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BSS7 SMARTBOOK

7th EDITION (BSS7)

Operations Process (Plan, Prepare, Execute, Assess)

Multidomain Operations & the Strategic Environment

Integrating Planning (Planning Methodologies)

Integrating Processes (IPB, Info Collection, Targeting, RM, KM)

Plans & Orders (WARNORDs, OPORDs, and FRAGORDs)

Mission Command (C2 Warfighting Function, Command Posts, Liaison)

Rehearsals & After Action Reviews

Operational Terms and Military Symbols

the BATTLE STAFF

Planning & Conducting Multidomain Operations

The Lightning Press

Norman M. Wade

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Planning & Conducting Multidomain Operations

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(BSS7) Notes to Reader

Planning & Conducting Multidomain Operations

The Army's framework for organizing and putting command and control into action is the **operations process**—the major command and control activities performed during operations: **planning, preparing, executing, and continuously assessing** the operation. Commanders use the operations process to drive the conceptual and detailed planning necessary to **understand** their operational environment (OE); **visualize and describe** the operation's end state and operational approach; make and articulate decisions; and **direct, lead, and assess** operations.

Commanders, staffs, and subordinate headquarters employ the operations process to organize efforts, **integrate the warfighting functions across multiple domains**, and synchronize forces to accomplish missions. This includes integrating numerous processes and activities within the headquarters and with higher, subordinate, supporting, and supported units. Key **integrating processes** that occur throughout the operations process include intelligence preparation of the battlefield, information collection, targeting, risk management, and knowledge management.

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

BSS7: The Battle Staff SMARTbook, 7th Ed. is completely updated for 2023 to include FM 5-0 w/C1 (2022), FM 6-0 (2022), FMs 1-02.1/.2 (2022), and more. Focusing on planning and conducting multidomain operations (FM 3-0), BSS7 covers the operations process; commander and staff activities; the five Army planning methodologies; integrating processes (IPB, information collection, targeting, risk management, and knowledge management); plans and orders; mission command, C2 warfighting function tasks, command posts, liaison; rehearsals & after action reviews; and operational terms and military symbols.

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BSS7: The Battle Staff SMARTbook, 7th Ed.
(Planning & Conducting Multidomain Operations)

BSS7: The Battle Staff SMARTbook, 7th Ed. is completely updated for 2023 to include FM 5-0 w/C1 (2022), FM 6-0 (2022), FMs 1-02.1/.2 (2022), and more. Focusing on planning and conducting multidomain operations (FM 3-0), BSS7 covers the operations process; commander and staff activities; the five Army planning methodologies; integrating processes (IPB, information collection, targeting, risk management, and knowledge management); plans and orders; mission command, C2 warfighting function tasks, command posts, liaison; rehearsals & after action reviews; and operational terms and military symbols.

FM 5-0 w/C1 (May '22) | *FM 3-0 (Oct '22)* | *FM 6-0 (May '22)* | *FMs 1-02.1/.2 (May '22)* | *plus more!*

Chap 1: The Operations Process (ADP 5-0)

The Army's framework for organizing and putting command and control into action is the **operations process**—the major command and control activities performed during operations: **planning, preparing, executing, and continuously assessing** the operation. Commanders use the operations process to drive the conceptual and detailed planning necessary to understand their operational environment (OE); visualize and describe the operation's end state and operational approach; make and articulate decisions; and direct, lead, and assess operations.

To understand the fundamentals of planning, Soldiers first must appreciate the general nature of operations. With this in mind, a complete overview and pertinent material focused for planners is provided related to planning and conducting **multidomain operations** as described in FM 3-0 (with direct page links that lead to expanded material in *AODS7: The Army Operations & Doctrine SMARTbook, 7th Ed.*).

Chap 2: Planning Methodologies (FM 5-0)

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

Chap 3: Integrating Processes (ATPs 2-01.3/3-19/5-19/6-01.1)

Commanders and staffs integrate the warfighting functions and synchronize the force to adapt to changing circumstances throughout the operations process. They use several **integrating processes** to do this. An integrating process consists of a series of steps that incorporate multiple disciplines to achieve a specific end. For example, during planning, the military decision-making process (MDMP) integrates the commander and staff in a series of steps to produce a plan or order. Key integrating processes that occur throughout the operations process include **intelligence preparation of the battlefield, information collection, targeting, risk management, and knowledge management**.

Chap 4: Plans & Orders (FM 5-0)

A product 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 visualization of an operation. Plans and orders direct, coordinate, and synchronize subordinate actions and inform those outside the unit how to cooperate and provide support.

Chap 5: Mission Command (FM 6-0)

Mission command is the Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation. Mission command supports the Army's operational concept of unified land operations and its emphasis on seizing, retaining, and exploiting the initiative. The **command and control warfighting function** is the related tasks and a system that enable commanders to synchronize and converge all elements of combat power. The primary purpose of the command and control warfighting function is to assist commanders in integrating the other elements of combat power to achieve objectives and accomplish missions.

Chap 6: Rehearsals & After Action Reviews (FM 6-0 & 7-0)

Rehearsals allow leaders and their Soldiers to practice executing key aspects of the concept of operations. These actions help Soldiers orient themselves to their environment and other units before executing the operation. An **after action review (AAR)** is a guided analysis of an organization's performance, conducted at appropriate times during and at the conclusion of a training event or operation with the objective of improving future performance. The AAR provides valuable feedback essential to correcting training deficiencies. Feedback must be direct, on-the-spot and standards-based.

Chap 7: Operational Terms & Military Symbols (FMs 1-02.1/.2)

Terms and symbols provide a common language used to communicate during the conduct of operations. FM 1-02.1 compiles all Army terms and definitions approved for use in Army doctrinal publications, including ADPs, FMs, and ATPs. Symbols are those graphics defined specifically for military use. They are codified in MIL-STD-2525D. Military symbols are logograms that represent words or terms used to depict abstract graphic representations of a unit, equipment, installation, activity, control measure, or tactical mission task relevant to military operations. These symbols are available for use in course of action sketches, visualizing operation orders, planning, maps, overlays, and command and control system displays to represent a current common operational picture.

(BSS7) References

The following references were used to compile The Battle Staff SMARTbook. All references are considered public domain, available to the general public, and designated as "approved for public release; distribution is unlimited." The Battle Staff SMARTbook does not contain classified or sensitive material restricted from public release.

Field Manuals (FMs)

FM 3-0*	Oct 2022	Operations
FM 5-0*	May 2022	Planning and Orders Production
FM 6-0*	May 2022	Commander and Staff Organization and Operations
FM 6-01.1	Jul 2012	Knowledge Management Operations
FM 3-09*	Apr 2020	Fire Support and Field Artillery Operations
FM 3-55	May 2013	Information Collection

Army Techniques Publications (ATPs)

ATP 2-01.3*	Mar 2019	Intelligence Preparation of the Battlefield (w/change 1)
ATP 3-60	May 2015	Targeting
ATP 5-0.1*	Jul 2015	Army Design Methodology
ATP 5-19*	Nov 2021	Risk Management
ATP 6-01.1*	Mar 2015	Techniques for Effective Knowledge Management

Army Doctrinal Publications (ADPs)

ADP 2-0	Jul 2019	Intelligence
ADP 3-19	Jul 2019	Fires
ADP 3-90	Jul 2019	Offense and Defense
ADP 5-0	Jul 2019	The Operations Process
ADP 6-0	Jul 2019	Mission Command

Joint Publications (JPs)

JP 3-0*	Jun 2022	Joint Campaigns and Operations
JP 5-0*	Dec 2020	Joint Planning

** New or updated reference publication since last edition.*

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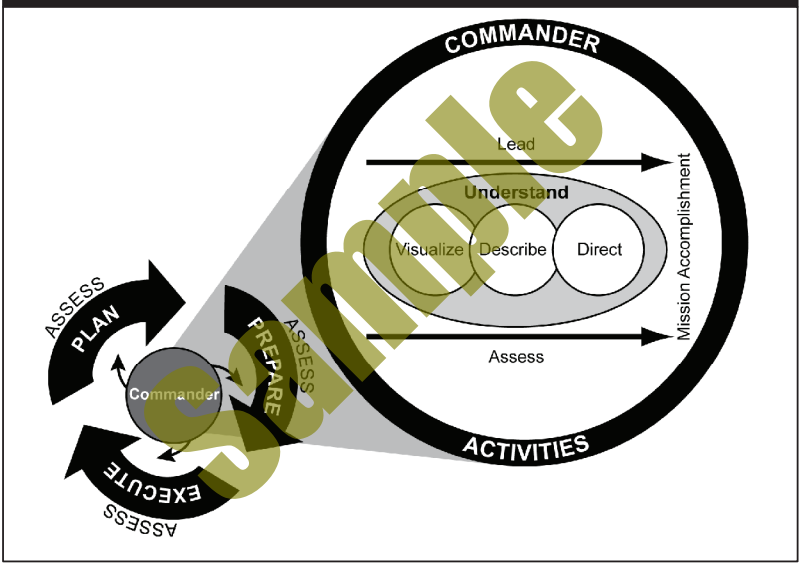
Chap 1

I. The Operations Process

Ref: ADP 5-0, The Operations Process (Jul '19), chap. I.

The Army's framework for organizing and putting command and control into action is the operations process—the major command and control activities performed during operations: planning, preparing, executing, and continuously assessing the operation. Commanders use the operations process to drive the conceptual and detailed planning necessary to understand their operational environment (OE); visualize and describe the operation's end state and operational approach; make and articulate decisions; and direct, lead, and assess operations.

The Operations Process



Ref: ADP 5-0, The Operations Process, fig. 1-1, p. 1-4.

Commanders, staffs, and subordinate headquarters employ the operations process to organize efforts, integrate the warfighting functions across multiple domains, and synchronize forces to accomplish missions. This includes integrating numerous processes and activities such as information collection and targeting within the headquarters and with higher, subordinate, supporting, and supported units. The unit's battle rhythm helps to integrate and synchronize the various processes and activities that occur within the operations process.

A goal of the operations process is to make timely and effective decisions and to act faster than the enemy. A tempo advantageous to friendly forces can place the enemy under the pressures of uncertainty and time. Throughout the operations process, making and communicating decisions faster than the enemy can react produces a tempo with which the enemy cannot compete. These decisions include assigning tasks; prioritizing, allocating, and organizing forces and resources; and selecting the critical times and places to act. Decision making during execution includes knowing how and when to adjust previous decisions. The speed and accuracy of a commander's actions to address a changing situation is a key contributor to agility.

Multidomain Operations *(AODS7, pp. 1-2 and 1-37 to 1-62.)*

Ref: FM 3-0, Operations (Oct. '22), pp. 1-2 to 1-3 and 3-1 to 3-2.

The Army's operational concept is multidomain operations. Multidomain operations are how Army forces contribute to and operate as part of the joint force. Army forces, enabled by joint capabilities provide the lethal and resilient landpower necessary to defeat threat standoff approaches and achieve joint force objectives.

Multidomain operations are the **combined arms** employment of **joint and Army** capabilities to create and exploit **relative advantages** that achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force commanders. *(AODS7, pp. 1-2 to 1-3 and 1-37 to 1-62.)*

During operations, small advantages can have significant impacts on the outcome of the mission, particularly when they accrue over time. Creating and exploiting relative advantages are therefore necessary for all operations, and they become even more critical when opposing sides are evenly matched. A relative advantage is a location or condition, in any domain, relative to an adversary or enemy that provides an opportunity towards or achieve an objective. Commanders seek and create relative advantages to exploit through action, and they continually assess to identify ways to expand opportunities.

Army leaders are accustomed to creating and exploiting relative advantages through the combined-arms approach that traditionally focuses on capabilities from the land, air, and maritime domains. The proliferation of space and cyberspace capabilities further requires leaders who understand the advantages those capabilities create in their operational environment. The ability to integrate and synchronize space and cyberspace capabilities at the most effective tactical echelon expands options for creating advantages to exploit.

Multidomain operations fracture the coherence of threat operational approaches by destroying, dislocating, isolating, and disintegrating their interdependent systems and formations, and exploiting the opportunities these disruptions provide to defeat enemy forces in detail. Army forces therefore require timely, accurate, relevant, and predictive intelligence to understand threat characteristics, capabilities, objectives, and courses of action. Intelligence initially drives what combinations of defeat mechanisms commanders pursue as they employ the capabilities of their forces in space and time against enemy forces. Army forces combine maneuver and targeting methods to defeat enemy formations and systems. Army forces employ maneuver to close with and destroy enemy formations in close operations. Targeting generally sets priorities for information collection, fires, and other key capabilities to disintegrate enemy networks and systems. Leaders execute the targeting process to create advantages that enable freedom of maneuver and exploit the positional advantages created by maneuver.

Because uncertainty, degraded communications, and fleeting windows of opportunity characterize operational environments during combat, multidomain operations require disciplined initiative cultivated through a mission command culture. Leaders must have a bias for action and accept that some level of uncertainty is always present. Commanders who empower leaders to make rapid decisions and to accept risk within the commander's intent enable formations to adapt rapidly while maintaining unity of effort.

Refer to AODS7: The Army Operations & Doctrine SMARTbook (Multidomain Operations). Completely updated with the 2022 edition of FM 3-0 , AODS7 focuses on Multidomain Operations and features rescoped chapters on generating and applying combat power: command & control (ADP 6-0), movement and maneuver (ADPs 3-90, 3-07, 3-28, 3-05), intelligence (ADP 2-0), fires (ADP 3-19), sustainment (ADP 4-0), & protection (ADP 3-37).

B. The Strategic Environment

Ref: FM 3-0, Operations (Oct. '22), chap. 2.

Strategic Environment *(AODS7, pp. 1-23 to 1-27.)*

The central challenge to U.S. security is the reemergence of long-term, great power competition with China and Russia as individual actors and as actors working together to achieve common goals.

- **China and Russia.** China uses its rapidly modernizing military, information warfare, and predatory economics to coerce neighboring countries to reorder the Indo-Pacific region to its advantage. Concurrently, Russia seeks veto authority over nations on its periphery in terms of its governmental, economic, and diplomatic decisions, to subvert the North Atlantic Treaty Organization (NATO), and to change European and Middle East security and economic structures to its favor.
- **North Korea and Iran.** In addition to China and Russia, several other states threaten U.S. security. North Korea seeks to guarantee survival of its regime and increase its leverage. It is pursuing a mixture of CBRN, conventional, and unconventional weapons and a growing ballistic missile capability to gain coercive influence over South Korea, Japan, and the United States. Similarly, Iran seeks dominance over its neighbors by asserting an arc of influence and instability while vying for regional hegemony. Iran uses state-sponsored terrorist activities, a network of proxies, and its missile capabilities to achieve its objectives.
- **Non-state Actors (Irregular Warfare).** While states are the principal actors on the global stage, non-state actors also threaten the strategic environment with increasingly sophisticated capabilities. Terrorists, transnational criminal organizations, threat cyber actors, and other malicious non-state actors have transformed global affairs with increased capabilities of mass disruption. Terrorism remains a persistent tactic driven by ideology and enabled by political and economic structures.

Threat *(AODS7, pp. 1-24.)*

A **threat** is any combination of actors, entities, or forces that have the capability and intent to harm United States forces, United States national interests, or the homeland (ADP 3-0). Threats faced by Army forces are, by nature, hybrid. They include individuals, groups of individuals, paramilitary or military forces, criminal elements, nation-states, or national alliances. In general, a threat can be categorized as an enemy or an adversary:

- An **enemy** is a party identified as hostile against which the use of force is authorized (ADP 3-0). An enemy is also a combatant under the law of war.
- An **adversary** is a party acknowledged as potentially hostile to a friendly party and against which the use of force may be envisaged (JP 3-0). Adversaries pursue interests that compete with those of the United States and are often called competitors.
- **Peer threats** are adversaries or enemies with capabilities and capacity to oppose U.S. forces across multiple domains worldwide or in a specific region where they enjoy a position of relative advantage. Peer threats possess roughly equal combat power to U.S. forces in geographic proximity to a conflict area.

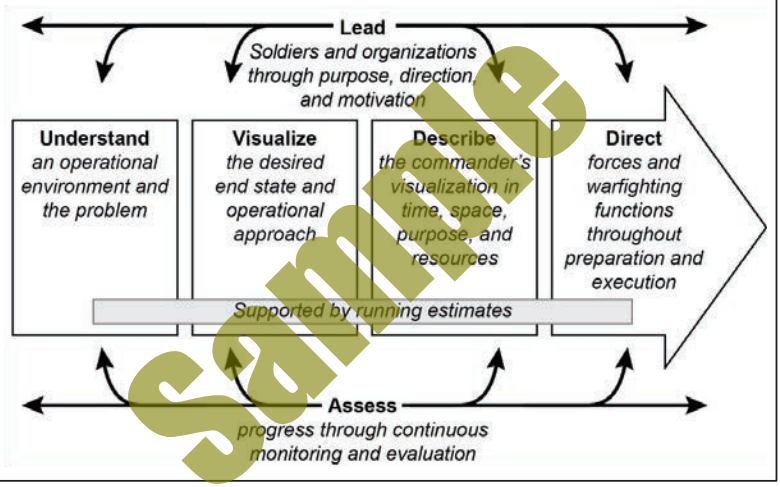
Chap 1

II. Driving the Operations Process

Ref: ADP 5-0, The Operations Process (Jul '19), chap. I and FM 3-0, Operations (Oct. '22), chap. 1.

Commanders are the most important participants in the operations process. 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**. Accurate and timely running estimates maintained by the staff, assist commanders in understanding situations and making decisions.

The Commander's Role in the Ops Process



Ref: ADP 5-0, The Operations Process (Jul '19), fig. 1-2, p. 1-8.

I. Understand

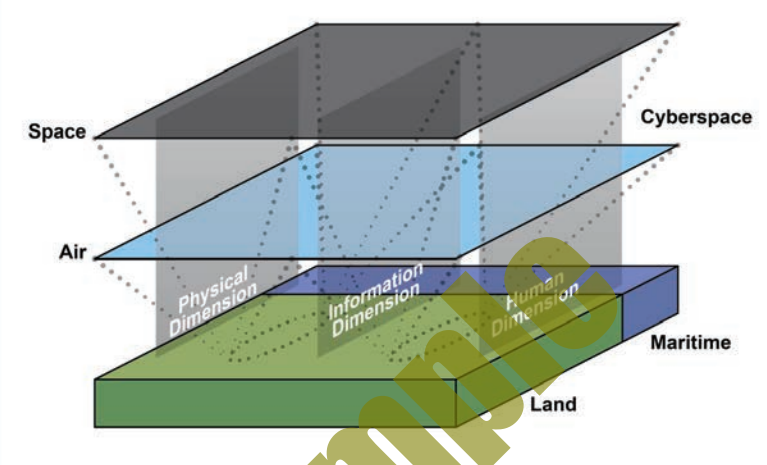
Understanding an operational environment (OE) and associated problems is fundamental to establishing a situation's context and visualizing operations. An operational environment is a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the 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 actors who are relevant to a specific operation. *(See following page.)*

Commanders collaborate with their staffs, other commanders, and unified action partners to build a shared understanding of their OEs and associated problems. Planning, intelligence preparation of the battlefield (IPB), and running estimates help commanders develop an initial understanding of their OEs. During execution, commanders direct reconnaissance and develop the situation through action to improve their understanding. Commanders circulate within the area of operations (AO) as often as possible, collaborating with subordinate commanders and speaking with Soldiers. Ideally, true understanding should be the basis for decisions.

Understanding an Operational Environment (OE)

Ref: FM 3-0, Operations (Oct. '22), pp. 1-16 to 1-23.

An operational environment is the aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander (JP 3-0). For Army forces, an operational environment includes portions of the land, maritime, air, space, and cyberspace domains understood through three dimensions (human, physical, and information). The land, maritime, air, and space domains are defined by their physical characteristics.



Ref: FM 3-0 (Oct. '22), fig. 1-4. Domains and dimensions of an operational environment. Refer to JP 2-0 and JP 5-0 for more information on describing and analyzing an operational environment from a joint perspective.

An operational environment is the totality of factors that affect what occurs in an assigned area. These factors include actors, events, or actions that occur outside the assigned area. How the many entities behave and interact with each other is difficult to discern. No two operational environments are the same, and all of them continually change. Changes result, in part, from opposing forces and actors interacting, learning, and adapting. The complex and dynamic nature of an operational environment makes determining the relationship between cause and effect challenging, and it contributes to the uncertain nature of war and human competition. This requires that commanders, supported by their staffs, develop and maintain the best possible understanding of their operational environment. Several tools and processes assist commanders and staffs in understanding their operational environment. They include—

- Domains. (*AODS7, pp. 1-18 to 1-19.)*
- Dimensions. (*AODS7, p. 1-20 to 1-21.)*
- Operational and mission variables (*See pp. 1-18 to 1-19.)*
- Running estimates (*See pp. 2-16 to 2-17.)*
- Army design methodology (*See pp. 2-5 to 2-12.)*
- The military decision-making process (*See pp. 2-13 to 2-72)*
- Building intelligence knowledge (*AODS7, chap. 5.)*
- Intelligence preparation of the battlefield (*See pp. 3-3 to 3-52.)*
- Sustainment preparation of the operational environment *(AODS7, p. 7-13.)*

Combat Power (Direct) *(AODS7, chap. 2.)*

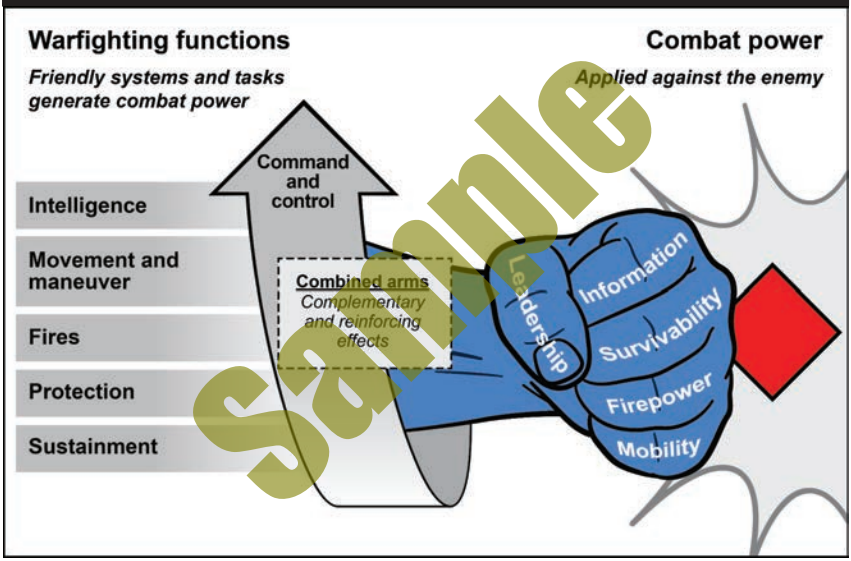
Ref: FM 3-0, Operations (Oct. '22), chap. 2.

Combat Power

Combat power is the total means of destructive and disruptive force that a military unit/formation can apply against an enemy at a given time (JP 3-0). It is the ability to fight. The complementary and reinforcing effects that result from synchronized operations yield a powerful blow that overwhelms enemy forces and creates friendly momentum.

The **complementary and reinforcing effects** that result from **synchronized operations** yield a powerful blow that overwhelms enemy forces and creates friendly momentum. **Army forces deliver that blow through a combination of five dynamics: leadership, information, survivability, firepower, and mobility.**

Dynamics of Combat Power



All **warfighting functions** contribute to generating and applying combat power. Well sustained units able to move and maneuver bring combat power to bear against the opponent. Joint and Army indirect fires complement and reinforce organic firepower in maneuver units. Survivability is a function of protection tasks, the protection inherent to Army platforms, and schemes of maneuver that focus friendly strengths against enemy weaknesses. Intelligence determines how and where to best apply combat power against enemy weaknesses. C2 enables leadership, the most important qualitative aspect of combat power.

Refer to AODS7: The Army Operations & Doctrine SMARTbook (Multidomain Operations). Completely updated with the new edition of FM 3-0 (Oct '22), AODS7 focuses on Multidomain Operations and features rescoped chapters on generating and applying the elements of combat power: command & control (ADP 6-0), movement and maneuver (ADPs 3-90, 3-07, 3-28, 3-05), intelligence (ADP 2-0), fires (ADP 3-19), sustainment (ADP 4-0), & protection (ADP 3-37).

(The Operations Process)
B. Preparation

Ref: ADP 5-0, The Operations Process (Jul '19), chap. 3.

Preparation consists of those activities performed by units and Soldiers to improve their ability to execute an operation. Preparation creates conditions that improve friendly forces' opportunities for success and include activities such as rehearsals, training, and inspections. It requires commander, staff, unit, and Soldier actions to ensure the force is ready to execute operations.

Preparation helps the force transition from planning to execution. Preparation normally begins during planning and continues into execution by uncommitted units. Like the other activities of the operations process, commanders drive preparation activities with a focus on leading and assessing.

Preparation Activities

- Coordinate and establish liaison
- Initiate information collection
- Initiate security operations
- Initiate troop movements
- Complete task organization
- Integrate new units and Soldiers
- Train
- Conduct pre-operations checks and inspections
- Initiate sustainment preparation
- Initiate network preparations
- Manage terrain
- Prepare terrain
- Conduct confirmation briefs
- Conduct rehearsals
- Conduct plans-to-operations transition
- Revise and refine the plan
- Supervise

Ref: ADP 5-0, The Operations Process (Jul '19), table 3-1, p. 3-4.

Guides to Effective Preparation

Like the other activities of the operations process, commanders drive preparation. They continue to understand, visualize, describe, direct, lead, and assess. They gather additional information to improve their situational understanding, revise the plan as required, coordinate with other units and partners, and supervise preparation activities to ensure their forces are ready to execute operations. The following guides aid commanders and leaders in effectively preparing for operations:

- Allocate time and prioritize preparation efforts.
- Protect the force.
- Supervise.

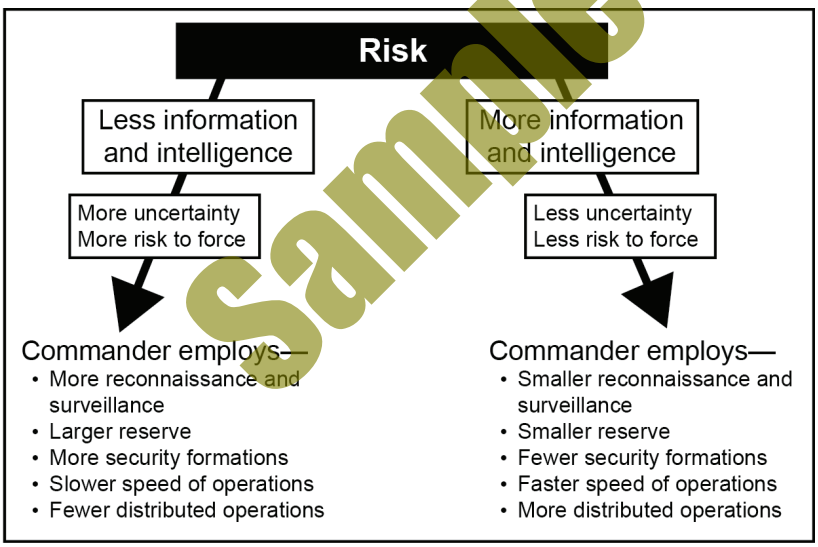
Risk Reduction Factors

Ref: ADP 5-0, The Operations Process (Jul '19), pp. 4-2 to 4-3.

Uncertainty and risk are inherent in all military operations. Recognizing and acting on opportunity means taking risks. Reasonably estimating and intentionally accepting risk is not gambling. Carefully determining the risks, analyzing and minimizing as many hazards as possible, and executing a plan that accounts for those hazards contributes to successfully applying military force. Gambling, in contrast, is imprudently staking the success of an entire action on a single, improbable event. Commanders assess risk by answering three questions:

- Am I minimizing the risk of friendly losses?
- Am I risking the success of the operation?
- Am I minimizing the risk of civilian casualties and collateral damage?

When commanders embrace opportunity, they accept risk. It is counterproductive to wait for perfect preparation and synchronization. The time taken to fully synchronize forces and warfighting functions in a detailed order could mean a lost opportunity. It is far better to quickly summarize the essentials, get things moving, and send the details later. Leaders optimize the use of time with WARNORDs, FRAGORDs, and verbal updates.



Ref: ADP 5-0, fig. 4-1. Risk reduction factors.

Commanders exercise the art of command when deciding how much risk to accept. As shown above in figure 4-1, the commander has several techniques available to reduce the risk associated in a specific operation. Some techniques for reducing risk take resources from the decisive operation, which reduces the concentration of effects at the decisive point.

See pp. 3-71 to 3-74 for discussion of risk management (from ATP 5-19) as an integrating process. Refer to ADP 3-90 for a detailed discussion of the art of tactics and risk reduction.

(The Operations Process)
D. Assessment

Ref: ADP 5-0, The Operations Process (Jul '19), chap. 5.

Assessment is the determination of the progress toward accomplishing a task, creating a condition, or achieving an objective (JP 3-0). Assessment is a continuous activity of the operations process that supports decision making by ascertaining progress of the operation for the purpose of developing and refining plans and for making operations more effective. Assessment results enhance the commander's decision making and help the commander and the staff to keep pace with constantly changing situations.

Assessment Process Activities

A Monitoring

B Evaluating

C Recommending or Directing Action

Assessment involves deliberately comparing intended outcomes with actual events to determine the overall effectiveness of force employment. More specifically, assessment helps the commander determine progress toward attaining the desired end state, achieving objectives, and performing tasks. Through professional military judgment, assessment helps answer the following questions:

- Where are we?
- What happened?
- Why do we think it happened?
- So what?
- What are the likely future opportunities and risks?
- What do we need to do?

Assessment precedes and guides the other activities of the operations process. During planning, assessment focuses on understanding an OE and building an assessment plan. During preparation, the focus of assessment switches to discerning changes in the situation and the force's readiness to execute operations. During execution, assessment involves deliberately comparing forecasted outcomes to actual events while using indicators to judge operational progress towards success. Assessment during execution helps commanders determine whether changes in the operation are necessary to take advantage of opportunities or to counter unexpected threats.

The situation and echelon dictate the focus and methods leaders use to assess. Assessment occurs at all echelons. Normally, commanders 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.

I. Assessment Activities

Ref: ADP 5-0, The Operations Process (Jul '19), pp. 5-2 to 5-4.

The situation and type of operations affect the characteristics of assessment. During large-scale combat, assessment tends to be rapid, focused on the level of destruction of enemy units, terrain gained or lost, objectives secured, and the status of the friendly force to include sustainment. In other situations, such as counterinsurgency, assessment is less tangible. Assessing the level of security in an area or the level of the population's support for the government is challenging. Identifying what and how to assess requires significant effort from the commander and staff.

A. Monitoring

Monitoring is continuous observation of those conditions relevant to the current operation. Monitoring allows staffs to collect relevant information, specifically that information about the current situation described in the commander's intent and concept of operations. Commanders cannot judge progress nor make effective decisions without an accurate understanding of the current situation.

CCIRs and associated information requirements focus the staff's monitoring activities and prioritize the unit's collection efforts. Information requirements concerning the enemy, terrain and weather, and civil considerations are identified and assigned priorities through reconnaissance and surveillance. Operations officers use friendly reports to coordinate other assessment-related information requirements.

Staffs monitor and collect information from the common operational picture and friendly reports. This information includes operational and intelligence summaries from subordinate, higher, and adjacent headquarters and communications and reports from liaison teams. Staffs also identify information sources outside military channels and monitor their reports. These other channels might include products from civilian, host-nation, and other government agencies. Staffs apply information management and knowledge management to facilitate disseminating this information to the right people at the right time.

Staff sections record relevant information in running estimates. Staff sections maintain a continuous assessment of current operations as a basis to determine if operations are proceeding according to the commander's intent, mission, and concept of operations. In their running estimates, staff sections use this new information and these updated facts and assumptions as the basis for evaluation.

B. Evaluating

The staff analyzes relevant information collected through monitoring to evaluate the operation's progress. Evaluating is using indicators to judge progress toward desired conditions and determining why the current degree of progress exists. Evaluation is at the heart of the assessment process where most of the analysis occurs. Evaluation helps commanders determine what is working and what is not working, and it helps them gain insights into how to better accomplish the mission.

In the context of assessment, an indicator is 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). 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.

The two types of indicators commonly used in assessment include measures of performance (MOPs) and measures of effectiveness (MOEs):

Chap 2

Planning Methodologies

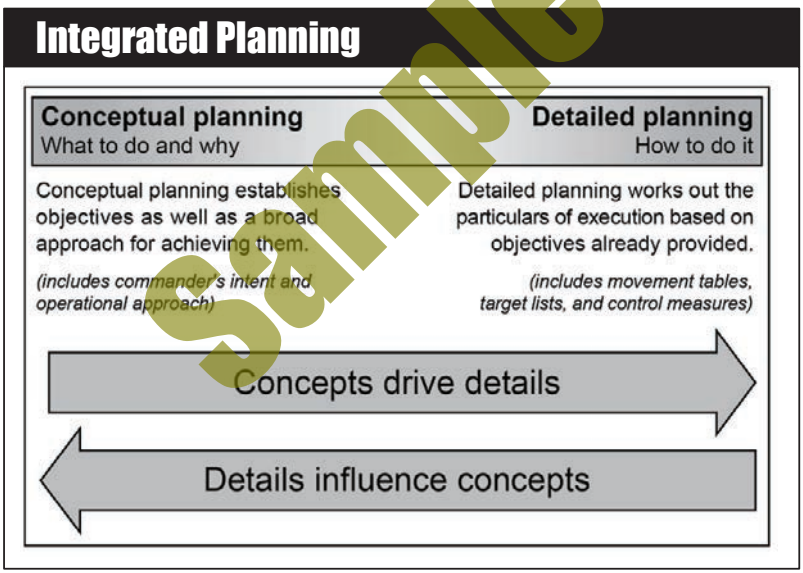
Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), p. 1-8.

I. Integrated Planning

Planning activities occupy a continuum ranging from conceptual to detailed. 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.

Detailed Planning

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.



Conceptual Planning

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 to the base OPLAN or OPORD. However, this dynamic does not operate in only one direction. Conceptual planning must respond to detailed constraints.

II. Army Planning Methodologies

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 1-9 to 1-12.

Integrated Planning

Planning activities occupy a continuum ranging from conceptual to detailed. 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.

Planning Methodologies

Planning requires 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 Planning Methodologies

Army Design Methodology
(See pp. 2-5 to 2-12.)

The Military Decisionmaking Process (MDMP) *(See pp. 2-13 to 2-72.)*

Troop Leading Procedures (TLP)
(See pp. 2-73 to 2-76.)

Rapid Decision-Making and Synchronization Process (RDSP) *(See pp. 2-77 to 2-82.)*

Army Problem Solving
(See pp. 2-83 to 2-84.)

A. Army Design Methodology (ADM) *(See pp. 2-5 to 2-12.)*

Army design methodology 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. 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, and reframing when necessary. While planners complete some activities before others, the understanding and learning within one activity may require revisiting the learning from another activity. Thus, ADM is iterative in nature.

(A.) Army Design Methodology (ADM)

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), chap. 4 and ATP 5-0.1, Army Design Methodology (Jul '15).

Successful planning requires the integration of both conceptual thinking and detailed analysis. 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 on p. 1-20, 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.

Army Design Methodology

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.**

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.

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.

When to Employ Army Design Methodology

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 4-4 to 4-7.

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?

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.

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.

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

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—

II. Framing the Problem

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 4-12 to 4-15.

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.

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 desired end state?
- What is the difference between the natural tendency of an OE and 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?

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.

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.

Refer to ATP 5-0.1, Army Design Methodology (Jul '15), chap. 4 for further discussion.

(B.) The Military Decision-Making Process (MDMP)

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), chap. 5.

The military decisionmaking 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.

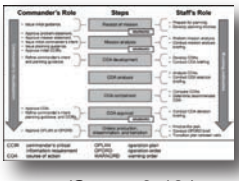
The Military Decision-Making Process (MDMP)

I **Receipt of Mission** → **WARNORD**
(See pp. 2-19 to 2-22.)

II **Mission Analysis** → **WARNORD**
(See pp. 2-23 to 2-38.)

III **COA Development**
(See pp. 2-39 to 2-50.)

Role of Commander and Staff



(See p. 2-18.)

IV **COA Analysis**
(See pp. 2-51 to 2-62.)

V **COA Comparison**
(See pp. 2-63 to 2-66.)

VI **COA Approval** → **WARNORD**
(See pp. 2-67 to 2-68.)

VII **Orders Production, Dissemination, and Transition** *(See pp. 2-69 to 2-70.)*

The military decision making process (MDMP) 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).

II. Running Estimates

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), App C.

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.

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.

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.

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.

Essential Qualities of Running Estimates

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. 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.

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.

Running Estimates in the Operations Process

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.

Generic Base Running Estimate Format

1. SITUATION AND CONSIDERATIONS.

a. Area of Interest. Identify and describe the area of interest that impact or affect functional area considerations.

b. Characteristics of the Area of Operations.

(1) Terrain. State how terrain affects staff functional area's capabilities.

(2) Weather. State how weather affects staff functional area's capabilities.

(3) Enemy Forces. Describe enemy disposition, composition, strength, capabilities, systems, and possible courses of action (COAs) with respect to their effect on functional area.

(4) Friendly Forces. List current functional area resources in terms of equipment, personnel, and systems. Identify additional resources available for functional area located at higher, adjacent, or other units. 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 functional area.

c. List the evaluation criteria identified during COA analysis. All staff use the same criteria.

4. ANALYSIS. Analyze each COA using the evaluation criteria from COA analysis. Review enemy actions that impact functional area as they relate to COAs. Identify issues, risks, and deficiencies these enemy actions may create with respect to functional area.

5. COMPARISON. Compare COAs. Rank order COAs for each key consideration. Use a decision matrix to aid the comparison process.

6. RECOMMENDATION AND CONCLUSIONS.

a. Recommend the most supportable COAs from the functional area perspective.

b. Prioritize and list issues, deficiencies, and risks and make recommendations on how to mitigate them.

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 MDMP. 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. 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. Each staff element continuously analyzes new information during operations to create knowledge, facilitate understanding, and **assess** if operations are progressing according to plan.

(B.) MDMP Step I. Receipt of Mission

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 5-4 to 5-8.

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.

I. Receipt of Mission

Purpose: Establish the conditions for successful planning.

Key Inputs	Key Outputs
▪ Higher headquarters plan (or order) or a new mission aniticipated by the commander	▪ Commander's initial guidance ▪ Initial allocation of time WARNORD

1. Alert the Staff and Other Key Participants
2. Gather the Tools
3. Update Running Estimates
4. Conduct Initial Assessment
5. Prepare Commander's Initial Guidance
6. Issue the Initial Warning Order

Ref: FM 5-0 (w/C1) (May '22), +fig. 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.

1. Alert the Staff and Other Key Participants

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 p. 2-4 for a discussion of planning teams.

2. Gather the Tools

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.

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.

3. Update Running Estimates

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

(B.) MDMP Step II. Mission Analysis

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 5-8 to 5-23.

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.

II. Mission Analysis

Purpose: Understand the Situation, Problem, and Mission

Key Inputs	Key Outputs
▪ Commander's initial guidance ▪ Higher headquarters plan or order ▪ Higher headquarters intelligence and knowledge products ▪ Knowledge products from other organizations ▪ Running estimates ▪ Army design products (if applicable)	▪ Updated IPB and running estimates ▪ Problem statement ▪ Mission statement ▪ Initial commander's intent ▪ Initial CCIRs and EEFIs ▪ Initial planning guidance ▪ Initial commander's guidance ▪ Assumptions ▪ Evaluation criteria for COAs **WARNORD**

1. Analyze Higher HQ Plan or Order
2. Perform the Initial IPB
3. Determine Specified, Implied and Essential Tasks
4. Review Available Assets and Identify Resource Shortfalls
5. Determine Constraints
6. Identify Facts and Develop Assumptions
7. Begin Risk Assessment and Management
8. Develop Initial CCIRs & EEFIs
9. Develop the Initial Information Collection Plan
10. Update Planning Timeline
11. Develop a Proposed Problem Statement
12. Develop a Proposed Mission Statement
13. Develop and Issue Initial Commander's Intent
14. Present the Mission Analysis Briefing
15. Develop COA Evaluation Criteria
16. Develop and Issue Planning Guidance
17. Issue a Warning Order

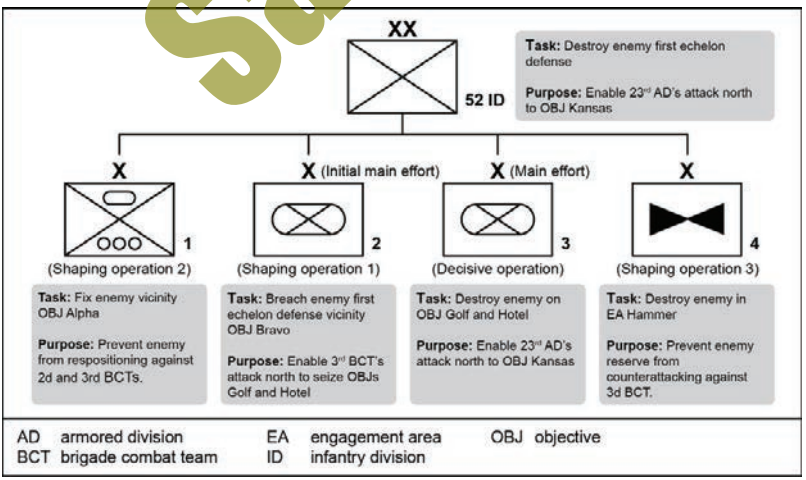
1. Analyze the Higher Headquarters' Plan or Order

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.

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.



Ref: FM 5-0 (w/C1), (May '22), fig. 5-4. Example nesting diagram.

Mission Statement (Examples)

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 5-17 to 5-18.

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 August19 (**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**).*

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**).*

Tactical Mission Tasks

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.

The following is a list of commonly used tactical mission tasks; see pp. 7-44 to 7-45 for a listing of tactical mission tasks to include symbols and definitions:

- attack by fire
- block
- breach
- bypass
- canalize
- clear
- contain
- control
- counter reconnaissance
- defeat
- destroy
- disengage
- disrupt
- exfiltrate
- fix
- follow and assume
- follow and support
- interdict
- isolate
- neutralize
- occupy
- reduce
- retain
- secure
- seize
- support-by-fire
- suppress
- turn

(B.) MDMP Step III. COA Development

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 5-23 to 5-35.

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.

III. COA Development

Purpose: Assist the commander in visualizing valid COAs.

Key Inputs	Key Outputs
▪ Mission statement ▪ Commander's planning guidance, CCIRs, and EEFIs ▪ Updated IPB products and running estimates ▪ Evaluation Criteria for COAs	▪ COA statements and sketches ▪ Revised planning guidance ▪ Updated running estimates and IPB ▪ Updated assumptions

1. Assess Relative Combat Power
2. Generate Options
3. Array Forces
4. Develop the Broad Concept
5. Assign Headquarters
6. Prepare Statements & Sketches
7. Conduct COA Briefing
8. Select or Modify COAs for Continued Analysis

Ref: FM 5-0 (w/C1), (May '22), +fig. 5-5. Step 3-course of action development.

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.

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.

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.

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.

1. Assess Relative Combat Power

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.

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.

War-Gaming Responsibilities

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 5-50 to 5-53.

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.

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.

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.

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.

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.

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 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.

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.

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.

Several other officers have responsibilities regarding war gaming.

Intelligence Responsibilities

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.

(Sample) Synchronization Matrix

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), p. 5-44.

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.

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 disinformation messaging accusing friendly sources of use of chemical munitions	Coordinate with OGA on location of chemical strikes; conduct tactical messaging
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

Ref: FM 5-0 (w/C1) (May '22), table 5-5. Example generic division synchronization matrix tool.

(B.) MDMP Step VII. Orders Production

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 5-56 to 5-58.

See chap. 4, Plans and Orders, for detailed discussion of orders production including task organization, administrative instructions, and examples and procedures.

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 chap. 4.)*

VII. Orders Production, Dissemination & Transition

Purpose: Complete the plan, issue the order, and ensure understanding by subordinates and supporting units.

Key Inputs	Key Outputs
▪ Commander approved COA with any modifications ▪ Refined commander's intent, CCIRs, and EEFIs ▪ Commander's final planning guidance ▪ Updated running estimates and IPB	▪ Approved operation plan or order ▪ Subordinates understand the plan or order

1 Produce and Disseminate Orders

2 Transition from Planning to Preparation

Ref: FM 5-0 (w/C1), (May '22), +fig. 5-16. Step 7-orders production, dissemination, and transition.

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.

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.

(C.) Troop Leading Procedures (TLP)

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), chap. 7.

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.

TLP - Planning at Company and Below

Troop Leading Procedures

1. Receive Mission
2. Issue WARNORD
3. Make Tentative Plan
4. Initiate Movement
5. Conduct Recon
6. Complete Plan
7. Issue OPORD
8. Supervise and Refine

METT-TC

Plan Development

Mission Analysis
- Analysis of the Mission
  - Purpose
  - Tasks – Specified, Implied, Essential
  - Constraints
  - Written Restated Mission
- Enemy Analysis
- Terrain and Weather Analysis
- Troops Available
- Time Available
- Risk Assessment

Course of Action Development
- Analyze Relative Combat Power
- Generate Options
- Develop a Concept of Operations
- Assign Responsibilities
- Prepare COA Statement and Sketch

COA Analysis
- Hasty War Game

COA Comparison

COA Selection

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.

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.

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.

Refer to SUTS3: The Small Unit Tactics SMARTbook, 3rd Ed. for further discussion of troop leading procedures and related activities/ topics -- such as combat orders, preparation and pre-combat inspections (PCIs), and rehearsals -- from a small unit perspective.

Troop Leading Procedure (TLP) Steps

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 7-4 to 7-10. Refer to SUTS3: The Small Unit Tactics SMARTbook, 3rd Ed. for further discussion.

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—

1. Receive the Mission

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.

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. 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 - METT-TC (I).

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.

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 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.

2. Issue a Warning Order

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.

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.

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.

(D.) Decision Making during Execution (RDSP)

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), chap. 6.

Execution Activities *(See pp. 1-41 to 1-46.)*

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.

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 include:

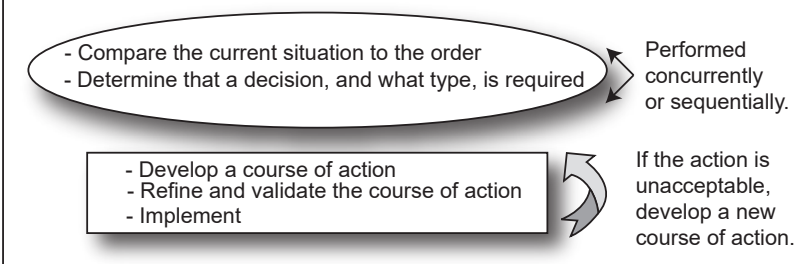
- **Assessment**—monitoring current operations and evaluating progress and variances.
- **Decision making**—making decisions to exploit opportunities or counter threats.
- **Directing action** — applying combat power and resources at decisive points and times.

Rapid Decision-Making and Synchronization Process (RDSP)

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. When using this technique:

- 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.

Rapid Decisionmaking & Sync Process



Ref: FM 5-0 (w/C1), (May '22), fig. 6-2. Rapid decision-making & synchronization process.

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. 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.

A. Compare the Current Situation to the Order

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 facing page (table 6-2) for examples of change indicators.

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.

B. Determine the Decision Required

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.)

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.

Course of Action Considerations

Ref: FM 5-0 (w/C1) (May '22), 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.

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.

Chap 3 Integrating Processes

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), app. G and ADP 5-0, The Operations Process (Jul '19), pp. 1-15 to 1-17.

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—

I. Intelligence Preparation of the Battlefield (IPB) *(See p. 3-3.)*

Intelligence preparation of the battlefield is the systematic process of analyzing the mission variables of enemy, terrain, weather, and civil considerations in an area of interest to determine their effect on operations (ATP 2-01.3). Led by the intelligence officer, the entire staff participates in IPB to develop and sustain an understanding of the enemy, terrain and weather, and civil considerations. IPB helps identify options available to friendly and threat forces.

II. Information Collection *(See pp. 3-53 to 3-56.)*

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). It integrates the functions of the intelligence and operations staffs that focus on answering CCIRs. Information collection includes acquiring information and providing it to processing elements.

III. Targeting *(See pp. 3-57 to 3-70.)*

Targeting is the process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities (JP 3-0). Targeting seeks to create specific desired effects through lethal and nonlethal actions. The emphasis of targeting is on identifying enemy resources (targets) that if destroyed or degraded will contribute to the success of the friendly mission. Targeting begins in planning and continues throughout the operations process.

IV. Risk Management *(See pp. 3-71 to 3-74.)*

Risk management is the process to identify, assess, and control risks and make decisions that balance risk cost with mission benefits (JP 3-0). Commanders and staffs use risk management throughout the operations process to identify and mitigate risks associated with hazards (to include ethical risk 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.

V. Knowledge Management *(See pp. 3-75 to 3-78.)*

Knowledge management is the process of enabling knowledge flow to enhance shared understanding, learning, and decision making (ADP 6-0). It facilitates the transfer of knowledge among commanders, staffs, and forces to build and maintain situational understanding. Knowledge management helps get the right information to the right person at the right time to facilitate decision making.

I. Intelligence Preparation of the Battlefield (IPB)

Ref: ATP 2-01.3 (C1), Intelligence Preparation of the Battlefield (Jan '21).

Intelligence preparation of the battlefield is the systematic process of analyzing the mission variables of enemy, terrain, weather, and civil considerations in an area of interest to determine their effect on operations.

I. IPB Process

1. **Define the Operational Environment**
(See p. 3-16.)
2. **Describe Environmental Effects on Operations**
(See p. 3-23.)
3. **Evaluate the Threat**
(See p. 3-32.)
4. **Determine Threat Courses of Action**
(See p. 3-42.)

IPB allows commanders and staffs to take a holistic approach to analyzing the operational environment (OE). A holistic approach—

- Describes the totality of relevant aspects of the OE that may impact friendly, threat, and neutral forces.
- Accounts for all relevant domains that may impact friendly and threat operations.
- Identifies windows of opportunity to leverage friendly capabilities against threat forces.
- Allows commanders to leverage positions of relative advantage at a time and place most advantageous for mission success with the most accurate information available.

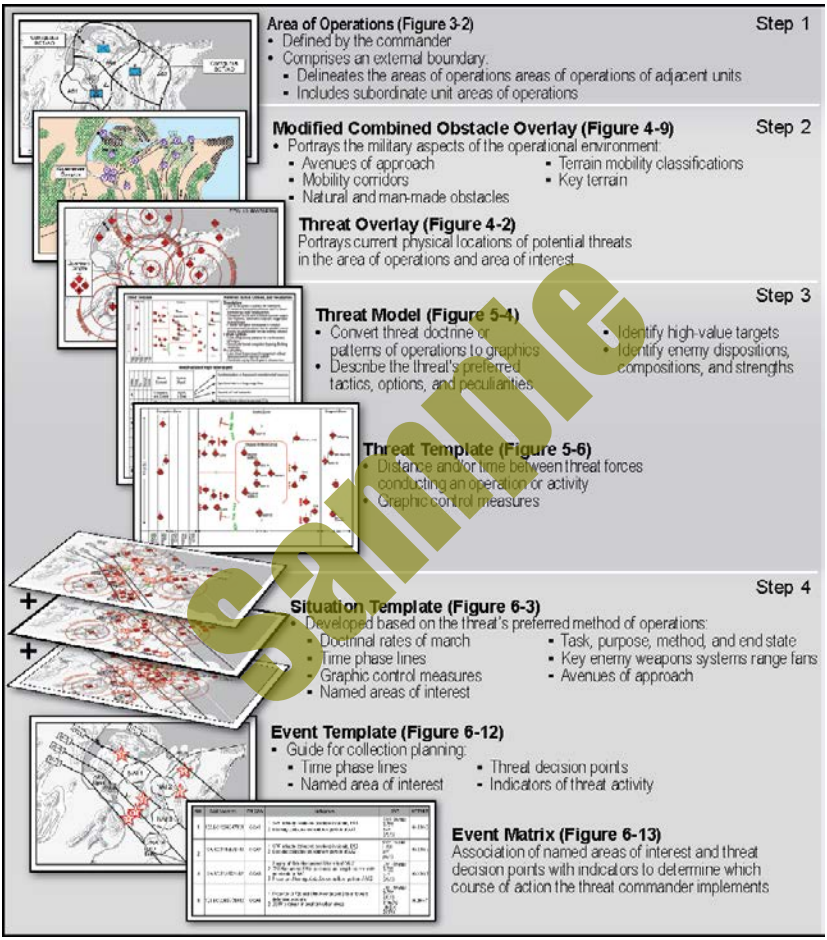
IPB results in intelligence products that are used during the military decision-making process (MDMP) to assist in developing friendly courses of action (COAs) and decision points for the commander. Additionally, the conclusions reached and the products (which are included in the intelligence estimate)developed during IPB are critical to planning information collection and targeting operations. IPB products include—

- Threat situation templates with associated COA statements and high-value target (HVT) lists.
- Event templates and associated event matrices.
- Modified combined obstacle overlays (MCOOs), terrain effects matrices, and terrain assessments.
- Weather effects work aids—weather forecast charts, weather effects matrices, light and illumination tables, and weather estimates.
- Civil considerations overlays and assessments.

A. Products of the IPB Process

Ref: ATP 2-01.3 (C1), Intelligence Preparation of the Battlefield (Jan '21), p. xi.

IPB is a collaborative staff effort led by the J-2/G-2/S-2 and the intelligence staff. IPB products developed and continuously updated facilitate situational understanding and assist commanders and staffs in identifying relevant aspects within the area of operations and area of interest that can affect mission accomplishment. The introductory figure lists and summarizes the relevant IPB products.

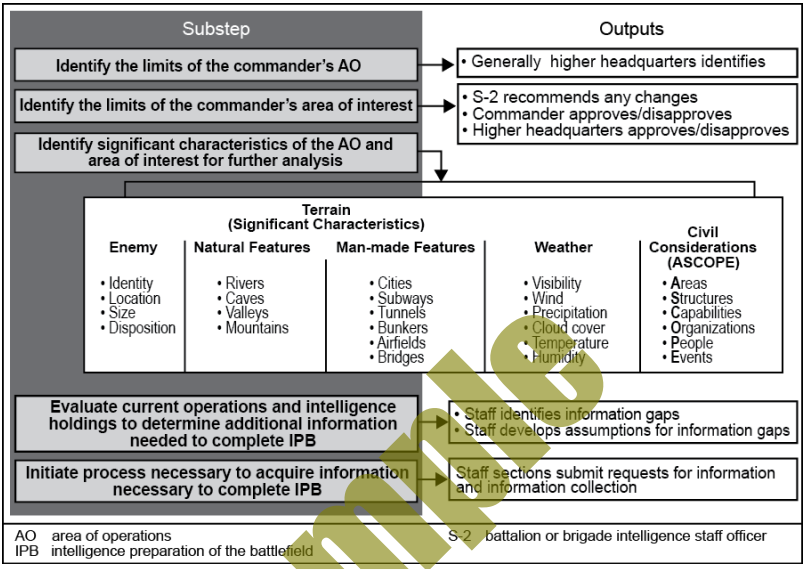


Ref: Introductory figure. Products of the IPB process.

The IPB process is unique—it impacts the range of military operations, is relevant across all echelons, and is the fundamental element used in all planning and decision making. IPB serves as the initial framework for analysis of the battlefield in all operations.

Step 1—Define the Operational Environment

During step 1 of the IPB process, the intelligence staff identifies for further analysis the significant characteristics of or activities within the OE that may influence friendly and threat COAs and command decisions, as well as the physical space the mission will occupy. Within an OE, Army forces may face large-scale combat operations, which simultaneously encompass multiple domains, military engagements, and populations.



Ref: Figure 3-1. Substeps and outputs of step 1 of the IPB process.

So What?

The "so what" of step 1 is to clearly define for commanders the relevant characteristics of their AOIs:

- Success results in time and effort saved by focusing only on those characteristics that influence friendly COAs and command decisions.

Consequences of failure:

- Failure to focus on only the significant characteristics leads to wasted time and effort collecting and evaluating intelligence on OE characteristics that do not influence the operation.
- Staff failure to identify all significant characteristics in all domains relevant to the OE may lead to the command's surprise and unpreparedness when some overlooked feature of the OE affects the operation for which the commander did not plan.

A. Identify the Limits of the Commander's Area of Operations

Area of operations is an operational area defined by a commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces (JP 3-0). The AO comprises an external boundary that delineates adjacent units AOs and includes subordinate unit AOs. Subordinate unit AOs may be contiguous or noncontiguous.

Modified Combined Obstacle Overlay (MCOO)

Ref: ATP 2-01.3 (C1), Intelligence Preparation of the Battlefield (Jan '21), pp. 4-13 to 4-16.

The combined obstacle overlay provides a basis for identifying ground AAs and mobility corridors. Unlike the cross-country mobility, the combined obstacle overlay integrates all impediments to mobility, such as built-up areas, slope, soils, vegetation, and hydrology into one overlay. This overlay also allows the staff to visualize impediments to mobility for both friendly and threat forces. The overlay depicts areas that impede mobility (severely restricted and restricted areas) and areas where friendly and threat forces can move unimpeded (unrestricted areas).

The modified combined obstacle overlay is a joint intelligence preparation of the operational environment product used to portray the militarily significant aspects of the operational environment, such as obstacles restricting military movement, key geography, and military objectives (JP 2-01.3). The MCOO is tailored to the mission and is a collaborative effort involving input from the entire staff. The staff uses its warfighting function expertise to determine how the terrain will impact that function.

Specific aspects of the MCOO include but are not limited to:

- AAs
- Key terrain
- Mobility corridors
- Natural and man-made obstacles
- Terrain mobility classifications

The MCOO depicts the terrain according to the mobility classification. These classifications are severely restricted, restricted, and unrestricted:

- **Severely restricted terrain** severely hinders or slows movement in combat formations unless some effort is made to enhance mobility, such as committing engineer assets to improving mobility or deviating from doctrinal tactics (moving in columns instead of line formations or at speeds much lower than those preferred). For example, severely restricted terrain for armored and mechanized forces is typically characterized by steep slopes and large or dense obstacle compositions with few bypasses. A common technique to depict this type of terrain on overlays and sketches is marking the areas with green crosshatched diagonal lines.
- **Restricted terrain** hinders movement to some degree. Little effort is needed to enhance mobility, but units may have difficulty maintaining preferred speeds, moving in combat formations, or transitioning from one formation to another. Restricted terrain slows movement by requiring zigzagging or frequent detours. Restricted terrain for armored or mechanized forces typically consists of moderate-to-steep slopes or moderate-to-dense obstacle compositions, such as restrictive slopes or curves. Swamps or rugged terrain are examples of restricted terrain for dismounted infantry forces. Logistical or sustainment area movement may be supported by poorly developed road systems. A common and useful technique to depict restricted terrain on overlays and sketches is marking the areas with green diagonal lines.
- **Unrestricted terrain** is free from any restriction to movement. Nothing is required to enhance mobility. Unrestricted terrain for armored or mechanized forces is typically flat to moderately sloping terrain with few obstacles such as limiting slopes or curves. This terrain allows wide maneuver by the forces under consideration and unlimited travel supported by well-developed road networks. No symbology is needed to show unrestricted terrain on overlays and sketches.

Terrain mobility classifications are not absolute but reflect the relative effect of terrain on the different types and sizes of movement formations. They are based on the force's ability to maneuver in combat formations or transition from one type of formation to another.

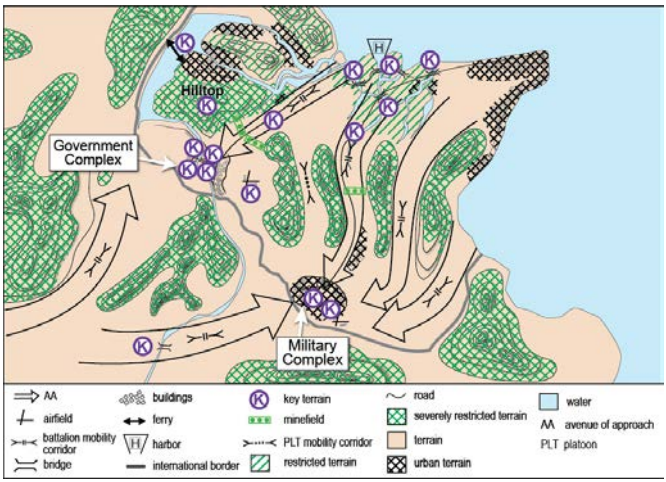


Figure 4-9. Modified combined obstacle overlay example.

The staff should consider the following:

- Obstacles are only effective if covered by observation and fields of fire. However, even undefended obstacles may canalize an attacker into concentrations, which are easier to detect and target or defend. Obstacles are green on map overlays.
- When evaluating the terrain's effects on more than one type of organization (for example, mounted or dismounted), obstacle overlays reflect an impact on mobility of a particular force.
- The cumulative effects of individual obstacles should be considered in the final evaluation. For example, individually, a gentle slope or a moderately dense forest may prove to be an unrestrictive obstacle to vehicular traffic; together, the slope and dense forest may prove to be restrictive.
- The staff should account for the weather's effects on factors that affect mobility.
- The classification of terrain into various obstacle types reflects only its relative impact on force mobility.

For urban areas, graphics typically depict population status overlays (dense population centers, political boundaries), logistics sustainability overlays, LOCs, route overlays (street names, patterns, widths),bridges (underpass and overpass information), potential sniper and ambush locations (will likely be a separate overlay), and key navigational landmarks. In developing urban area and complex terrain overlays, the following should be depicted:

- **Natural terrain**. The underlying terrain on which man-made terrain is superimposed, such as rivers, streams, hills, valleys, forests, desert, bogs, swamps.
- **Man-made terrain**. Streets, bridges, buildings, railways, canals, sewer systems, subway systems, military bunkers, traffic control points; building density, construct, dimensions; functional zone disposition; street construct, materials, disposition, dimensions.
- **Key facilities, targets and/or terrain**. Banks, hospitals, police stations, industrial plants and factories, media and information facilities, bridges, airports, seaports, electric power grids, oil facilities, military facilities, key residences and places of employment, waterways; tall structures(skyscrapers); choke points; street patterns, intersections; industrial complexes; other facilities; density of construction or population.
- **Obstacles**. Rubble and vehicles on the road; fixed barriers; masking of fires, burning of buildings, and other fire hazards; rivers and lakes; power lines and cell phone towers; population; trenches and minefields; certain religious or cultural sites; wire obstacles (concertina wire, barb wire).

C. Describe How Weather Can Affect Friendly and Threat Operations

Weather analysis is the collection, processing, evaluation, and interpretation of relevant military aspects of weather. It is the evaluation of forecasted weather effects on operations. There are two substeps in weather analysis:

Analyze the Military Aspects of Weather

The following are military aspects of weather:

- Visibility
- Wind
- Precipitation
- Cloud cover
- Temperature
- Humidity
- Atmospheric pressure (as required)

Evaluate the Weather's Effects on Military Operations

Weather has both direct and indirect effects on military operations. The following are examples of direct and indirect effects on military operations:

- Temperature inversions might cause some battle positions to be more at risk to the effects of chemical agents because of atmospheric ducting, a process that occurs when strong high pressure influences an area and prevents particulates from dispersing into the upper atmosphere.
- Local visibility restrictions, such as fog, affect observation for both friendly and threat forces. Severe restrictions to visibility often restrict aviation operations.
- Hot, dry weather might force friendly and threat forces to consider water sources as key terrain.
- Dense, humid air limits the range of loudspeaker broadcasts, affecting sonic deception, surrender appeals to threat forces, and the ability to provide instruction to friendly or neutral audiences.
- Sandstorms with high silica content may decrease the strength and clarity of radio and television signals.

Weather and climate effects can impact seasonal outlooks, which affect seasonal decision making—for example, giving crop selection and rotation advice in a particular area that boosts plant growth. Knowing that a particular area may be susceptible to locust swarms may enable pesticide application to prevent such a swarm. If a drought is expected, civil affairs personnel may advise planting another crop that raises the benefit to the farmer.

The G-2/S-2 coordinates with the Air Force staff weather officer to provide weather effects to support operations. The following work aids assist in analyzing and describing weather effects on operations:

- Weather forecast charts are guides for determining the weather information needed for planning and operations.
- Light and illumination data tables are guides for determining the light and illumination data needed for planning and operations.
- Weather effects matrices are guides for determining the weather effects on personnel, weapons, and equipment needed for planning and operations.

D. Describe How Civil Considerations Can Affect Friendly and Threat Operations

An understanding of civil considerations—the ability to analyze their impact on operations—enhances several aspects of operations, including the selection of objectives; location, movement, and control of forces; use of weapons; and protection measures. The intelligence staff should leverage the rest of the staff, as well as outside agencies, who have expertise in civil considerations, to aid the intelligence

Threat Models

Ref: ATP 2-01.3 (C1), Intelligence Preparation of the Battlefield (Jan '21), pp. 5-9 to 5-16.

A threat model is an analytical tool that assists analysts in developing situation templates during step 4 of the IPB process. Threat models consist of three activities:

1. Convert Threat Doctrine or Patterns of Operation to Graphics

Threat templates graphically portray how the threat might use its capabilities to perform the functions required to accomplish its objectives when not constrained by the effects of the OE. Threat templates are scaled to depict the threat's disposition and actions for a type of operation (for example, offense, defense, ambush, personnel movement, clandestine sustainment operations or kidnapping). When possible, templates should be depicted graphically as an overlay, on a supporting system, or through some other means. Threat templates are tailored to the needs of the unit or staff creating them. Some threat templates consider threat forces, while others focus on a single warfighting function, such as intelligence or fire support. Other products depict pattern analysis, time event charts, and association matrices. Threat templates may depict, but are not limited to, unit frontages, unit depths, boundaries, engagement areas, and obstacles.

Refer to ATP 2-33.4 for more on pattern analysis and association matrices.

2. Describe the Threat's Tactics, Options, and Peculiarities

The threat model includes a description of the threat's preferred **tactics** (including but not limited to attack, defend, reinforce, and retrograde). A description is still required even if the preferred tactics are depicted in graphic form. This allows the template to become more than a "snapshot in time" of the operation being depicted.

Options are described by listing items such as identified threat capabilities and branches and sequels. Branches and sequels are used primarily for changing deployments or direction of movement and for accepting or declining combat. Analysts research and annotate any threat peculiarities about the operation.

Peculiarities can provide insights into threat strengths and vulnerabilities, as well as assist friendly forces in addressing them.

3. Identify High-Value Targets (HVTs)

Identifying HVTs assists the staff in creating HPTs during the COA development step of the MDMP. The following techniques may be useful in identifying/evaluating HVTs:

- Identify HVTs from existing intelligence studies; the evaluation of the databases; size, activity, location, unit, time, and equipment (also called SALUTE) reports; patrol debriefs; the threat template and its associated threat capability statement; and the use of tactical judgment.
- Review threat TTP and previous threat operations as well as understand the threat's task, purpose, method, and end state.
- Consider that HVTs usually fall within non maneuver elements (command and control [C2],intelligence, fires, sustainment, and protection).
- Identify assets that are key to executing the primary operation or sequels.
- Determine how the threat might react to losing each identified HVT. Consider the threat's ability to substitute other assets as well as adopt branches or sequels.
- Conduct mental war gaming and think through the operation under consideration and how the threat will use assets from each of the elements (such as fire support, engineers).

Target Value Analysis. HVTs should be prioritized by their relative value to the threat's operation. Target value analysis assists in prioritizing HVTs. Target value analysis is a process led by the fires cell as part of targeting that quantifies the relative value of HVTs with each other in relation to a threat operation.

Step 4—Determine Threat Courses of Action

Step 4 of the IPB process identifies and describes threat COAs that can influence friendly operations.

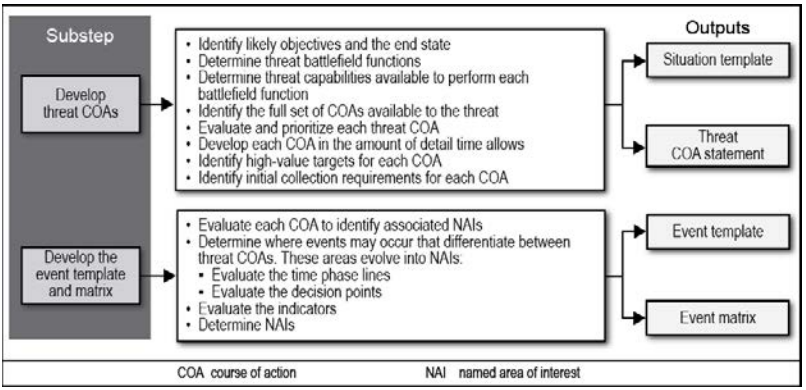


Figure 6-1. Substeps and outputs of step 4 of the IPB process.

So What?

The "so what" is to determine the threat COAs necessary to aid the development of friendly COAs:

- The friendly commander will avoid being surprised with an unanticipated threat action, thus quickly narrowing the set of possible threat COAs to the one the threat has chosen.

Consequences of failure:

- Failure to identify which of the possible COAs the threat has chosen, leading to surprise of the friendly command.
- The threat commander may have the information needed to exploit the opportunities the OE provides in a way the friendly commander did not anticipate.

Determining threat COAs is a two-step process:

A. Develop Threat Courses Of Action

Developing a threat COA requires an understanding of the threat characteristics discussed earlier, as well as the effects of terrain, weather, and civil considerations on operations. Population effects on operations must be clearly annotated with full details. This ensures population effects and threat actions are portrayed during the war game.

The most important element in determining threat COAs is understanding threat operational art and tactics. U.S. forces may encounter regular, irregular, and hybrid threats. The process for determining the COAs these threat forces may employ mirrors friendly COA development and consists of the following:

- Identify likely objectives and the end state.
- Determine threat battlefield functions.
- Determine threat capabilities available to perform each battlefield function.
- Identify the full set of COAs available to the threat.
- Evaluate and prioritize each threat COA.
- Develop each COA in the amount of detail time allows.
- Identify HVTs for each COA.
- Identify initial collection requirements for each COA.

See following pages (pp. 3-43 to 3-45) for an overview and further discussion.

Develop Threat COAs (Overview)

Ref: ATP 2-01.3 (C1), Intelligence Preparation of the Battlefield (Jan '21), pp. 6-2 to 6-19.

Developing a threat COA requires an understanding of the threat characteristics discussed earlier, as well as the effects of terrain, weather, and civil considerations on operations. Population effects on operations must be clearly annotated with full details. This ensures population effects and threat actions are portrayed during the war game.

The most important element in determining threat COAs is understanding threat operational art and tactics. U.S. forces may encounter regular, irregular, and hybrid threats. The process for determining the COAs these threat forces may employ mirrors friendly COA development and consists of the following:

1. Identify Likely Objectives and End State

Based on the results of the mission variables analysis conducted earlier in the IPB process, the staff now identifies the threat's likely immediate and subsequent objectives and desired end state. These elements are included in the threat COA statement developed for each COA.

An **objective** is the clearly defined, decisive, and attainable goal toward which an operation is directed (JP 5-0). Threat objectives are normally terrain- or force-oriented. For example, an enemy may attack to destroy a friendly force or to seize key terrain; defend to delay a friendly force or retain control of key terrain; or conduct guerrilla operations to disrupt friendly operations.

The **end state** is the set of required conditions that defines achievement of the commander's objectives(JP 3-0). The end state, if achieved, meets the conditions of policy, orders, guidance, and directives issued by the commander. For example, the end state for an attack to destroy may be the destruction of all friendly forces down to the platoon level and friendly forces incapable of conducting a coordinated defense.

2. Determine Threat Battlefield Functions

The threat executes several different battlefield functions each time a threat attempts to accomplish a mission. Threat commanders identify the specific functions they intend their various subordinate forces or elements to perform. The functions do not change, regardless of the forces' or elements' location on the battlefield. While the various functions required to accomplish any given mission can be quite diverse, they can be divided into two very broad categories: action and enabling.

3. Determine Threat Capabilities Available to Perform each Battlefield Function

Upon determining which battlefield functions the threat needs to perform and what objective or goal the threat commander seeks to accomplish through the performance of those functions, analysts must then determine what capabilities the threat has in order to execute each function.

While the functions required for a high chance of success in achieving a military objective or goal are universal, the means to accomplish them depend on the location, threat, and environment. For example, in one battlefield, the threat may employ an infantry platoon equipped with infantry-fighting vehicles and sophisticated thermal sensors to execute the security function. In another example, a civilian in a third-floor apartment window using a cellular phone may perform the same function.

Functional analysis is an analytical technique that depicts graphically how the threat might use its capabilities to perform the functions required to accomplish its objectives. It is based on the concept—while every action or battle is unique, certain functions are performed to bring about mission accomplishment. When analysts apply their knowledge of common and necessary military functions to specific threat capabilities, they are performing functional analysis. *Refer to ATP 2-33.4 for more information about functional analysis.*

Continued on next page

Threat Course of Action Statement

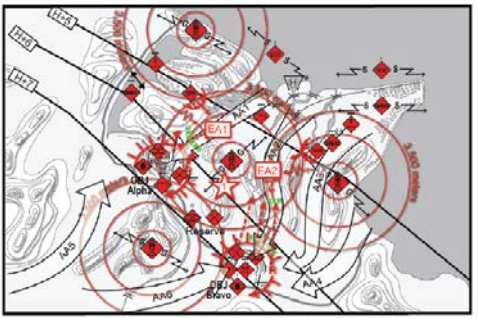
Ref: ATP 2-01.3 (C1), Intelligence Preparation of the Battlefield (Jan '21), p. 6-16.

Every threat COA includes a threat COA statement, which is a narrative that describes the situation template as an overlay. Figure 6-8 illustrates a threat COA statement.

Mission: The 375th Brigade Tactical Group conducts an area defense at OBJ Alpha and OBJ Bravo no later than 110900ZNOV16 to prevent occupation force seizure of government and military infrastructure.

Enemy Commander's Intent: Retain control of OBJ Alpha and OBJ Bravo with minimal key infrastructure losses.

End State:
Enemy: Occupation force denied seizure of OBJ Alpha and OBJ Bravo.
Friendly: Maintain combat effectiveness of 75% until negotiations or regional partner assistance obtained.
Terrain: Key coastal and inland infrastructure remain intact.



Decisive Operations: The 65th and 72d Mechanized BNs conduct area defense no later than 110900ZNOV16 to deny occupation force seizure of OBJ Alpha and OBJ Bravo.

Shaping Operations:
Shaping Operation 1: Special purpose forces conduct ambushes along high-speed AAs to disrupt occupation force freedom of movement toward southern infrastructure.
Shaping Operation 2: Engineer emplacement of minefields along high-speed AAs to block occupation force.

Movement and Maneuver
Disruption Zone:
85th Special Purpose Force
Task: Disrupt occupation force in vicinity EA1 and EA2.
Purpose: Delay occupation force movement to the south.
Method: Conduct ambushes on occupation force using complex terrain features and hasty defensive positions.
End State: Occupation force ground movement is delayed in vicinity EA1 and EA2.

Battle Zone:
65th Mechanized BN
Task: Prevent western movement of occupation force.
Purpose: Protect southern flank of the 72d Mechanized BN.
Method: Use of obstacle belts and attack by fire positions.
End State: Occupation force is unable to turn west to OBJ Alpha.

72d Mechanized BN
Task: Prevent occupation of OBJ Alpha.
Purpose: Retain control of government.
Method: Use of obstacle belts and attack by fire position.
End State: Government status quo is maintained.

Support Zone:
97th Mechanized BN and 10th Infantry BN (Reserve)
Task: Reinforce the 65th and 72d Mechanized BNs.
Purpose: Prevent occupation force flanking of the 65th and 72d Mechanized BNs.
Method: Conduct a counterattack.
End State: Occupation force is prevented from seizing OBJ Alpha and OBJ Bravo.

AA	avenue of approach	EA	engagement area
BN	battalion	OBJ	objective
C2	command and control		

Fires
Disruption Zone:
Task: Disrupt occupation force coastal lodgement.
Purpose: Delay movement to the south.
Method: Long-range precision fires.
End State: The 65th and 72d Mechanized BNs are afforded additional time to prepare defenses.

Battle Zone:
Task: Disrupt air AAs.
Purpose: Prevent light infantry air assault in vicinity OBJ Alpha and OBJ Bravo.
Method: Use SA-13s to close air corridors.
End State: Occupation force unable to control friendly rear.

Sustainment:
Task: Conduct resupply operations across all zones.
Purpose: Maintain the initiative.
Method: Support echelons aligned to support main and supporting efforts.
End State: Friendly forces are able to maintain momentum of the battle to repel occupation force.

Reconnaissance
Disruption Zone:
Task: Identify coastal landing areas.
Purpose: Direct long-range precision fires.
Method: Special purpose forces.
End State: Occupation force lodgement is contested and delayed.

Battle Zone:
Task: Identify occupation force AAs.
Purpose: Direct long-range precision fires.
Method: Special purpose forces.
End State: C2 elements are able to direct the main effort.

Figure 6-8. Threat course of action statement example.

II. Information Collection

Ref: FM 3-55, Information Collection (May '13).

Knowledge is the precursor to effective action in the informational or physical domains. Knowledge about an operational environment requires aggressive and continuous operations to acquire information. Information collected from multiple sources and analyzed becomes intelligence that provides answers to commander's critical information requirements (CCIRs). Commanders use reconnaissance and surveillance to provide intelligence to reduce the inherent uncertainty of war.

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.

Information Collection Activities

Ref: FM 3-55, fig. 1-1. Information collection activities.

Information collection is the acquisition of information and the provision of this information to processing elements. This includes the following:

- Plan requirements and assess collection.
- Task and direct collection.
- Execute collection.

Army Targeting Process (D3A)

Ref: ADP 3-19, Fires (Jul '19), pp. 3-7 to 3-9.

The Army targeting process organizes the efforts of the commander and staff to accomplish key targeting requirements. This methodology is referred to as the D3A. D3A assists the commander and staff decide which targets must be acquired and engaged and to help develop options to engage those targets. Options may include lethal or nonlethal, organic or supporting assets at all levels, including maneuver, electronic attack, psychological operations, attack aircraft, surface-to-surface fires, air to surface fires, other information-related capabilities, or a combination of these options.
The D3A methodology is an integral part of the MDMP. As the MDMP is conducted, targeting becomes more focused based on the commander's guidance and intent. Certain targets may require special considerations or caution, because engaging them improperly could create unintended effects. Examples include targets that should be handled with sensitivity due to potential political and or diplomatic repercussions and targets located in areas with a high risks of collateral damage, to include weapons of mass destruction facilities. These measures are incorporated in the coordinating instructions and appropriate annexes of the operation plan or operation order.

I. Decide

Decide is the first function in targeting and occurs during the planning portion of the operations process. It is the most important function, requiring close interaction between the commander, intelligence, plans, operations, the fires cell, and staff judge advocate. It begins during the mission analysis portion of the MDMP and continues throughout the operation.

II. Detect

Detect is the second function in targeting and occurs initially during the prepare portion of the operations process, continuing throughout the operation. A key resource for fires planning and targeting is the intelligence generated through information collection to answer the targeting information requirements. Commanders express requirements for target detection and action as priority intelligence and information requirements. During large-scale combat operations, it might be challenging to prioritize the detection of targets and could require the opening of windows of opportunity for specific collection capabilities in support of fires. High-payoff targets must be integrated and support associated priority intelligence requirements. Their priority depends on the importance of the target to the friendly course of action and target acquisition requirements. Targets are prioritized through a quantitative and qualitative valuation methodology. An example of a valuation methodology is the target value analysis process that prioritizes targets based on the target's criticality, accessibility, recuperability, vulnerability, effect, and recognizability. Targeting working groups incorporate priority intelligence and information requirements that support acquisition of high-payoff targets into the overall information collection plan along with named areas of interest, target areas of interest, and engagement areas.

III. Deliver

Deliver is the third function in targeting and occurs primarily during the execution portion of the operations process. The main objective is to engage targets in accordance with the commander's guidance or engagement authority's direction. The selection of a weapon system or a combination of weapons systems leads to the tactical decision of time of engagement and then the technical solution for the selected weapon.

IV. Assess

Assess is the fourth function of targeting and occurs throughout the operations process. The commander and staff assess the results of mission execution. The assessment process is continuous and directly tied to the commander's decisions throughout planning, preparation, and execution of operations.

Operations Process & Targeting Relationship

Operations Process		Joint Targeting Cycle	D3A	MDMP	Targeting Task
Continuous Assessment	Plan	1. The End State and Commanders Objectives	Decide	Mission Analysis	• Perform target value analysis to develop fire support (including cyber electromagnetic and information related capablitiies) high-value targets. • Provide fire support, information related capabilities, and cyber electromagnetic activities input to the commander's targeting guidance and desired effects.
		2. Target Development and Prioritization		Course of Action Development	• Designate potential high-payoff targets. • Deconflict and coordinate potential high-payoff targets. • Develop high-payoff target list. • Establish target selection standards. • Develop attack guidance matrix. • Develop fire support and cyber electromagnetic activities tasks. • Develop associated measures of performance and measures of effectiveness.
		3. Capabilities Analysis		Course of Action Analysis	• Refine the high-payoff target list. • Refine target selection standards. • Refine the attack guidance matrix. • Refine fire support tasks. • Refine associated measures of performance and measures of effectiveness. • Develop the target synchronization matrix. • Draft airspace control means requests.
		4. Commander's Decision and Force Assignment		Orders Production	• Finalize the high-payoff target list. • Finalize target selection standards. • Finalize the attack guidance matrix. • Finalize the targeting synchronization matrix. • Finalize fire support tasks. • Finalize associated measures of performance and measures of effectiveness. • Submit information requirements to battalion or brigade intelligence staff officer - S-2.
	Prepare	5. Mission Planning and Force Execution	Detect		• Execute Information Collection Plan. • Update information requirements as they are answered. • Update the high-payoff target list, attack guidance matrix, and targeting synchronization matrix. • Update fire support and cyber electromagnetic activities tasks. • Update associated measures of performance and measures of effectiveness.
	Execute	6. Assessment	Deliver		• Execute fire support and electronic attacks in accordance with the attack guidance matrix and the targeting synchronization matrix.
	Assess	D3A – decide, detect, deliver and assess MDMP – military decisionmaking process	Assess		• Assess task accomplishment (as determined by measures of performance). • Assess effects (as determined by measures of effectiveness).

Ref: ATP 3-60, Targeting (May '15), Table 1-1. Crosswalk of operations, joint targeting cycle, D3A, and MDMP.

Refer to AODS7: The Army Operations & Doctrine SMARTbook, 7th Ed. (Multidomain Operations) for complete discussion of the fires warfighting function from ADP 3-19 (Jul '19). Sections include fires as a warfighting function; fires in unified land operations, execution of fires across the domains; and integrating Army, joint & multinational fires (to include airspace planning/integration and air and missile defense planning/integration).

Targeting Guidance

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. G-14 to G-15.

The commander's guidance, issued at the end of mission analysis, includes targeting guidance. Targeting guidance describes the desired lethal and nonlethal effects. Targeting guidance focuses on essential adversary capabilities and functions, such as the ability to exercise command and control of forward units, mass artillery fires, or (in stability operations) form a hostile crowd. Capabilities associated with one desired effect may also contribute to other desired effects. For example, delay can result from disrupting, diverting, or destroying enemy capabilities on targets. **Terms that are used to describe effects include—**

- Deceive.
- Defeat.
- Degrade.
- Delay.
- Deny.
- Destroy.
- Destruct.
- Disrupt.
- Divert.
- Exploit.
- Interdict.
- Neutralize.
- Suppress.

Refer to ATP 3-60, pp. 1-1 to 1-2 for a complete discussion of these effects.

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.

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.

IV. Risk Management (RM)

Ref: ATP 5-19, Risk Management (Nov '21).

Risk management is the process to identify, assess, and control risks and make decisions that balance risk cost with mission benefits (JP 3-0). The Army uses risk management (RM) to help maintain combat power while ensuring mission accomplishment in current and future operations. RM applies to operations and to nonoperational activities.

RM is the Army's process for helping organizations and individuals make informed decisions to reduce or offset risk. Using this process increases operational effectiveness and the probability of mission accomplishment. It is a systematic way of identifying hazards, assessing them, and managing the associated risks. Risk management is a primary task of the protection warfighting function. Commanders, staffs, Army leaders, Soldiers, and Army Civilians integrate RM into all planning, preparation, execution, and assessment of operations. The process applies to all types of operations, tasks, and activities. Commanders ensure first-line supervisors apply the process where it has the greatest impact. Individuals should also use the process for off-duty activities.

Principles of Risk Management

- Integrate RM into all phases of missions and operations.
- Make risk decisions at the appropriate level.
- Accept no unnecessary risk.
- Apply RM cyclically and continuously.

All members of the Army Profession apply RM: commanders and staffs, Army leaders, Soldiers, and Civilians. This text adopts the phrase RM practitioners to include all individuals and organizations that use RM to mitigate or eliminate risk. RM practitioners need not be formally trained in the RM integration process,tools, and techniques in order to apply these steps.

RM outlines a disciplined approach to express a risk level in terms readily understood at all echelons. Except in time-constrained situations, planners complete the process in a deliberate manner—systematically applying all the steps and recording the results on the prescribed form, *DD Form 2977 (Deliberate Risk Assessment Worksheet)*. Organizations develop data and use charts, codes, and numbers to analyze probability and standardize the analysis of risk. They use this standardization to manage risk in a logical and controlled manner over time. However, the five-step process is compatible with intuitive and experience-based decision making. In time-constrained conditions,commanders, staffs, leaders, Soldiers, and Civilians use judgment to apply RM steps and principles.

Army leaders use judgment to manage risk based on the situation. They approach RM at the appropriate application level, using a deliberate approach or a real-time approach. The main factor that differentiates the approach is the amount of time available for planning. A deliberate approach is more analytical but takes more time; a real-time approach is more intuitive and tends to take less time. Regardless of the amount of time available, Army forces manage risk throughout the operations process using the five steps of RM.

See p. 3-74 for an overview of the five steps of risk management.

	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

Ref: FM 5-0 (w/C1), (May '22), table G-3. Risk management in the military decision-making process

III. KM and the MDMP

Ref: ATP 6-01.1, Techniques for Effective Knowledge Management (Mar '15), pp. 1-10 to 1-11.

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.

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.

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.

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.

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.

Chap 4

I. Plans & Orders

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), app. D & pp. 1-11 to 1-13.

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.

MDMP Step VII: Prepare the Order or Plan *(See pp. 2-69 to 2-70.)*
The staff prepares the order or plan by turning the selected COA into a clear, concise concept of operations and 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. If time permits, the staff may conduct a more detailed war game 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 operation order format.

Normally, the COS (XO) coordinates with staff principals to assist the G-3 (S-3) in developing the plan or order. Based on the commander's planning guidance, the COS (XO) dictates the type of order, sets and enforces the time limits and development sequence, and determines which staff section publishes which attachments.

- Plans and orders reconciliation.
- Plans and orders crosswalk.

I. Mission Orders

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. 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.

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.

III. Types of Plans and Orders

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. D-1 to D-2.

A. Plans

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—

1. Campaign Plan

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).

2. Operation Plan (OPLAN)

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.

3. Supporting Plan

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.

4. Concept Plan

In the context of joint operation planning level 3 planning detail, a concept plan is an operation plan in an abbreviated format that may require considerable expansion or alteration to convert it into a complete operation plan or operation order (JP 5-0). Often branches and sequels are written as concept plans. As time and the potential allow for executing a particular branch or sequel, these concept plans are developed in detail into OPLANs.

5. Branch

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.

6. Sequel

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.

Running Estimates (& COA Analysis)

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. 1-12 to 1-13.

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.

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.

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 reallocate 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 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 headquarter

Army Command & Support Relationships

Ref: FM 3-0, Operations (Oct. '22), pp. B-4 to B-7.

Army command and support relationships are similar but not identical to joint command authorities and relationships. Differences stem from the way Army forces task-organize internally and the need for a system of support relationships between Army forces. Another important difference is the requirement for Army commanders to handle the administrative support requirements that meet the needs of Soldiers

A. Command Relationships

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 quickly identifies the degree of support that the gaining and losing Army commanders provide.

If relationship is—	*Then the inherent responsibilities are:* Have command relationship with—	May be task-organized by—	Unless modified, ADCON responsibility goes through—	Are assigned position or AO by—	Provide liaison to—	Establish/maintain communications with—	Have priorities established by—	Authorities CDR can impose on gaining unit further command or support relationship of—
Organic	Organic HQ	Organic HQ	Organic HQ	Organic HQ	N/A	N/A	Organic HQ	Attached; OPCON; TACON; GS; GSR; R; DS
Assigned	Gaining HQ	Gaining HQ	Gaining HQ	Gaining HQ	N/A	N/A	Gaining HQ	Attached; OPCON; TACON; GS; GSR; R; DS
Attached	Gaining HQ	Gaining HQ	Gaining HQ	Gaining HQ	As required by gaining HQ	Unit to which attached	Gaining HQ	Attached; OPCON; TACON; GS; GSR; R; DS
OPCON	Gaining HQ	Parent unit and gaining unit; gaining unit may pass OPCON to lower HQ	Parent HQ	Gaining HQ	As required by gaining HQ	As required by gaining HQ and parent HQ	Gaining HQ	OPCON; TACON; GS; GSR; R; DS
TACON	Gaining HQ	Parent HQ	Parent HQ	Gaining HQ	As required by gaining HQ	As required by gaining unit and parent HQ	Gaining HQ	TACON; GS GSR; R; DS

ADCON	administrative control	GSR	general support—reinforcing
ASCC	Army Service component command	HQ	headquarters
AO	area of operations	N/A	not applicable
CDR	commander	OPCON	operational control
DS	direct support	R	reinforcing
GS	general support	TACON	tactical control

Ref: FM 3-0 (Oct. '22), table B-2. Army command relationships.

B. Support Relationships

Table B-3 lists Army support relationships. Army support relationships are not a command authority and are more specific than the joint support relationships. Commanders establish support relationships when subordination of one unit to another is inappropriate. If a unit has an established command relationship with a headquarters, a support relationship is unnecessary as the command relationship already grants the gaining commander all the authorities required. Commanders assign a support relationship when—

IV. Outline Format (Sample)

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. E-8 to E-10 (fig. E-1).

Figure E-1 illustrates a sample Annex A (Task Organization) format. It also provides a sample acronym list for task organization.

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. Task organization is typically displayed in a list *(see p. 4-12 to 4-13)* or an outline format following the unit listing convention shown in table E-1 below.

See p. 4-21 for a Task Organization example.

[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]

III. Administrative Instructions & Examples

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), pp. D-4 to D-8.

I. Administrative Instructions

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.

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.

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.)

A. Acronyms and Abbreviations

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.

B. Location and Direction Designations

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]).

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.

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.

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.

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.

Order writers identify riverbanks as north, south, east, or west. In wet gap-crossing operations, they identify riverbanks as either near or far.

C. Naming Conventions

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.

D. Classification Markings

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.

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

A. Task Organization (Example)

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), fig. E-1, p. E-8.

[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 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.

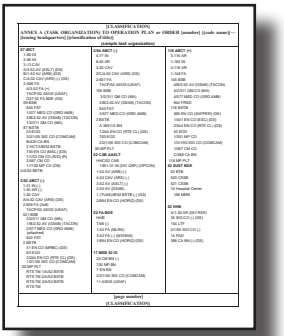
b. List other references in subparagraphs labeled as shown.

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 OPLAN/OPORD: *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]



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. Task organization is typically displayed in a list (see p. 4-12 to 4-13) or an outline format following the unit listing convention shown in table E-1 (see p. 4-14).

See pp. 4-7 to 4-14 for discussion of the fundamentals of task organization and instructions for developing Annex A (Task Organization) to the base plan or order.

C. Annotated OPLAN/OPORD Format

Ref: FM 5-0 (w/C1), Planning and Orders Production (May '22), fig. D-4.

[CLASSIFICATION]

Place the classification at the top and bottom of every page of the OPLAN or 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
Message reference number

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/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, if any.

(U) References: *List documents essential to understanding the OPLAN/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 labeled as shown. 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/OPORD: *State the time zone used in the area of operations during execution. When the OPLAN/OPORD applies to units in different time zones, use Greenwich Mean (ZULU) Time.*

(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 (AO). Refer to the appropriate map by its subparagraph under references, for example, "Map, reference (b)." Refer to the 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.*

[page number]
[CLASSIFICATION]

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Continued on next page

Chap 5

Mission Command (Command & Control)

Ref: FM 6-0, Commander and Staff Organization and Operations, (May '22), chap 1.

Mission command is 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 helps commanders employ subordinates to achieve the commander's intent in changing conditions. *(See pp. 5-2 to 5-3.)*

I. Command & Control Warfighting Function

The command and control warfighting function is the related tasks and a system that enable commanders to synchronize and converge all elements of combat power. The primary purpose of the C2 warfighting function is to assist commanders in integrating the other elements of combat power (leadership, information, movement and maneuver, intelligence, fires, sustainment, and protection) to achieve objectives and accomplish missions. The C2 warfighting function consists of the C2 warfighting function tasks and the C2 system.

Ref: FM 6-0 (May '22), fig. 1-1. Command and control warfighting function.

The C2 warfighting function tasks focus on integrating the activities of the other elements of combat power to accomplish missions. Commanders, assisted by their staffs, integrate numerous processes and activities within the headquarters and across the force through the C2 warfighting function:

- Command forces
- Control operations
- Drive the operations process *(See p. 1-11.)*
- Establish the command and control system *(See pp. 5-4 to 5-6.)*

Refer to AODS7: The Army Operations & Doctrine SMARTbook (Multidomain Operations). Completely updated with the 2022 edition of FM 3-0 , AODS7 focuses on Multidomain Operations and features rescoped chapters on generating and applying combat power: command & control (ADP 6-0), movement and maneuver (ADPs 3-90, 3-07, 3-28, 3-05), intelligence (ADP 2-0), fires (ADP 3-19), sustainment (ADP 4-0), & protection (ADP 3-37).

II. Command Posts

Ref: FM 6-0, Commander and Staff Organization and Operations, (May '22), chap 7 to 9.

Command Post (CP)

A command post is a headquarters, or a portion there of, organized for the exercise of command and control. When necessary, commanders control operations from other locations away from the CP. In all cases, the commander alone exercises command when in a CP or elsewhere.

CPs provide a physical location for people, processes, and networks to directly assist commanders as they understand, visualize, describe, direct, lead, and assess operations. CPs can vary in size, complexity and focus, such as the main CP or the tactical CP. CPs may be composed of vehicles, containers, and tents, or located in buildings.

Commanders systematically arrange platforms, operation centers, signal nodes, and support equipment in ways best suited for a particular operational environment. Examples of equipment needed to sustain a CP include vehicles, radio or signal equipment, generators, and lighting. Functions common to all CPs include—

- Conducting knowledge management, information management, and foreign disclosure.
- Building and maintaining situational understanding.
- Controlling operations (by coordinating, synchronizing, and integrating).
- Assessing operations.
- Coordinating with internal and external organizations.
- Performing CP administrative activities.

I. Types of Command Posts

Effective command and control (C2) requires continuous, and often immediate, close coordination, synchronization, and information sharing across staffs and warfighting functions for directing activities. To promote this, commanders organize their staffs and other components of the C2 system into CPs to assist them in effectively conducting specific operations. Different types of CPs—such as the main CP, the tactical CP, or the rear CP—have specific functions by design.

CPs are arranged by echelon and unit, and they differ based on organization and employment. Commanders systematically arrange platforms, operation centers, signal nodes, and support equipment in ways best suited for a particular operational environment. Depending on the organization, type of unit, and situation, commanders echelon their headquarters into multiple CPs for the conduct of operations. CPs come in many different structures, and they may consist of vehicles, containers, and tents, or located in buildings. CPs provide the physical location for people, processes, and networks to directly assist commanders in understanding, visualizing, describing, directing, leading, and assessing operations.

See following pages (pp. 5-20 to 5-21) for an overview and discussion of the types of command posts as outlined in FM 6-0.

CP by Echelon and Type of Unit

Ref: FM 6-0, Commander and Staff Organization and Operations, (May '22), pp. 7-4 to 7-5.

Depending on the organization, type of unit, and situation, commanders echelon their headquarters into multiple CPs for the conduct of operations. A theater army is resourced with a main CP and a contingency CP. Corps, divisions, and brigade combat teams can employ a main CP, tactical CP, and a mobile command group. In addition, corps and divisions may operate a rear CP. Combined arms battalions, Stryker battalions, and infantry battalions can employ a main CP, tactical CP, combat trains CP, and a field trains CP. Some multifunctional brigades and battalions operate from a single main CP. Table 7-1 summarizes the various CPs resourced by echelon of command and type of unit. Beyond this publication and the table of organization and equipment (TO&E), units at all levels must establish SOPs to designate the commanders' desired roles and responsibilities of each CP within their organization.

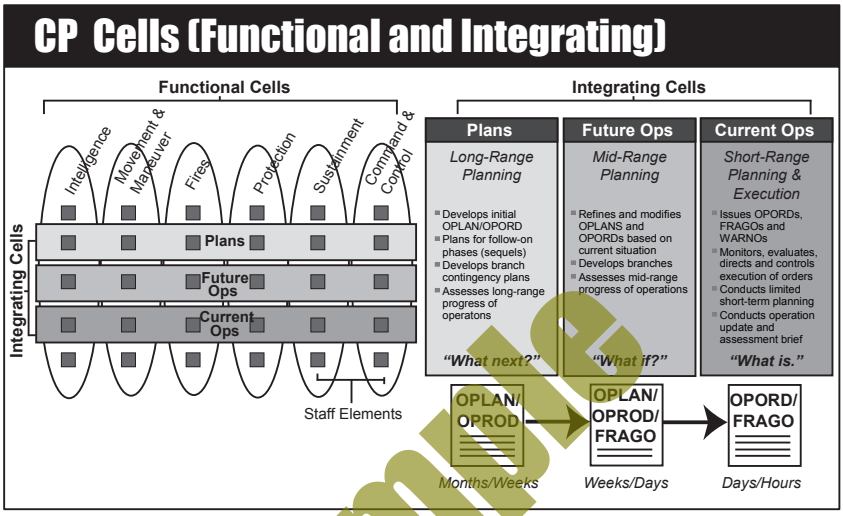
Echelon or Type of Unit	*Command Posts*
Theater army	• Main command post. • Contingency command post. (See ATP 3-93 for more information on theater army.)
Corps	• Main command post. • Tactical command post. • Mobile command group and early-entry command post (ad hoc with personnel and equipment from the others). • Rear command post. (See FM 3-94 and ATP 3-92 for more information on corps.)
Division	• Main command post. • Tactical command post. • Mobile command group and early-entry command post (ad hoc with personnel and equipment from the others). • Rear command post. (See FM 3-94 and ATP 3-91 for more information on division command posts.)
Brigade combat teams	• Main command post. • Tactical command post. (See FM 3-96 for more information on brigade combat team command posts.)
Multifunctional brigades	• Main command post. • Tactical command post. (These organizations vary extensively. See specific doctrine for each type of multifunctional support brigade.)
Functional brigades and battalions	• Main command post. • Tactical command post. (These organizations vary extensively. See specific doctrine for each type of functional brigade and battalion.)
Maneuver battalions	• Main command post. • Tactical command post. • Combat trains command post. • Field trains command post. (See ATP 3-90.5 for more information on combined arms and infantry battalion command posts.)

Ref: FM 6-0, (May '22), table 7-1. Command posts by echelon and type of unit.

A. Command Post Cells and Staff Sections

Ref: FM 6-0, Commander and Staff Organization and Operations, (May '22), pp. 8-2 to 8-8.

In CPs, staffs sections are cross-functionally organized into **CP cells.** A command post cell is a grouping of personnel and equipment organized by warfighting function or by planning horizon to facilitate the exercise of command and control. Functional cells group personnel and equipment by warfighting function.



Functional Cells

Functional cells coordinate and synchronize forces and activities by warfighting function. The functional cells within a CP are intelligence, movement and maneuver, fires, protection, and sustainment. Echelons above brigade are resourced for all five functional cells.

- **Intelligence Cell.** The intelligence cell coordinates activities and systems that facilitate understanding of the enemy, terrain, weather, and other relevant aspects of an operational environment. The intelligence cell requests, receives, and analyzes information from multiple sources to produce and distribute intelligence products. The intelligence cell consists of most of the intelligence staff and an attached U.S. Air Force weather team.
- **Movement and Maneuver Cell.** The movement and maneuver cell coordinates the related tasks and systems that move and employ forces to achieve a position of relative advantage over the enemy and other threats. This includes tasks related to gaining a positional advantage by combining forces with force projection (movement) and direct fire (maneuver). Elements of operations, airspace control, aviation, engineer, geospatial information and service, and space support elements all form this cell. Staff elements in the movement and maneuver cell also form the core of the current operations integration cell.
- **Fires Cell.** The fires cell coordinates, plans, integrates, and synchronizes the employment and assessment of Army, joint, and multinational fires in support of operations. The fires cell recommends targeting guidance to the commander, including the selection of high-payoff targets. The fires cell plans, synchronizes, coordinates, and integrates fires matched to a wide range of targets and targeting systems. The fires cell coordinates target acquisition, target dissemination, and target engagement functions for the commander.
- **Protection Cell.** The protection cell is responsible for integrating, coordinating, and synchronizing protection tasks and activities. The protection cell advises commanders on the priorities for protection and coordinates the implementation and sustainment of protective measures to protect assets according to the commander's priorities. The elements that

IV. Liaison Officer

Ref: FM 6-0, Commander and Staff Organization and Operations, (May '22), pp. 3-2 to 3-3.

A liaison officer (LNO) is an individual who represents a commander or staff officer for the purpose of maintaining contact or intercommunication between units or organizations. A trained, competent, trusted, and informed LNO is the key to effective liaison. LNOs must have the commander's full confidence and experience for the mission. LNOs generally transmit information directly bypassing headquarters and staff layers. At higher echelons, the complexity of operations often requires more experience reflected in higher rank required for LNOs.

Senior liaison officer rank by echelon	Recommended rank
Theater army, multinational, or joint force commander*	Colonel
Corps	Colonel
Division	Lieutenant colonel
Brigade, regiment, or group	Captain
Battalion	Lieutenant
*These include joint force commanders and functional component commanders and may also include major interagency and international organizations.	

Ref: FM 6-0 (May '22), table 3-1. Senior liaison officer rank by echelon.

A LNO normally remains at the receiving unit or organization until recalled by the sending unit. The LNO's parent unit is referred to as the sending unit. The unit or activity that the LNO is sent to is the receiving unit. As their commander's representative, LNOs must—

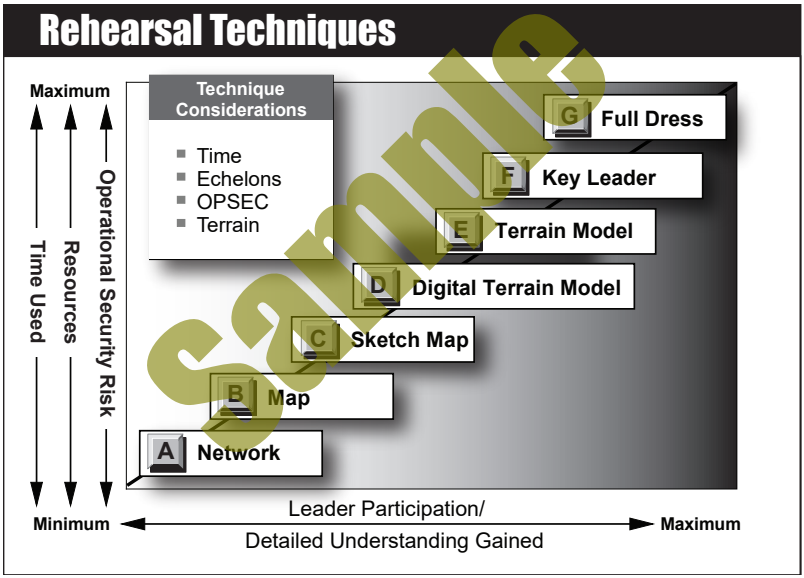
- Convey the sending and receiving unit's commander's intent, guidance, mission, and concept of operations.
- Keep the sending unit informed of the receiving unit plans and operations.
- Represent the sending unit commander's position.
- Ensure missions being assigned to the sending unit match its capabilities.
- Know how to access sending and receiving unit information.
- Know the sending unit's mission, current and future operations, logistics status, organization, disposition, capabilities, and tactics, techniques, and procedures.
- Appreciate and understand the receiving unit's customs, organization, capabilities, mission, doctrine, and tactics, techniques, and procedures.
- Anticipate questions and potential points of conflict and prevent or resolve misunderstandings.
- Be familiar with—
  - Requirements for and purpose of liaison.
  - The liaison system and its reports, documents, and records.
  - Liaison team training.
  - Observe the established channels of command and staff functions.
  - Be tactful and articulate.
  - Possess familiarity with local culture and language (when liaising with the host nation or with multinational partners) and have regional expertise if possible

LNOs generally have access to the commander consistent with the duties involved. However, for routine matters, LNOs work for and receive direction from the chief of staff (COS) or executive officer (XO). Using one officer to perform a liaison mission across the command conserves manpower while guaranteeing a consistent, accurate flow of information. However, continuous operations may require a liaison team or liaison detachment.

I. Rehearsals

Ref: FM 6-0, Commander and Staff Organization and Operations, (May '22), app. C.

A rehearsal is a session in which the commander and staff or unit practices expected actions to improve performance during execution (ADP 5-0). Rehearsals allow leaders and their Soldiers to practice key aspects of the concept of operations. These actions help Soldiers orient themselves to their environment and the planned actions of other units before executing an operation. Rehearsals help Soldiers build a lasting mental picture of the sequence of key actions within the operation. Rehearsals are the commander's tool to ensure that staffs and subordinates understand the commander's intent and the concept of operations. They allow commanders and staffs to identify shortcomings in the plan that have not been previously recognized. Rehearsals also contribute to external and internal coordination, as the staff identifies additional coordinating requirements.



Ref: FM 6-0 (May '22), fig. C-1. Rehearsal techniques.

Effective and efficient units habitually rehearse during training. Commanders at every level routinely train and practice various rehearsal types. Adequate time is essential when conducting rehearsals. The time required varies with the complexity of the mission, the type and technique of rehearsal, and the level of participation. Units conduct rehearsals at the lowest possible level using the most thorough technique possible with the given time available.

A rehearsal is a coordination event, not an analysis. It does not replace war gaming. Commanders war-game during the military decision-making process (known as MDMP) to analyze different courses of action to determine the optimal one. Rehearsals practice that selected course of action. Commanders avoid making major changes to operation orders (OPORDs) during rehearsals. They make only those changes essential to mission success and risk mitigation.

III. Rehearsal Types

Ref: FM 6-0, Commander and Staff Organization and Operations, (May '22), pp. C-1 to C-2.

Each rehearsal type achieves a different result and has a specific place in the preparation timeline. The types of rehearsals are the—

A. Backbrief

A backbrief is a briefing by subordinates to the commander to review how subordinates intend to accomplish their mission. Subordinates perform backbriefs throughout preparation to allow commanders to clarify intent and provide additional guidance early in subordinate planning. Commanders use the backbrief to identify any problems in the concept of operations. Backbriefs are performed sequentially in which subordinate leaders review assigned tasks and planned actions from start to finish of the operation. Backbriefs require the fewest resources and may be the only option under time-constrained conditions. *Note. The backbrief must not be confused with a confirmation brief. A confirmation brief is an opportunity for subordinate leaders to verify receipt and understanding of the commander's intent and specified tasks, immediately following the issuance of the order.*

B. Combined Arms Rehearsal

A combined arms rehearsal is a scripted event involving the commander, staff, and units used to identify and solve problems. A combined arms rehearsal enables the commander, staff, and subordinate units to synchronize plans, actions, and responsibilities across warfighting functions. Higher headquarters should execute a combined arms rehearsal after subordinate units not only issue their operation orders but also have an opportunity to rehearse their individual plans. This type of rehearsal helps ensure subordinate commanders' plans achieve the higher echelon commander's intent. A combined arms rehearsal is intended to be an opportunity to synchronize actions, identify conflicts, and solve problems through the fragmentary order process. It should not be a rigidly scripted event and should have time allocated for discussion. A combined arms rehearsal may be the final opportunity for problem identification and conflict resolution prior to execution, as the entire staff and unit is exposed to the overall scheme of events.

C. Support Rehearsal

A support rehearsal is an event focused on synchronizing each warfighting function with the overall operation. Throughout preparation, units conduct support rehearsals within the framework of a single or limited number of warfighting functions that can involve coordination and procedure drills for aviation, fires, engineer support, or casualty evacuation. Support rehearsals and combined arms rehearsals complement preparations for an operation. Units may conduct support rehearsals separately and then combine them into full-dress rehearsals. Although these rehearsals differ slightly by warfighting function, they achieve the same result.

D. Battle Drill or SOP Rehearsal

A battle drill is an action units collectively and rapidly execute without applying a deliberate decision-making process. A battle drill or SOP rehearsal ensures that all participants understand a technique or a specific set of procedures. Throughout preparation, units and staffs rehearse battle drills and SOPs. These rehearsals do not need a completed order from higher headquarters. Leaders place priority on those drills or actions they anticipate occurring during the operation. All echelons use these rehearsal types; however, they are most common for platoons, squads, and sections. They are conducted throughout preparation, and they are not limited to published battle drills. All echelons can rehearse actions such as a command post shift change, an obstacle breach lane-marking SOP, or a refuel-on-the-move site operation.

II. The After Action Review (AAR)

Ref: FM 7-0, Training (Jun '21), app. K and A Leader's Guide to After Action Reviews (Aug '12).

An after action review (AAR) is a guided analysis of a Soldier's or organization's performance, conducted at appropriate times during and at the conclusion of a training event or operation with the objective of improving future performance. It includes a facilitator, event participants, and other observers. AARs are conducted at every echelon and are essential in correcting observed training deficiencies by providing feedback that is immediate, direct, and standards based.

After Action Review Steps

Plan the AAR

Execute the AAR

Evaluate the AAR

Integrate & Share Lessons Learned

AARs are a professional discussion requiring the participation of those trained. AARs enable and encourage participants to self-discover what happened then develop a plan for improving task performance. AARs focus on the commander's intent, guidance, training objectives, and task standards. They are not a critique, and leaders avoid creating an environment of pointing out failures. The climate of the AAR must encourage candid and open discussion of task performance without stifling learning and team building by—

- Emphasizing meeting the Army standard on tasks rather than judging success or failure.
- Using leading questions to encourage self-discovery and important lessons.
- Allowing a large number of Soldiers and leaders—including opposing forces (OPFORs)—to participate so more lessons are shared.
- Assigning leader responsibility to improve task performance.

AARs also signal the start of the next planning cycle. Lessons learned from the review of performance provide leaders the specifics of what and how to perform better for future training. The AAR process ensures participants self-discover what went right, what went wrong, and how to perform to standard next time. Leaders capture AAR results to craft better, more effective training plans and execution. AARs also help leaders frame the unit's retraining efforts. To the greatest extent, training is not complete until all training objectives are met. When this is not possible, leaders ensure retraining is planned and executed as expeditiously as possible.

The After Action Report (Written)

An important collection technique used by Army echelons and organizations is an after action report. The after action report provides observations and insights from the lessons learned that allow a unit to reflect on successes and shortcomings of the operation as well as share these lessons with the Army. Leaders can use the after action report for building future training plans or for planning for future operations.

The after action report differs from the after action review. An after action review brings together Soldiers to have a verbal discussion held at the completion of an operation or event. The after action report is a written document that highlights unit accomplishments and lessons learned. The after action report is not meant to critique an operation. Instead, it documents what worked well as much as what did not work well.

Refer to FM 6-0, Commander and Staff Organization and Operations, (May '22), app. F.

Types of After Action Reviews

Two types of after action reviews exist: formal and informal. Commanders generally conduct formal action reviews after completing a mission. Normally, only informal after action reviews are possible during the conduct of operations.

Types of After-Action Reviews

Formal Reviews	Informal Reviews
■ Conducted by either internal or external leaders and external observer and controllers (OC)	■ Conducted by internal chain of command
■ Takes more time to prepare	■ Takes less time to prepare
■ Uses complex training aids	■ Uses simple training aids
■ Scheduled - events and / or tasks are identified beforehand	■ Conducted as needed. Primarily based on leaders assessment
■ Conducted where best supported	■ Held at the training site

Ref: A Leader's Guide to After Action Reviews, p. 5.

A. Formal

Leaders plan formal after action reviews when they complete an operation or otherwise realize they have the need, time, and resources available. Formal after action reviews require more planning and preparation than informal after action reviews. Formal after action reviews require site reconnaissance and selection; coordination for aids (such as terrain models and large-scale maps); and selection, setup, maintenance, and security of the after action review site. During formal after action reviews, the after action review facilitator (unit leader or other facilitator) provides an overview of the operation and focuses the discussion on topics the after action review plan identifies. At the conclusion, the facilitator reviews identified and discussed key points and issues, and summarizes strengths and weaknesses.

B. Informal

Leaders use informal after action reviews as on-the-spot coaching tools while reviewing Soldier and unit performance during or immediately after execution. Informal after action reviews involve all Soldiers. These after action reviews provide immediate feedback to Soldiers, leaders, and units after execution. Ideas and solutions leaders gathered during informal after action reviews can be applied immediately as the unit continues operations. Successful solutions can be identified and transferred as lessons learned.

Step 1. Plan the AAR

Ref: FM 7-0, Training (Jun '21), pp. K-2 to K-5.

Commanders provide their guidance to develop an AAR plan for each training event. Subordinates determine how to achieve the commander's guidance. The guidance applies to formal and informal AARs and identifies—

- Who conducts the AAR.
- Who provides information.
- Aspects of the operation an AAR evaluates.
- Who attends the AAR.
- When and where the AAR occurs.
- A senior trainer to capture the results of the AAR and to integrate results into training in accordance with the 8-Step Training Model.

Leaders or evaluators use the AAR plan to identify critical locations and events to observe so they can provide the unit a timely and valid assessment. Critical places can include unit maintenance collection points, passage points, and unit aid stations. The AAR plan identifies responsible persons (internal or external to the unit) who facilitate the AAR for a particular event. The leader or evaluator is the individual tasked to observe training, provide control for the training, and lead the AAR.

Selecting and Training Evaluators.

Commanders select leaders and evaluators who—

- Have demonstrated task proficiency.
- Know the duties they are observing.
- Know current doctrine.

External evaluators are at least equal in rank to the leader of the unit they assess. Evaluators are not responsible for training the unit. That responsibility lies exclusively with the unit chain of command. If commanders choose between experience and an understanding of current doctrine or rank, they should go with experience. A staff sergeant with experience as a tank platoon sergeant is a better platoon evaluator than a sergeant first class who has no platoon sergeant experience. Commanders are responsible for training and certifying evaluators to include providing training on conducting AARs.

Reviewing Training and Evaluation Outlines

When planning the AAR, unit leaders review applicable training and evaluation outlines to understand task requirements and standards.

Scheduling Stopping Points

Leaders schedule the time and place to conduct AARs as an integral part of training events. They plan for AARs during and at the end of each critical phase or major training event. For example, a leader may plan a stopping point after issuing an operation order, upon the unit's arrival at a new position, or after consolidation on an objective.

Determining Attendance

The AAR plan specifies who attends each AAR. At each echelon, an AAR has a primary set of participants. At squad and platoon levels, everyone attends and participates. At company or higher levels, it may not be practical to have everyone attend because of continuing operations or training. At company or higher levels, unit and OPFOR commanders, unit leaders, and other key players may be the only participants. Leaders or evaluators recommend additional participants attend based on specific observations.

Chap 7

Operational Terms & Military Symbols

Editor's note: Changes to operational terms and military symbols occur more frequently than traditional publication media can be updated. The terminology and military symbol database, known as the Army Dictionary, is updated monthly to reflect the latest editions of Army publications.

Army Dictionary Online (Up-to-date Terms & Symbols)

Both FM 1-02.1 and FM 1-02.2 are augmented by the military terms and symbols database, known as the Army Dictionary online. Changes to operational terms and military symbols occur more frequently than traditional publication media can be updated. The terminology and military symbol database, known as the Army Dictionary, is updated monthly to reflect the latest editions of Army publications.

To access the database, go to https://jdeis.js.mil/jdeis/index.jsp?pindex=207, and log in with a common access card.

This database is an official DOD website, maintained by the Combined Arms Doctrine Directorate in collaboration with the Joint Staff Directorate for Joint Force Development. The site is part of the Joint Doctrine, Education, and Training Electronic Information System. It includes all Army doctrinal terms and all military symbols in MIL-STD 2525D, including air, land, maritime, space, activities, and control measures.

Operational Terms

FM 1-02.1, Operational Terms (Mar '21) constitutes approved Army doctrinal terminology for general use. The principal audience for this manual are all members of the profession of Arms. Commanders and staffs of Army headquarters serving as joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning the range of military operations and joint or multinational forces. Trainers and educators throughout the Army will also use this publication.

The second edition of FM 1-02.1 compiles all Army terms and definitions approved for use in Army doctrinal publications, including ADPs, FMs, and ATPs. It also includes joint and North Atlantic Treaty Organization (NATO) terms used and listed in the glossaries of Army doctrinal publications as of September 2020. FM 1-02.1 also lists shortened forms (whether considered acronyms or abbreviations) approved for use in Army doctrinal publications.

Military Symbols

FM 1-02.2, Military Symbols (May '22) constitutes approved Army military symbols for general use to depict land operations. The principal audience for FM 1-02.2 is all members of the profession of arms. 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 the range of military operations and joint or multinational forces. Trainers and educators throughout the Army will also use this publication.

FM 1-02.2 compiles Department of Defense Military Standard (MIL-STD) 2525D approved military symbols applicable to land operations for use in U.S. Army doctrinal publications, situation maps, overlays, annotated aerial photographs for all types of military operation.

Glossary of Terms (FM 3-0/5-0/6-0)

This combined glossary -- compiled from FM 3-0 (Oct '23), FM 5-0 (w/C1) (May '22), and FM 6-0 (May '22) -- lists operational planning- and multidomain operations-specific terms for the purposes of the Battle Staff SMARTbook. The proponent publication for terms is listed in parentheses after the definition. Where Army and Joint definitions differ, (Army) precedes the definition.

agility - The ability to move forces and adjust their dispositions and activities more rapidly than the enemy. (FM 3-0)

antiaccess - Action, activity, or capability, usually long-range, designed to prevent an enemy force from entering an operational area. (JP 3-0)

area denial - Action, activity, or capability, usually short-range, designed to limit an enemy force's freedom of action within an operational area. (JP 3-0)

area of influence - An area inclusive of and extending beyond an operational area wherein a commander is capable of direct influence by maneuver, fire support, and information normally under the commander's command or control. (JP 3-0)

area of interest - That area of concern to the commander, including the area of influence, areas adjacent to it, and extending into enemy territory. (JP 3-0)

area of operations - An operational area defined by a commander for the land or maritime force commander to accomplish their missions and protect their forces. (JP 3-0)

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)

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)

battle - A set of related engagements that lasts longer and involves larger forces than an engagement. (ADP 3-90)

backbrief - A briefing by subordinates to the commander to review how subordinates intend to accomplish their mission. (FM 6-0)

battle rhythm - A deliberate daily cycle of command, staff, and unit activities intended to synchronize current and future operations. (FM 6-0)

be-prepared mission - A mission assigned to a unit that might be executed. (FM 5-0)

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)

I. Military Symbol Fundamentals

Ref: FM 1-02.2, Military Symbols (May '22), chap. 1.

This section discusses the MIL-STD 2525D military symbol construct standards for framed and unframed symbol standard identity, physical domain, color usage, and the placement of main icons, modifiers, and amplifiers.

Military symbols are logograms that represent words or terms used to depict abstract graphic representations of a unit, equipment, installation, activity, control measure, or tactical mission task relevant to military operations. These symbols are available for use in course of action sketches, visualizing operation orders, planning, maps, overlays, and command and control system displays to represent a current common operational picture.

Framed Symbols

Framed symbols allow the depiction of units, equipment, installations, and activities by using a combination of main icon, modifiers, amplifiers, and color (optional) to complete the military symbol construct. The frame is the border of the symbol and serves as the base to which other symbol components are added, and indicates the standard identity, physical domain, and status of the object being represented. Framed symbol may use standard identity colors to enhance depiction, or can be black and white depending on display.

- Military Units and Organizational Symbols *(See pp. 7-17 to 7-22.)*
- Activity and Installation Symbols *(See pp. 7-23 to 7-28.)*
- Equipment Symbols *(See pp. 7-29 to 7-34.)*

See following pages (pp. 7-12 to 7-15) for the building process for framed symbols.

Unframed Symbols

Control measure symbols and mission task verb symbols are unframed symbols. They conform to special rules for their own elements. Unframed symbols include:

- Unframed Equipment Symbols. Unframed equipment symbol constructs follow the same icon and amplifier placement rules as framed equipment symbols.
- Tactical Mission Task Symbols *(See pp. 7-44 to 7-45.)*

See p. 7-16 for discussion of the building process for unframed symbols.

Control Measure Symbols *(See pp. 7-35 to 7-42.)*

A control measure is a means of regulating forces or warfighting functions. Control measure symbols have different unique construct template patterns for each type of control measure, but they use similar standard identity colors and amplifiers as other military symbols.

Operation Symbols *(See pp. 7-35 and 7-43.)*

Operation symbols are symbols related to offensive and defensive operations, which include movement to contact, attack, enabling, and retrograde operations. See types of offense and defense operations in ADP 3-90 and FM 3-90-1 for more information on operation symbols and their usage. Offensive and defensive operations symbols are not control measures, and are used to depict actions conducted during offense and defense operations that enhance operational picture of an operation.

Building Unframed Symbols

Ref: FM 1-02.2, Military Symbols (May '22), p. 1-9.

As part of the military symbol construct process, many control measure symbols can be combined with amplifiers and main icons to display operational information in one symbol. Table 1-6 depicts the steps in the building process example for one of these types of control measures.

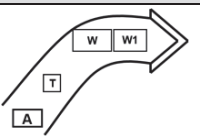
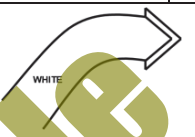
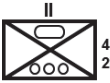
	Steps	***Construct example and symbol translation***
1	Choose an appropriate control measure template with amplifier fields from chapter 5. ***Note***. This example uses the main axis of advance template.	 Main axis of advance with amplifier fields
2	Choose the appropriate amplifier information by field. ***Note***. This example uses unique designation Field T to name the axis of advance.	T: WHITE  Main axis of advance "White"
3	Choose the next appropriate amplifier information by field. ***Note***. This example uses Field W to add a date time group to axis of advance.	W: 140600ZMAR2019 W1: If needed  Main axis of advance "White" movement begins at 0600 Zulu hour, 14 MAR 2019
4	Add a main icon construct to complete the intent of the symbol. ***Note***. This example use Feld A to add a completed unit symbol construct.	A  Infantry battalion with armored high mobility vehicle capability, 4th Battalion, 23d Infantry Regiment, 2d Brigade, 2nd Infantry Division
5	Completed construct of control measure.	 4th Infantry Battalion (Stryker), 23d Infantry Regiment, 2d Brigade, 2nd Infantry Division, moves at 0600 Zulu hour, 14 MAR 2019 on main axis of advance White

Table 1-6. Construct process for control measure symbol.

II. Military Unit and Organizational Symbols

Ref: FM 1-02.2, Military Symbols (May '22), chap.2.

A unit is any military element whose structure is prescribed by a competent authority (JP 3-33). This section includes the lists of amplifiers, main icons, and modifiers for constructing unit and organization symbols.

Main and Modifier Icons and Amplifier Fields for Units

The main and modifier icons and amplifier fields standardize the display of alphanumerical information that graphically describes a unit, its capabilities, status, and location. The field placement is the same for all unit standard identity frames (including friend and assumed friend, hostile and suspect, neutral, pending, and unknown). *See following pages for amplifiers used for framed symbols.*

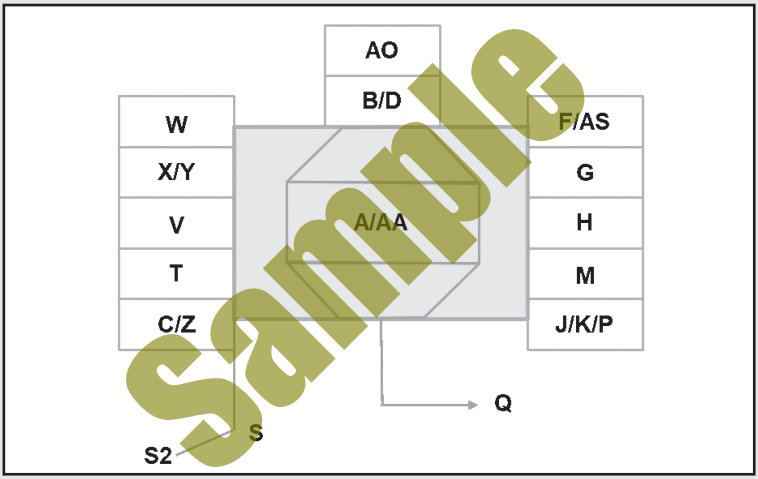


Figure 2-1. Main and modifier icon and amplifier placement locations.

Unit and Organization Frame Shapes

Unit and organization frame shapes are used to identify friendly, enemy, neutral, or unknown affiliation units in an area of interest or operation that may affect unified land operations. Table 2-1 provides the standard identity frame shapes for units and organizations.

Friendly	*Hostile*	*Neutral*	*Unknown*
			
Assumed Friend	*Suspect*		*Pending*
			

Table 2-1. Unit and organization standard identity frame shapes.

Amplifier Fields for Unit Frames

Ref: FM 1-02.2, Military Symbols (May '22), Table 2-2.

Field	*Field Title*	*Description*
A	Main and modifier icons	The innermost part of a symbol that represents the main function (main icon) and its capabilities (modifiers 1 and 2).
B	Echelon	A graphic amplifier in a unit symbol that identifies command level.
C	Quantity	A text amplifier that identifies a specific number and type of items.
D	Task organization indicator	A graphic amplifier that identifies a unit or an activities symbol as a task force.
F	Attached and detached (reinforced or reduced)	A text amplifier in a unit symbol that displays (+) for reinforced, (-) for reduced, (±) reinforced and reduced. ***Note***. This field allows a maximum of 3 characters.
G	Staff comments	A text amplifier for units, equipment, and installations. Content is implementation specific. ***Note***. This field allows a maximum of 20 characters.
H	Additional information	A unique alphanumeric designation that identifies the displayed unit. ***Note***. This field allows a maximum of 20 characters.
J	Evaluation rating	A text amplifier for units, equipment, and installations that consists of a single letter reliability rating and a single digit credibility rating. Reliability Ratings: A-completely reliable B-usually reliable C-fairly reliable D-not usually reliable E-unreliable F-reliability cannot be judged Credibility Ratings: 1-confirmed by other sources 2-probably true 3-possibly true 4-doubtfully true 5-improbable 6-truth cannot be judged ***Note***. This field allows a maximum of 2 characters
K	Combat effectiveness	A text amplifier for units and installations that indicates effectiveness. The entries are— Fully operational (FO) Substantially operational (SO) Marginally operational (MO) Not operational (NO) Unknown (UNK) ***Note***. This field allows a maximum of 5 characters.
M	Higher formation	A text amplifier for units that indicates number or title of higher echelon command (Roman numerals designate corps). ***Note***. This field allows a maximum of 21 characters.
P	Identification, friend or foe Selective identification feature	A text amplifier displaying one or more identification, friend or foe, or selective identification feature identification modes and codes. Display priority is mode 5, mode, mode 4, mode 3, and mode 2. ***Note***. This field allows a maximum of 15 characters.
Q	Direction of movement indicator	A graphic amplifier for units and equipment that identifies the direction of movement or intended movement of an object.
S S^2	Offset location indicator	A graphic amplifier used to indicate the offset or precise location.

III. Activity and Installation Symbols

Ref: FM 1-02.2, Military Symbols (May '22), chap. 3.

Main Icons for Activities and Installations

Main icons (Field A) reflect the primary function of the symbol. The main icons for activities and installations include some military symbols used in chapter 2 and unique civilian symbols used in defense support of civil authorities and stability operations. Activity symbols provide the means to construct military and civilian symbols to identify individual and group activities (including isolated personnel, civic, religious, social, and other groups), and installation symbols identify military and civilian infrastructure. The use of unique civilian symbols is a recognition of the larger role of military forces beyond war fighting and reflect stability and support to civil authority activities around the world. Table 3-6 shows the main icons for civilian individuals, organizations, events, installations, and facilities. *Select examples are provided below.*

Function	Icon	Main Icon Usage Construct Example and Symbol Translation
Airport		 Airport cargo terminal
Ammunition		 Ammunition facility
Arrest		 Arrest activity
Bomb	BOMB	 Enemy bombing activity
Booby trap		 Enemy booby trap activity
Broadcast transmitter antenna		 Broadcast transmitter antenna installation
Chemical, biological, radiological, or nuclear (CBRN)		 Enemy CBRN facility
Explosion		
Group (organized)		
Improvised explosive device (IED)	IED	 Enemy IED activity

Function	Icon	Main Icon Usage Construct Example and Symbol Translation
Individual		 Individual suspicious activity
Individual victim—attempted criminal activity		 Attempted criminal activity on individual
Individual victim—criminal activity		 Enemy individual victim criminal activity
Industrial building		 Industrial building facility
Internal security force	ISF	 Internal security force activity
Mass grave		 Mass grave facility
Medical treatment		 Medical treatment facility (hospital)
Nongovernmental	NGO	 Nongovernmental facility  Nongovernmental activity
Patrolling		 Patrolling activity

Table 3-6. Main icons for activities and installations (select examples).

Installations

Ref: FM 1-02.2, Military Symbols (May '22), pp. 3-4 to 3-8.

Installation Main and Modifier Icons and Amplifier Fields

Figure 3-1 shows the placement of main and modifier icons within the frame and amplifiers around the friendly symbol frame. Table 3-2 on page 3-2 provides descriptions and formats of each amplifier.

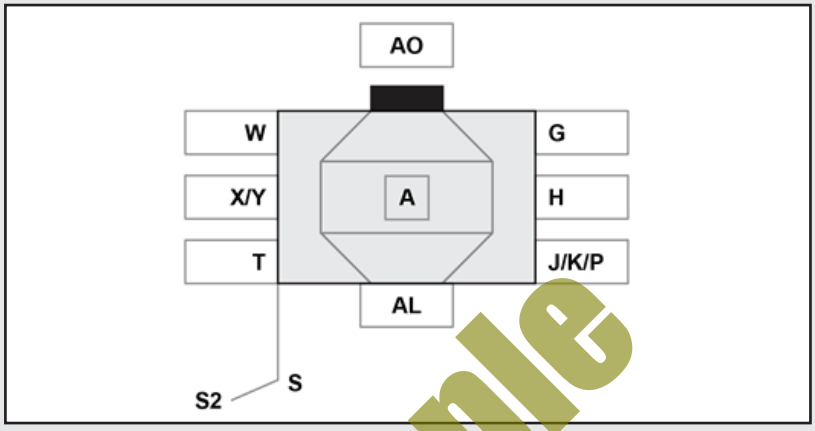


Figure 3-5. Placement of installation main and modifier icon and amplifiers.

Installation Frame Shapes

This frame is used to identify friendly, enemy, or criminal actions that can reveal civic, ethnic, religious, social, or other grouping activities in an area of interest or operation that may affect unified land operations.

Standard Identity	Friendly	Hostile	Neutral	Unknown
Installation				
	Assumed Friend	Suspect		Pending
				

Table 3-3. Installation standard identity frame shapes.

Amplifier Fields for Installations

Field	Field Title	Description
A	Main and modifier icons	The innermost part of a symbol that represents the main function and its capabilities (modifiers 1 and 2).
G	Staff comments	A text amplifier content is implementation specific. ***Note***. This field allows a maximum of 20 characters.
H	Additional information	A text amplifier content is implantation specific. ***Note***. This field allows a maximum of 20 characters.

Field	Field Title	Description
J	Evaluation rating	A text amplifier that consists of a single-letter reliability rating and a single digit credibility rating. **Reliability Ratings:** / **Credibility Ratings:** A-completely reliable. / 1-confirmed by other sources. B-usually reliable. / 2-probably true. C-fairly reliable. / 3-possibly true. D-not usually reliable. / 4-doubtfully true. E-unreliable. / 5-improbable. F-reliability cannot be judged. / 6-truth cannot be judged. ***Note***. This field allows a maximum of 2 characters.
K	Combat effectiveness	A text amplifier that indicates effectiveness. The entries are— Fully operational (FO). Substantially operational (SO). Marginally operational (MO). Not operational (NO). Unknown (UNK). ***Note***. This field allows a maximum of 5 characters.
P	Identification, friend or foe Selective identification feature	A text amplifier displaying one or more identification, friend or foe, or selective identification feature identification modes and codes. Display priority is mode 5, mode, mode 4, mode 3, and mode 2. ***Note***. This field allows a maximum of 15 characters.
S	Headquarters staff indicator	A graphic amplifier that identifies a headquarters.
S^2	Offset location indicator	A graphic amplifier used to indicate the offset or precise location of a single point symbol.
T	Unique identifier	An amplifier field reserved for command and control systems that uniquely identifies a particular symbol with a track number. Prefix = TN: #####. Example: TN: 13579. ***Note***. This field allows a maximum of 30 characters.
W	Date-time group	An alphanumeric designator for displaying a date-time group (DDHHMMSSZMONYYYY) or "O/O for an order. The date-time group is composed of a group of six numeric digits with a time zone suffix and the standardized three-letter abbreviation for the month followed by four digits representing the year. The first pair of digits represents the day; the second pair, the hour; the third pair, the minutes. For automated systems, two digits may be added before the time zone suffix and after the minutes to designate seconds. ***Note***. This field allows a maximum of 16 characters.
X	Altitude or depth	A text amplifier that displays either altitude, flight level, depth for submerged objects, or height of equipment or structures on the ground. Measurement units shall be displayed in the string. Examples: 1500MSL FL150 ***Note***. This field allows a maximum of 14 characters.
Y	Location	A text amplifier that displays a symbol's location in degrees, minutes, and decimal minutes (or in military grid reference system, global area reference system, or other applicable display formats). Note. This field allows a maximum of 22 characters.
AL	Operational condition	A graphic amplifier that indicates operational condition or capacity. Operational condition amplifier, if used, shall be comprised of only one color. Example: Aircraft: Red—damaged, Green—fully capable example: Missile: Red—imminent threat, Green—no threat
AO	Engagement bar	A graphic amplifier placed immediately atop the symbol. May denote 1) local/remote status, 2) engagement status, and 3) weapon type. Format: A:BBB-CC where A = remote/local BBB = engagement status CC = weapon status

Table 3-4. Descriptions of main and modifier icons and amplifier fields for installation frames.

IV. Equipment Symbols (Framed & Unframed)

Ref: FM 1-02.2, Military Symbols (May '22), chap. 4.

Frame and Unframed Equipment Symbols

The equipment symbol construct standard permits the option to depict the symbol with frame or unframed. As discussed in chapter 1, the frame shape is what indicates the standard identity (friendly, enemy, neutral, and unknown) of a symbol. The unframed equipment symbol constructs must use colors (including blue, red, green, and yellow) in order to indicate the standard identity depiction of friendly, enemy, neutral, or unknown items. *(See p. 7-14 for standard identity colors.)*

Equipment Symbol Frame Shapes

The symbol frame shape is used to identify friendly, enemy, neutral, and unknown equipment affiliation in or supporting an area of interest or operations. Table 4-1 provides the standard identity frame shapes for units and organizations.

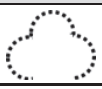
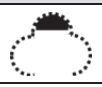
Domain	Friendly	Hostile	Neutral	Unknown
Land and sea surface				
	Assumed Friend	**Suspect**		**Pending**
				
Air (in flight)				
	Assumed Friend	**Suspect**		**Unknown**
				
Space (in space)				
	Assumed Friend	**Suspect**		**Unknown**
				

Table 4-1. Equipment standard identity frame shapes.

Field	Field Title	Description
Q	Direction of movement indicator	A graphic amplifier that identifies the direction of movement or intended movement of an object.
R	Mobility mode indicator	A graphic amplifier that depicts the mobility mode of transportation of an object.
S^2	Offset location indicator	A graphic amplifier used to indicate the offset or precise location of a single point symbol.
T	Unique identifier	An amplifier field reserved for command and control systems that uniquely identifies a particular symbol with a track number. Prefix = TN: #####. Example: TN: 13579. ***Note***. This field allows a maximum of 30 characters.
V	Type	A text amplifier for equipment that indicates types of equipment. ***Note***. This field allows a maximum of 24 characters.
W	Date-time group	An alphanumeric designator for displaying a date-time group (DDHHMMSSZMONYYYY) or "O/O" for an order. The date-time group is composed of a group of six numeric digits with a time zone suffix and the standardized three-letter abbreviation for the month followed by four digits representing the year. The first pair of digits represents the day; the second pair, the hour; the third pair, the minutes. For automated systems, two digits may be added before the time zone suffix and after the minutes to designate seconds. ***Note***. This field allows a maximum of 16 characters.
X	Altitude or depth	A text amplifier that displays either altitude, flight level, depth for submerged objects; or height of equipment or structures on the ground. Measurement units shall be displayed in the string. Examples: 1500MSL. FL150. ***Note***. This field allows a maximum of 14 characters.
Y	Location	A text amplifier that displays a symbol's location in degrees, minutes, and decimal minutes (or in military grid reference system, global area reference system, or other applicable display formats). Examples: military grid reference system: 28SMB2649083145 global area reference system: 3317.0921N 04412.6332E ***Note***. This field allows a maximum of 22 characters.
Z	Speed	A text amplifier that displays velocity. ***Note***. This field allows a maximum of 8 characters.
AD	Platform type	Electronic intelligence notation or communications intelligence notation. ***Note***. This field allows a maximum of 6 characters.
AE	Equipment teardown time	Equipment teardown time in minutes. ***Note***. This field allows a maximum of 3 characters.
AF	Common identifier	A text amplifier used for placement of common system name or model type name. Example: "Hawk" for Hawk surface-to-air missile system. ***Note***. This field allows a maximum of 12 characters.
AG	Auxiliary equipment indicator	Towed sonar array indicator: A graphic modifier for equipment that indicates the presence of a towed sonar array.
AL	Operational condition	A graphic amplifier that indicates operational condition or capacity. If used, it shall be comprised of only one color. Example: Aircraft: Red—destroyed, Green—fully capable. Example: Missile: Red—imminent threat, Green—no threat.
AO	Engagement bar	A graphic amplifier placed immediately atop the symbol. May denote 1) local/remote status, 2) engagement status, and 3) weapon type. Format: A:BBB-CC, where A = remote/local BBB = engagement status CC = weapon asset
AQ	Guarded unit	During ballistic missile defense, some tracks are designated as guarded by a particular unit. ***Note***. This field allows a maximum of 2 characters.
AR	Special designator	Special track designators such as non-real time and tactically significant tracks are denoted here. ***Note***. This field allows a maximum of 3 characters.

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V. Control Measure & Operation Symbols

Ref: FM 1-02.2, Military Symbols (May '22), chap. 5.

Control Measures

A control measure is a means of regulating forces or warfighting functions. Control measure symbols have different unique construct template patterns for each type of control measure, but they use similar standard identity colors and amplifiers as other military symbols.

Control measure symbols and mission task verb symbols are unframed symbols. They conform to special rules for their own elements. *See p. 7-16 for discussion and overview of the building process for control measure symbols (unframed symbols).*

Composition of Control Measure Symbols

Control measure symbols can be combined with other symbols, icons, and amplifiers to display operational information. They do not follow the same building rules as the icon-based symbols, but they shall be built in accordance with the symbol tables. See fig. 5-1.

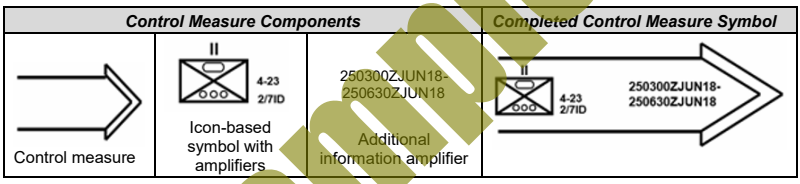


Figure 5-1. Composition of control measure symbol.

Standard Identity Coloring Control Measures

Friendly graphic control measures are shown in black or blue. Hostile graphic control measures are shown in red. If red is not available, they are drawn in black with the abbreviation "ENY" placed on the graphic in at least two places. Obstacles as shown in this chapter (friendly, hostile, neutral, unknown, factional) are drawn using the color green (black if green is not available. The color yellow will be used for the hatching for CBRN contaminated areas.

Control Measure Acronyms and Abbreviations

The acronyms and abbreviations in this chapter are considered symbols that are part of the military symbol construct for use with Army control measure symbols. No acronyms or abbreviations other than those provided in this publication may be used. When acronyms or abbreviations are approved for use with military symbols they become part of the military symbol lexicon.

Operation Symbols *(See pp. 7-11 and 7-43.)*

Operation symbols are symbols related to offensive and defensive operations, which include movement to contact, attack, enabling, and retrograde operations. See types of offense and defense operations in ADP 3-90 and FM 3-90-1 for more information on operation symbols and their usage. Offensive and defensive operations symbols are not control measures, and are used to depict actions conducted during offense and defense operations that enhance operational picture of an operation.

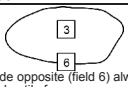
Control Measure Symbols (Examples)

Ref: FM 1-02.2, Military Symbols (May '22), pp. 5-41 to 5-42.

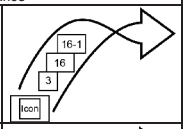
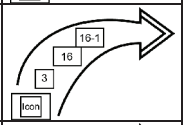
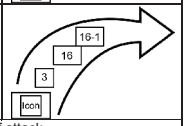
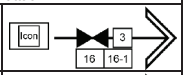
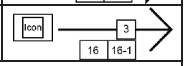
Mission Command (C2)

Type	Icon
Points	
Coordination point	
Decision point	
Checkpoint	CKP
Linkup point	LU
Passage point	PP
Rally point	RLY
Release point	RP
Start point	SP
Type	Icon
Lines	
Light line	LL
Type	Icon
Areas	
Area of operations	AO
Named area of interest	NAI
Targeted area of interest	TAI

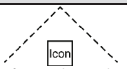
Movement and Maneuver

Type	Icon
General	
Points	
Point of interest	
Lines	
Forward line of troops	
Handover line	HL
Phase line	PL
Areas	
Assembly area	AA
Drop zone	DZ
Extraction zone	EZ
Landing zone	LZ
Pickup zone	PZ
Defensive	
Points	
Combat outpost	
Observation post	
Lines	
Final protective line	FPL
Areas	
Battle position	 Note: The side opposite (field 6) always faces toward the hostile force.

Movement and Maneuver (cont.)

Type	Icon
Offensive	
Axis of advance	
Airborne/aviation (supporting attack)	
Main attack	
Supporting attack	
Direction of attack	
Aviation (main attack)	
Main attack	
Supporting attack	
Points	
Target reference point Note: Task force units and below use target reference points (TRPs). A TRP can delineate sectors of fire within an engagement area. TRPs are designated using the standard target symbol or numbers issued by the fire support officer. Once designated, TRPs can also constitute indirect fire targets.	
Lines	
Bridgehead line	BL
Final coordination line	FCL
Holding line	HL
Limit of advance	LOA
Line of departure	LD
Line of departure/line of contact	LD/LC
Probable line of deployment	PLD Note: Use the planned status for the line.
Release line	RL
Areas	
Assault position	ASLT
Attack position	ATK
Objective	OBJ
Special areas	
Airhead/airhead line	 Note: An airhead/airhead line can be an area or a line.

Intelligence

Point, line, or area	
Type	Icon
Decoy/dummy/ feint/phoney	 Note: The icon refers to another control measure icon, such as axis of advance, direction of attack, or minefield.

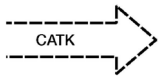
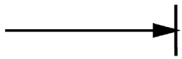
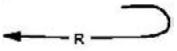
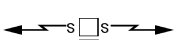
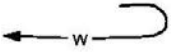
VI. Tactical Mission Tasks (and Symbols)

Ref: FM 1-02.2, Military Symbols (May '22) , chap. 6.

A **task** is a clearly defined and measurable activity accomplished by individuals or organizations. A **tactical mission task** is a specific activity performed by a unit while executing a form of tactical operation or form of maneuver. A tactical mission task may be expressed as either an action by a friendly force or an effect on an enemy force (FM 3-90-1). Tactical mission task symbols are used in course of action sketches, synchronization matrices, and maneuver sketches. Tactical mission task symbols are sized to accommodate the scale of the display or map, and they may be used with other framed and unframed symbols, but they do not use modifiers or amplifiers.

See following pages (pp. 7-44 to 7-45) for tactical mission tasks.

A. Operation Symbols *(See pp. 7-11 and 7-35.)*

Counterattack (dashed axis)		A form of attack by part or all of a defending force against an enemy attacking force, with the general objective of denying the enemy his goal in attacking (FM 3-0).
Cover		A form of security operation whose primary task is to protect the main body by fighting to gain time while also observing and reporting information and preventing enemy ground observation of and direct fire against the main body.
Delay		A form of retrograde in which a force under pressure trades space for time by slowing down the enemy's momentum and inflicting maximum damage on the enemy without, in principle, becoming decisively engaged (JP 1-02, see delaying operation).
Guard		A form of security operations whose primary task is to protect the main body by fighting to gain time while also observing and reporting information and preventing enemy ground observation of and direct fire against the main body. Units conducting a guard mission cannot operate independently because they rely upon fires and combat support assets of the main body.
Penetrate		A form of maneuver in which an attacking force seeks to rupture enemy defenses on a narrow front to disrupt the defensive system (FM 3-0).
Relief in Place		A tactical enabling operation in which, by the direction of higher authority, all or part of a unit is replaced in an area by the incoming unit.
Retirement		A form of retrograde [JP 1-02 uses *operation*] in which a force out of contact with the enemy moves away from the enemy (JP 1-02).
Screen		A form of security operations that primarily provides early warning to the protected force.
Withdraw		A planned operation in which a force in contact disengages from an enemy force (JP 1-02) [The Army considers it a form of retrograde.]

Select examples only.

(BSS7) Index

T

U

V

W

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Planning & Conducting Multidomain Operations

The Army's framework for organizing and putting command and control into action is the **operations process**—the major command and control activities performed during operations: **planning, preparing, executing, and continuously assessing** the operation.

Commanders use the operations process to drive the conceptual and detailed planning necessary to **understand** their operational environment (OE); **visualize and describe** the operation's end state and operational approach; make and articulate decisions; and **direct, lead, and assess** operations.

Key integrating processes that occur throughout the operations process include intelligence preparation of the battlefield, information collection, targeting, risk management, and knowledge management.

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

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