian suffering when tasked to a consolidation area during offensive operations. Establishing civil security and providing essential services such as medical care, water, food, and shelter are implied tasks for commanders during any combat operation. (See FM 3-07 for a full discussion of stability tasks.)

Develop the Broad Concept

5-125. In developing the broad concept of operations, the staff describes how arrayed forces will accomplish the mission within the commander's intent. The broad concept concisely expresses the how of

the commander's visualization, and it will eventually provide the framework for the concept of operations and summarize the contributions of all warfighting functions. The staff develops the initial concept of operations for each COA and express it in both narrative and graphic forms. Planners include those graphic control measures necessary to enhance understanding of the COA. A *graphic control measure* is a symbol used on maps and displays to regulate forces and warfighting functions (ADP 6-0). A sound COA is more than the arraying of forces. It presents an overall combined arms idea that will accomplish the mission and is flexible enough to support sequels or unforeseen events during execution. 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).
- Designation of the decisive operation, along with its task and purpose, linked to how it supports the higher echelon headquarters' concept.
- Designation of the operational framework for this operation: deep-close-rear, main and supporting effort, or decisive-shaping-sustaining.
- 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.
- Assignment of subordinate areas of operations.
- Scheme of fires.
- Concept of sustainment.
- Scheme of protection.
- Integration of obstacle effects with maneuver and fires.
- Priorities for each warfighting function.
- Themes, messages, and means of delivery.
- Military deception operations (on a need to know basis).
- Key control measures.
- Essential stability tasks as necessary.

Note. For the purpose of this section, the decisive-shaping-sustaining operational framework is an example. Planners use the same process when analyzing the other components of the operational frameworks, including deep, close, rear, and support areas and main and supporting efforts to develop initial concepts of the operation.

5-126. Planners select control measures, including graphics, only as necessary to control subordinate units during an operation. 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 3-90-1 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.)

5-127. Planners may also use both lines of operations and lines of effort to refine their broad concept. Lines of operations link a base of operations to physical objectives which link to end state conditions. A line of effort, however, helps planners link multiple tasks with goal-oriented objectives focused on establishing end state conditions. Combining lines of operations with lines of effort allows planners to include nonmilitary activities in their broad concept, as necessary. This combination helps commanders incorporate stability or defense support of civil authorities tasks that, when accomplished, help set end state conditions of an operation. Based on the commander's planning guidance, planners develop lines of effort by—

- Confirming end state conditions from the initial commander's intent and planning guidance.
- Determining and describing each line of effort.
- Identifying objectives (intermediate goals) and determining tasks along each line of effort.

5-128. During COA development, lines of effort are general and lack specifics, such as tasks to subordinate units associated to objectives along each line of effort. Units develop and refine lines of effort, including specific tasks to subordinate units, during war gaming (See ADP 5-0 and FM 3-07 for examples of operations depicted along lines of effort.)

5-129. As planning progresses, commanders and staffs may modify lines of effort and add details while war gaming. Military operations conducted with other instruments of national power generally support a broader, comprehensive approach to stability tasks. Each operation, however, differs. Commanders develop and modify lines of effort to focus operations on achieving an end state, even as the situation evolves.

Assign Headquarters

5-130. 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 (commanders and planners must also carefully consider the maximum number, ensuring they do not overextend their span of control) for fast-paced offensive or defensive operations common during large-scale combat operations. 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 either commanding and controlling troops or, if a headquarters does not have any assigned troops, it is given a mission appropriate to its organization. Task organization takes into account 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).

Prepare Statements and Sketches

5-131. A COA is a broad potential solution to an identified problem. The G-5, G-3, or S-3 prepares a COA statement and updates 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 covers the *who* (generic 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.

5-132. The COA sketch depicts the array of forces and control measures. It includes—

- The unit and subordinate unit boundaries, including deep, close, rear, and support areas by phase as necessary.
- Unit movement formations (but not subordinate unit formations).
- The line of departure or line of contact and phase lines, if used.
- Reconnaissance and security graphics.
- Ground and air axes of advance.
- Assembly areas, battle positions, strong points, engagement areas, and objectives.
- Obstacle control measures and tactical mission graphics.
- Fire support coordination and airspace coordinating measures.
- Main effort.
- Location of command posts and critical communications nodes.
- Known or templated enemy locations.
- Population concentrations.

5-133. 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 and supporting efforts, as appropriate, by phase.
- Scheme of maneuver.
- Scheme of intelligence.
- Scheme of fires.
- Scheme of protection.
- Scheme of engineer operations.
- Scheme of information.
- Concept of sustainment.
- Task and purpose of subordinate units, including priorities for employment of the reserve.
- Concept of command and control.
- Initial decision support matrix (DSM) and decision support template (DST).
- Operational risk with identified mitigation.

5-134. 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 5-6 on pages 5-34 through 5-35 for a sample COA sketch and COA statement for a brigade combat team using the operational framework of decisive-shaping-sustaining.)

Conduct a Course of Action Briefing

5-135. After developing COAs, the staff briefs them to the commander. A collaborative session may facilitate subordinate planning. The COA briefing includes—

- An updated IPB (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.
- The approved problem statement and mission statement.
- The commander's and higher echelon's commander's intents.
- Deductions resulting from the relative combat power analysis.
- Each COA statement and sketch, including lines of operations and lines of effort, if used. Each COA sketch includes—
  - Assumptions used.
  - Task organization.
  - Concept of operations briefed chronologically, geographically using deep-close-rear-support areas with main and supporting efforts, or using the decisive-shaping-sustaining framework.
  - Scheme of maneuver.
  - Scheme of intelligence.
  - Scheme of fires.
  - Scheme of protection.
  - Scheme of sustainment.
  - Scheme of information.
  - Scheme of command and control.
  - Risk.
- COA evaluation criteria.
- Commander's comments, decisions, or guidance.
- 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. (See FM 1-02.2 for doctrine on COA sketches.)
- The reason the staff used the selected control measures.
- The impact on civilians.
- How the COA accounts for minimum essential stability tasks, as required.
- New facts and new or updated assumptions.
- Refined COA evaluation criteria.

Select or Modify Courses of Action for Continued Analysis

5-136. After the COA briefing, the commander selects or modifies selected COAs for continued analysis. The commander also issues additional guidance for COA analysis (war gaming). 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 (war gaming). The staff incorporates those modifications and ensures that all staff members understand the new COA.

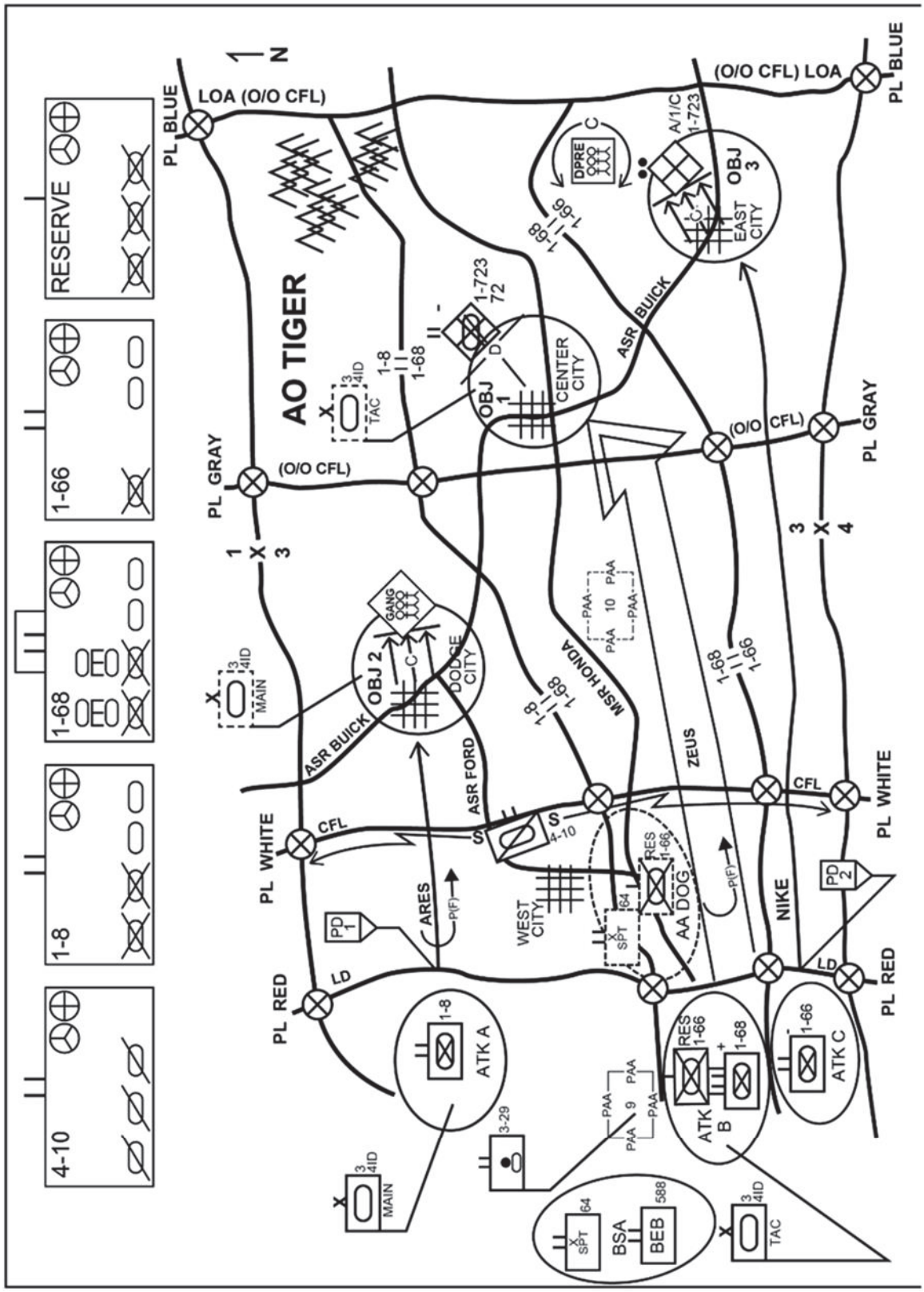

Figure 5-6. Example brigade course of action sketch

MISSION: On order, 3rd ABCT destroys remnants of the 72nd BDE in AO TIGER to establish security and enable the host-nation in reestablishing civil control in the region.

COMMANDER'S INTENT: The **purpose** of this operation is to provide a safe and secure environment in AO TIGER to enable the host-nation and other civilian organizations to reestablish civil control, restore essential services, and reestablish local governance within the area. The **key tasks** are: 1) destroy remnants of the 72nd BDE; 2) secure population centers vic OBJs 1, 2, and 3; 3) transition authority to the host nation. At **end state**, the BCT has destroyed remnant enemy forces in AO TIGER, secured population centers, and is prepared to transition responsibility for security to host nation authority.

INFORMATION COLLECTION: Priority of reconnaissance initially to locate enemy forces between PL RED (LD) and PL WHITE. Information collection operations subsequently focus on: 1) identifying the location and disposition of enemy forces vic OBJ 1; 2) observation of MSR HONDA between PL WHITE and PL BLUE; 3) observation of dislocated civilian traffic from CENTER CITY to EAST CITY.

SHAPING OPERATIONS:

4-10 CAV (ME) initially screens along PL WHITE IOT deny enemy reconnaissance and provide freedom of maneuver for follow on operations. On order, conducts FPOL at PL WHITE IOT move 1-8 CAB and 1-66 CAB(-) forward to conduct operations while maintaining contact with enemy.

O/O, **1-8 CAB** (SE) in the north moves from ATK A , crosses LD at PD1 on DIRECTION OF ATTACK ARES, conducts FPOL, and clears hostile gang vic OBJ 2 IOT enable NGO delivery of humanitarian assistance to WEST CITY and DODGE CITY.

TF 1-68 (SE) in the center occupies ATK B IOT prepare for follow on operations.

On order, **1-66 CAB(-)** (SE) in the south moves from ATK C, crosses LD at PD 2, attacks along DIRECTION OF ATTACK NIKE, and clears enemy vic OBJ 3 IOT prevent disruption of DO vic OBJ 1.

588 BEB (SE) occupies BSA IOT set conditions for follow on operations.

RESERVE initially establishes vic ATK B. On order, displace to AA DOG (east). Priority of commitment to DO vic OBJ 1.

DECISIVE OPERATION:

4-10 CAV (SE) conducts FPOL vic PL WHITE IOT move 1-68 CAB (ME) forward to conduct operations while maintaining enemy contact. On order, occupy AA DOG (south) IOT prepare for future operations. BPT conduct security operations in northeastern portion of AO TIGER IOT provide early and accurate warning of enemy or hostile threats to the security of population centers.

1-8 CAB (SE) controls ASRs BUICK and FORD in assigned AO IOT facilitate sustaining operations and prevent civilians interference with DO vic OBJ 1.

O/O, **TF 1-68 (ME)** moves from ATK B along AXIS ZEUS, conducts FPOL, and attacks to destroy elements of 72nd BDE vic OBJ 1 IOT provide a secure environment for the CENTER CITY population. Bypass criteria is platoon-size or smaller.

1-66 CAB(-) (SE) controls DPRE camp vic EAST CITY IOT provide a secure environment and controls ASR BUICK in assigned AO IOT facilitate sustaining operations and prevent civilian interference with DO vic OBJ 1.

588 BEB (SE) conducts operations as required IOT support DO.

RESERVE establishes in AA DOG (east). Priority of commitment is to reinforce DO vic OBJ 1.

FIRES:

(Shaping Operations): Priority of fires to 4-10 CAV, 1-8 CAB, 1-66 CAB, and TF 1-68 initially from PAA 9. O/O displace to PAA 10. HPTs are enemy reconnaissance forces, indirect fire systems, and mechanized Infantry forces.

(Decisive Operations): Priority of fires to TF 1-68 (ME), 1-66 CAB, 1-8 CAB, and 4-10 CAV from PAA 10. HPTs are enemy armor, mechanized infantry forces, and indirect fire systems.

FSCM: CFL initially PL WHITE, O/O PL GRAY, O/O PL BLUE (LOA).

SUSTAINING OPERATIONS:

(Shaping Operations): 64 BSB will initially establish operations in BSA. O/O, establish BSA in AA DOG vic WEST CITY using MSR HONDA, ASR FORD, and ASR BUICK as primary routes IOT sustain operations. Establish FLEs as required to support operations. Priority of support to 4-10 CAV (ME) will be class III, V, maintenance, and medical.

(Decisive Operations): Priority of support to TF 1-68 (ME) will be class III, V, maintenance, and medical. Coordinate with humanitarian relief agencies IOT facilitate rapid restoration of essential services in AO TIGER.

MISSION COMMAND:

(Command): 3rd ABCT commander located with TAC CP and executive officer located with MAIN CP throughout mission.

(Control/Signal): 3rd ABCT **MAIN CP** initially located vic ATK A. O/O, displaces vic OBJ 2. 3rd ABCT **TAC CP** initially located vic ATK B. O/O, displaces vic OBJ 1.

RISK: Based on intelligence reports of negative enemy activity in the northeast mountainous portion of AO TIGER, risk is assumed with no ground maneuver forces initially allocated to conduct reconnaissance or surveillance operations. Mitigation will be accomplished by assigning a BPT mission to 4-10 CAV to conduct security operations IOT provide early and accurate warning of enemy or hostile threats to the security of population centers.

AA	assembly area	BSA	brigade support area	FSCM	fire support coordination measures	ME	main effort	SE	supporting effort
ABCT	armored brigade combat team	BSB	brigade support battalion			MSR	main supply route	SPT	support
AO	area of operations	CAB	combat aviation brigade	FLE	forward logistics element	NGO	nongovernmental organization	TAC	tactical
ASR	alternate supply route	CAV	cavalry	FPOL	forward passage of lines	O/O	on order	TF	task force
ATK	attack position	CFL	coordinated fire line	HPT	high payoff targets	OBJ	objective	vic	vicinity
BCT	brigade combat team	CP	command post	ID	infantry division	PAA	position area of artillery		
BDE	brigade	DO	decisive operations	IOT	in order to	PD	point of departure		
BEB	brigade engineer battalion	DPRE	displaced persons, refugees, and evacuees	LD	line of departure	PL	phase line		
BPT	be prepared to			LOA	limit of advance	RES	reserve		

Figure 5-6. Example brigade course of action sketch (continued)

STEP 4-COURSE OF ACTION ANALYSIS AND WAR GAMING

5-137. COA analysis enables commanders and staffs to identify difficulties, coordination problems, and probable consequences of planned actions for each COA being considered. It helps them to synchronize combat power and resources, identify and mitigate risk, exploit opportunities, reduce friction, and improve COAs. COA analysis may require commanders and staffs to revisit parts of a COA as discrepancies arise. COA analysis not only appraises the quality of each COA, but it also uncovers potential execution problems, decisions, and contingencies. In addition, COA analysis influences how commanders and staffs understand a problem, how they understand enemy strengths and weaknesses, and how they determine what may require the planning process to restart when the desired end state is not achieved. (See figure 5-7 for a depiction of COA analysis.)

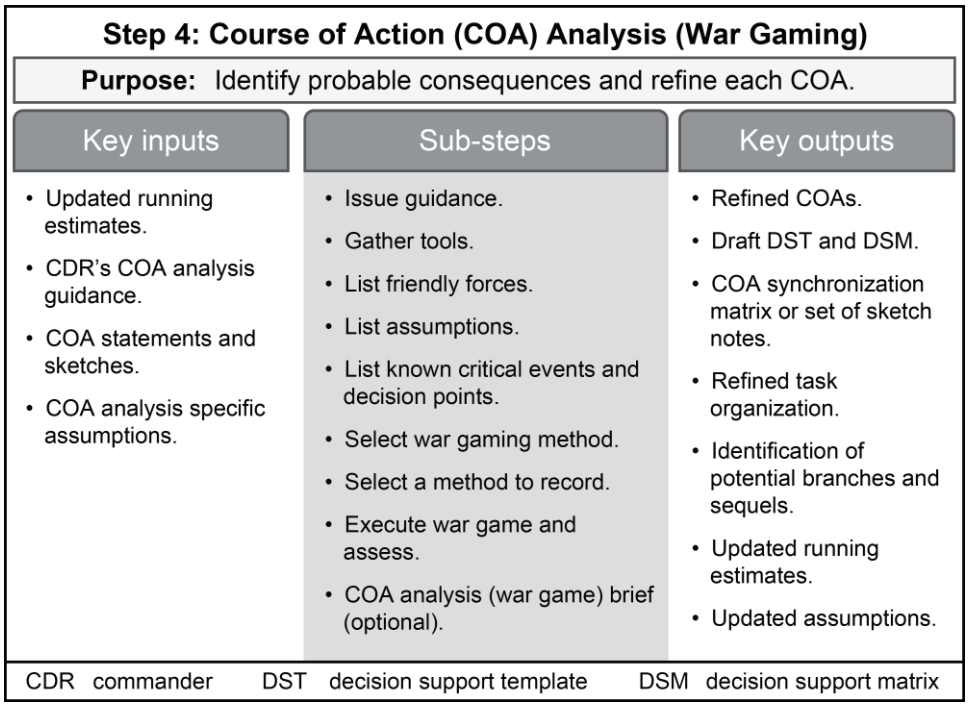

Figure 5-7. Step 4-course of action analysis and war gaming

5-138. COA analysis (or war gaming) is a disciplined process, with rules and steps that attempt to visualize the flow of an operation, given the friendly force's strengths and dispositions, the enemy's capabilities, and possible COAs, the impact and requirements of civilians in the AO, and other aspects of the situation. The simplest form of COA analysis (or war gaming) is the manual method, often using a tabletop approach with blowups of matrixes and templates. The most sophisticated form of COA analysis (or war gaming) is computer-aided modeling and simulation. Typically, most Army units and planning teams use the war-gaming method, and it is the primary method discussed. Regardless of the form used, each critical event within a proposed COA should be war-gamed using the action, reaction, and counteraction methods of friendly and enemy forces interaction. This basic war-gaming method (modified to fit the specific mission and environment) applies to offensive, defensive, and stability or defense support of civil authorities operations. When conducting any COA analysis, commanders and staffs perform the process actions and produce the outputs shown in figure 5-7.

5-139. War gaming stimulates ideas, highlights critical tasks, and provides insights that might not otherwise be discovered. It is a critical step in the MDMP, and commanders should allocate adequate time to complete it. War gaming should result in refined COAs, a completed synchronization matrix, and decision support templates and matrixes for each COA. A synchronization matrix records the results of a war game. It depicts how friendly forces for a particular COA are synchronized in time, space, and purpose in relation to an enemy or threat COA or other activities or events in stability or defense support of civil

authorities operations. The decision support template and matrix portray key decisions and potential actions that are likely to arise during the execution of each COA.

5-140. War gaming further allows the staff to synchronize the six warfighting functions for each COA. It also enables the commander and staff to—

- Determine how to maximize the effects of combat power while protecting friendly forces and minimizing collateral damage.
- Refine the visualization of the operation.
- Anticipate operational events.
- Determine conditions and resources required for success.
- Determine when and where to apply force capabilities.
- Identify coordination needed to produce synchronized results.
- Determine the most flexible COA.

5-141. During the war game, the staff takes each COA and begins to develop a detailed plan while identifying its strengths or weaknesses. War gaming tests and improves COAs. The commander, staff, and other available partners (and subordinate commanders and staffs if the war game 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 feasibility, acceptability, and suitability 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 the war game.

Issue Guidance

5-142. A common technique is for the leader to issue guidance to the staff that enables them to gather the proper tools to conduct COA analysis or war game. The commander and staff should develop a time estimate for COA analysis, as time is a limited resource during the planning process. An analysis of time available helps determine the method used during COA analysis. With an understanding of available time, the commander and staff provide guidance which may include—

- Technique used to conduct COA analysis and expected participants.
- Number of COAs to analyze.
- Objective of the analysis, such as synchronize action at the decisive point, decisive operation, critical event, decision point, phase of the operation, or as time allow the entire operation.
- Type of visual representation and responsible staff to develop it.
- Method used for analysis.
- Recording technique.
- Units or capabilities used.
- Roles and responsibilities of participants.
- Initial problem set.
- COA and COA analysis assumptions.
- Time period covered.
- Any other specific guidance necessary for staff members to prepare.

Gather the Tools

5-143. 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 war game. 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 war-gamed 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 war-game method. War gaming 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 AO. The tools required include, but are not limited to—

- Running estimates.
- Threat templated COAs and models.
- Civil considerations overlays, databases, and data files.
- MCOOs and terrain effects matrices.
- A recording method.
- Completed COAs, including graphics.
- Synchronization matrices and decision support templates and matrices.
- A means to post or display enemy and friendly unit symbols and other organizations.
- A map or sketch of the AO.

List Friendly Forces

5-144. 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 AO. The friendly forces list remains constant for all COAs.

List Assumptions

5-145. The commander and staff review previous assumptions for continued validity and necessity for each COA. Any changes resulting from this review are captured.

List Known Critical Events and Decision Points

5-146. **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 essential tasks. 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.

5-147. A decision point is a point in time and space when the commander or staff anticipates making a key decision concerning a specific course of action. Key decisions are decisions that commanders make. During large-scale combat there may be circumstances, based on the tempo and anticipated operational environment, where a commander delegates specific decisions with a set of criteria as directed by the commander, to a second in command. Decision points may be associated with the status of the friendly force or ongoing operations, and they may be 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.

Select the War-gaming Method

5-148. When war-gaming, there are three recommended war-gaming 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.

5-149. The belt method divides the AO into belts (areas) running the width of the AO. 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.

5-150. This war-gaming method is based on a sequential analysis of events in each belt. Commanders prefer it because it focuses 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 AO 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 AO. (See figure 5-8 for a depiction of the belt method.)

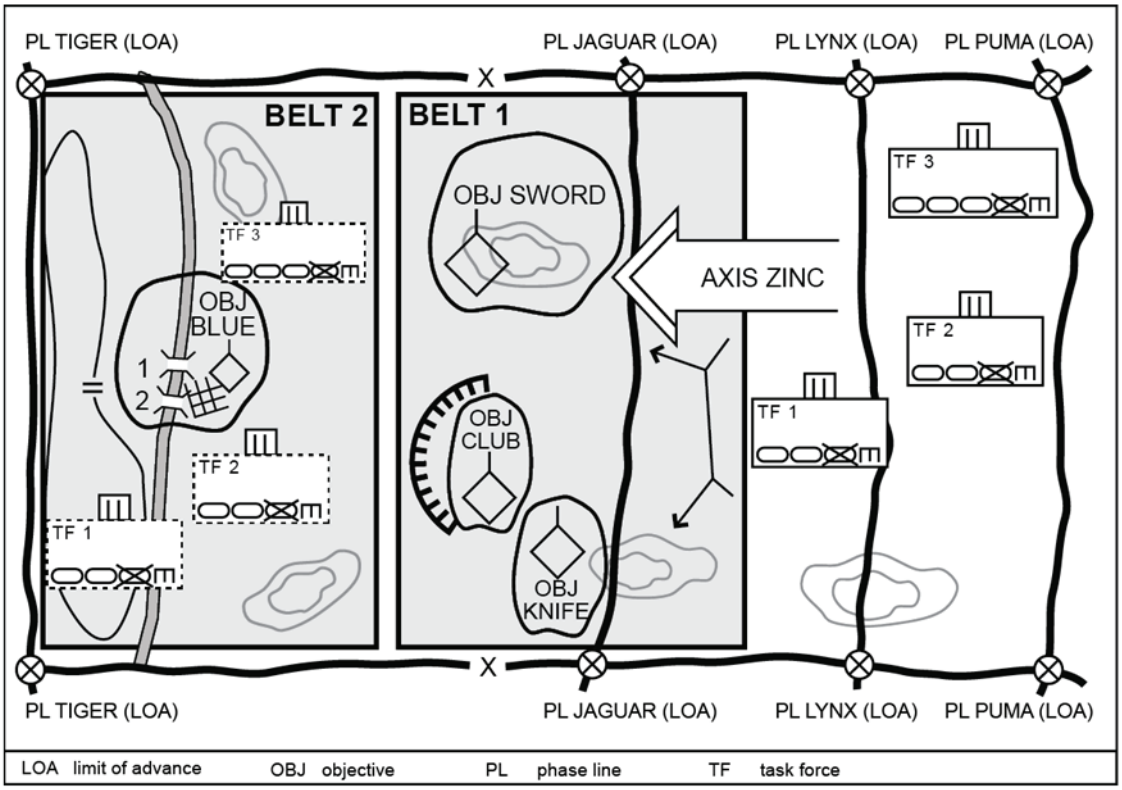

Figure 5-8. Sample belt method

5-151. 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 war-gaming relationships among events or objectives on all lines of effort in the belt. (See figure 5-9 on page 5-40 for a depiction of a sample modified belt method using lines of effort.)

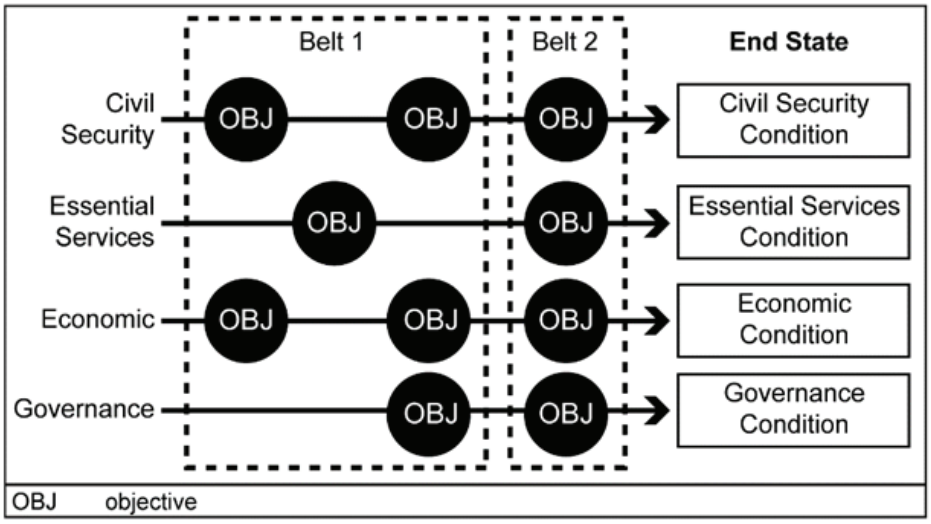

Figure 5-9. Sample modified belt method using lines of effort

5-152. The avenue-in-depth method focuses on one avenue of approach at a time, beginning with the decisive operation. This method is good for offensive COAs or in the defense when canalizing terrain inhibits mutual support. (See figure 5-10 for a depiction of the avenue-in-depth method.)

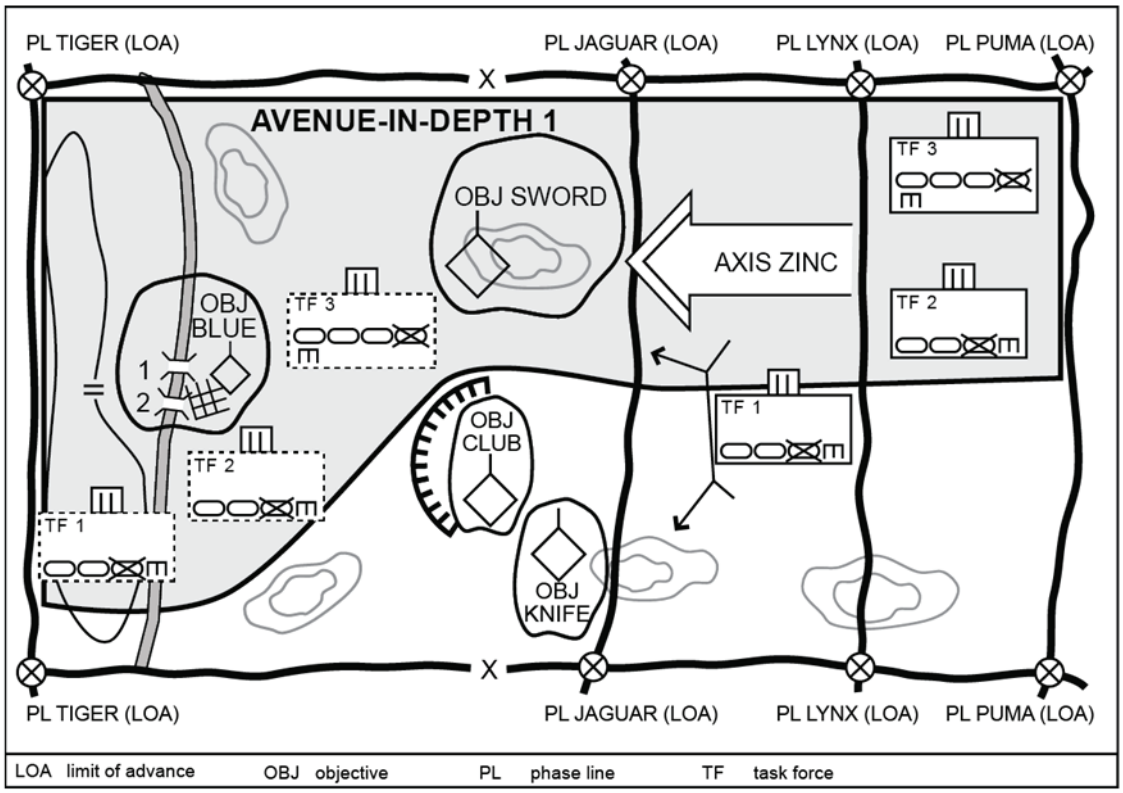

Figure 5-10. Sample avenue-in-depth method

5-153. In stability operations, planners can modify the avenue-in-depth method. Instead of focusing on a geographic avenue, the staff war-games a line of effort. This method focuses on one line of effort at a time,

beginning with the decisive line. The avenue-in-depth method includes not only war-gaming events and objectives in the selected line, but also war-gaming relationships among events or objectives on all lines of effort with respect to events in the selected line. (See figure 5-11 for a depiction of the avenue-in-depth method using lines of effort.)

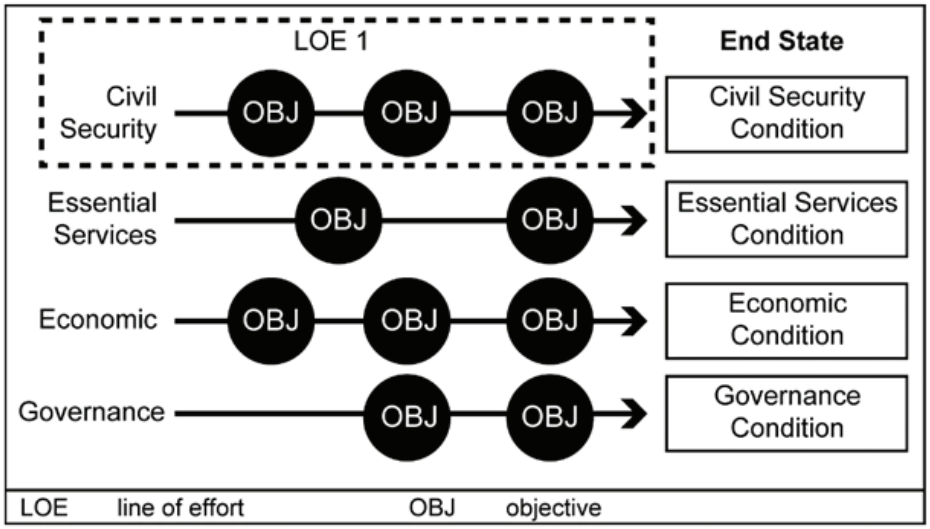

Figure 5-11. Sample modified avenue-in-depth method using lines of effort

5-154. 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 AOs. 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 the AO and focus their attention on the critical event or events. (See figure 5-12 on page 5-42 for a depiction of the box method.)

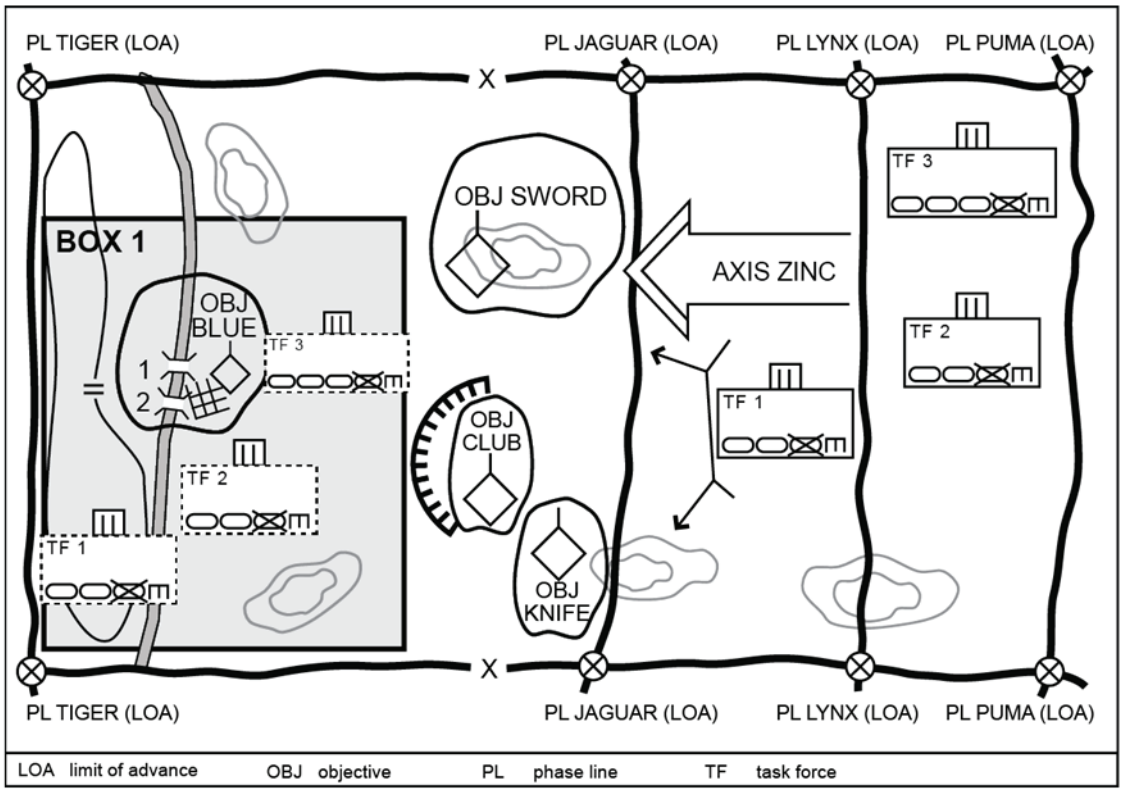

Figure 5-12. Sample box method

5-155. 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 5-13 for a depiction of the modified box method using lines of effort.)

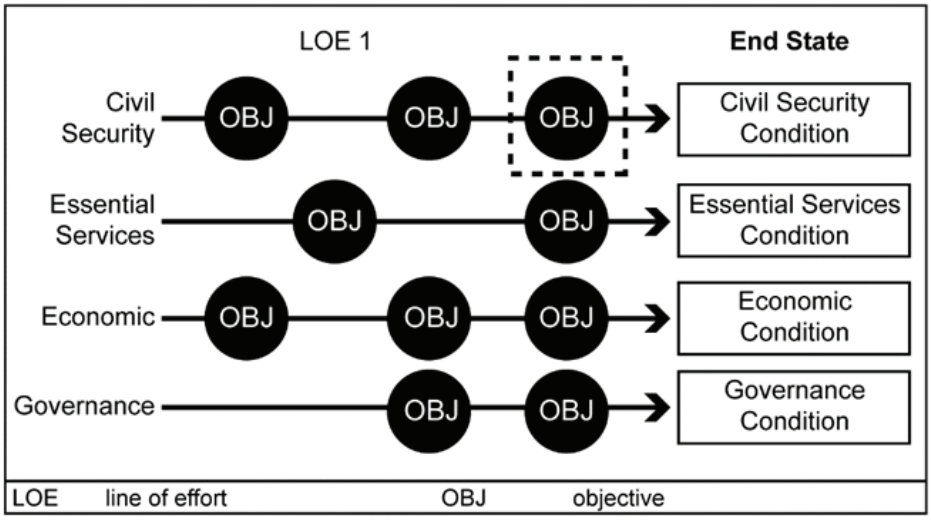

Figure 5-13. Sample modified box method using lines of effort

Select a Method to Record and Display Results

5-156. The war-game results provide a record from which to build task organizations, synchronize activities, develop decision support templates, confirm and refine event templates, prepare plans or orders, and compare COAs. Two methods commonly used to record and display results are the synchronization matrix method and the sketch note method. In both methods, staff members record any remarks regarding the strengths and weaknesses they discover. The amount of detail depends on the time available. Unit SOPs should address details and methods of recording and displaying war-game results.

5-157. The synchronization matrix is a tool the staff uses to record the results of war gaming. It helps them synchronize a COA across time, space, and purpose in relationship to potential enemy and civil actions.

5-158. The synchronization matrix typically identifies those pieces of critical information necessary to guide, record, and synchronize the war game, such as—

- Weather and light data.
- Area of influence critical information.
- Enemy actions.
- Population or civilian action when expected to impact operation.
- Decision points.
- Control measures.
- Friendly actions.
- Risk.
- Other organizations or partners potentially impacting a COA when appropriate.

(See table 5-5 on pages 5-44 through 5-46 for an example of a generic division synchronization matrix.)

Table 5-5. Example generic division synchronization matrix tool

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)***		
Step		***Initial Set***	***Action***	***Reaction***	***Counter-action***	***Action***	***Reac-tion***	***Counte r-action***
Weather and Light Data		BMNT – 0635; Sunrise – 0650; Sunset – 1910; EENT – 1935	No change	No change	No change	BMNT – 0637; Sunrise – 0652; Sunset – 1907; EENT – 1932	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 AO	No change	No change	No change	No change	Chem reserve; Commits reserve to OBJ HENRY	No change
Enemy Action		Prepares defense; targets USAF OCA; conducts disinformation through international media and camps	No change	Destroys key bridges; conducts cyber attack against infrastructure and C2	No change	No change	Conducts disinformat ion messaging accusing friendly sources of use of chemical munitions	Coordina te with OGA on location of chemical strikes; conduct tactical messagi ng
Population or Civilian Action		Begins displacement to refugee 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 5-5. Example generic division synchronization matrix tool (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)***		
Step		***Initial Set***	***Action***	***Reaction***	***Counteraction***	***Action***	***Reaction***	***Counter-action***
Movement and Maneuver	1st ABCT	Set TAA MICHAEL	Moves ROUTE IRISH to assault position	No change	No change	Attacks to seize OBJ HENRY	No change	No change
	2d SBCT	Set TAA JOHN	Moves ROUTE WILDCATS to assault position	No change	No change	Attacks to seize OBJ BILL	No change	No change
	3d IBCT	Set TAA TIM	Occupies AA GAP	No change	Conducts AASLT to seize OBJ CROSSING	Secures OBJ CROSSING	No change	Conducts AASLT to OBJ TOM
	Avn Bde	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	Jam enemy C2 vic OBJ GOLD	No change	No change
Nonlethal Effects		Direct civilians to IDP camp radio message and leaflet	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 support area Denver	No change	No change
	Engineer	Attach bridging CO to 1 ABCT	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
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

Table 5-5. Example generic division synchronization matrix tool (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)*		
Step	*Initial Set*	*Action*	*Reaction*	*Counteraction*	*Action*	*Reaction*	*Counter-action*
Command and Control	Main CP behind 1st ABCT	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
Host Nation	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	Refugee Relief in AO	No change	No change	No change	No change	No change	No change

AA	assembly area	IBCT	infantry brigade combat team
AASLT	air assault	IDP	internally displaced person
ABCT	armored brigade combat team	IO	information operations
AD	armored division	LD	line of departure
ADA	air defense artillery	MEB	maneuver enhancement brigade
AI	air interdiction	MSR	main supply route
AMD	air and missile defense	NAI	named area of interest
AO	area of operations	NGO	nongovernmental organization
Avn	aviation	OBJ	objective
Bde	brigade	OCA	offensive counterair
BMNT	begin morning nautical twilight	O/O	on order
C2	command and control	PL	phase line
CBRN	chemical, biological, radiological, and nuclear	PM	provost martial
Chem	chemical	SBCT	Stryker brigade combat team
CO	company	SEAD	suppression of enemy air defenses
CP	command post	TAA	tactical assembly area
DCA	defensive counterair	TAC	tactical command post
DIV	division	TAI	targeted area of interest
DSA	division support area	UK	United Kingdom
EENT	end of evening nautical twilight	USAF	United States Air Force
FSCL	fire support coordination line	vic	vicinity

5-159. 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 war-game 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 war-game worksheet to identify all pertinent data for a critical event. (See table 5-6 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 5-6. 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 TF2
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 decision point OBJ objective	PL phase line TF task force

Execute War Game and Assess the Results

5-160. War gaming is a conscious attempt to visualize the flow of operations, given the friendly force's strengths and dispositions, the enemy's capabilities and possible COAs, and civilian locations and activities. During the war game, the commander and staff try to foresee the actions, reactions, and counteractions of all participants, including civilians. The staff analyzes each selected event. It identifies tasks that the force one echelon below it must accomplish, using assets two echelons below the staff. Identifying strengths and weaknesses of each COA allows the staff to adjust COAs as necessary.

5-161. The war game focuses on actors rather than the tools used. Staff members who participate in war gaming should be the individuals deeply involved in developing COAs. Red team members (who can provide alternative points of view) provide insight on each COA. 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.

5-162. The war game 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 war game 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.

5-163. The staff considers all possible forces, including templated enemy forces outside the AO that can influence the operation. The staff also considers the actions of civilians in the AO, 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 worksheet or sketch note.

5-164. The planning team examines many areas during the war game. These include, but are not limited to—

- All friendly capabilities.
- All enemy capabilities and critical civil considerations that impact operations.
- Movement considerations.
- Closure rates.
- Lengths of columns.
- Formation depths.
- Ranges and capabilities of weapons systems.
- Desired effects of fires.
- Templated enemy forces outside the AO.
- Sustainment.
- Time and space, to include sequencing, phasing, and boundaries.
- Branches and sequels.

5-165. The commander and staff consider how to create conditions for success, protect the force, and shape an OE. Experience, historical data, SOPs, and doctrinal literature provide much of the necessary information. During the war game, staff officers continuously assess and mitigate risk for their functional areas for each COA whenever possible. They then propose appropriate control measures. They continually assess the risk of adverse reactions from population and media resulting from actions taken by all sides in the operation. Staff officers develop ways to mitigate those risks.

5-166. The staff identifies the required assets of the warfighting functions to support the concept of operations, including those needed to synchronize sustaining operations. If requirements exceed available assets, the staff recommends priorities based on the situation, commander's intent, and planning guidance. To maintain flexibility, the commander may decide to create a reserve to maintain assets for unforeseen tasks or opportunities.

5-167. The commander can modify any COA based on how things develop during the war game. When doing this, the commander validates the composition and location of the decisive operation, shaping operations, and reserve forces. Control measures are adjusted as necessary. The commander may also identify situations, opportunities, or additional critical events that require more analysis. The staff performs this analysis quickly and incorporates the results into the war-gaming record.

5-168. An effective war game results in the commander and staff refining, identifying, analyzing, developing, and determining several effects. (See table 5-7 for a sample list of effective war-game results.)

Table 5-7. Sample effective war-game 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 areas 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 area of operations.
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 area of operations.
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 War-Game Briefing (Optional)

5-169. Time permitting, the staff delivers a briefing to ensure everyone understands the results of the war game. 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 war game for presentation to the commander, COS, XO, or deputy or assistant commander. In a collaborative environment, the briefing may include selected subordinate staffs. A war-game brief generally includes—

- Higher echelon headquarters' mission, commander's intent and brief overview of scheme of maneuver.
- Updated IPB.

- War-gaming method used.
- Friendly and enemy COAs that were war-gamed, including—
  - Assumptions used.
  - Critical events.
  - Concept of operations.
  - Analysis results.
  - Modifications made.
- Additional commander's guidance.
- Additional COA analysis responsibilities by warfighting function.

General War-gaming Responsibilities

5-170. Paragraphs 5-171 through 5-190 discusses specific individual and staff section responsibilities for war gaming.

Responsibilities

5-171. The commander has overall responsibility for the war-gaming process, and the commander can determine the staff members who are involved in war gaming. Traditionally, certain staff members have key and specific roles.

5-172. The COS or XO coordinates actions of the staff during the war game. This officer is the unbiased controller of the process, ensuring the staff stays on a timeline and achieves the goals of the war-gaming session. In a time-constrained environment, this officer ensures that, at a minimum, the decisive operation's critical event is war-gamed.

5-173. The G-5, G-3, or S-3 assists the commander with the war game. The G-5, G-3, or S-3—

- Portrays the friendly scheme of maneuver, including the employment of information-related capabilities.
- Ensures subordinate unit actions comply with the commander's intent.
- Normally provides the recorder.

5-174. 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 war-gamed 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.

5-175. The information operations officer assesses the information operations concept of support against the ability of information-related capabilities to execute tasks in support of each war-gamed COA and the effectiveness of integrated information-related capabilities to impact enemy decision-making and various audiences and populations in and outside the AO. The information operations officer, in coordination with the cyber electronic warfare officer, also integrates information operations with cyberspace electromagnetic activities.

5-176. The assistant chief of staff, civil affairs operations (G-9) or battalion or brigade civil affairs operations staff officer (S-9) ensures each war-gamed COA effectively integrates civil considerations: the "C" 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 AO affects each COA. If the unit lacks an assigned civil affairs officer, the commander assigns these responsibilities to another staff member.

5-177. If available, the red team section provides the commander and G-2 with an independent capability to fully explore alternatives. The staff looks at plans, operations, concepts, organizations, and capabilities of an OE from the perspectives of enemies, unified action partners, and others.

5-178. The cyber electromagnetic warfare officer provides information on the electromagnetic warfare target list, electromagnetic attack requests, electronic attack taskings, and the electromagnetic warfare portion of the collection matrix and the attack guidance matrix. Additionally, the cyber electromagnetic warfare officer assesses threat vulnerabilities, friendly electromagnetic warfare capabilities, and friendly actions relative to electronic warfare activities and other cyberspace electromagnetic activities not covered by the G-6 or G-2.

5-179. The staff judge advocate advises the commander on all matters pertaining to law, policy, regulation, good order, and discipline for each war-gamed COA. This officer provides legal advice across the range of military operations on law of war, rules of engagement, international agreements, Geneva and Hague Conventions, treatment and disposition of noncombatants, and the legal aspects of targeting.

5-180. Several other officers have responsibilities regarding war gaming. 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 course of action.
- The space operations officer, if available, provides and represents friendly, threat, and non-aligned space capabilities.

Intelligence Responsibilities

5-181. During the war game the G-2 or S-2 role-plays the enemy commander, other threat organizations in the AO, and critical civil considerations in the AO. 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) for war gaming. 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 the war game 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 named areas of interest that support decision points.
- Refines the event template with corresponding decision points, target areas of interest, and high value targets.
- Participates in targeting to select high-payoff targets from high-value targets identified during IPB.
- 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

5-182. During the war game, 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 war game 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 G-5 assesses warfighting function requirements, solutions, and concepts for each COA; develops plans and orders; and determines potential branches and sequels arising from various war gamed COAs. The G-5 also

coordinates and synchronizes warfighting functions in all plans and orders. The planning staff ensures that the war game 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 war game and use those rationales later with the commander's guidance to compare COAs.

Fires Responsibilities

5-183. The chief of fires, deputy fire support coordinator, or fire support officer assesses the fire support feasibility of each war-gamed COA. This officer refines or develops a proposed high-payoff target list, target selection standards, and attack guidance matrix. The chief of fires works with the intelligence officer to identify named and target areas of interest for enemy indirect fire weapons systems and identify high-payoff targets and additional events that may influence the positioning of field artillery and ADA assets. The chief of fires should also offer a list of possible defended assets for ADA forces and assist the commander in making a final determination about asset priority.

Protection Responsibilities

5-184. The chief of protection assesses protection element requirements, refines EEFIs, and develops a scheme of protection for each war-gamed COA. The chief of protection—

- 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.
- 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

5-185. During the war game, 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. During the war game 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. (See ATP 1-0.1 for additional information on casualty estimates.)

5-186. 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 war-gamed 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, including potential support required to provide essential services to civilians and compares it to available assets. This officer identifies potential shortfalls and recommends actions to eliminate or reduce their effects. While improvising can contribute to responsiveness, only accurately predicting requirements for each logistics function can ensure continuous sustainment. The logistics officer ensures that available movement times and assets support each COA.

5-187. During the war game, the assistant chief of staff, financial management (G-8) assesses the commander's AO 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.

5-188. The surgeon section coordinates, monitors, and synchronizes 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.

Liaisons

5-189. 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

5-190. 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

5-191. 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 5-14 for a depiction of the course of action comparison.)

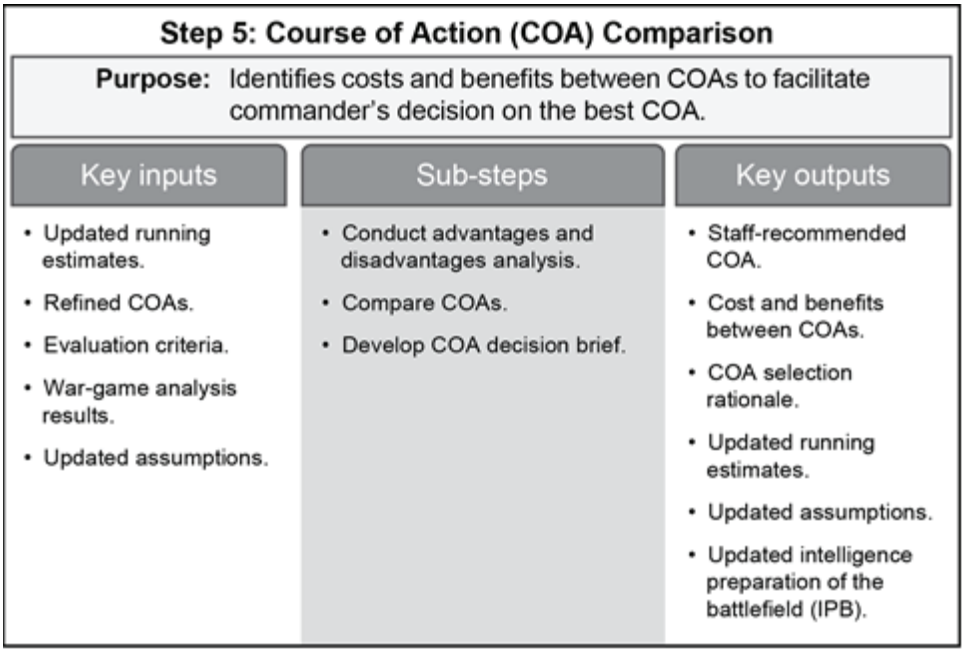

Figure 5-14. Step 5-course of action comparison

Conduct Advantages and Disadvantages Analysis

5-192. 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 and refined during COA development, 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 5-8 for a list of COA advantages and disadvantages.)

Table 5-8. Sample advantages and disadvantages

Course of Action	*Advantages*	*Disadvantages*
Course of action 1	Decisive operation avoids major terrain obstacles. Adequate maneuver space available for units conducting the decisive operation and the reserve.	Units conducting the decisive operation face stronger resistance at the start of the operation. Limited resources available to establishing civil control to town X.
Course of action 2	Shaping operations provide excellent flank protection of the decisive operation. Upon completion of decisive operations, units conducting shaping operations 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

5-193. 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 5-9 for a sample decision matrix.)

Table 5-9. Sample decision matrix

Weight[1]	***1***	***2***	***1***	***1***	***2***	
Criteria[2] **Course of Action (COA)**	Simplicity	Maneuver	Fires	Civil control	Mass	Total
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 the mission analysis brief.
[3]COAs selected for war gaming have rankings assigned with regards to each criteria 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

5-194. 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 5-9 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.

5-195. 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. Upon review and consideration, the commander—based on personal judgment—may accept the results of the decision matrix or elect to execute one of the other COAs.

5-196. The staff compares feasible COAs to identify the one with the highest probability of success against the most likely enemy COA, the most dangerous enemy COA, the most important stability task, or the most damaging environmental impact. The selected COA generally—

- Poses the minimum risk to the force and mission accomplishment.
- Places the force in the best posture for future operations.
- Provides maximum latitude for initiative by subordinates.
- Provides the most flexibility to meet unexpected threats and opportunities.
- Provides the most secure and stable environment for civilians in the AO.

5-197. Staff officers often use their own matrix to compare COAs with respect to their functional areas. Matrixes use the evaluation criteria developed before the war game. Their greatest value is providing a method to compare COAs against criteria that, when met, produce operational success. Staff officers use these analytical tools to prepare recommendations. Commanders provide the solution by applying their judgment to staff recommendations and making a decision.

Conduct a Course of Action Decision Briefing

5-198. 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 IPB.
- 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.

STEP 6-COURSE OF ACTION APPROVAL

5-199. 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. (See figure 5-15 for a depiction of course of action approval.)

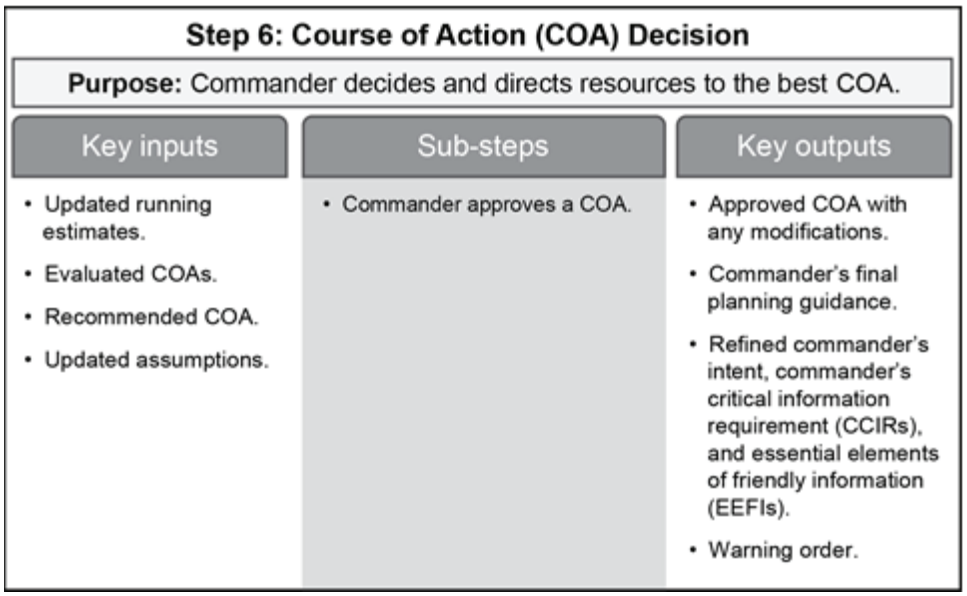

Figure 5-15. Step 6-course of action approval

5-200. After approving a COA, the commander issues the final planning guidance. The final planning guidance includes a refined commander's intent (if necessary) and new CCIRs to support execution. 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.

5-201. 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.

5-202. 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—

- The AO.
- Mission.
- 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

5-203. 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 using the Army's OPORD format. (See figure 5-16 for a depiction of orders production, dissemination, and transition. See Appendix D for more information on the OPORD format.)

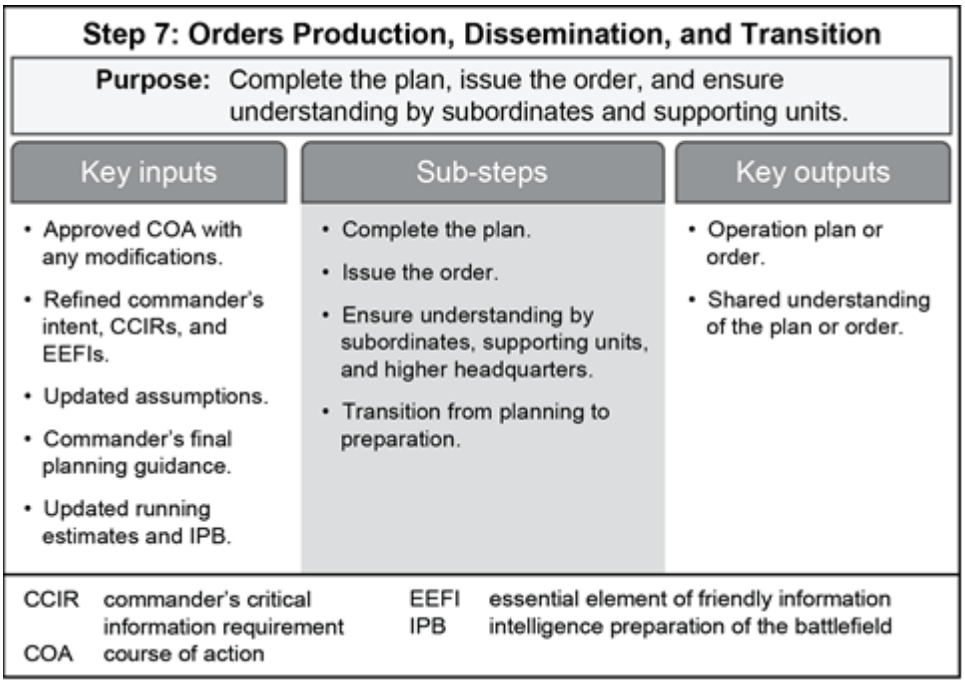

Figure 5-16. Step 7-orders production, dissemination, and transition

5-204. 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.

5-205. 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

5-206. 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

5-207. 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

5-208. 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.

5-209. Commanders review and approve orders before the staff reproduces and disseminates them, unless commanders 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. The commander and staff conduct confirmation briefings with subordinates immediately afterwards. 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.

5-210. Immediately after receiving the order, subordinate leaders brief their superiors on the order just received. Subordinate leaders brief an understanding of the commander's intent, the specific tasks assigned and their purposes, and the relationship of tasks to other elements conducting operations.

5-211. This step bridges the transition between planning and preparations. 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 operation order. This responsibility includes answering requests for information concerning the order and maintaining the order through fragmentary orders. 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

5-212. Any planning process aims to quickly develop a flexible, sound, and fully integrated and synchronized plan. However, any operation may "outrun" the initial plan. The most detailed estimates cannot anticipate every possible branch or sequel, enemy action, threat action, or reaction from the local population, unexpected opportunity, or change in mission directed from higher echelon headquarters. 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.

5-213. Before a unit can effectively conduct planning in a time-constrained environment, it must master the steps in the full MDMP. A unit can only shorten the process if it fully understands the role of each and every step of the process and the requirements to produce the necessary products. Typically a commander abbreviates the MDMP based on the benefits outweighing the risk. Training on these steps must be thorough and result in a series of staff battle drills and SOPs that can be tailored to the time available.

5-214. Quality staffs produce simple, flexible, and tactically sound plans in time-constrained environments. Any METT-TC (I) factor, but especially limited time, may make it difficult to complete every step of the MDMP in detail. Applying an inflexible process to all situations does not work. Anticipation, organization, and prior preparation are the keys to successful planning under time-constrained conditions. Staffs can use the time saved on any step of the MDMP to—

- Refine the plan more thoroughly.
- Conduct a more deliberate and detailed war game.
- Consider potential branches and sequels in detail.
- Focus more on rehearsing and preparing the plan.
- Allow subordinate units more planning and preparation time.

THE COMMANDER'S RESPONSIBILITY

5-215. The commander decides how to adjust the MDMP, giving specific guidance to the staff to focus on the process and 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.

5-216. 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.

5-217. Commanders consult with subordinate commanders before making a decision, if possible. Subordinate commanders are 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.

5-218. 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

5-219. 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 AO and begun operations. This means that the IPB, 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 AO 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

5-220. Paragraphs 5-221 through 5-225 discuss time-saving techniques. Commanders and staffs can use these techniques to speed the planning process.

Increased Commander's Involvement

5-221. 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

5-222. 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. This technique saves the most time. The fastest way to develop a plan has the commander directing development of one COA with branches against the most likely enemy COA or most damaging civil situation or condition. However, this technique should be used only when time is severely limited. In such cases, this choice of COA is often intuitive, relying on the commander's experience and judgment. The commander determines which staff officers are essential to assist in COA development. Normally commanders require the intelligence officer, operations officer, plans officer, chief of fires (deputy fire support coordinator or fire support officer), engineer officer, sustainment officer, civil affairs operations officer, information operations officer, military information support operations officer, cyber electronic warfare officer, and COS or XO. They 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. The commander mentally war-games this COA and gives it to the staff to refine.

Maximize Parallel Planning

5-223. 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 the same WARNORDs used in the full MDMP when abbreviating the process. In addition to WARNORDs, units must share all available information with subordinates, especially IPB 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

5-224. 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 AOs often results in developing better COAs quickly.

Use Liaison Element

5-225. 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.

(See 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 the 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 combat power to accomplish the mission and adjusting operations based on changes in the situation (ADP 5-0). In execution, commanders, staffs, and subordinate commanders focus their efforts on translating decisions into actions. They direct action to apply combat power 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 at decisive points and times.

ASSESSMENT DURING EXECUTION

6-3. During execution, continuous assessment is essential. 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 during an operation 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 6-2. The first form of variance is an opportunity to accomplish the mission more effectively. Opportunities result from forecasted or unexpected success. When commanders recognize an opportunity, and if the change achieves the end state more effectively or efficiently, they alter the order to exploit it. 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 no branch or sequel is 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 an operational environment (OE) as depicted in figure 6-1 on page 6-2. (See Chapter 1 for more information on reframing.)

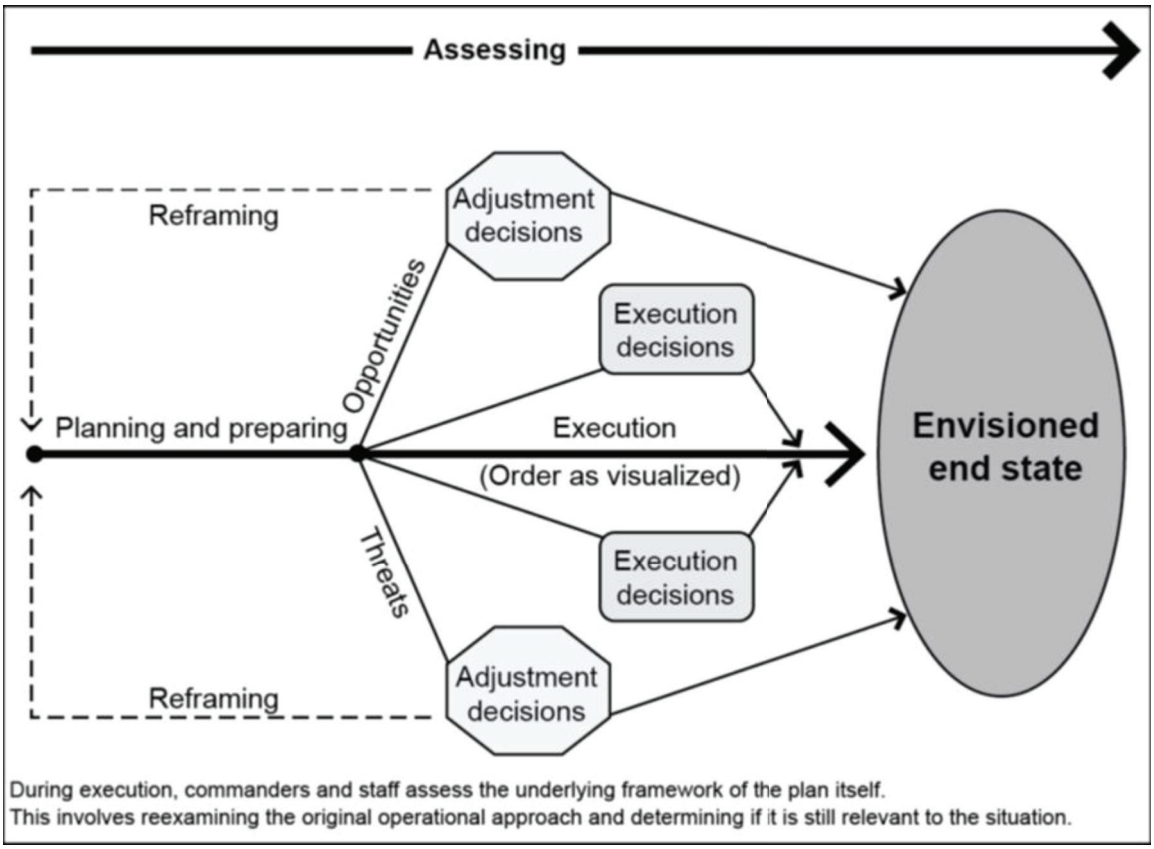

Figure 6-1. Decision making during execution

DECISION MAKING DURING OPERATIONS

6-6. When operations are progressing satisfactorily, the variances are minor and within acceptable levels. Commanders who make this evaluation—formally or informally—allow operations to continue according to plan. This situation leads to following execution decisions included in the plan. Execution decisions implement a planned action under circumstances anticipated in the order. An execution decision is normally tied to a decision point.

6-7. An assessment may determine that the operation as a whole, or one or more of its major actions, is not progressing according to expectations. At times, the commander determines the variance requires an adjustment decision. An adjustment decision is the selection of a course of action (COA) that modifies the order to respond to unanticipated opportunities or threats.

6-8. 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 underlies the adjustment decision with guidance on the critical on-going operations. Commanders and staff must 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.

6-9. 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

6-10. 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 to seize, retain, and exploit the initiative. This involves synchronizing the operations in time, space, and purpose and issuing directives to subordinates. (See table 6-1 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.

6-11. 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. 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

6-12. 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.

6-13. 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.

6-14. 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 decisive operation 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.

6-15. 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 course of action. (See figure 6-2 for a depiction of the rapid decision-making and synchronization process.)

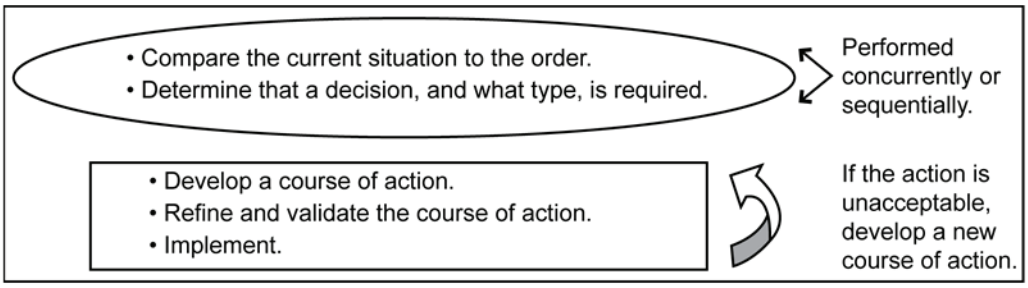

Figure 6-2. Rapid decision-making and synchronization process

COMPARE THE CURRENT SITUATION TO THE ORDER

6-16. 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 page 6-6 through 6-7 for examples of change indicators.)

6-17. 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.

6-18. 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, and this likely falls outside of the RDSP.

Table 6-2. Examples of change indicators

Types	*Indicators*	
General	• Answer to a commander's critical information requirement. • 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 area of operations. • Change in role of host-nation military force. • Climate changes or natural disasters impacting on the population, agriculture, industry. • Upcoming local election or change of key civilian leadership. • Signing or implementation of peace treaty or other key political arrangement.
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 electronic attack use.	• Identification of unplanned chemical, biological, radiological, nuclear or explosive capabilities. • Indicators of illicit economic activity. • Identification of threats from within the population. • Increased unemployment within the population. • Interference with freedom of religious worship. • Increase in enemy solicitation of civilians for intelligence operations.
Movement and Maneuver	• Action that impacts or desynchronizes planned decisive operation. • 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. • Loss of one or more critical transportation systems. • 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. • Destruction of any place of worship by friendly fire.

Table 6-2. Examples of change indicators (continued)

Types	*Indicators*	
Protection	• Chemical, biological, radiological, nuclear report. • Indicators of enemy chemical, biological, radiological, nuclear 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. • Increase in organized demonstrations or civil disturbances.
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). • Closing of major host-nation financial institutions.
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 leaders. • Interference with freedom of the press or news media.

DETERMINE THE DECISION REQUIRED

6-19. 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 decisive operation's success.

- Threatens a shaping operation such that it may impact the decisive operation.
- 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.)

6-20. For minor variances, the chief of operations works with other cell chiefs 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.

6-21. 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

6-22. If the variance requires an adjustment decision, the designated integrating cell and affected command post cell chiefs 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.

6-23. 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 chiefs and other staff leaders identify areas that may be affected within their areas of expertise by proposed changes to the order or mission. Course of action considerations include, but are not limited to, those shown in table 6-3.

6-24. When reallocating resources or priorities, commanders assign only minimum essential assets to shaping operations. They weight the decisive operation with necessary assets. This applies when allocating resources for the overall operation or within a warfighting function.

6-25. 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.

6-26. 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 war gaming 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 the 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.	• 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, and 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

6-27. 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.

6-28. Validation and refinement are done quickly. Normally, the commander and staff officers conduct a mental war game 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 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?

6-29. 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

6-30. 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.

6-31. 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, and attack guidance matrix.
- Updated information tasks.

6-32. 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.

6-33. After the analysis is complete, the current operations integration cell and command post cell chiefs update decision support templates and synchronization matrixes. Staff members begin the synchronization needed to implement the decision. This synchronization involves collaboration with other command post 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.

6-34. 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 at decisive times and places. When making synchronization decisions or allowing others' synchronization in collaboration to proceed, the following outcomes are considered:

- Combined arms integration.
- Responsiveness.
- Timeliness.

6-35. 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. Cross talk 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) and their relationship to the military decision-making process (MDMP), as it applies to small units (at company and lower echelons) of all types. The chapter begins with a background discussion of TLP in comparison to the MDMP, and it provides a framework for planning and preparing operations. The chapter concludes with a discussion how unit leaders perform TLPs to develop plans and orders.

TLP BACKGROUND AND COMPARISON TO THE MDMP

7-1. TLPs extend the MDMP to the small-unit level. The MDMP and TLP are similar but not identical. They are both linked by the basic Army problem-solving process. Commanders with a coordinating staff use the MDMP as their primary planning process. Company-level and smaller units 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. While TLP are discussed in this chapter from a ground maneuver perspective, they are applicable to all small units and small-unit leaders. (See Chapter 3 for more information on the Army problem-solving process.)

7-2. *Troop leading procedures* are a dynamic process used by small-unit leaders to analyze a mission, develop a plan, and prepare for an operation (ADP 5-0). These procedures enable leaders to maximize available planning time while developing effective plans and preparing their units for an operation. (See paragraphs 7-13 to 7-50 for a discussion on performing the eight steps of TLP.)

7-3. Leaders typically perform TLP while working alone or with a small group to solve tactical problems. For example, a company commander may use the executive officer, first sergeant, fire support officer, supply sergeant, and communications sergeant to assist during TLP.

7-4. The type, amount, and timeliness of information passed from a higher echelon to a lower echelon headquarters directly impacts the lower unit leader's TLP. Figure 7-1 on page 7-2 illustrates the parallel sequences of the MDMP of a battalion with the TLP of a company and a platoon. The solid arrows depict when a higher headquarters' planning event could start the TLP of a subordinate unit. However, events do not always occur in the order shown. For example, TLP may start with receipt of a warning order (WARNORD), or they may not start until the higher headquarters has completed the MDMP and issued an operation order (OPORD). WARNORDs from higher headquarters may arrive at any time during TLP. Leaders remain flexible. They adapt TLP to fit the situation rather than try to alter the situation to fit a preconceived idea of how events should flow.

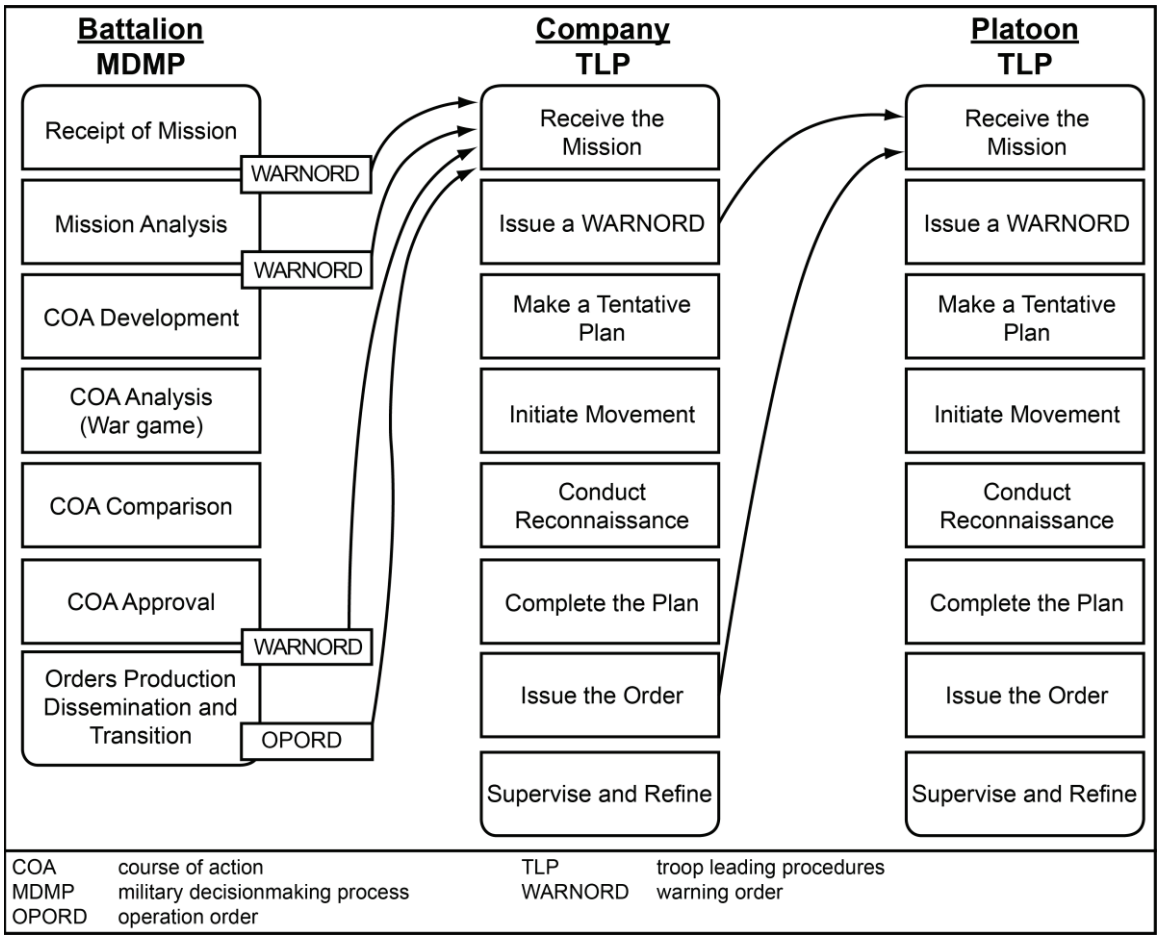

Figure 7-1. Parallel sequences of the MDMP and TLP

7-5. Normally, the first three steps (receive the mission, issue a WARNORD, and make a tentative plan) of TLP occur in order. The sequence of subsequent steps is then based on the situation. The tasks involved in some steps (for example, initiate movement and conduct reconnaissance) may occur multiple times. The last step, supervise and refine, occurs throughout.

7-6. A tension exists between executing current operations and planning for future operations. The small-unit leader must balance both. If engaged in a current operation, leaders have less time for TLP. If in a lull, transition, or an assembly area, leaders have more time to perform TLP thoroughly. In some situations, time constraints or other factors may prevent leaders from performing each step of TLP as thoroughly as they would like. For example, during the step make a tentative plan, small-unit leaders often develop only one acceptable course of action (COA) instead of multiple COAs. If time permits, leaders develop, compare, and analyze several COAs before deciding which one to execute.

7-7. Ideally, a battalion headquarters issues at least three WARNORDs to subordinates when conducting the MDMP, as depicted in figure 7-1. WARNORDs are typically issued upon receipt of mission, completion of mission analysis, and when the commander approves a COA. WARNORDs serve a function in planning similar to that of fragmentary orders (FRAGORDs) during execution. Commanders may issue a WARNORD whenever they need to disseminate additional planning information or initiate necessary preparatory action, such as movement or reconnaissance.

7-8. The first WARNORD normally contains minimal information. It generally alerts leaders that a new mission is pending. This WARNORD generally contains the following information, as previously discussed in Chapter 5:

- 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.
- Initial information requirements or commander's critical information requirements (CCIRs).
- Initial information collection tasks.

7-9. The second WARNORD is typically issued at the end of mission analysis, and it usually contains essential information for planning and directives to initiate movements and reconnaissance. This WARNORD generally contains the following information:

- Updated situation.
- The approved mission statement.
- The commander's intent.
- Changes to task organization.
- The unit area of operations (AO) (using a sketch, overlay, or some other description).
- Tasks to subordinate units as applicable.
- CCIRs and essential elements of friendly information (EEFIs).
- Risk guidance.
- Priorities by warfighting function.
- Deception guidance. (If it is military deception, it is sent separately as need to know information.)
- Essential stability tasks as appropriate.
- Intelligence preparation of the battlefield (IPB) results.
- Initial information collection plan.
- Specific priorities.
- Updated planning and operational timelines.
- Movements.

7-10. The final WARNORD is issued after COA approval, and it facilitates subordinate leaders in developing and completing their plans. This WARNORD normally contains the following information:

- The AO.
- Mission.
- Commander's intent.
- Updated CCIRs and EEFIs.
- Concept of operations.
- Principal tasks assigned to subordinate units.
- Preparation and rehearsal instructions not included in standard operating procedure (SOPs).
- A final timeline for the operations.
- Updated task organization.
- Necessary graphics.

7-11. TLP are typically started upon receipt of the first WARNORD, receipt of a new mission, or as the commander assesses they are necessary in the absence of higher echelon planning. As each subsequent order arrives, leaders modify their assessments, update tentative plans, and continue to supervise and assess preparations. In some situations, the higher headquarters may not issue the full sequence of WARNORDs; security considerations or tempo may make it impractical. Commanders must consider the impact on their subordinates' planning and preparations before deciding to eliminate WARNORDs. Subordinate units always need to have enough information to plan and prepare for an operation. In uncommon cases, leaders may initiate TLP before receiving a WARNORD based on existing plans and orders and on their understanding of the situation.

7-12. Parallel planning depends on distributing information as it is received or developed. Leaders cannot complete their plans until they receive their tasks and understand their unit mission. If each successive WARNORD contains enough information, the higher echelon headquarters' final order will confirm what subordinate leaders have already analyzed and put into their tentative plans. In other cases, the higher headquarters' order may change or modify the subordinate's tasks enough so that additional planning and reconnaissance are required.

PERFORMING TROOP LEADING PROCEDURES

7-13. TLP provide small-unit leaders a framework for planning and preparing for operations. This section discusses each step of TLP. TLP are a sequence of actions that assist leaders to effectively and efficiently use available time to issue orders and execute tactical operations while understanding and mitigating the inherent risk that is involved with any operation.

7-14. 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. Some steps are done concurrently, while others may go on continuously throughout planning and preparation. 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

7-15. Receive the mission may occur in several ways. It may begin when the initial WARNORD or OPORD arrives from higher headquarters or when a leader anticipates a new mission. Frequently, leaders receive a mission in a FRAGORD over the radio. Ideally, they receive a series of WARNORDs, the OPORD, and a briefing from their commander. Normally, after receiving an OPORD leaders give a confirmation brief to their higher echelon commander to ensure they understand the higher commander's intent and concept of operations. The leader obtains clarification on any portions of the higher headquarters plan as required.

7-16. When they receive the mission, leaders perform an initial assessment of the situation and assess the time available for planning and preparation. Preparation includes rehearsals and initial movement. When a higher echelon headquarters assigns tasks and a mission, it provides small-unit leaders an analysis of its operational environment. Higher headquarters may provide this assessment using the operational variables of political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT). From this higher level assessment, commanders can draw information relevant to their own operational environments (OEs) and supplement it with their own knowledge. During mission analysis, they filter relevant information into the categories of the mission variables of mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations, represented by the mnemonic METT-TC (I). 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 factors of METT-TC (I). The order and detail in which leaders analyze the factors of METT-TC (I) is flexible and often depends on the amount of information available and its relative importance. For example, leaders may concentrate on the mission, enemy, and terrain, leaving weather and civil considerations until they receive more detailed information. (See Appendix A for a more detailed description of the operational variables and the mission variables.)

7-17. Often, leaders do not receive their tasks to finalize a unit mission until the WARNORD is disseminated after COA approval or after the OPORD. Effective leaders do not wait until their higher

echelon headquarters completes planning to begin their planning when conditions allow. 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).

7-18. Based on what they know, leaders estimate the time available to plan and prepare for the mission. Leaders begin by identifying the times 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 the reach the start point for movement.

7-19. 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. Figure 7-2 illustrates an initial timeline for an infantry company. The company adjusts the tentative timeline as necessary.

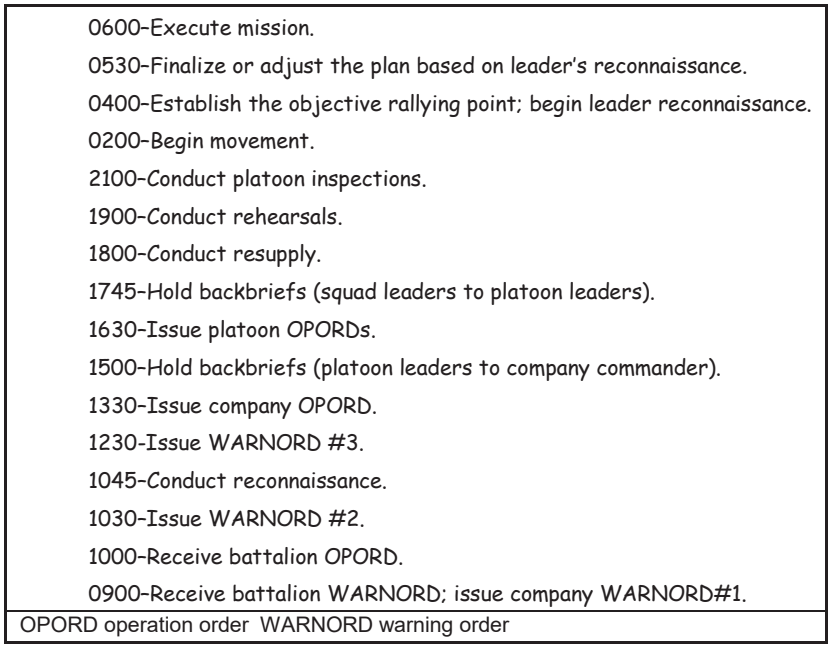

Figure 7-2. Sample reverse planning timeline

STEP 2-ISSUE A WARNING ORDER

7-20. As soon as leaders finish their initial assessment of the situation and available time, they issue a WARNORD. Leaders do not wait for more information. They issue the best WARNORD possible with the information available and update it as needed with additional WARNORDs.

7-21. 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. 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.

7-22. 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 SOPs.
- The timeline for the operation.

(See Appendix D for the WARNORD format.)

STEP 3-MAKE A TENTATIVE PLAN

7-23. Once they have issued the initial WARNORD, leaders develop a tentative plan. This step combines the MDMP steps 2 through 6: mission analysis, COA development, COA analysis, COA comparison, and COA approval. 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. When additional COAs are developed, leaders generally include their principal subordinates—especially during COA development, analysis, and comparison. However, leaders—not their subordinates—select the COA on which to base the tentative plan.

Mission Analysis

7-24. 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 factors. (See Appendix A for a more detailed description of the mission variables.)

Course of Action Development

7-25. 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. Most missions and tasks can be accomplished in more than one way. Depending on time available, leaders at lower echelons may only develop a single COA. However, if the situation allows, they may develop and then analyze additional COAs. Leaders do not wait for a complete order before beginning COA development. Usable COAs are expressed using the format discussed in Chapter 5: feasible, acceptable, suitable, complete, and distinguishable (also known as FASCD). 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 Relative Combat Power

7-26. During COA development, leaders determine whether the unit has enough combat power to defeat the enemy force (or accomplish a task in stability or defense support of civil authorities tasks) against which it is arrayed by comparing the combat power of friendly and enemy forces. Leaders seek to determine where, when, and how friendly combat power (the elements of intelligence, movement and maneuver, fires, sustainment, protection, command and control, leadership, and information) can overwhelm the enemy. It is a particularly difficult process if the unit is fighting a dissimilar unit, for example, when an infantry unit is attacking or defending against an enemy mechanized force. Below the battalion level, relative combat power comparisons are rough and generally rely on professional judgment instead of numerical analysis. When an enemy is not the object of a particular mission or tasks, leaders conduct a troop-to-task analysis to determine if they have enough combat power to accomplish their mission or tasks. For example, a company commander assigned the task “establish civil control in town X” would need to determine if there were enough Soldiers and equipment (including vehicles and barrier

materials) to establish the necessary check points and security stations within the town to control the population in town X.

Generate Options

7-27. Leaders brainstorm different ways to accomplish the mission. They determine the requirements for the operation, including the tactical tasks normally assigned to subordinates. Requirements give leaders a framework from which to develop COAs.

7-28. Next, leaders identify where and when their unit can mass overwhelming combat power to achieve specific results (with respect to enemy, terrain, time, or civil considerations) that accomplish the mission. Offensive and defensive tasks focus on the destructive effects of combat power. Stability tasks, on the other hand, emphasize constructive effects. Leaders identify any decisive points and determine what result they must achieve at those decisive points to accomplish the mission. This helps leaders determine the required tasks and how much combat power to apply at a decisive point.

7-29. After identifying tasks, leaders determine the purpose for each task. Generally, there is one primary task for each mission. The unit assigned this task is the main effort. The other tasks should support the accomplishment of the primary task.

Develop an Initial Concept of Operations

7-30. The concept of operations describes how the leader envisions the operation unfolding from its start to its conclusion or end state. It determines how accomplishing each task leads to executing the next. It identifies the best ways to use available terrain and to employ unit strengths against planned enemy weaknesses. Fire support considerations make up an important part of the concept of operations. Leaders identify and account for essential stability tasks when appropriate. Leaders develop the graphic control measures necessary to convey and enhance the understanding of the concept of operations, prevent fratricide, and clarify the task and purpose of the main effort.

Assign Responsibilities

7-31. Leaders assign their subordinates tasks to complete. Whenever possible, leaders maintain the existing chain of command. They avoid fracturing unit integrity unless the number of simultaneous tasks exceeds the number of available elements. Different command and support arrangements may be a distinguishing feature among COAs.

Prepare a Course of Action Statement and Sketch

7-32. Leaders base the COA statement on the concept of operations for that COA. The COA statement focuses on all significant actions, from the start of the COA to its finish. Whenever possible, leaders prepare a sketch showing each COA. It is useful to provide the amount of time it takes to achieve each movement and task in the COA sketch. This helps subordinate leaders gain an appreciation for how much time will pass as they execute each task of the COA. The COA contains the following information:

- Form of movement or defense to be used.
- Designation of the main effort.
- Tasks and purposes of subordinate units.
- Necessary sustaining operations.
- Desired end state.

Table 7-1 on page 7-8 provides a sample mission statement and COA statement for an infantry company in the defense.

Table 7-1. Sample mission and course of action statements

Mission Statement:	B Co/1-31 IN defends NLT 281700(Z) AUG 2020 from GL 375652 to GL 389650 to GL 394660 to GL 373665 to prevent the envelopment of A Co, the battalion main effort.
COA Statement:	The company defends with two PLTs forward and one PLT in depth from PLT battle positions. The northern PLT (2 squads) destroys enemy forces to prevent enemy bypass of the main effort PLT on Hill 657. The southern PLT (3 squads, 2 Javelins) destroys enemy forces to prevent an organized company attack against the Co main effort on Hill 657. The main effort PLT (3 squads, 2 TOW missiles) retains Hill 657 (vicinity GL378659) to prevent the envelopment of Co A (battalion main effort) from the south. The anti-armor section (1 squad, 4 Javelins) establishes ambush positions at the road junction (vicinity GL 377653) to destroy enemy recon to deny observation of friendly defensive position and to prevent a concentration of combat power against the main effort PLT. The company mortars establish a mortar firing point vicinity GL 377664 to suppress enemy forces to protect the main effort platoon.
Co	company
IN	infantry
NLT	not later than
PLT	platoon
TOW	tube-launched, optically tracked, wire-guided

Analyze Courses of Action (War-game)

7-33. When the situation allows the development and analysis of multiple COAs, leaders think through the operation from start to finish for each COA. At company and lower echelons, leaders generally conduct a war game more intuitively than the structured process discussed in Chapter 4 as part of the MDMP. When time is available, the war game should be conducted with key leaders to aid in analysis. They compare each COA 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. The leader visualizes a set of actions, reactions, and counteractions. The object is to determine what can go wrong and what decision the leader will likely have to make as a result.

Course of Action Comparison and Selection

7-34. 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 the war game. 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

7-35. 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. 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 AO, or an attack position as directed or approved. They may include movement of reconnaissance elements, guides, or quartering parties.

STEP 5-CONDUCT RECONNAISSANCE

7-36. Whenever time and circumstances allow, or as directed by higher headquarters, leaders personally observe the AO for the mission prior to execution. No amount of information from higher headquarters can substitute for firsthand assessment of the mission variables from within the AO. Unfortunately, many factors can keep leaders from performing a personal reconnaissance. The minimum action necessary is a thorough map reconnaissance supplemented by imagery and intelligence products. As directed, subordinates or other elements (such as scouts) may conduct reconnaissance while the leader completes other TLP steps.

7-37. Leaders use results of the war game 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

7-38. 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, coordinating sustainment with signal requirements, and updating the tentative plan because of reconnaissance. 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

7-39. 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.)

7-40. The ideal location for issuing the order is a point in the AO 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 is the ideal location when the situation allows. When impractical to issue the order at the objective, leaders use a sand table, a detailed sketch, maps, and other products to depict the AO and the situation.

STEP 8-SUPERVISE AND REFINE

7-41. 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.

7-42. A crucial component of preparation is the 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.

7-43. Company and smaller-sized units use five types of rehearsals. These types of rehearsals include—

- Confirmation brief.
- Backbrief.
- Combined arms rehearsal.
- Support rehearsal.
- Battle drill or SOP rehearsal.

(See FM 6-0 for a detailed discussion of rehearsals.)

7-44. Immediately following the receipt of order, subordinate leaders brief their superior on the order they received. 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.

7-45. The backbrief differs from the confirmation brief in that subordinates are given time to complete their plan. Backbriefs require the fewest resources, and they are often the best option in time-constrained conditions. Subordinate leaders describe their actions from the start to the finish of the operation. Backbriefs are generally conducted sequentially, with all leaders reviewing their tasks. When time is available, backbriefs can be combined with other types of rehearsals. Doing this lets all element leaders coordinate their plans. If possible, backbriefs are performed overlooking the AO while implementing appropriate OPSEC measures.

7-46. The combined arms rehearsal requires considerable resources, but it provides the most benefit. Depending on circumstances, units may conduct a reduced force or full dress rehearsal. During a reduced force rehearsal, unit leaders and other key individuals typically perform the rehearsal while the remainder of the unit prepares for the operation. Often, smaller scale replicas of terrain or buildings are used. Rehearsals are prioritized beginning with actions on the objectives. Leaders explain their plans and walk through their actions. The full dress rehearsal is preferred. Leaders rehearse on terrain similar to the AO. 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.

7-47. The support rehearsal rehearses all aspects of support for an operation. For small units, this typically involves coordination and procedure drills for aviation, fires, sustainment, engineer support, or casualty evacuation. Support rehearsals and combined arms rehearsals enhance preparation activities for the operation. They may be conducted separately or integrated into a single full dress rehearsal.

7-48. A battle drill is a collective action rapidly executed without applying a deliberate decision-making process. A battle drill or SOP rehearsal ensures that everyone understands a technique or a specific set of procedures. Throughout preparation, units rehearse battle drill and SOP actions. These rehearsals do not need a completed order from higher headquarters to conduct. Leaders place priority on those drills or actions they anticipate occurring during the operation. For example, a transportation platoon may rehearse a battle drill on reacting to an ambush while awaiting the movement order.

7-49. Leaders refine their plan based on continuing analysis of their mission and updated intelligence. Most importantly, leaders know that they create plans to ensure 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 the enemy. These include inspections, coordination, reorganization, fire support and engineer activities, maintenance, resupply, and movement. Supervision is a continuous requirement throughout TLP. 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 8-2. The focus of assessment differs during planning, preparation, and execution. During planning, assessment focuses on gathering information to understand the current situation, the framed problem, and outputs of Army design methodology (ADM) to develop 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.

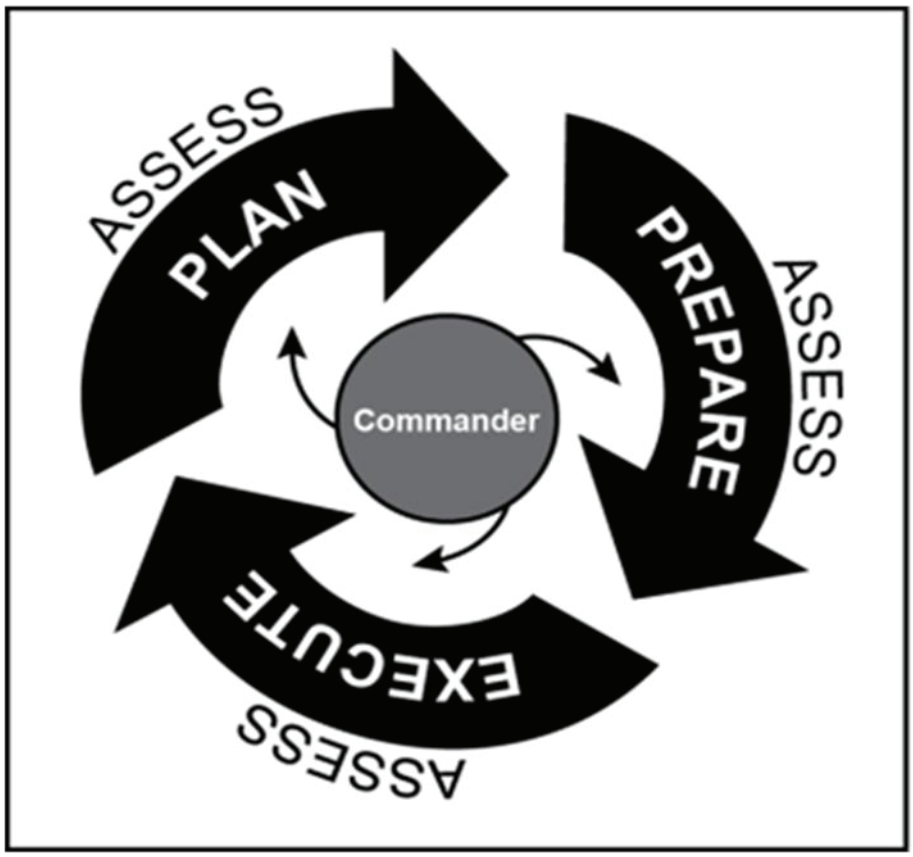

Figure 8-1. The operations process

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 combat power. In other situations, such as counter insurgency 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 the commander and staff. 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 or not to continue to fight. 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 time available) 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 they 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 throughout the course of 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 a significant amount of 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, the staff begins 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, the staff tries 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, the staff aligns 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 should link 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 should include 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 staff or subordinate organizations to monitor, collect, analyze information, and develop recommendations and assessment products as required. Assessment planning is discussed in detail in paragraphs 8-19 through 8-32.

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 the enemy, 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, the staff determines the effects on forces and resource allocation, determines whether forces have achieved their objectives, or realizes 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 the staff 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 products (classified or open-source) produced by civilian and military organizations.
- The identification of potential data sources, including academic institutions and civilian subject matter experts.

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 area of operations (AO) against

desired conditions. 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 help measure changes in conditions, both positive and negative. 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 AO.
- Commitment of reserve.
- 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 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. The staff organizes 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.

STEP 4 - DEVELOP THE COLLECTION PLAN

8-29. Each indicator represents an information requirement. Staffs 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. Staffs 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

8-30. 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

8-31. A formal assessment with meaningful recommendations that is not presented to the appropriate decision maker wastes time and energy. The assessment plan identifies who, what, when, where, and why of that presentation. The commander and staff discuss feedback leading up to and following that presentation as well. 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

8-32. 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 8-8 through 8-9 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 battlefield (IPB).
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 IPB, 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 (war gaming), 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 IPB 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 the operational and mission variables to assist commanders and staffs in applying these tools. This appendix also describes the modification and inclusion of information into the mission variables.

A-1. Commanders and staffs use the operational and mission variables to help build their situational understanding. They analyze and describe an operational environment (OE) in terms of eight interrelated operational variables: political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT). 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 informational considerations, remembered with the mnemonic METT-TC (I). (See ADP 6-0 for more information on situational understanding.)

OPERATIONAL VARIABLES

A-2. The operational variables are fundamental to developing a comprehensive understanding of an OE. When commanders and staff analyze their specific OE, they also discern what parts or aspects of each domain and the relevant information aspects and considerations to their operation. The *information environment* is the aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information (JP 3-13). These information aspects and considerations can make up a significant piece of a commander's OE. Table A-1 on page A-2 provides a brief description of each variable, along with examples (in parentheses) of questions a commander might need to have answered about each 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 a given 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, 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 area of operations. (What types of terrain or weather conditions in this area of operations 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-3. Each of the eight operational variables also has associated subvariables. The specific questions for each variable will differ, depending on the general nature of an OE.

MISSION VARIABLES

A-4. 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 area of operations (AO), 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-5. METT-TC (I) represents the mission variables leaders use to analyze and understand a situation in relationship to the unit's mission. The first six variables are not new. 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. Because of the continued growth and information capabilities impacting all operations, during all phases, a necessary emphasis for leaders at all levels, informational considerations, has been added to the familiar METT-TC mnemonic making it METT-TC (I). Informational considerations is expressed as a parenthetical variable (I) in that it is not an independent variable, but an important consideration combined with each mission variable that leaders should pay particular attention to in understanding a situation.

A-6. 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 all of 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, and humidity. 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-7. Table A-3 on page A-4 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 cyber, 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, cyber, and space)?
Troops and support available	What information capabilities do we have available, either organic, assigned, or attached? Do we have PSYOPS, civil affairs, cyber support elements, or information operations field support teams? What support can headquarters provide?
Time available	Do we have time for shaping operations, 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?
C2	command and control
DISO	deception in support of operations security
EMS	electromagnetic spectrum
EW	electronic warfare
MILDEC	military deception
MISO	military information support operations
OPSEC	operations security
PSYOPS	psychological operations (forces)
TAC-D	tactical deception

MISSION

A-8. 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-9. 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-10. 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-11. 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-12. 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-13. 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-14. 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 battlefield (IPB) 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-15. 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-16. 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 the enemy. To obtain the necessary information, they identify these intelligence gaps to their higher headquarters or take action (such as sending out reconnaissance patrols).

TERRAIN AND WEATHER

A-17. 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-18. *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 3-90-1). 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-19. An *avenue of approach* is an air or ground route of an attacking force of a given size leading to its objective or to key terrain in its path (JP 2-01.3). Avenues of approach include overland, air, and underground routes. Underground avenues are particularly important in urban operations.

A-20. *Key terrain* is any locality, or area, the seizure or retention of which affords a marked advantage to either combatant (JP 2-01.3). *Decisive terrain* is key terrain whose seizure and retention is mandatory for

successful mission accomplishment (ADP 3-90).Terrain adjacent to an AO may be key if its control is necessary to accomplish the mission.

A-21. An *obstacle* is any natural or man-made obstruction designed or employed to disrupt, fix, turn, or block the movement of an opposing force, and to impose additional losses in personnel, time, and equipment on the opposing force (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-22. *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-23. The military aspects of weather are visibility, wind, precipitation, cloud cover, temperature, humidity, and atmospheric pressure (as required). 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-24. 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 capability. 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 it is 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-25. Leaders not only appreciate how much time is available, they 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 the enemy 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-26. Military operations are rarely conducted in uninhabited areas. Often units are surrounded by noncombatants. These noncombatants may include residents within the AO, local officials, and governmental and nongovernmental organizations. Leaders strive to understand the behaviors and attitudes of a population, 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.

Areas

A-27. Key civilian areas are localities or aspects of the terrain within an AO that are not normally militarily significant. This characteristic approaches terrain analysis (OAKOC) 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-28. Existing structures can play many significant roles. Some structures, such as bridges, communications towers, power plants, and dams are traditional high-payoff targets. 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-29. 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-30. 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-31. Organizations are nonmilitary groups or institutions in an AO. 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, fraternal organizations, patriotic or service organizations, labor unions, criminal organizations, and community watch groups. Other organizations may come from outside an AO. Examples of these include multinational corporations, United Nations agencies, U.S. governmental agencies, and nongovernmental organizations, such as the International Red Cross.

A-32. Operations also often require commanders to coordinate with international organizations and nongovernmental organizations. Commanders remain familiar with organizations operating in their AOs. 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-33. 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 AO 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-34. 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 AOs. 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-35. People is a general term used to describe nonmilitary personnel encountered by military forces. The term includes all civilians within an AO and those outside the AO 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-36. There can be many different kinds of people living and operating in and around an AO. As with organizations, people may be indigenous or introduced from outside an AO. 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 AO 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.
  - Gender norms and roles.

Events

A-37. 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.

A-38. 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 AOs. 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 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.

CHAIN OF COMMAND

B-1. Command is central to all military action, and unity of command is central to unity of effort. Inherent in command is the authority that a military commander lawfully exercises over subordinates, including 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.

B-2. 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 JP 1. One branch runs from the President, through the Secretary of Defense, to the combatant commanders for missions and forces assigned or attached to combatant commands. Within their commands, combatant commanders establish joint command relationships among forces as described in paragraphs B-4 through B-12.

B-3. For purposes other than the operational direction of the combatant commanders, the chain of command runs from the President to the Secretary of Defense to the secretaries of the military departments and, as prescribed by the secretaries, to the commanders of military service forces. The military departments, organized separately, operate under the authority, direction, and control of the secretary of that military department. The secretaries of the military departments exercise administrative control (ADCON) over Service forces through their respective Service chiefs and Service component commanders as described in paragraphs B-13 through B-14.

JOINT COMMAND RELATIONSHIPS

B-4. Echelons above brigade headquarters are often part of joint commands, or they directly support them. As such, it is important that Army leaders understand joint command relationships and how these relationships impact operations. The four types of joint command relationships are—

- Combatant command (command authority) (COCOM).
- Operational control (OPCON).
- Tactical control (TACON).
- Support.

B-5. The specific command relationship (COCOM, OPCON, TACON, or support) defines the authority a commander has over assigned or attached forces and are summarized in table B-1 on page B-2. (See JP 1 for the full discussion of the authorities for each joint command relationship.)

COMBATANT COMMAND (COMMAND AUTHORITY)

B-6. *Combatant command (command authority)* is the 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 mission to the command (JP 1). COCOM is the command authority over assigned forces vested only in commanders of combatant commands or as directed by the President or the Secretary of Defense, and it cannot be delegated or transferred. The combatant commander exercises COCOM of assigned forces and may delegate OPCON or TACON or establish support relationships of assigned and attached forces.

Table B-1. Joint command relationships synopsis

Combatant command (command authority)	
Authorities unique to combatant commander include—	• Planning, programming, budgeting, and execution process input • Assignment of subordinate commanders • Relationships with Department of Defense agencies • Directive authority for logistics
Authorities under operational control (when delegated) include—	• Authoritative direction for all military operations and joint training • Organize and employ commands and forces • Assign command functions to subordinates • Establish plans and requirements for intelligence, surveillance, and reconnaissance activities • Suspend subordinate commanders from duty
Authorities under tactical control (when delegated) include—	• Local direction and control of movements or maneuvers to accomplish mission
Authorities under support relationship (when assigned) include—	• Aid, assist, protect or sustain another organization

B-7. COCOM includes *directive authority for logistics*—combatant commander authority to issue directives to subordinate commanders to ensure the effective execution of approved operation plans, optimize the use or reallocation of available resources, and prevent or eliminate redundant facilities and/or overlapping functions among the Service component commands (JP 1). Combatant commanders exercise directive authority for logistics and may delegate directive authority for a common support capability to a subordinate joint force commander (JFC) as required. While logistics support is primarily a Service responsibility, Army forces provide logistic support to other Services as directed by combatant commanders through directive authority for logistics and executive agent responsibilities designated by the Secretary of Defense.

OPERATIONAL CONTROL

B-8. *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). OPCON is a command authority inherent in COCOM that may be delegated to commanders at any echelon at or below the level of combatant command.

B-9. OPCON includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. This authority should be exercised through the commanders of subordinate organizations, normally through subordinate JFCs and Service and functional component commanders. OPCON provides full authority to organize commands and forces and to employ those forces as the commander exercising OPCON considers necessary to accomplish assigned missions. Commanders of subordinate commands will be given OPCON of assigned forces and OPCON or TACON of attached forces by the superior commander.

TACTICAL CONTROL

B-10. *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 missions or tasks assigned (JP 1). TACON is a command authority inherent in OPCON and may be delegated to and exercised by commanders at any echelon at or below the level of combatant command. TACON provides sufficient authority for controlling and directing the application of force or tactical use of support assets within the assigned mission or task.

Note. TACON does not provide organizational authority or authoritative direction for administrative and logistic support; the commander of the parent unit continues to exercise these authorities unless otherwise specified in the establishing directive.

SUPPORT

B-11. *Support* is the action of a force that aids, protects, complements, or sustains another force in accordance with a directive requiring such action (JP 1). Support is a command authority in joint doctrine. A supported and supporting relationship is established by a superior commander between subordinate commanders when one organization should aid, protect, complement, or sustain another force. Designating support relationships conveys priorities to commanders and staffs planning or executing joint operations.

Note. 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.

B-12. The Secretary of Defense assigns support relationships between the combatant commanders for the planning and execution of joint operations. Joint force commanders also establish support relationships among functional and Service component commanders, such as for the coordination of operations in depth involving the joint force land component commander and the joint force air component commander. Within a joint force, the JFC may simultaneously designate more than one supported commander, and components may simultaneously receive and provide support for different missions, functions, or operations. Joint doctrine divides support into the categories listed in table B-2.

Table B-2. 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 against an enemy, because of their assigned tasks, their position relative to each other and to the enemy, and 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	That 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 (JP 3-31).

Note. 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 as described in paragraphs B-25 through B-30.

JOINT ASSIGNMENT AND ATTACHMENT

B-13. All forces under the jurisdiction of the secretaries of the military departments (except those forces necessary to carry out the functions of the military departments as noted in Title 10, United States Code, Section 162) are assigned to combatant commanders, or Commander, United States Element, North American Aerospace Defense Command, or designated as Service retained in the *Global Force Management Implementation Guidance* (GFMIG). A force assigned or attached to a combatant commander, or Service retained by a Service Secretary, may be transferred from that command to another combatant command only when directed by Secretary of Defense and under procedures prescribed by Secretary of Defense and approved by the President. The Secretary of Defense specifies the command relationship the gaining commander will exercise (and the losing commander will relinquish). Establishing authorities for subordinate unified commands and joint task forces may direct the assignment or attachment of their forces to those subordinate commands and delegate the command relationship as appropriate.

Note. Assigned and attached are not command relationships in joint doctrine—they are terms used to describe the relative permanency of the transfer of forces among commands. When forces are assigned the authority is COCOM (in which OPCON and TACON are inherent) as executed by the combatant commander. When attached, the specific command relationship (OPCON or TACON) is specified.

B-14. Forces, not command relationships, are transferred between commands. When forces are transferred, the command relationship the gaining commander will exercise (and the losing commander will relinquish) over those forces must be specified. When transfer of forces to a joint force will be permanent (or for an unknown but long period of time) the forces should be reassigned. Combatant commanders will exercise COCOM, and subordinate JFCs will exercise OPCON over reassigned forces. When transfer of forces to a joint force will be temporary, the forces will be attached to the gaining command and JFC normally through the Service component commander, who will exercise OPCON over the attached forces. Establishing authorities for subordinate unified commands and joint task forces direct the assignment or attachment of their forces to those subordinate commands as appropriate. When the JFC establishes a command relationship of an Army force, the Army Service component command clearly specifies ADCON responsibilities for all affected Army commanders.

OTHER AUTHORITIES

B-15. Some authorities exist outside joint command relationships. These authorities include—

- ADCON.
- Coordinating authority.
- Direct liaison authorized.

These authorities are discussed in paragraphs B-16 through B-19.

ADMINISTRATIVE CONTROL

B-16. *Administrative control* is direction or exercise of authority over subordinate or other organizations in respect to administration and support (JP 1). This administration and support includes organization of Service forces, control of resources and equipment, personnel management, unit logistics, individual and unit training, readiness, mobilization, demobilization, discipline, and other matters not included in the operational missions of the subordinate or other organizations.

Note. ADCON is a Service authority, not a joint authority. ADCON is exercised under the authority of and is delegated by the Secretary of the Army. ADCON is synonymous with the Army's Title 10 authorities and responsibilities. (See DODD 5100.01 for more information on ADCON.)

B-17. ADCON does not necessarily follow the operational chain of command at echelons above brigade. Unless modified by the Secretary of the Army, administrative responsibilities normally flow from Department of the Army through the Army Service component command to those Army forces assigned or attached to that combatant command. As the Army Service component command, the theater army delegates ADCON as required to Army forces assigned or attached by the combatant commander to a joint (or joint and multinational) task force. The ARFOR commander and associated headquarters exercises ADCON of Army forces within that joint task force specified by the theater army commander.

COORDINATING AUTHORITY

B-18. The *coordinating authority* is the 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). Commanders or individuals may exercise coordinating authority at any echelon at or below the level of combatant command. The common task to be coordinated will be specified in the establishing directive without disturbing the normal organizational relationships in other matters.

Note. 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.

DIRECT LIAISON AUTHORIZED

B-19. *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). 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.

Note. Direct liaison authorized is a coordination relationship, not an authority through which command may be exercised.

ARMY COMMAND AND SUPPORT RELATIONSHIPS

B-20. Army command and support relationships are similar but not identical to joint command 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 provide ADCON and support to subordinate Army forces. These differences allow for flexible allocation of Army capabilities within various Army echelons.

ARMY COMMAND RELATIONSHIPS

B-21. Army command relationships define superior and subordinate relationships between unit commanders. By specifying a chain of command, command relationships unify effort and enable commanders to use subordinate forces with maximum flexibility. Army command relationships identify the degree of control of the gaining Army commander. The type of command relationship often relates to the expected longevity of the relationship between the headquarters involved, and it quickly identifies the degree of administration and support that the gaining and losing Army commanders provide. Army command relationships include—

- Organic.
- Assigned.
- Attached.
- OPCON (see paragraphs B-8 through B-9 for a discussion of OPCON).
- TACON (see paragraph B-10 for a discussion of TACON).

Organic, assigned, and attached relationships are discussed in paragraphs B-22 through B-24. (See table B-3 on for a list of Army command relationships.)

Organic

B-22. *Organic* forces are those assigned to and forming an essential part of a military organization as listed in its table of organization for the Army, Air Force, and Marine Corps, and are assigned to the operating forces for the Navy (JP 1). For example, combined arms battalions, field artillery battalions, cavalry squadrons, brigade engineer battalions, brigade support battalions, and headquarters and headquarters companies are all organic units of armored brigade combat teams. The Army establishes organic units through organizational documents such as tables of organization.

Note. Army commanders exercise OPCON and ADCON of organic forces.

Assigned

B-23. *Assign* is to place units or personnel in an organization where such placement is relatively permanent, and/or where such organization controls and administers the units or personnel for the primary function, or greater portion of the functions, of the unit or personnel (JP 3-0). For example, brigade combat teams, division artillery, and a sustainment brigade are assigned to a division. 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 assigned headquarters or their organic headquarters.

Note. Army commanders exercise OPCON and ADCON of assigned forces.

Attached

B-24. *Attach* is the placement of units or personnel in an organization where such placement is relatively temporary (JP 3-0). For Army forces a unit that is attached is temporarily moved to another unit and includes OPCON authorities and all ADCON responsibilities unless otherwise directed in an order.

Table B-3. Army command relationships

If relationship is—	*Then inherent responsibilities—*							
	Have command relationship with—	***May be task-organized by—[1]***	***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 commanders can impose on gaining unit further command or support relationship of—***
Organic	All organic forces organized with the HQ	Organic HQ	Army HQ specified in organizing document	Organic HQ	N/A	N/A	Organic HQ	Attached, OPCON, TACON, GS, GSR, R, DS
Assigned	Gaining unit	Gaining HQ	Gaining Army HQ	OPCON chain of command	As required by OPCON	As required by OPCON	ASCC or Service assigned HQ	As required by OPCON HQ
Attached	Gaining unit	Gaining unit	Gaining Army HQ	Gaining unit	As required by gaining unit	Unit to which attached	Gaining unit	Attached, OPCON, TACON, GS, GSR, R, DS
OPCON	Gaining unit	Parent unit and gaining unit. Gaining unit may pass OPCON to lower echelon HQ	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	OPCON, TACON, GS, GSR, R, DS
TACON	Gaining unit	Parent unit	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	OPCON, TACON, GS, GSR, R, DS

Note.[1] In NATO, the gaining unit may not task-organize a multinational force. (See TACON.)

ADCON	administrative control	HQ	headquarters
AO	area of operations	N/A	not applicable
ASCC	Army Service component command	NATO	North Atlantic Treaty Organization
DS	direct support	OPCON	operational control
GS	general support	R	reinforcing
GSR	general support-reinforcing	TACON	tactical support

ARMY SUPPORT RELATIONSHIPS

B-25. Army support relationships are not a command authority, and they are more specific than the joint support relationships. Army commanders establish support relationships when subordination of one unit to another is inappropriate. They 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 to set support priorities to allocate resources to supported units exists. Establishing support relationships is one aspect of command and control.

B-26. 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 headquarters—as in general support. Support relationships do not alter ADCON. Commanders specify and change support relationships through task-organizing. The Army support relationships include—

- Direct support.
- General support.
- General support-reinforcing.
- Reinforcing.

(See table B-4 for a list of the inherent responsibilities for each support relationship.)

Table B-4. Army support relationships

If relationship is—	*Then inherent responsibilities—*							
	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 and commanders can impose on gaining unit further command or support relationship by—
Direct support[1]	Parent unit	Parent unit	Parent unit	Supported unit	Supported unit	Parent unit, supported unit	Supported unit	See note.
Reinforcing	Parent unit	Parent unit	Parent unit	Reinforced unit	Reinforced unit	Parent unit, reinforced unit	Reinforced unit, then parent unit	Not applicable
General support–reinforcing	Parent unit	Parent unit	Parent unit	Parent unit	Reinforced unit and as required by parent unit	Reinforced unit and as required by parent unit	Parent unit, then reinforced unit	Not applicable
General support	Parent unit	Parent unit	Parent unit	Parent unit	As required by parent unit	As required by parent unit	Parent unit	Not applicable

Note. [1] 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.

B-27. 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. 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 fires cell of the supported maneuver unit plans and coordinates fires to support the maneuver commander's intent. The commander of a unit in direct support recommends position areas and coordinates for movement clearances where that unit can best support the maneuver commander's concept of operations.

B-28. General support is that support which is given to the supported force as a whole and not to any particular subdivision of it. A unit assigned a general support relationship retains its command relationship with its parent unit. Units assigned a general support relationship are positioned and have priorities established by their parent unit.

B-29. Reinforcing is a support relationship requiring a force to support another supporting unit. 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-30. 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. A unit assigned a general support-reinforcing relationship retains its command relationship with its parent unit. A unit assigned a general support-reinforcing support relationship is positioned and has priorities established by its parent unit and secondly by the reinforced unit. For example, an artillery unit that has a general support-reinforcing mission supports the force as a whole and provides reinforcing fires for other artillery units.

Note. Commanders and planners must understand the established command relationship or determine the appropriate support relationship necessary to support an operation. A unit that has an established command relationship already has the appropriate support relationship defined, and therefore planners would task a subordinate unit to provide support requirements instead of recreating a redundant support relationship that already exists.

MULTINATIONAL COMMAND AND SUPPORT CONSIDERATIONS

B-31. 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-32. *Multinational operations* is a collective term to describe military actions conducted by forces of two or more nations, usually undertaken within the structure of the coalition or alliance (JP 3-16). 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 and the Combined Forces Command, Korea.

B-33. A coalition is an ad arrangement between two or more nations for a common action, and a coalition is formed for a limited purpose and time. 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.

MULTINATIONAL COMMAND STRUCTURE

B-34. All multinational operations have two chains of command regardless of structure or authority. The first is a national chain of command extending back to national capitals. The second is the multinational chain of command constructed by the United Nations, alliance, or coalition. As unity of command is all but impossible given parallel national chains of command, multinational commanders strive for unity of effort. In doing so, multinational commanders develop a high level of mutual trust and comfort with other national contingents.

B-35. Alliances, United Nations forces, 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, United Nations forces, and coalitions; however, the basic structures for multinational operations fall into one of three types:

- Integrated.
- Lead nation.
- Parallel.
- Combination

These structures are discussed in paragraphs B-37 through B-40.

B-36. Regardless of how the 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 national component provides a means to administer and support the national forces, coordinate communication to the parent nation, tender national military views and recommendations directly to the multinational force command, facilitate the assignment and reassignment of national forces to subordinate operational multinational organizations, and maintain personnel accountability. In an administrative role, these national components are similar to a Service component command at the unified combatant command level in a U.S. joint organization. The logistic support element of this component is referred to as the national support element.

Integrated Command Structure

B-37. Integrated commands have representative members from the member nations in the command headquarters. Multinational commands organized under an integrated command help ensure the capabilities of member nations are represented and employed properly. A good example of this command structure is found in the North American Aerospace Defense Command where the commander is American, the deputy commander is Canadian, and each of the regional commands has a commander and deputy commander from a different nation. In addition, the North American Aerospace Defense Command staff is binational.

Lead Nation Command Structure

B-38. 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 Structures

B-39. 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 the use of coordination centers. Nonetheless, because of the absence of a single multinational force command, the use of a parallel command structure should be avoided if possible.

Combination Command Structure

B-40. 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.

COMMAND AUTHORITY

B-41. The Army and joint force have doctrinal definitions for command and support relationships. However, these definitions and authorities apply to U.S. forces only. In multinational operations, each nation determines the authority it 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 will be specified in the implementing agreements and 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. For example, both the United States and the North Atlantic Treaty Organization use the term operational control and the acronym OPCON, but the authorities of U.S. OPCON are more encompassing than the authorities of the North Atlantic Treaty Organization's OPCON. (See AJP 3-2.2 for North Atlantic Treaty Organization command and support relationships.)

B-42. 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 does not have the authority to resolve disputes. (See FM 3-16 for further details on multinational operations.)

NORTH ATLANTIC TREATY ORGANIZATION COMMAND RELATIONSHIPS AND AUTHORITIES

B-43. The North Atlantic Treaty Organization (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.

B-44. Having a common understanding of the degrees of authority and command relationships is necessary for effective cooperation under NATO military command structures. For NATO there are five command relationships:

- Full command (FULLCOM).
- Operational command (OPCOM).
- OPCON.
- Tactical command (TACOM).
- TACON.

B-45. The specific command relationships (FULLCOM, OPCOM, OPCON, TACOM, and TACON) define the authority a NATO commander has over forces. NATO command relationships are discussed in paragraphs B-46 thru B-50. (See table B-5 on page B-12 for a listing of NATO command relationships and authorities. See AJP-3 for additional discussion of the authorities for each command relationship).

Full Command

B-46. 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.

Operational Command

B-47. 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.

Operational Control

B-48. OPCON in NATO is the authority delegated to a commander to direct assigned forces so that 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 tactical control of those units. It does not include authority to assign separate employment of components of the units concerned. Neither does it, of itself, include administrative or logistic 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.

Tactical Command

B-49. 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. This means within the parameters of the current

mission given by the higher authority. TACOM is used where the superior commander recognizes the need for additional resources for a task but requires the resources intact for a later role. Under TACOM the assigned force is allocated for specific tasks, and it is normally allocated for a limited period of time. 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. TACOM is usually applied to specific situations and to elements that have unique capabilities.

Tactical Control

B-50. 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, such as force protection and terrain allocation.

Table B-5. NATO command relationships

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	full command operational command	OPCON TACOM	operational control tactical command	TACON	tactical control

Other Authorities

B-51. Some authorities exist outside NATO command relationships. These authorities include—

- Administrative control.
- Coordinating authority.

These authorities are discussed in paragraphs B-52 through B-53.

Administrative Control

B-52. ADCON in NATO is the direction or exercise of authority over subordinate or other organizations in respect to administrative matters. These matters include personnel management, supply, services and other matters not included in the operational mission of the subordinate or other organizations.

Coordinating Authority

B-53. Coordinating authority in NATO is the authority granted to a commander or other individual with assigned responsibility to coordinate specific functions or activities of two or more forces, commands, services or organizations. The commander or individual has the authority to require consultation between the organizations involved or their representatives, but that individual does not have the authority to compel agreement. In case of disagreement between the organizations involved, the commander or individual should attempt to obtain essential agreement by discussion. In the event the individual and the organizations involved are unable to obtain essential agreement, they shall refer the matter to the appropriate authority.

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Appendix C

Running Estimates

This appendix defines running estimate and describes 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-4 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 area of operations (AO) at a given time. (See figure C-1 for a generic format for a running estimate that parallels the planning process.)

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 area of operations.

(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 war-gamed.

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.

Figure C-1. Generic base running estimate format

C-7. Estimates are as thorough as time and circumstances permit. The commander and staff 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. It serves as the staff element's initial assessment of the current readiness of equipment and personnel and of 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 AO. Because the running estimate is of 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.) 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 (war gaming) in which the staff identifies the strengths and weaknesses of each COA. The staff relies on its updated running estimate to provide input to the war game. 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-12. 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 decisive operation or 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-13. 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-14. 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-15. 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 6-12 through 6-35 for more information on rapid decision making.) During execution, running estimates serve as a key assessment tool.

RUNNING ESTIMATES IN ASSESSMENT

C-16. 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-17. 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.
- 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 operation plan (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:

- 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 affecting 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.
- Alert order.
- Execute order.
- Prepare-to-deploy order.
- Deployment order.
- 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 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 at the decisive time and place 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). They 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. They do not include material covered in SOPs, but 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 officer (XO), as long as they are consistent throughout the order. (See figure D-1 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 these acronyms and abbreviations 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, 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 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 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. 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 NORN 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.**

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 to avoid confusion. For example, a complete date-time group for 6 August 2025 at 1145Z appears as "061145Z August 2025".

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 261300Z May 2025."

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 in the continental United States is SIERRA. When daylight savings time is in effect, the time zone indicator for Central Standard Time 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 D-15 through D-19.

D-46. Commanders and staffs are not required to develop all attachments listed in table D-2 (on pages D-15 through D-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 D-15 through D-19) 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.

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 D-9 through D-14 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 area of operations 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:*

a. (U) Area of Interest. *Describe the area of interest which includes the area of influence in all five domains and information aspects. Refer to Annex B (Intelligence) as required*.

b. (U) Area of Operations. *Describe the area of operations. 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 adversaries and known or potential threats within the area of operations. 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 area of operations. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Civil Considerations. *Describe the critical aspects of the civil situation that impact operations. Refer to Appendix 1 (Intelligence Estimate) 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 combination of offense, defense, and stability operations (or defense support of civil authorities tasks) and the sequence of actions the force will use to achieve the operation's end state. Use components of the operational framework (deep, close, rear, and support areas; decisive, shaping, and sustaining operations; and main and supporting efforts) 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." If the operation is phased, 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)]

c. (U) Scheme of Maneuver. *Describe the employment of maneuver units in accordance with the concept of operations. Identify the type of offensive or defensive operations (for example, movement to contact, area defense) and primary stability tasks when conducting stability operations. Provide the primary tasks of maneuver units, including security operations, and the purpose of each. Identify and include priorities for the reserve and reaction forces. If the operation is phased, identify the main effort by phase. Refer to Annex C (Operations) as required*.

d. (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*.

e. (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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f. (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, air and missile defense, and cyberspace electromagnetic activities, as required. Refer to Annex C (Operations) and Annex D (Fires) as required*.

g. (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 related tasks (for example, chemical, biological, radiological, and 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*.

h. (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*.

i. (U) Scheme of Information. *Describe how the commander intends to use information and information operations to support the concept of operations. State the priorities for, allocation of, and restrictions on information capabilities. Use subparagraphs to describe key information operations, cyberspace electromagnetic activities, operations security, electromagnetic warfare, and military information support operations tasks as required. Refer to Annex C (Operations) as required*.

j. (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)]

k. (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 rules of engagement. 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."

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(7) (U) Risk Reduction Control Measures. *State measures specific to this operation not included in unit SOPs. They may include mission-oriented protective posture, operational exposure guidance, troop-safety criteria, 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, area of operations (AO)-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) Other Coordinating Instructions. *List in subparagraphs any additional coordinating instructions and tasks that apply to two or more units, such as the operational timeline and any other critical timing or events.*

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*.

[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)]

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 SOPs*.

b. (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 (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]

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.

ANNEXES: *List annexes 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–Spare

Annex J–Public Affairs

[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)]

Annex K–Civil Affairs Operations

Annex L–Information Collection

Annex M–Assessment

Annex N–Spare

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 D-15 through D-19) 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 (Engineer Officer)
Tab B–Weather (Staff Weather Officer)
Tab C–Civil Considerations
Tab D–Intelligence Preparation of the Battlefield 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 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 (G-3 or S-3)
Appendix 9–Battlefield Obscuration (G-3 or S-3)
Appendix 10–Airspace Control (G-3 or S-3 or Airspace Control Officer)
Tab A–Air Traffic Services
Appendix 11–Rules of Engagement (Staff Judge Advocate)
Tab A–No Strike List
Tab B–Restricted Target List (G-3 or S-3 with Staff Judge Advocate)
Appendix 12–Cyberspace Electromagnetic Activities (Cyber Electromagnetic Warfare Officer)
Tab A–Offensive Cyberspace Operations

Table D-2. List of attachments and responsible staff officers (continued)

Tab B–Defensive Cyberspace Operations–Response Actions
Tab C–Electromagnetic Attack
Tab D–Electromagnetic Protection
Tab E–Electromagnetic Support
Appendix 13- Military Information Support Operations (Military Information Support Officer)
Appendix 14–Information Operations (Information Operations Officer)
Tab A-Military Deception (Military Deception Officer)
Tab B-Key Leader Engagement
Appendix 15– Personnel Recovery (Personnel Recovery Officer)
ANNEX D–FIRES (Chief of Fires 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 (G-2 or S-2)
Appendix 4–Field Artillery Support
Appendix 5–Air Support (Air Liaison Officer or S-3)
Appendix 6–Naval Surface Fire Support
Appendix 7–Air and Missile Defense (Air and Missile Defense Officer)
Tab A–Enemy Air Avenues of Approach
Tab B–Enemy Air Order of Battle
Tab C–Enemy Theater Ballistic Missile Overlay
Tab D–Air and Missile Defense Protection Overlay
Tab E–Critical Asset List/Defended Asset List
ANNEX E–PROTECTION (Chief of Protection or Protection Officer as designated by the commander)
Appendix 1–Area Security
Appendix 2–Risk Management (G3 or S-3 with Safety Officer)
Appendix 3–Operations Security
Appendix 4–Populace and Resource Control
Appendix 5–Physical Security
Appendix 6–Antiterrorism
Appendix 7–Police Operations (Provost Marshal)
Appendix 8–Survivability
Appendix 9–Force Health Protection (Surgeon)
Appendix 10–Chemical, Biological, Radiological, and Nuclear Operations (CBRN Officer)
Appendix 11–Explosive Ordnance Disposal (Explosive Ordnance Disposal [EOD] Officer)
Appendix 12–Coordinate Air and Missile Defense (Air Defense Officer)
Appendix 13–Detention Operations (Provost Marshal)
Appendix 14–Electromagnetic Protection
Appendix 15–Cyberspace Security and Defense

Table D-2. List of attachments and responsible staff officers (continued)

ANNEX F–SUSTAINMENT (Brigade Logistics Staff Officer [S-4])
Appendix 1–Logistics (assistant chief of staff, logistics [G-4] or S-4)
Tab A–Sustainment Overlay
Tab B–Maintenance
Tab C–Transportation
Exhibit 1–Traffic Circulation and Control (Provost Marshal)
Exhibit 2–Traffic Circulation Overlay
Exhibit 3–Road Movement Table
Exhibit 4–Highway Regulation (Provost Marshal)
Tab D–Supply
Tab E–Field Services
Tab F–Distribution
Tab G–Contract Support Integration
Tab H–Mortuary Affairs
Appendix 2–Personnel Services Support (assistant chief of staff, personnel [G-1] or battalion or brigade personnel staff officer [S-1])
Tab A–Human Resources Support (G-1 or S-1)
Tab B–Financial Management (assistant chief of staff, financial management [G-8])
Tab C–Legal Support (Staff Judge Advocate)
Tab D–Religious Support (Chaplain)
Tab E–Band Operations (G-1 or S-1)
Appendix 3–Health Service Support (Surgeon)
Appendix 4—Financial Management (G-8)
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 (G-6 or S-6)
Appendix 1–Concept of Signal Support Overlay
Tab A–Retransmission Team Mission Checklist
Appendix 2–Department of Defense Information Network Operations
Tab A–Cybersecurity Incident Battle Drill
Tab B–Cybersecurity Incident Report
Tab C–Network Node Allocation and Organization
Tab D–Network Outage Procedures & 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–Spare

Table D-2. List of attachments and responsible staff officers (continued)

ANNEX J–PUBLIC AFFAIRS
Appendix 1–Public Affairs Running Estimate
Appendix 2–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
Tab A–Information Collection Matrix
Tab B–Information Collection Synchronization Matrix
Tab C–Information Collection Overlay
Appendix 2–Intelligence, Surveillance, and Reconnaissance Concept of Operations
Appendix 3–Collection Emphasis Message
Appendix 4–Named Area of Interest Matrix
Appendix 5–Named Area of Interest Overlay
ANNEX M–ASSESSMENT (G-5 or battalion or brigade plans staff officer [S-3] or G-3 or S-3)
ANNEX N–Space Operations
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 D-20 through D-21 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)

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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, Intel Estimate, or OPORD does not cover or that needs expansion.*

a. (U) Area of Interest. *Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe aspects of terrain that impact functional area operations. Refer to Annex B (Intelligence) as required*.

(2) (U) Weather. *Describe aspects of weather that impact functional area operations. 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 area of operations 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 functional area operations. 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 D-22 provides the format and instructions for developing a WARNORD. The example in figure D-5 on page D-23 provides the format and instructions for developing a FRAGORD.

[CLASSIFICATION]
(Change from verbal orders, if any) (Optional)

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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) Area of Operations.

c. (U) Enemy Forces.

d. (U) Friendly Forces.

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations.

f. (U) Civil Considerations.

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)

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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 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."*
c. (U) Scheme of Maneuver. *Include any changes or state "No change."*
d. (U) Scheme of Information Collection. *Include any changes or state "No change".*
e. (U) Scheme of Intelligence. *Include any changes or state "No change."*
f. (U) Scheme of Fires. *Include any changes or state "No change."*
g. (U) Scheme of Protection. *Include any changes or state "No change."*
h. (U) Scheme of Information. *Include any changes or state "No change."*
i. (U) Tasks to Subordinate Units. *Include any changes or state "No change."*
j. (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.

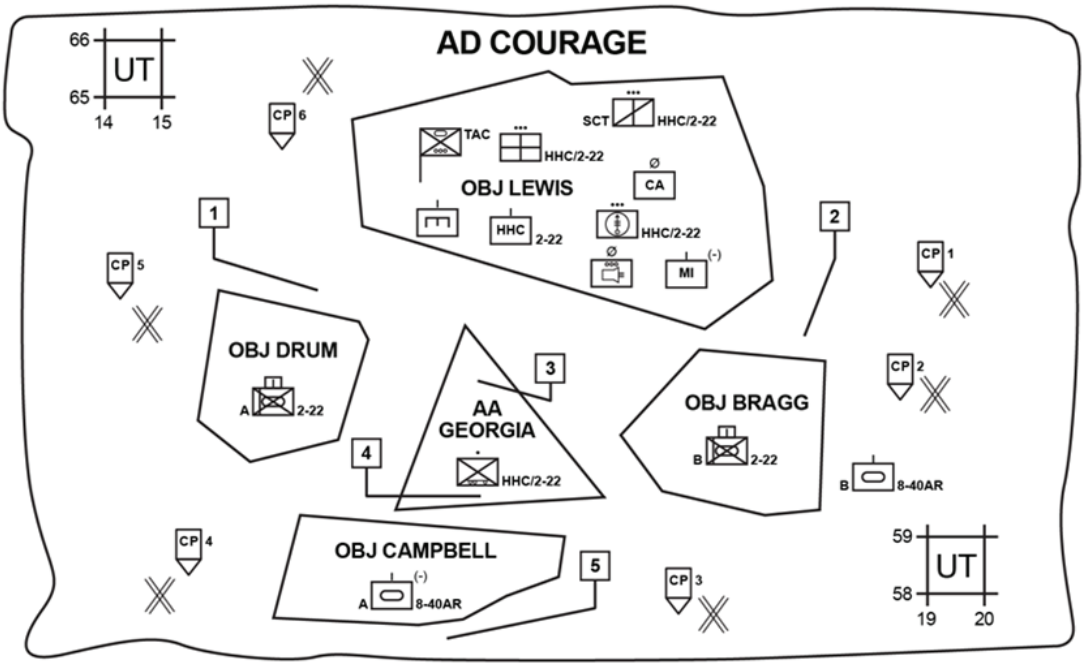
DISTRIBUTION:

[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 staff 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 D-25 for an example of an overlay order.)



Task Organization				
TF Control	A/2-22 IN	B/2-22 IN	A/8-40 AR	B/8-40 AR
Sniper Sqd/HHC/2-22	1/A/2-22 IN 2/A/2-22 IN 3/A/8-40 AR	1/B/2-22 IN 2/B/2-22 IN 3/B/8-40 AR	1/A/8-40 AR 2/A/8-40 AR 3/A/2-22 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 120900ZJAN13 to limit the attacks on coalition force.				
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 patiences, 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, BRAGG and CAMPBELL free of ACF and companies postured for future operations.				
Execution - Tasks to subordinate units				
A/2-22 IN	**TF Decisive Operation:** 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	Secure OBJ BRAGG (inner cordon) and conduct search to capture ACF and seize weapons caches in order to limit the attacks on coalition forces.			
A/8-40 AR	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	1. Secure the outer cordon at check points 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, BRAGG, and CAMPBELL 2. O/O deliver precision fires to destroy ACF.			
Acknowledge: A/2-22 IN, B/2-22 IN, A/8-40 AR, B/8-40AR, HHC/2-22, Sniper/2-22 IN				

ACF	anti-coalition forces	DIRLAUTH	direct liaison authorized	OBJ	objective
AO	area of operations	HHC	headquarters and headquarters company	O/O	on order
AR	armor			PLT	platoon
BCT	brigade combat team	HN	host-nation	TF	task force

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 20 annexes. There are five annexes designated as spares: annexes I, N, 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, operational environment (OE), (including enemy 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 decisive operation 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 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 area of operations (AO).
- 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.

E-11. 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-12. 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-9 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-13. Annex A (Task Organization) of the operation plan (OPLAN) and operation order (OPORD) is one of the annexes that does not follow the standard five-paragraph attachment format. (Refer to appendix D 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 E-4 through E-5 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** **MISO**	**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** **MISO** **Special operations forces** - Ranger - Special forces	**Battalion TFs** **Battalions or squadrons** - Combined arms - Infantry - Reconnaissance **Company teams** **Companies** **Air cavalry squadrons** **Civil affairs** **MISO**	**Company teams** - Named teams in alphabetical order - Letter designated teams in alphabetical order **Companies or troops (in alphabetical order)** - Infantry - Armor - Stryker **Civil affairs** **MISO**	**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	**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	**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** **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** **Public affairs** **PRT** **Space** **TAOG** **OGA** (listed in alphabetical order with reference to any applicable nonstandard command and support relationship)	**Signal** **Public affairs** **PRT** **AOB** **OGA** (listed in alphabetical order with reference to any applicable nonstandard command and support relationship)	**Signal** **Public affairs** **PRT** **OGA** (listed in alphabetical order with reference to any applicable nonstandard command and support relationship)	

AOB	airfield operations battalion	MISO	military information support operations
CBRN	chemical, biological, radiological, and nuclear	OGA	other governmental agencies
CI	counterintelligence	PRT	provincial reconstruction team
DIVARTY	division artillery	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-14. 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-15. 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 combat power with respect to other similar elements. Order writers do not use either symbol when two units swap subordinate elements and their combat power 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-16. 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-17. 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-18. 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-19. 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-20. During multinational operations, order writers insert the country code between the numeric designation and the unit name-for example, 3d (DE) Corps. (Here, DE designates that the corps is German. FM 1-02.1 contains authorized country codes.)

E-21. 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-22. 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-23. For unit designations at theater army level, order writers list major subordinate maneuver units first, placing them in alpha-numerical order, followed by multifunctional brigades in the following order: fires, intelligence, maneuver enhancement, sustainment, then followed by functional brigades in

alpha-numerical 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-24. Figure E-1 (on pages E-8 through E-10) 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.

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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
- 1-80 IN
- 2-80 IN
- 3-13 CAV
- A/3-52 AV (ASLT) (DS)
- B/1-52 AV (ARB) (DS)
- C/4-52 CAV (ARS) (-) (DS)
- 2-636 FA
  - A/3-52 FA (+)
  - TACP/52 ASOS (USAF)
  - Q37 52 FA BDE (GS)
- 99 BSB
  - 845 FST
  - 1/577 MED CO (GRD AMB)
  - 3/B/2-52 AV (GSAB) (TACON)
  - 1/2/311 QM CO (MA)
- 87 BSTB
  - 53 EOD
  - 3/2/1/55 SIG CO (COMCAM)
  - B/420 CA BN
  - 2 HCT/3/B/52 BSTB
  - 745 EN CO (MAC) (DS)
  - 1/1/52 CM CO (R/D) (R)
  - 2/467 CM CO
  - 1/1102 MP CO (DS)

4/A/52 BSTB

2/52 ABCT (-)
- 1-31 IN (-)
- 1-30 AR (-)
- 1-20 CAV
- A/4-52 CAV (ARS) (DS)
- 2-606 FA (2x8)
  - TACP/52 ASOS (USAF)
- 521 BSB
  - 2/2/311 QM CO (MA)
  - 1/B/2-52 AV (GSAB) (TACON)
  - 2/577 MED CO (GRD AMB) (attached)
  - 842 FST
- 2 BSTB
  - 31 EN CO (MRBC) (DS)
  - 63 EOD
  - 2/244 EN CO (RTE CL) (DS)
  - 1/2/1/55 SIG CO (COMCAM)
- 2D MP PLT
  - RTS TM 1/A/52 BSTB
  - RTS TM 2/A/52 BSTB
  - RTS TM 3/A/52 BSTB
  - RTS TM

2/54 ABCT (-)
- 4-77 IN
- 8-40 AR
- 3-20 CAV
- 2/C/4-52 CAV (ARS) (DS)
- 2-607 FA
  - TACP/52 ASOS (USAF)
- 105 BSB
  - 3/2/311 QM CO (MA)
  - 2/B/2-52 AV (GSAB) (TACON)
  - 843 FST
  - 3/577 MED CO (GRD AMB)
- 3 BSTB
  - A 388 CA BN
  - 1/244 EN CO (RTE CL) (DS)
  - 763 EOD
  - 2/2/1/55 SIG CO (COMCAM)
- 3D MP PLT

52 CAB AASLT
- HHC/52 CAB
  - 1/B/1-31 IN (DIV QRF) (OPCON)
- 1-52 AV (ARB) (-)
- 4-52 CAV (ARS) (-)
- 3-52 AV (ASLT) (-)
- 2-52 AV (GSAB)
- 1 (TUAS)/B/52 BSTB (-) (GS)
- 2/694 EN CO (HORIZ) (DS)

52 FA BDE
- HHB
- TAB (-)
- 1-52 FA (MLRS)
- 3-52 FA (-) (M109A6)
- 1/694 EN CO (HORIZ) (DS)

17 MEB 52 ID
- 25 CM BN (-)
- 700 MP BN
- 7 EN BN
- 2/2/1/55 SIG CO (COMCAM)
- 11 ASOS (USAF)

116 ABCT (+)
- 3-116 AR
- 1-163 IN
- 2-116 AR
- 1-148 FA
- 145 BSB
  - 4/B/2-52 AV (GSAB) (TACON)
  - 4/2/311 QM CO (MA)
  - 4/577 MED CO (GRD AMB)
  - 844 FRSD
- 116 BSTB
  - 366 EN CO (SAPPER) (DS)
  - 1/401 EN CO (ESC) (DS)
  - 2/244 EN CO (RTE CL) (DS)
  - 52 EOD
  - 1/301 MP CO
  - 1/3/1/55 SIG CO (COMCAM)
  - 1/467 CM CO
  - C/388 CA BN
- 116 MP PLT

52 SUST BDE
- 52 BTB
- 520 CSSB
- 521 CSSB
- 10 Hospital Center
  - 168 MMB

52 HHB
- A/1-30 AR (DIV RES)
- 35 SIG CO (-) (DS)
- 154 LTF
- 2/1/55 SIG CO (-)
- 14 PAD
- 388 CA BN (-) (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	DS	direct support	MED	medical
		EN	engineer	MLRS	multiple launch rocket system
ABCT	armored brigade combat team	EOD	explosive ordnance disposal	MMB	multifunctional medical battalion
		ESC	expeditionary sustainment command	MP	military police
AR	armor			MRBC	multi-role bridge company
ARB	attack reconnaissance battalion	FA	field artillery	OPCON	operational control
		FRSD	forward resuscitative surgical detachment	PAD	public affairs detachment
ARS	attack reconnaissance squadron			PLT	platoon
		FST	fire support team	QM	quartermaster
ASLT	assault	GRD AMB	ground ambulance	QRF	quick reaction force
ASOS	air support operations squadron	GS	general support	R	reinforcing
		GSAB	general support aviation battalion	R/D	reconnaissance/ decontamination
AV	aviation				
BDE	brigade	HCT	human intelligence collection team	RES	reserve
BN	battalion			RTE CL	route clearance
BSB	brigade support battalion	HHB	headquarters and headquarters battalion	RTS	retransmission
BSTB	brigade special troops battalion			SIG	signal
		HHC	headquarters and headquarters company	SUST	sustainment
BTB	brigade troop battalion			TAB	target acquisition battery
CA	civil affairs	HORIZ	horizontal	TACON	tactical control
CAB	combat aviation brigade	IBCT	infantry brigade combat team	TACP	tactical air control party
CAV	cavalry	ID	infantry division	TM	team
CM	chemical	IN	infantry	TUAS	tactical unmanned aircraft system
CO	company	LTF	logistic task force		
COMCAM	combat camera	MA	mortuary affairs		
CSSB	combat sustainment support battalion	MAC	mobility augmentation company	USAF	United States Air Force
DIV	division	MEB	maneuver enhancement brigade		

[page number]

[CLASSIFICATION]

Figure E-1. Sample Annex A (Task Organization) format (continued)

ANNEX B (INTELLIGENCE) FORMAT AND INSTRUCTIONS

E-25. 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-26. 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-27. The purpose of Annex B (Intelligence) is to provide detailed information and intelligence on the characteristics of the operational environment 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 E-11 through E-15 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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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 in all five domains and information aspects as it relates to intelligence.*

b. (U) Area of Operations. *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. *Identify and describe other organizations in the area of operations that may impact the conduct of intelligence operations or implementation of intelligence-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 intelligence operations. Refer to Tab C (Civil Considerations) to Appendix 1 (Intelligence Estimate) 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 area of operations 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 SOPs.*

(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 (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-28. 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-29. 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-30. 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 E-17 through E-22 for the format of Annex C.)

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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 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, 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 in all five domains and information aspects as it relates to operations. Reference the digital overlay(s) within systems such as command post of the future. Refer to Annex B (Intelligence) 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)]

b. (U) Area of Operations. *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. 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 area of operations. Refer to Annex B (Intelligence) and other sources as required.*

*(**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. *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 area of operations 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 area of operations 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.*

[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)]

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, 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 conducting the decisive operation and the purpose of each. Next, state the primary tasks of maneuver units conducting shaping operations, 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.

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.*

[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)]

(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.)

---

(4). (U) Scheme of Information. *Describe how the commander intends to use information and information operations to support the concept of operations. State the priorities for, allocation of, and restrictions on information capabilities. Use subparagraphs to describe key information operations, cyberspace electromagnetic activities, operations security, electromagnetic warfare, and military information support operations tasks as required. Refer to appendix Annex C (Operations) as required*.

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 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*.

[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)]

d. (U) Financial Management. *Refer to Annex F (Sustainment) as required*.

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 SOPs*.

(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 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 (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.

[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)]

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
Appendix 10–Airspace Control
Appendix 11–Rules of Engagement
Appendix 12–Cyberspace Electromagnetic Activities
Appendix 13–Military Information Support Operations
Appendix 14– Information Operations
Appendix 15–Combined Arms Recovery of Forces

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-31. 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-32. 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 coordinator, or fire support officer develops Annex D (Fires).

E-33. 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 E-23 through E-28 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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Message reference number

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, ATP 3-60, FM 3-09, 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 area of interest which includes the area of influence in all five domains and information aspects as it relates to fires. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *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. *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 area of operations 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*.

h. (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 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 area of operations.*

(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 operational 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 counterpreparations, 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 SOPs.*

(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 (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.

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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]

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Figure E-4. Sample Annex D (Fires) format (continued)

ANNEX E (PROTECTION) FORMAT AND INSTRUCTIONS

E-34. 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-35. 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 preserve the force 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 surgeon provides the chief of protection with input for Appendix 10 (Force Health Protection).

E-36. 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 E-29 through E-36 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.

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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 3-50.10, 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.*

(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.*

[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)]

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 in all five domains and information aspects 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) Area of Operations. *Describe the area of operations as it impacts protection. Identify and describe the area of operation'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 area of operations 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 area of operations 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 operational 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 conduct of sustainment operations and to support decisive and shaping operations. 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) Intelligence Support to 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 defensive measures 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 combat and operational stress control, dental services, and laboratory services. Identify and describe food safety and food defense activities to include inspection of Class I rations. Refer to Appendix 9 (Force Health Protection) to Annex E (Protection) as required.*

(10) (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 defense reconnaissance support to the maneuver forces based on the mission and chemical, biological, radiological, and nuclear threat to assess threats and hazards, 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.*

(11) (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.*

[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) 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, detention operations, and U.S. military prisoners) as a result of military or civil conflict and natural or man-made disasters or to facilitate criminal prosecution. Refer to Appendix 13 (Detention Operations) to Annex E (Protection) as required.*

(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 (cybersecurity 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 cybersecurity 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:*

[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)]

(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.*

(3) (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.*

(4) (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.*

(5) (U) Essential Elements of Friendly Information.

(a) (U) *Date-time group, location, size, disposition, and flight path of aviation units in the area of operations.*

(b) (U) *Date-time group, location, size, disposition, and mobility of units in the area of operations.*

(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.*

(6) (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 care. Address treatment and medical evacuation issues affecting protection forces and synchronize health threat reporting and statistics (such as the disease and nonbattle injury rate). 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 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 (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–Coordinate Air and Missile Defense

Appendix 13–Detention Operations

Appendix 14–Electromagnetic Protection

Appendix 15–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-37. 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-38. 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 E-37 through E-42 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.

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 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 in all five domains and information aspects as it relates to the sustainment. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *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.*

(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 supplies. 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 (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.*

(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.*

[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)]

(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 Supply. *Identify and list medical supplies 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*.

(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*.

[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)]

(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 care. 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 support requirements for medical logistics (including blood management), combat and operational stress control, preventive medicine, dental services, medical laboratory support, and veterinary services. Post hospital and medical treatment facility 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 3 (Health Service Support) to Annex F (Sustainment) as required.*

(1) (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 ordnance.*

[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)]

(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*.

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 sustainment-specific 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 (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]

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]

[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)]

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-39. 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-40. 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-41. This annex follows the five-paragraph (situation, mission, execution, sustainment, and command and signal) format of the base plan or order. 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 E-43 through E-47 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 in all five domains and information aspects as it relates to engineer operations. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *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 area of operations. 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 engineer operations 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 concept 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 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 (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-42. 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-43. 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 E-48 through E-51 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.

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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 FM 5-0, FM 6-02, ATP 6-02.45, ATP 6-02.53, ATP 6-02.54, ATP 6-02.60, ATP 6-02.70, ATP 6-02.71, and ATP 6-02.75.*

(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 in all five domains and information aspects as it relates to signal support. Refer to Annex B (Intelligence) as required. This is an opportunity to define the cyber area of interest, which does not always align with the physical area of interest, and is arguably much larger. 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 area of operations).*

[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) Area of Operations. *Describe the area of operations as it relates to signal support. Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

(1) (U) Terrain. *Describe the aspects of physical and logical terrain (including key terrain in cyberspace) that impact signal support and information aspects. 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 area of operations. Refer to Annex B (Intelligence) as required.*

c. (U) Enemy Forces. *List known and templated locations and activities of enemy communications, cyber, and electromagnetic warfare units that may influence the area of operations or area of interest. List enemy capabilities (including cyberspace electromagnetic activities 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 area of operations. Refer to Annex V (Interagency Coordination) as required.*

f. (U) Risk. *State the risk to mission, risk to network, and risk to personnel if the concept of signal support is not followed or supported. Identify entry points into cyberspace which are higher vulnerability areas, such as physical nodes connected to commercial networks and virtual local area network traffic.*

2. (U) Mission. *Support [State the mission of the functional area in support of the base plan or order.]*.

3. (U) Execution.

a. (U) Concept 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 cybersecurity and communications security) support each phase of the operation in the base plan or order*

(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.*

(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.*

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 in order 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*.

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 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 (for example, "The division tactical command post will control the air assault").*

[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)]

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). 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 (Spare)

ANNEX J (PUBLIC AFFAIRS) FORMAT AND INSTRUCTIONS

E-44. 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-45. 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-9 on pages E-53 through E-56 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 in all five domains and information aspects as it relates to public affairs. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

[page number]

[CLASSIFICATION]

Figure E-9. 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 area of operations 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 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-9. 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 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 (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 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-9. 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-9. Sample Annex J (Public Affairs) format (continued)

ANNEX K (CIVIL AFFAIRS OPERATIONS) FORMAT AND INSTRUCTIONS

E-46. 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-47. 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-10 on pages E-57 through E-62 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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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 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 in all five domains and information aspects as it relates to civil affairs operations. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-10. 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) Area of Operations. *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 area of operations. 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 area of operations. 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-10. 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).*

*(**Note.** This list may extend to personnel outside of the area of operations whose actions, opinions, and influence can affect the commander's area of operations.)*

(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.*

2. (U) Mission. *State the mission of civil affairs operations in support of the base plan or order.*

[page number]

[CLASSIFICATION]

Figure E-10. 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)]

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 hazards such as pesticides, toxic chemicals, and historic or cultural resources for preservation. Refer to Annex G (Engineer) 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 area of operations 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-10. 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 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 (for example, "The division tactical command post will control the air assault.").*

b. (U) Signal. *Describe the concept 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]

[CLASSIFICATION]

Figure E-10. 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-10. Sample Annex K (Civil Affairs Operations) format (continued)

ANNEX L (INFORMATION COLLECTION) FORMAT AND INSTRUCTIONS

E-48. This annex provides considerations, formats, and instructions for developing Annex L (Information Collection), also referred to as Collection Management or Intelligence, Surveillance, and Reconnaissance (ISR) Operations, is a mix of ground, air, and space collection platforms at the joint, operational, and strategic levels, articulated in Army plans and orders. It provides a format for the annex 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-49. 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-11 on pages E-63 through E-68 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. *Doctrinal references for this annex include FM 2-0, FM 3-55, FM 3-90-2, FM 5-0, FM 6-0, ATP 2-01, and ATP 3-04.64 for tactical and operational formations; include JP 2-01 as required.*

b. *List Combined Joint Chiefs of Staff references for this annex, as required for operational formations.*

c. *List Combatant Command references for this annex as required for all formations.*

d. *List United States Signals Intelligence Directives as required for all formations.*

e. *List other references as applicable, such as any references that provide unique guidance and authorities to perform collection missions (for example open-source intelligence and global force management allocation activities).*

(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-11. Sample Annex L (Information Collection) format

[CLASSIFICATION]

ANNEX L (INFORMATION COLLECTION) 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. *Describe the aspects of this annex that are specific to collection management and information collection, hereafter referred to as collection in this annex, used to synchronize, integrate, and employ intelligence, surveillance, and reconnaissance (ISR) platforms to support the operations. State what is to be accomplished through collection operations.*

a.(U) Friendly Forces.

(1)(U) Facts. *List the relevant facts specific to collection operations to support the mission. Identify friendly forces and agencies that will be providing collection operation to support the mission required by this order.*

(a)(U) Legal Considerations. *Describe those legal considerations that are applicable to conducting collection operations within the area of operations. Refer to Appendix 11 (Rules of Engagement) to Annex C (Operations) and Appendix 2 (Personnel Service Support) to Annex F (Sustainment) as required. (This is only applicable to tactical and operational formations that have ISR platforms.)*

(b)(U) Signals Intelligence Operational Tasking Authority (SOTA). *Describe the type of SOTA granted to the Commander and those signals intelligence (SIGINT) functions pertinent to the designation of objectives and assignment of SIGINT mission, for example SIGINT tasking authority. Refer to Appendix 3 (Signals Intelligence) to Annex B Intelligence. (This is only applicable to tactical and operational formations that have SOTA authorities and ability to task SIGINT missions.)*

(1)(U) Supplemental Tasking. *Describe any Director, National Security Agency or Chief, Central Security Service responsibilities to ensure validation of unit's SIGINT missions. (This is only applicable to tactical and operational formations that have SOTA authorities.)*

(2)(U) Advisory Tasking. *Describe any SIGINT advisory taskings from Director, National Security Agency or Chief, Central Security Service provide technical guidance for tactical or operational electromagnetic warfare and cyberspace operations used to conduct SIGINT collection or processing. Refer to applicable United States Signals Intelligence Directive reference listed above. (Only applicable to tactical and operational formations that have SOTA authorities)*

(c)(U) Collection Management Authority. *Describe who has collection management authority over each type of ISR platform tasked, which will affect development of the collection plan and tasking of those capabilities. Refer to applicable references as required. (Omit for functional, multi-functional, and tactical formations, if not required.)*

(d)(U) Collection Requirements Management. *Describe who has collection requirements management authority based on tactical, operational, combatant command, joint, or national level guidance. Refer to applicable references as required. (Omit for functional, multi-functional, and tactical formations, if not required.)*

[page number]

[CLASSIFICATION]

Figure E-11. 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)]

(e)(U) Collection Operations Management. *Describe who has collection operations management authority based on tactical, operational, combatant command, joint, or national level guidance. Refer to applicable references as required. (Omit for functional, multi-functional, and tactical formations, if not required.)*

(2)(U) Assumptions. *List assumptions unique to collection management or information collection. Include assumptions on information sharing, capabilities, and ISR platform capacity essential for planning.*

(3)(U) Limitations and Shortfalls. *Provide a brief description of factors affecting the employment of friendly ISR capabilities. These may include but are not limited to a lack of access due to legal restrictions, technical limitations, or access considerations for organic ground or airborne platforms.*

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 for Collection Management. *Summarize the concept of operations for collection management and the systems and resources to be employed. Identify any special requirements for employment of specific sensors. Ensure the concept of collection management is nested within the base plan mission and lines of efforts and/or phases as appropriate. Develop collection areas for employment of specific sensors.*

(4)(U) Scheme of Collection Operations. *Summarize, by phase if applicable, the concept for execution of information collection (ground and air collection platforms) and the systems and resources to be employed. Identify the collection tasks, objectives, methods, collection priorities, and collection capabilities that are best suited to answer the collection requirements. Identify task, purpose, and intelligence disciplines to achieve security and reconnaissance taskings as listed in FM 3-90-2. Identify any special requirements for employment of ISR platforms or specific sensors.*

(5)(U) Collection Plan. *State when and how often collection plan will be published, approval authorities for the collection plan, and inclusion of subordinate collection platforms in support of the mission. State how the collection plan is nested with the commander's critical information requirements, priority intelligence requirements, indicators, observables, specific information requirements, and decision points within the decision support matrix. Refer to Appendix 1 (Information Collection Plan) to Annex L (Information Collection).*

(a)(U) Allocation. *State allocation of ISR platforms for employment among competing requirements, including execution of allocations, reviewing specified allocations, and the consolidation, prioritization, and validation of collection requirements levied against the allocations.*

(b)(U) ISR Priorities. *State collection priorities for ISR platforms at which echelon, and if any of those organizations or priorities lies in support for other platforms.*

[page number]

[CLASSIFICATION]

Figure E-11. 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)]

(U) Collection Matrix. *Describe when and how the collection matrix will be updated. Refer to Tab A (Information Collection Matrix) and Tab B (Information Collection Synchronization Matrix) to Annex L (Information Collection).*

(c)(U) Targeting Support. *Identify any special procedures for planned ISR to support targeting efforts. Summarize limitations or any special considerations regarding ISR platform or specific sensor tasking. Refer to Annex D (Fires) regarding procedures for submitting reconnaissance objectives and determining targeting priorities. (This is only applicable to tactical and operational units providing targeting support or conducting targeting missions).*

(d)(U) Cyberspace Electrometric Activities Support. *Summarize limitations or any special considerations regarding ISR platform or specific sensor tasking. Refer to Annex D (Fires) regarding procedures for submitting reconnaissance objectives and determining collection priorities. (This is only applicable to tactical and operational units providing cyberspace electromagnetic activities support or conducting cyberspace electromagnetic activities).*

b. (U) Collection of ISR Planning Considerations. *State apportionment of ISR platforms including distribution and capabilities for collection planning, for example air sorties and forces for planning. Summarize the inclusion of national and theater collection within the collection plan. State the tools, resources, and processes for submission of national and theater level collection requirements. Summarize the method, purpose, and function of the collection management working group, who participates, how often it meets, and outputs for other working groups and boards. Refer to Appendix 2 (ISR Concept of Operations) to Annex L (Information Collection).*

c.(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.*

d.(U) Tasks to Subordinate Units. *Identify tasks and responsibilities for subordinate units and supporting units. State collection synchronization timelines, meetings, and report dates, for example, "Requests must be submitted 24—48 hours in advance." State attached units to any subordinate units. Direct units to observe and report in accordance with Appendix 1 (Information Collection Plan) to Annex L (Information Collection).*

e.(U) Coordinating Instructions. *List only instructions applicable or not covered in unit standard operating procedures.*

(1)(U) Time or Condition When the Plan Becomes Effective and Latest Time Information of Value.

(2)(U) Priority Intelligence Requirements. *Refer to Coordinating Instructions in Annex B (Intelligence).*

(3)(U) Named Area of Interests and Target Area of Interest. *Refer to Appendix 4 (Named Area of Interest Matrix) and Appendix 5 (Named Area of Interest Overlay) to Annex L (Information Collection Plan).*

(4)(U) Request for Intelligence Information Procedures. *State the procedures for submission of requests for intelligence information from subordinate elements and organizations, how they are processed within the unit, and the methods for submission of requests to higher echelons for servicing, as needed.*

[page number]

[CLASSIFICATION]

Figure E-11. 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) Intelligence Handover Lines and Intelligence Coordination Measures. *Identify handover guidance and parameters; refer to necessary graphics or attachments as required. 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. Refer to paragraph Command and Signal to Annex B (Intelligence).*

(2)(U) Fire Support Coordination Measures. *List fire support coordinating or control measures and established no fire areas specific to ISR platforms. Refer to Annex D (Fires) as required.*

(3)(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.*

(4)(U) Airspace Coordinating Measures. *List the timeline on when ISR requests must be submitted before the air tasking order becomes finalized. List airspace control measure specific to ISR platforms. Refer to Appendix 10 (Airspace Control) as required.*

(5)(U) Rules of Engagement and Rules for Use of Force. *List rules of engagement and rules for the use of force specific to ISR platforms. Refer to Appendix 11 (Rules of Engagement) to Annex C (Operations) as required.*

(6)(U) Risk Reduction Control Measures. *State any reconnaissance, surveillance, and security-specific guidance such as fratricide prevention measures not included in standard operating procedures, referring to Annex E (Protection) as required.*

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.*

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), 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.*

[page number]

[CLASSIFICATION]

Figure E-11. 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) 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 standard operating procedures.*

(4) (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 (for example, "The division tactical command post will control the air assault.")*

b. (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. 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 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]

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—Intelligence, Surveillance, and Reconnaissance Concept of Operations

Appendix 3—Collection Emphasis Message

Appendix 4—Named Area of Interest Matrix

Appendix 5—Named Area of Interest Overlay

DISTRIBUTION: *(if distributed separately from the base order).*

[page number]

[CLASSIFICATION]

Figure E-11. Sample Annex L (Information Collection) format (continued)

ANNEX M (ASSESSMENT) FORMAT AND INSTRUCTIONS

E-50. 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-51. Commanders and staffs use Annex M (Assessment) to as a means to quantify and qualify the effectiveness of mission success or task accomplishment. The G-3 or S-3 or G-5 is responsible for the development of Annex M (Assessment).

E-52. 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-12 on pages E-69 through E-72 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.

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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, 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. *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 in all five domains and information aspects as it relates to assessment. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-12. Sample Annex M (Assessment) format

[CLASSIFICATION]

ANNEX M (ASSESSMENT) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)]

b. (U) Area of Operations. *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 area of operations. 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-12. 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-12. 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 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 (for example, "The division tactical command post will control the air assault".)*

b. (U) Signal. *Address any assessment-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]

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-12. Sample Annex M (Assessment) format (continued)

ANNEX N (SPACE OPERATIONS) FORMAT AND INSTRUCTIONS

E-53. 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-54. 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-55. This annex is used to coordinate early with the staff, including the G-2, S-2, G-6, and 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-13 on pages E-73 through E-77.)

[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 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-13. 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 in all five domains and information aspects as it relates to space operations. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *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 obscurra. 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 area of operations 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 AOR.*

[page number]

[CLASSIFICATION]

Figure E-13. 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 OPLAN, 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 (GPS) accuracy to support GPS-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 electronic 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 operational 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-13. 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, electronic 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 (CPs), including the location of each CP and its time of opening and closing, as appropriate. State the primary controlling CP for specific tasks or phases of the operation (for example, "The division tactical CP 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.

b. (U) Signal.

[page number]

[CLASSIFICATION]

Figure E-13. 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)]

(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 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 (PACE) 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 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-13. Sample Annex N (Space Operations) format (continued)

Annex O (Spare)

ANNEX P (HOST-NATION SUPPORT) FORMAT AND INSTRUCTIONS

E-56. 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-57. 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-58. 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-14 on pages E-79 through E-83 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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Include heading if attachment is distributed separately from the base order or higher-level attachment.

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 in all five domains and information aspects as it relates to host-nation support. Refer to Annex B (Intelligence) as required.*

[page number]

[CLASSIFICATION]

Figure E-14. 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) Area of Operations. *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 area of operations 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-14. 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, emergency facilities, reciprocal national health agreements, and availability of medical equipment and supplies, 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-14. 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 care. Determine if locally available medical supplies and equipment 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 equipment repairers. 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 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 (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-14. 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-14. Sample Annex P (Host-Nation Support) format (continued)

ANNEX Q (KNOWLEDGE MANAGEMENT) FORMAT AND INSTRUCTIONS

E-59. 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-15 on pages E-84 through E-87 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 in all five domains and information aspects as it relates to knowledge management. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations) as required.*

[page number]

[CLASSIFICATION]

Figure E-15. 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 area of operations 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 area of operations. 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 in order 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-15. 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 units. 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 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 (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-15. 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-15. Sample Annex Q (Knowledge Management) format (continued)

ANNEX R (REPORTS) FORMAT AND INSTRUCTIONS

E-60. 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 standard operating procedures (SOPs) will dictate the development and format for this annex.

E-61. Commanders and staffs use Annex R (Reports) to list and catalog all unit reports and their respective formats. The G-3 or S-3 or G-5 or battalion or brigade plans staff officer (S-5), in coordination with the knowledge management officer, develops Annex R (Reports). (See figure E-16 on pages E-88 through E-89 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-16. 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-16. Sample Annex R (Reports) format (continued)

ANNEX S (SPECIAL TECHNICAL OPERATIONS) FORMAT AND INSTRUCTIONS

E-62. 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-63. 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-17 on pages E-90 through E-93 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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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 in all five domains and information aspects as it relates to special technical operations. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *Refer to Appendix 2 (Operation Overlay) to Annex C (Operations).*

[page number]

[CLASSIFICATION]

Figure E-17. 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 area of operations 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-17. 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 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 (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-17. 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.

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[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-17. Sample Annex S (Special Technical Operations) format (continued)

Annex T (Spare)

ANNEX U (INSPECTOR GENERAL) FORMAT AND INSTRUCTIONS

E-64. 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-65. 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-18 on pages E-95 through E-98 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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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 in all five domains and information aspects as it relates to inspector general operations. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *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-18. 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 area of operations. Refer to Annex V (Interagency Coordination) as required.*

e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. *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-18. 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 reachback 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 intelligence oversight procedure 15 reports, 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-18. 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 specialty personnel, medical logistic personnel, and medical equipment maintenance personnel. 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. *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 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 (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-18. Sample Annex U (Inspector General) format (continued)

ANNEX V (INTERAGENCY COORDINATION) FORMAT AND INSTRUCTIONS

E-66. 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-67. 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-19 on pages E-99 through E-102 for the Annex V format.)

E-68. Interagency organizations of the United States government 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.

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 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-19. 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 in all five domains and information aspects as it relates to interagency coordination. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *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 area of operations. 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.*

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 area of operations. Refer to Annex V (Interagency Coordination) as required.*

f. (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.*

g. (U) Assumptions. *List any interagency coordination-specific assumptions that support the annex development.*

h. (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 titles 10 and 50.*

[page number]

[CLASSIFICATION]

Figure E-19. 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-19. 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 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 (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-19. Sample Annex V (Interagency Coordination) format (continued)

ANNEX W (OPERATIONAL CONTRACT SUPPORT) FORMAT AND INSTRUCTIONS

E-69. 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-70. 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-71. 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-72. A detailed description of specific contract support requirements and guidance will be addressed in the appropriate appendix, tab, or exhibit. (See figure E-20 on pages E-103 through E-106 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.

Copy ## of ## copies

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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 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, 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-20. 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 as it relates to operational contract support, including general business climate and information on existing U.S. government contracts. Area of interest includes the area of influence in all five domains and information aspects. Refer to Annex B (Intelligence) as required.*

b. (U) Area of Operations. *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 area of operations. 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-20. 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 SOPs.*

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-20. 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 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 (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-20. Sample Annex W (Operational Contract Support) format (continued)

Annex X (Spare)

Annex Y (Spare)

ANNEX Z (DISTRIBUTION) FORMAT AND INSTRUCTIONS

E-73. 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-74. 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-75. 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-21 on pages E-109 through E-110 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)] References:

(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-21. Sample Annex Z (Distribution) format

[CLASSIFICATION]

ANNEX Z (DISTRIBUTION) TO OPERATION PLAN or ORDER [number] [(code name)]—[issuing headquarters] [(classification of title)] References:

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-21. 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.

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 operations order (OPORD) format. (See ATP 2-01.3 for more information on decision support tools.)

DECISION SUPPORT TEMPLATE AND MATRIX

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 2-01.3). 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 battlefield (IPB) process.

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? - What element.
- What? - Type of operation.
- When? - Time the action will begin.
- Where? - Battlefield framework such as boundaries, routes, zone, or avenue of approach.
- How? - Method the enemy will use to employ his assets.
- Why? - Threat objective.

Additionally, each COA should include a list of high-value targets (HVTs) that the staff uses 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 its lack of activity, will indicate which course of action the adversary has adopted (JP 2-01.3). 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, war gaming, 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 F-3 for an example of a DST.)

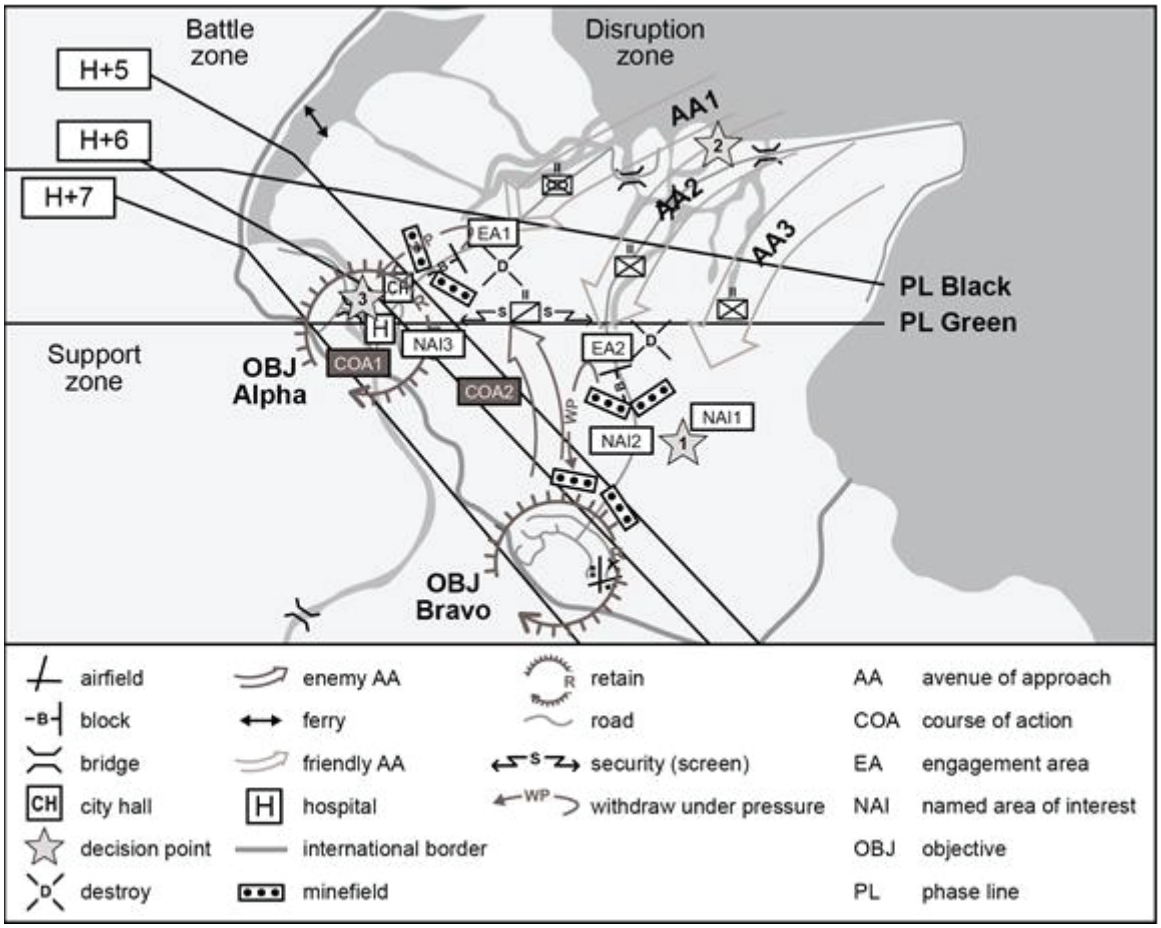

Figure F-1. Decision support template example

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 requirement (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 F-4 for an example of a DSM.)

Table F-1. Decision support template 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% 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

EXECUTION MATRIX

F-13. An *execution matrix* is a visual representation of subordinate tasks in relationship to each other over time (ADP 5-0). An execution matrix can cover the entire force for the duration of an operation, a specific portion of an operation (such as an air assault execution matrix), or for a specific warfighting function (such as a fire support execution matrix). A single operation can have multiple execution matrices.

F-14. During planning, the execution matrix is developed from the selected COA synchronization matrix that was developed during war gaming. Commanders and staffs use the execution matrix to control, synchronize, and adjust operations in time, space, and purpose, as required. The current operations integration cell uses the execution matrix to determine which friendly actions or tasks to expect forces to execute or which execution decisions to make. This is done in conjunction with the DST to ensure that tasks executed by subordinate units are being executed according to a timeline that has been synchronized and deconflicted through planning and war gaming. (See table F-2 on pages F-5 and F-6 for an example of an execution matrix.)

Table F-2. Example execution matrix

As of 231200 July 2021	***Day***	***24 July (C+3)***				***25 July 21 (C+4)***		
	Hour	2000-2059	2100-2159	2200-2259	2300-2359	0000-0059	0100-0150	0200-0259
	Phase	***Phase 1***			***Phase 2***			
Environmental factors	Weather	Low 42, high 68; partly cloudy; 38% humidity; 5 % chance of showers						
	Light	Moonrise 2059; illumination 58%; BMNT 0525; sunrise 0558						
Area of influence	Division fires	Suppress OBJ PANTHERS	Suppress OBJ BENGALS	Suppress OBJ JAGUARS	Suppress OBJ CHIEFS	Suppress OBJ GIANTS	Suppress OBJ EAGLES	Suppress OBJ BEARS
	USAF	AI. OCA, DCA	No change	No change	No change	No change	No change	No change
	Adjacent units	1st UK attacks to seize OBJ LIVERPOOL 2/4 attacks to seize OBJ DENVER	No change	No change	No change	No change	No change	Secure OBJ LIVERPOOL Secure OBJ DENVER
Decision points				1				2
Movement and Maneuver	1-16 IN	Attack to seize OBJ GOLD	No change	No change	No change	No change	No change	Secure OBJ GOLD
	2-34 AR	Attack to seize OBJ PLATINUM	No change	No change	No change	No change	No change	Secure OBJ PLATINUM
	3-66 AR	Attack to seize OBJ SILVER	No change	No change	No change	No change	No change	Secure OBJ SILVER
	1-4 CAV	Screen PL RED	No change	No change	No change	No change	No change	No change
	A/1-6 CAB	Screen PL RED	No change	No change	No change	No change	No change	No change
	C/3-66 AR (Reserve)	Follow 2-34 AR	No change	No change	No change	No change	No change	Set TAA RED
Intel	UAS	NAI 2	NAI 5	NAI 6	NAI 4	NAI 7	NAI 8	NAI 9
	ISR	NAI 2	NAI 5	NAI 6	NAI 4	NAI 7	NAI 8	NAI 9
	HUMINT	NAI 7	No change	No change	No change	No change	No change	No change
	SIGINT	NAI 12	NAI 14	No change	NAI 7	NAI 9	No change	No change
Fires	1-5 FA	Suppress AN001	No change	SEAD AN006	No change	No change	No change	Suppress AN009
	CAS	TAI 1	No change	No change	TAI 4	No change	No change	TAI 5
	PSYOP	Influence NAI 12	No change	No change	No change	No change	No change	No change
	A/407 CA	Conducts civil reconnais-sance OBJ TOM	No change	No change	No change	No change	Conducts civil engage-ment	No change

Table F-2. Example execution matrix (continued)

	Day	24 July (C+3)				25 July 21 (C+4)		
	Hour	2000-2059	2100-2159	2200-2259	2300-2359	0000-0059	0100-0150	0200-0259
	Phase	Phase 1			Phase 2			
Protection	1 EN BN	Clear route AMBER	No change	No change	No change	No change	No change	No change
	62 EN Co	Conduct reconnais-sance route BLUE	No change	No change	No change	No change	No change	No change
	287 MP Co	Secure MSR Omaha	No change	No change	No change	No change	No change	No change
	63 CM	Conduct reconnais-sance route BLUE	No change	No change	No change	No change	No change	No change
	704 EOD team	Clear route AMBER	No change	No change	No change	No change	No change	No change
	A/1-188 AD	Establish CP 9	No change	No change	No change	No change	No change	No change
Sustain	101 BSB	Set PL GREEN	No change	No change	No change	No change	No change	No change
	FLE	Moves behind 2-34 AR	No change	No change	No change	No change	No change	No change
	BSA	Set PL GREEN	No change	No change	No change	No change	No change	No change
Command and Control	MAIN	Set CP 2	No change	No change	No change	No change	No change	Set CP 5
	TAC	Moves with 2-34 AR	No change	No change	No change	No change	No change	No change
	RETRANS #1	Set CP 4	No change	No change	No change	No change	No change	No change

AD	air defense	IN	infantry
AI	air interdiction	ISR	intelligence, surveillance, and reconnaissance
AR	armor	MAIN	main command post
BMNT	before morning nautical twilight	MP	military police
BN	battalion	MSR	main supply route
BSA	brigade support area	NAI	named area of interest
BSB	brigade support battalion	OBJ	objective
CA	civil affairs	OCA	offensive counterair
CAB	combined arms battalion	PL	phase line
CAS	close air support	PSYOP	psychological operations
CAV	cavalry	RETRANS	retransmission
CM	chemical	SEAD	suppression of enemy air defenses
Co	company	SIGINT	signals intelligence
CP	command post	TAA	tactical assembly area
DCA	defensive counterair	TAC	tactical command post
EN	engineer	TAI	target area of interest
EOD	explosive ordnance disposal	UAS	unmanned aircraft system
FA	field artillery	UK	United Kingdom
FLE	forward logistic element	USAF	United States Air Force
HUMINT	human intelligence		

EXECUTION CHECKLIST

F-15. An execution checklist is a distilled version of the execution matrix that lists key actions sequentially, with units responsible for actions, and an associated code word to quickly provide shared understanding among the commander, staff, and subordinate units on initiation or completion of the

actions. Unlike the DSM, the DST, the execution matrix, and the execution checklist are used to track the progress of decisions made rather than plan for decisions to be made within an operation.

F-16. The information populated in the execution checklist is taken from the execution matrix. An execution checklist is a chronological list of preplanned actions that friendly forces execute during the conduct of an operation. The checklist is a shortcut that allows for rapid decision making and battle tracking as an operation is developing. It allows the staff to determine if the operation is being executed in accordance with a commander's vision, or if an operation is becoming desynchronized or failing. If the execution checklist is not progressing as planned, leaders may refer to the execution matrix to determine what decisions and actions are required to get the plan back on track. (See table F-3 for an example of an execution checklist.)

Table F-3. Example execution checklist

Line	*H-hour*	*Time*	*Event*	*Code word*
10	H-8	14 2000 JUL 21	B CO occupies AA BLACKFOOT	AKRON
15	H-4	15 0001 JUL 21	A CO moves from AA APACHE	ALBANY
20	H-1	0300	C CO moves from AA COMANCHE	ALLENTOWN
25	H-hour	0400	A CO crosses LD	ARLINGTON
30	H+2.5	0630	C CO crosses LD	ASHVILLE
35	H+3.25	0715	B CO moves from AA BLACKFOOT	ATLANTA
40	H+4	0800	A CO establishes support by fire 1	AUGUSTA
AA assembly area CO company LD line of departure				

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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 into 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 battlefield (IPB). (See ATP 2-01.3 for more information on IPB.)
- Information collection. (See FM 3-55 for more information on information collection.)
- Targeting (See ATP 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 G-2 shows key products produced and outputs from the integrating processes of IPB, 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.)

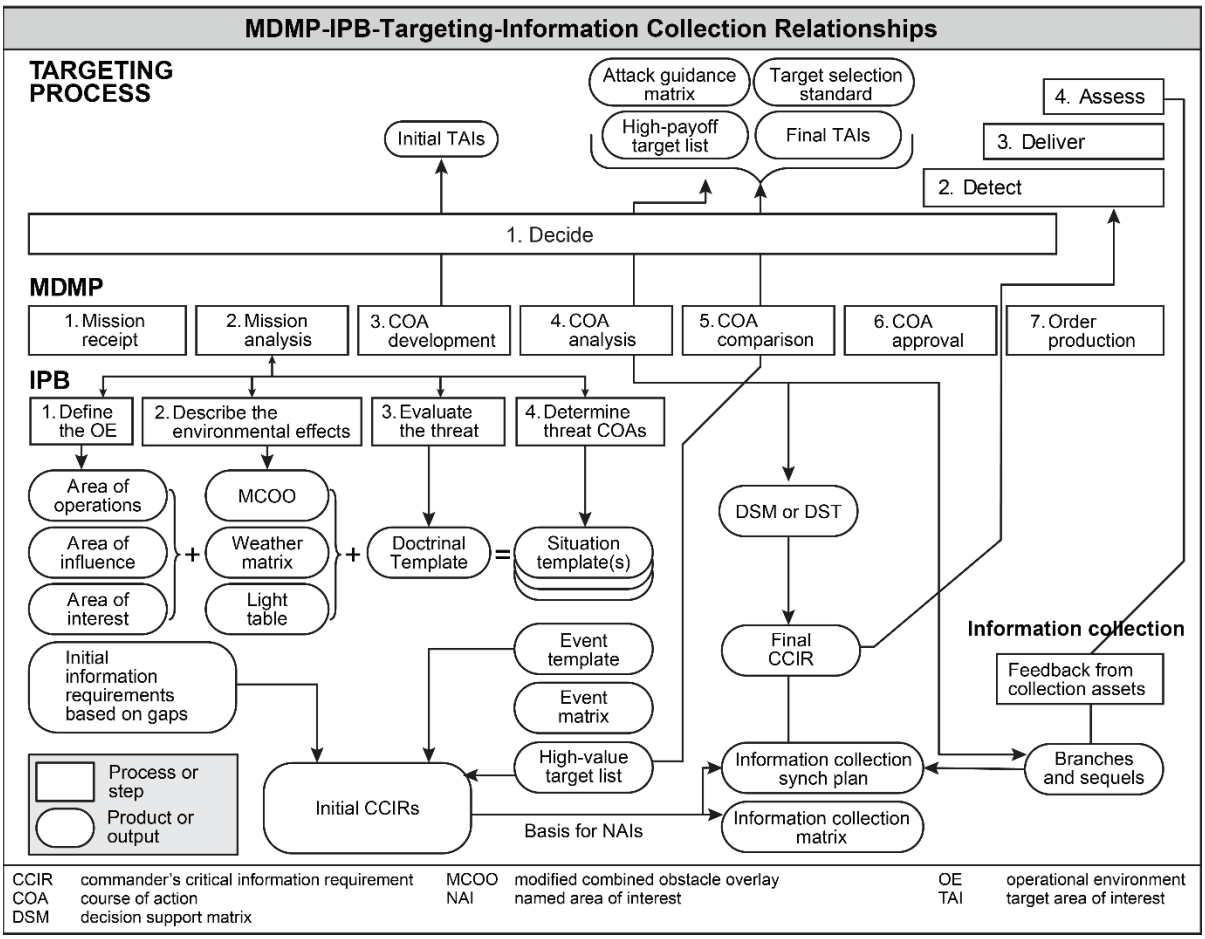

Figure G-1. MDMP, IPB, targeting, and information collection relationships

INTELLIGENCE PREPARATION OF THE BATTLEFIELD

G-3. IPB is a collaborative staff effort led by the assistant chief of staff, intelligence (G-2) or brigade or battalion intelligence staff officer (S-2). IPB products that are developed and continuously updated facilitate situational understanding and assist commanders and staffs in identifying relevant aspects within the area of operations (AO) and area of interest that can affect mission accomplishment.

G-4. IPB is a key aspect of mission analysis resulting in products that aid in developing friendly course of actions (COAs) and decision points. Additionally, the conclusions reached, information gaps identified, and products created during IPB are critical to planning information collection and targeting operations. A key aspect of IPB is refinement in preparation and execution. The four IPB 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 IPB and examples of associated IPB products.)

G-5. Figure G-2 lists the key inputs and outputs of IPB in relationship to the steps of the MDMP. As shown in figure G-2, most IPB 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.

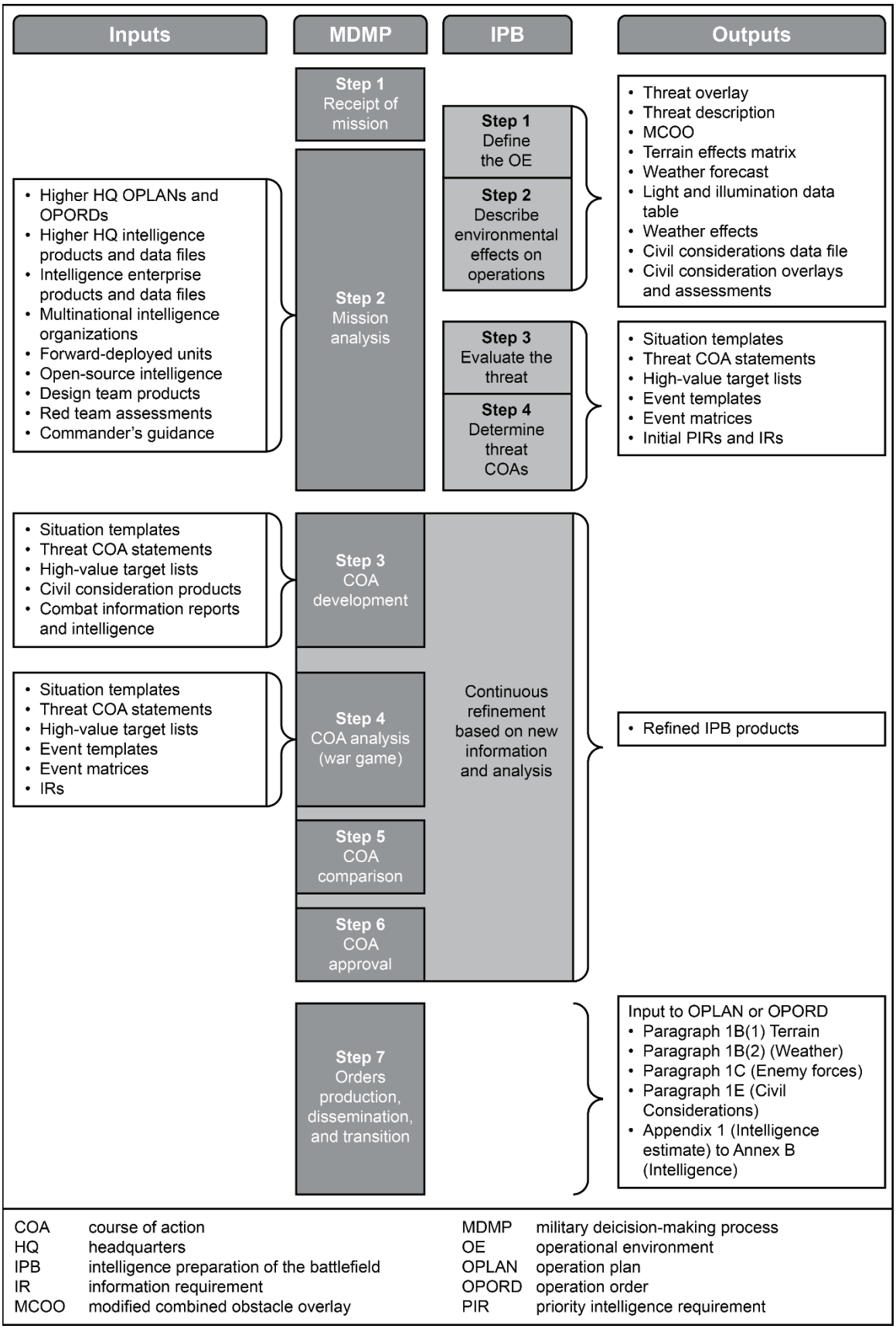

Figure G-2. Intelligence preparation of the battlefield within the MDMP

DEFINE THE OPERATIONAL ENVIRONMENT

G-6. The define the OE step of IPB 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 of enemy, terrain and weather, time, and civil considerations are relevant to the mission. During this step, the AO and area of interest are identified. The staff then identifies specific characteristics of the AO 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, and humidity).
- Civil considerations (areas, structures, capabilities, organizations, people, and events).

G-7. 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 IPB. 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 IPB, 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 IPB 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 IPB 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 graphically depicts the threat's current physical location in the AO and area of influence, including the threat's identity, size, location, and strength.

EVALUATE THE THREAT

G-10. Step 3 of IPB 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 graphically portray how the threat prefers to use its capabilities to accomplish its 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 IPB 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 G-5.

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 graphically 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 high-payoff target list (HPTL) during the COA development step of the MDMP.

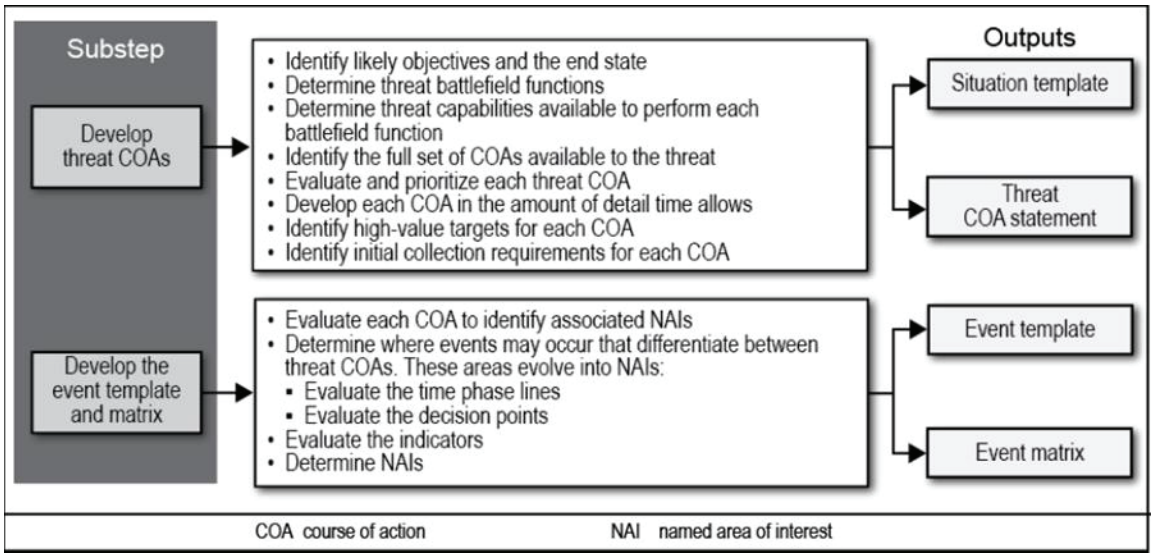

Figure G-3. Determine threat courses of action

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 requirements (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 war gaming. 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 (JP 2-01.3). 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.

STAFF INPUT TO INTELLIGENCE PREPARATION OF THE BATTLEFIELD

G-16. IPB is a collaborative staff effort led by the G-2 or S-2. All staff sections provide their subject matter expertise as required in the development of IPB products and understanding of the enemy, terrain, weather, and civil considerations. Table G-1 (on pages G-6 through G-7) lists each staff section's input to IPB products (such as MCOOs, threat models, situation templates, HVT lists, high-payoff target lists, event templates, and event matrices). Staff input is mission-dependent and not all inclusive.

Table G-1. Staff input to intelligence preparation of the battlefield

Staff section	*Intelligence preparation of the battlefield related inputs*
All staff sections provide their subject matter expertise to assist in determining these inputs:	• Enemy objectives and desired end state. • Named areas of interest. • High-value targets. • High-payoff targets. • Decision points.
The **assistant chief of staff, intelligence (G-2) or battalion or brigade intelligence staff officer (S-2)** leads the intelligence preparation of the battlefield effort and has staff responsibility for analyzing the mission variables of enemy, terrain and weather, civil considerations, and intelligence considerations.	• Threat doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Threat systems. • Identification of areas of interest and areas of influence. • Terrain analysis. • Determination of threat courses of action.
The **assistant chief of staff, operations (G-3) or battalion or brigade operations staff officer (S-3)** provides subject matter expertise on the art and science of military operations. The G-3 or S-3 evaluates intelligence preparation of the battlefield products to ensure they support friendly course of action development and analysis.	• Operational experience. • Assistance in determining— ▪ Target areas of interest. ▪ Engagement areas. ▪ Time phase lines. ▪ Relative combat power matrices for friendly and enemy forces.
The **assistant chief of staff, logistics (G-4) or battalion or brigade logistics staff officer (S-4)** provides subject matter expertise on sustainment operations.	• Threat logistics doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Threat supply, resupply routes, and resupply points.
The **assistant chief of staff, signal (G-6) or battalion or brigade signal staff officer (S-6)** provides subject matter expertise on friendly communications systems and assists the G-2 or S-2 in identifying and evaluating friendly communications systems' vulnerabilities to cyberspace electromagnetic activities and electronic attack.	• Threat employment of communications systems. • Threat communications networks and nodes. • Threat communications vulnerabilities. • Line of sight analysis.
The **assistant chief of staff, civil affairs operations (G-9) or battalion or brigade civil affairs operations staff officer (S-9)** provides subject matter expertise on civil affairs operations.	• Evaluation of civil considerations on military operations. • ASCOPE (areas, structures, capabilities, organizations, people, and events) analysis. • PMESII-PT (political, military, economic, social, information, infrastructure, physical environment, and time) analysis. • Civil considerations overlays.
The **chief of fires** (at Army Service component command), deputy fire support coordinator (at brigade through corps), or the **fires support officer** (at battalion and below) provides subject matter expertise for fires.	• Threat fires doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Assistance in selecting— ▪ Target areas of interest. ▪ Electronic attack. ▪ Decision points. ▪ Time phase lines.

Table G-1. Staff input to intelligence preparation of the battlefield (continued)

Staff section	*Intelligence preparation of the battlefield related inputs*
The **engineer officer** provides subject matter expertise on mobility and countermobility and assists the G-2 or S-2 in developing enemy obstacle plans for the enemy situation template.	• Threat engineer doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Terrain analysis. • Mobility corridors. • OAKOC (observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment) factors. • Obstacle locations.
The **chemical, biological, radiological, and nuclear (CBRN) officer** provides subject matter expertise on CBRN, weapons of mass destruction targets, and assists the G-2 or S-2 in planning CBRN reconnaissance and surveillance of named areas of interest.	• Threat CBRN doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Triggers for using CBRN. • Terrain and weather considerations for using CBRN.
The **air defense artillery (ADA) officer** provides subject matter expertise on ADA and assists the G-2 or S-2 in determining the locations of ADA assets and potential areas of employment.	• Threat ADA doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Air avenues of approach.
The **cyberspace electromagnetic activities section** provides subject matter expertise on information pertaining to doctrine, tactics, and equipment of enemy cyberspace and electromagnetic warfare (EW) forces, and access to cyberspace and EW capabilities for information collection.	• Threat cyberspace and EW doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Threat use of cyberspace and the electromagnetic spectrum.
The **cyber electromagnetic warfare officer** provides subject matter expertise on ground-based, airborne, and functional EW employment considerations.	• Threat EW doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Line of sight analysis.
The **information operations officer** provides subject matter expertise on shaping operational activities and information considerations.	• Threat information warfare doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Threat themes and messaging. • Combined information overlays.
The **staff weather officer** provides subject matter expertise on weather effects on operations.	• Weather effects on terrain. • Weather forecast charts. • Light and illumination data tables. • Weather effects on systems and capabilities. • Tidal charts.
The **space support team** provides analysis of the space domain and its capabilities and effects within the operational environment.	• Threat space doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. • Space weather effects on operations.

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 IPB 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 G-2 or 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 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 all of 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 commander's critical information requirements (CCIRs) and other information requirements.

G-24. Reconnaissance produces information about the AO. 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. Units are primarily tasked to conduct reconnaissance with tailored and specialized capabilities that include air cavalry and attack helicopter units, ground cavalry and scout units, chemical reconnaissance elements, engineer reconnaissance units, 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 the threat and 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'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 cyber-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 Battlefield

G-34. IPB is an important prerequisite to information collection planning as discussed in paragraphs G-3 to G-15. During IPB, 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 on a daily basis, 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 always 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 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 IPB.

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 overall responsible for the information collection plan. In developing the plan they consider—

- 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 game).

Course of Action Analysis (War game), 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 (XO) officer 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, 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:

- **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.** The attack guidance matrix (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-2 on page G-14 for information on integrating the decide function into the MDMP.)

Table G-2. The MDMP 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
Warning order	**Warning order**				**Warning order**	
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 IPB.

G-57. IPB 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.

(See ATP 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 war.
- 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 elements of combat power to accomplish the mission. The targeting team identifies which HVTs are potential high payoff targets (HPTs) for each COA. It coordinates and deconflicts targets and establishes assessment criteria.

Course of Action Analysis (War gaming)

G-62. COA analysis (war gaming) 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. **High-payoff target list**. The HPTL is a prioritized list of HPTs. A *high-payoff target* is a target whose loss to the threat 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 criteria 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 a matrix (the 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 electronic 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 (ISR) 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 a result of battle damage assessment, may result in a reattack recommendation. (See ATP 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-3 for a listing of how risk management is integrated into the MDMP.) The representation in table G-3 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-3. 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 changing 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 IPB 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.

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
AFMAN	Air Force manual
AFTTP	Air Force tactics, techniques, and procedures
AGM	attack guidance matrix
AJP	allied joint publication
APP	allied procedural publication
AO	area of operations
AOR	area of responsibility
AR	armor
AR	Army regulation
ATP	Army techniques publication
BCT	brigade combat team
C	CONFIDENTIAL
CAV	cavalry
CBRN	chemical, biological, radiological, and nuclear
CCIR	commander's critical information requirement
CCP	combatant command campaign plan
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 memorandum
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
DOD	Department of Defense
DODD	Department of Defense directive
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 requirement
FM	field manual
FULLCOM	full command
FRAGORD	fragmentary order
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
GCC	geographic combatant commander
GFMIG	Global Force Management Implementation Guidance
GS	general support
HPT	high-payoff target
HPTL	high-payoff target list
HVT	high-value target
IN	infantry
IPB	intelligence preparation of the battlefield
ISR	intelligence, surveillance, and reconnaissance
JFC	joint force commander
JP	joint publication
JSCP	Joint Strategic Campaign Plan
MCOO	modified combined obstacle overlay
MCRP	Marine Corps reference publication
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	measure of effectiveness
MOP	measure of performance
NAI	named area of interest
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
NTTP	Navy tactics, techniques, and procedures
OAKOC	observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment
OE	operational environment
OPCOM	operational command
OPCON	operational control
OPLAN	operation plan
OPORD	operation order
OPSEC	operations security
PIR	priority intelligence requirement
PMESII-PT	political, military, economic, social, information, infrastructure, physical environment, and time
RDSP	rapid decision-making and synchronization process
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-5	battalion or brigade plans staff officer
S-6	battalion or brigade signal staff 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
TPFDD	time-phased force deployment data
TS	TOP SECRET
U	UNCLASSIFIED
UCP	Unified Command Plan
U.S.	United States
WARNORD	warning order
XO	executive officer

SECTION II – TERMS

administrative control

Direction or exercise of authority over subordinate or other organizations in respect to administration and support. (JP 1)

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

The determination of the progress toward accomplishing a task, creating a condition, or achieving an objective. (JP 3-0)

assign

To place units or personnel in an organization where such placement is relatively permanent, and/or where such organization controls and administers the units or personnel for the primary function, or greater portion of the functions, of the unit or personnel. (JP 3-0)

attach

The placement of units or personnel in an organization where such placement is relatively temporary. (JP 3-0)

avenue of approach

An air or ground route of an attacking force of a given size leading to its objective or to key terrain in its path. (JP 2-01.3)

base

A locality from which operations are projected or supported. (JP 4-0)

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

That 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. (JP 3-31)

collaborative planning

Two or more echelons planning together in rela time, sharing information, perceptions, and ideas to develop their respective plans simultaneously. (ADP 5-0)

combat assessment

The determination of the overall effectiveness of force employment during military operations. (JP 3-60)

combat power

(Army) The total means of destructive, constructive, and information capabilities that a military unit or formation can apply at a given time. (ADP 3-0)

combatant command (command authority)

The 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 mission to the command. (JP 1)

commander's critical information requirement

An information requirement identified by the commander as being critical to facilitating timely decision making. (JP 3-0)

commander's intent

A clear and concise expression of the purpose of the operation and the desired military end state that supports mission command, provides focus to the staff, and helps subordinate and supporting commanders act to achieve the commander's desired results without further orders, even when the operation does not unfold as planned. (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)

common operational picture

(Army) A display of relevant information within a commander's area of interest tailored to the user's requirements and based on common data and information shared by more than one command. (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. A constraint dictates an action or inaction, thus restricting the freedom of action of a subordinate commander.

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

The 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)

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.

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 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 2-01.3)

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)

directive authority for logistics

Combatant commander authority to issue directives to subordinate commanders to ensure the effective execution of approved operation plans, optimize the use or reallocation of available resources, and prevent or eliminate redundant facilities and/or overlapping functions among the Service component commands. (JP 1)

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)

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)

end state

The set of required conditions that defines achievement of the commander's objectives. (JP 3-0)

engagement

A tactical conflict, usually between opposing lower echelons 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 measure change in the situation and judge progress toward desired conditions and determing why the current degree of progress exists. (ADP 5-0)

event matrix

A cross-referenced description of the indicators and activity expected to occur in each named area of interest. (JP 2-01.3)

event template

A guide for collection planning that depicts the named areas of interest where activity, or its lack of activity, will indicate which course of action the adversary has adopted. (JP 2-01.3)

execution

The act of putting a plan into action by applying combat power to accomplish the mission and adjusting operations based on changes in the situation. (ADP 5-0)

execution matrix

A visual representation of subordinate tasks in relationship to each other over time. (ADP 5-0)

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 3-90-1)

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)

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 threat will contribute to the success of the friendly course of action. (JP 3- 60)

***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)

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)

information environment

The aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information. (JP 3-13)

intelligence preparation of the battlefield

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)

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 2-01.3)

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 taktical 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 effort

(Army) A line that links multiple tasks using the logic of purpose rather than geogrphical reference to focus efforts toward establishing a desired end state. (ADP 3-0)

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 task, together with the purpose, that clearly indicates the action to be taken and the reason therefore. (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)

multinational operations

A collective term to describe military actions conducted by forces of two or more nations, usually undertaken within the structure of the coalition or alliance. (JP 3-16)

mutual support

That support which units render each other against an enemy, because of their assigned tasks, their position relative to each other and to the enemy, and their inherent capabilities. (JP 3-31)

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 natural or man-made obstruction designed or employed to disrupt, fix, turn, or block the movement of an opposing force, and to impose additional losses in personnel, time, and equipment on the opposing force. (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)

operational environment

A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

operational level of warfare

The level of warfare at which campaigns and major operations are planned, conducted, and sustained to achieve strategic objectives within theaters or other operational areas. (JP 3-0)

operational reach

The distance and duration across which a force can successfully employ military capabilities. (JP 3-0)

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)

organic

Assigned to and forming an essential part of a military organization as listed in its table of organization for the Army, Air Force, and Marine Corps, and are assigned to the operating forces for the Navy. (JP 1)

***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.

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)

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

An intelligence requirement that the commander and staff need to understand the threat and other aspects of the operational environment. (JP 2-01)

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)

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)

strategic level of warfare

The level of warfare at which a nation, often as a member of a group of nations, determines national or multinational (alliance or coalition) strategic objectives and guidance, then develops and uses national resources to achieve those objectives. (JP 3-0)

strategy

A prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theater, national, and/or multinational objectives. (JP 3-0)

support

The action of a force that aids, protects, complements, or sustains another force in accordance with a directive requiring such action. (JP 1)

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 missions or tasks assigned. (JP 1)

tactical level of warfare

The level of warfare at which battles and engagements are planned and executed to achieve military objectives assigned to tacticval units or task forces. (JP 3-0)

tactical mission task

The specific activity performed by a unit while executing a form of tactical operation or form of maneuver. It may be expressed as either an action by a friendly force or effects on an enemy force. (FM 3-90-1)

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 to an individual or organization that must be done as it is imposed by an appropriate authority. (JP 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)

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, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort. (JP 1)

warning order

A preliminary notice of an order or action that is to follow. (JP 5-0)

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Index

Entries are by paragraph number.

Entries are by paragraph number.

Entries are by paragraph number.

D

Entries are by paragraph number.

Entries are by paragraph number.

Entries are by paragraph number.

Entries are by paragraph number.

P-Q

Entries are by paragraph number.

Entries are by paragraph number.

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16 May 2022

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