ATP 2-01.4

INTELLIGENCE SUPPORT TO ARMY TARGETING

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INTELLIGENCE SUPPORT TO ARMY TARGETING

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Preface

ATP 2-01.4 provides foundational guidance for executing Army intelligence support to targeting at echelons corps and below, which are integrated within a theater's targeting process. Echelons above corps elements use joint doctrine (see JP 3-60).

This publication focuses on intelligence professionals conducting intelligence support to Army targeting across all intelligence disciplines. It complements and expands on intelligence support to Army targeting discussions in FM 3-60. This publication includes techniques developed from lessons learned, current best practices, and existing doctrine.

The principal audience for ATP 2-01.4 includes commanders, intelligence professionals, and operational staff supporting the targeting process at echelons corps and below. ATP 2-01.4 also serves as a reference for military personnel developing doctrine, institutional and unit training, materiel and force structure, and standard operating procedures for intelligence activities that support targeting.

To understand the doctrine in ATP 2-01.4, readers must understand the following:

- Intelligence doctrine described in ADP 2-0 and FM 2-0.
- Collection management described in ATP 2-01.
- Intelligence preparation of the operational environment (IPOE) described in ATP 2-01.3.
- Intelligence analysis described in ATP 2-33.4.
- Operational doctrine described in ADP 3-0 and FM 3-0.
- Army targeting described in FM 3-60.
- Corps and division intelligence techniques described in ATP 2-19.3.

Commanders, staffs, and subordinates, with assistance from their servicing judge advocates, ensure their decisions and actions comply with applicable U.S. laws and policy, to include but not limited to Executive Order (EO) 12333 as amended; relevant DOD instructions; DODD 2310.01E; DODD 3115.09; DODD 5240.01; DODM 5240.01; AR 381-10; FM 2-22.3; FM 6-27; the Uniform Code of Military Justice; military orders, including fragmentary orders; and international treaties. Commanders at all levels ensure their Soldiers operate in accordance with the law of armed conflict and the rules of engagement. (See FM 6-27.)

ATP 2-01.4 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. For definitions shown in the text, the term is italicized, and the number of the proponent publication follows the definition. This publication is not the proponent for any Army terms.

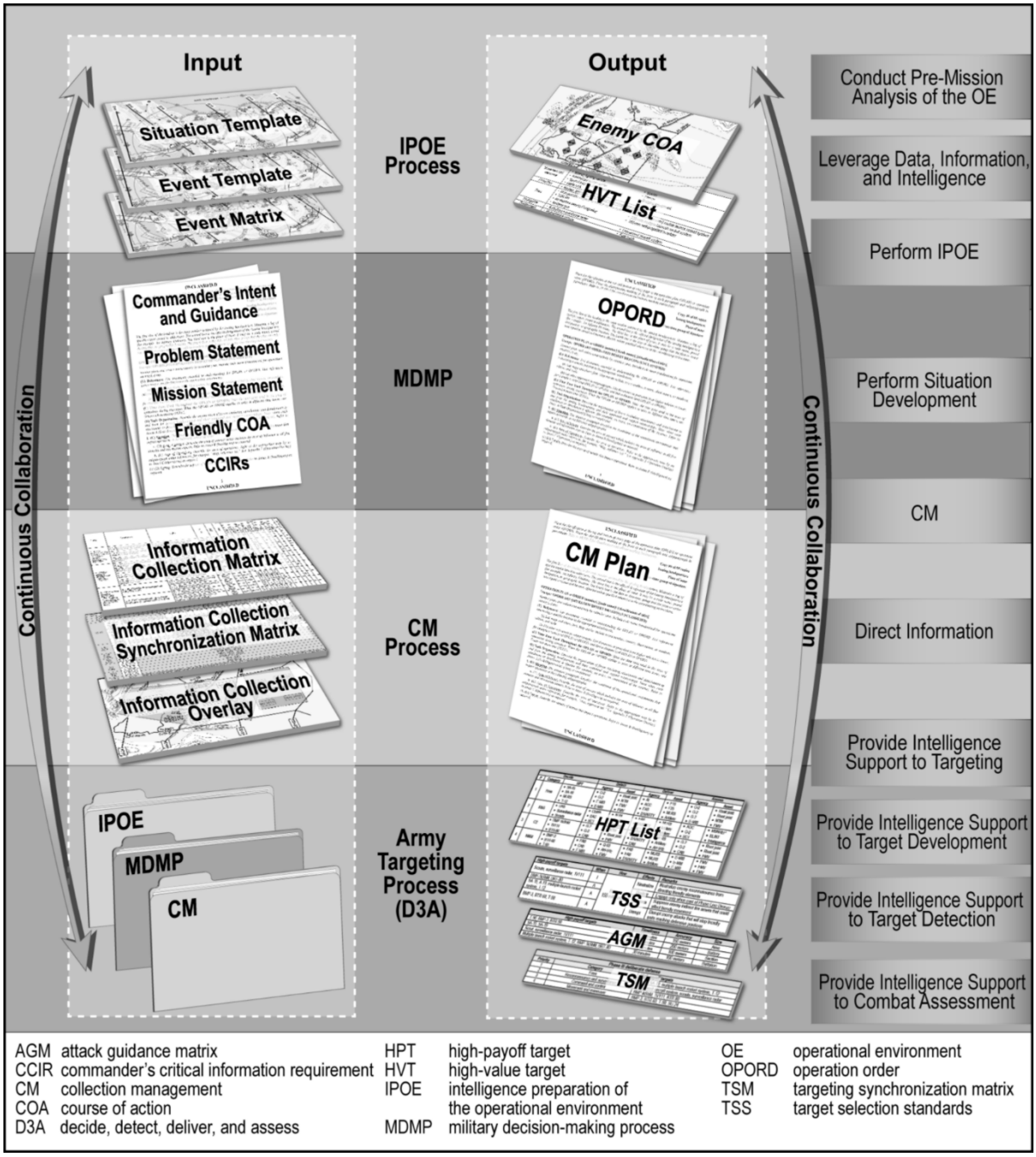
ATP 2-01.4 applies to the Active Army, Army National Guard/Army National Guard of the United States, and U.S. Army Reserve unless otherwise stated.

The proponent of ATP 2-01.4 is the U.S. Army Intelligence Center of Excellence. The preparing agency is the Directorate of Training and Doctrine, U.S. Army Intelligence Center of Excellence. Send comments and recommendations on DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) to Commander, U.S. Army Intelligence Center of Excellence, ATTN: ATZS-DOT-D (ATP 2-01.4), 550 Cibeque Street, Fort Huachuca, AZ 85613-7017; by e-mail to usarmy.huachuca.icoe.mbx.doctrine@army.mil; or submit an electronic DA Form 2028.

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Introduction

Intelligence support to Army targeting is a specialized and synchronized effort as it overlaps with all components of the intelligence warfighting function. Specifically, intelligence support to Army targeting incorporates several all-source intelligence analysis tasks, all aspects of collection management, and every intelligence discipline and complementary capability. (See introductory figure.)



Introductory figure. Intelligence support to targeting

ATP2-01.4 encompasses six chapters and five appendixes:

- **Chapter 1** provides an overview of both intelligence and targeting fundamentals.
- **Chapter 2** presents the interrelationship between targeting and intelligence, including staff collaboration, which is necessary to adequately conduct targeting.
- **Chapter 3** describes *conduct pre-mission analysis of the operational environment (OE)* as a key intelligence activity that supports targeting.
- **Chapter 4** describes *perform IPOE* as a key intelligence activity that supports targeting.
- **Chapter 5** discusses how intelligence supports target development—the decide function of the Army targeting process.
- **Chapter 6** discusses how intelligence supports the detect, deliver, and assess functions of the Army targeting process.
- **Appendix A** discusses intelligence support to targeting by intelligence capability, including all-source, single-source, and complementary capabilities.
- **Appendix B** discusses the joint targeting process and joint target methodologies.
- **Appendix C** describes target-related working groups and boards.
- **Appendix D** introduces a vignette that illustrates the application of intelligence support to targeting through the application of IPOE, targeting products, and collection management tools.
- **Appendix E** describes specific target graphics for target folders to support basic and intermediate target development.

This publication—

- Introduces acronyms at their first use in the front matter of this publication (preface and introduction) and again in the body of the publication (chapters 1 through 6 and appendixes A through E).
- Uses the term *threat*, which includes all enemies and adversaries that are a part of the OE.
- Uses the word *theater* to indicate theater of operations.
- Uses U.S. as a modifier (for example, *U.S. forces*) and United States as a noun (for example, the *United States, a country in North America*).
- Uses *G-2/S-2*, *G-3/S-3*, *G-4/S-4*, and *G-6/S-6* to denote *division or corps/battalion or brigade intelligence, operations, logistics, and signal staff officers*, respectively.

PART ONE

FUNDAMENTALS

Chapter 1

Intelligence and Targeting

SECTION I – INTELLIGENCE

1-1. *Intelligence* is 1. The product resulting from the collection, processing, integration, evaluation, analysis, and interpretation of available information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. 2. The activities that result in the product. 3. The organizations conducting such activities (JP 2-0). Intelligence drives operations and operations enable intelligence.

1-2. Intelligence is a function, a product, and a process that together enables the Army to conduct (plan, prepare, execute, and assess) operations. The purpose of intelligence (the function) is to provide commanders and staffs with timely, accurate, relevant, predictive, and tailored intelligence (the product) about the threat and other aspects of the operational environment (OE). Intelligence (the process) supports the conduct of operations. (FM 2-0 provides doctrine to assist in understanding Army intelligence and building proficiency in intelligence fundamentals.)

ARMY INTELLIGENCE

1-3. Intelligence is networked, synchronized, and collaborative across the intelligence enterprise. The Army's contribution to the intelligence enterprise is the *intelligence warfighting function*—the related tasks and systems that facilitate understanding the enemy, terrain, weather, civil considerations, and other significant aspects of the operational environment (ADP 3-0). Other significant aspects of the OE include the operational variables not covered by the mission variables of enemy, terrain and weather, and civil considerations, and other aspects depending on the nature of the operation. (See FM 2-0.)

1-4. The intelligence warfighting function supports operations through a broad range of supporting doctrinal tasks, referred to as intelligence warfighting function tasks (IWFTs)—one of which is *provide intelligence support to targeting*. Army units and organizations perform these tasks via the intelligence process, shown in figure 1-1 on page 2, by employing intelligence capabilities (see appendix A) to support the commander and staff. (FM 2-0 provides doctrine on the intelligence warfighting function and the intelligence process.)

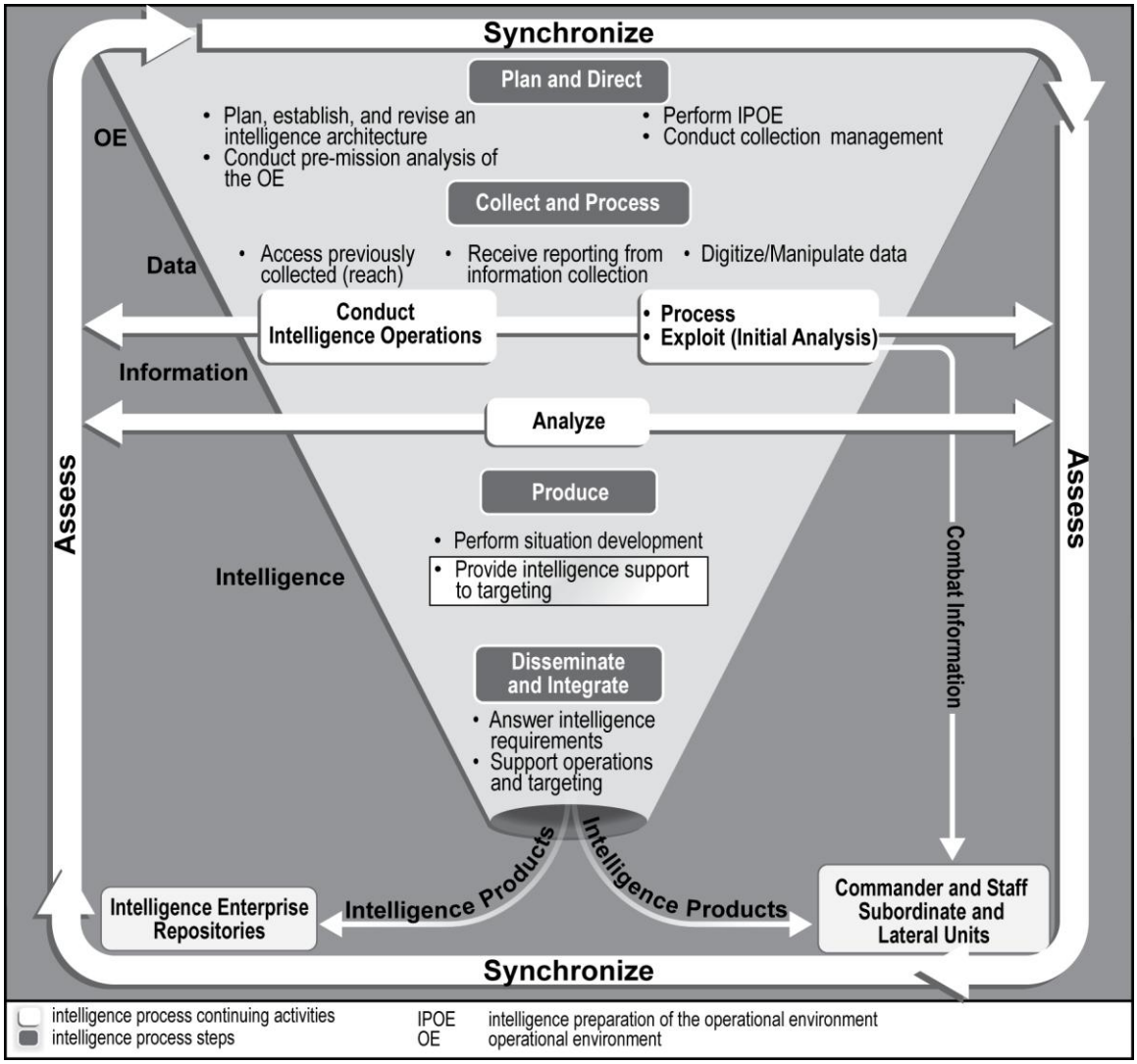


Figure 1-1. The Army intelligence process

FIGHTING FOR INTELLIGENCE

1-5. *Fighting for intelligence* refers to the challenge to provide effective and flexible intelligence support against a determined and adaptive threat—whether a peer threat or terrorist cell. This challenge also affects targeting as intelligence provides the commander and staff with the information and intelligence needed to support targeting actions. Fighting for intelligence spans the Army strategic contexts—competition below armed conflict, crisis, and armed conflict. (FM 3-0 and FM 2-0 provide doctrine on the Army strategic contexts and how intelligence relates to them, respectively.)

1-6. Fighting for intelligence is most challenging during large-scale combat operations as the threat can apply operational reach, contest friendly deployments, leverage highly lethal and effective nonlethal capabilities across multiple domains (land, maritime, air, space, and cyberspace), and influence friendly forces across multiple dimensions (human, information, and physical). Maneuver units, not just military intelligence (MI) units, must be prepared to fight for intelligence to gain information against enemy formations, a range of sophisticated threat capabilities, and many unknown conditions within the OE. The commander and staff will have to make difficult choices in terms of accepting risk to Soldiers conducting information collection. Therefore, staff integration is crucial; the staff must collaborate to overcome challenges and mitigate information collection capability risks and system limitations by developing an integrated information collection plan synchronized and nested across echelons. (FM 2-0 provides doctrine on fighting for intelligence.)

SECTION II – TARGETING

1-7. *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, as an integrating process, assists in integrating and synchronizing the *fires warfighting function*—the related tasks and systems that create and converge effects in all domains against the threat to enable actions across the range of military operations (ADP 3-0)—with other Army warfighting functions and joint functions. (See FM 5-0 and ADP 3-19 for doctrine on the integrating processes and fires warfighting function, respectively.)

1-8. A *target* is an entity that performs a function for the adversary or enemy considered for possible engagement (JP 3-60). A target's importance is determined by its potential contribution to achieving the commander's objectives or otherwise accomplishing assigned tasks or reaching an effect. Targets are continuously refined or adjusted as an operation unfolds.

1-9. Targets nominated for engagement may be grouped in the following entity types: facility, individual, virtual, equipment, and organization (FIVE-O). (See CJCSI 3370.01D.) A single entity may be associated with several target systems and critical to one or more of those systems. An entity may contain functions or elements that are part of other target systems. A *target element* is specific features of a target entity that enable it to function (JP 3-60).

1-10. The following provides a brief description of each entity type (see FM 3-60 for a full description):

- **Facility** is a physical structure, group of structures, or area that performs one or more functions that contribute to a threat capability.
- **Individual** is a person who provides one or more functions that contribute to a threat capability.
- **Virtual** is a collection of programs, files, or codes that depend on each other to perform a function for the threat.
- **Equipment** is an object comprising any number of devices and components, integrated and codependent, upon which the engagement of one component results in an effect upon the whole.
- **Organization** is a group or unit that provides a function that contributes to a threat capability.

1-11. Within the OE, targets exist in a—

- **Fixed state.** The target is unable to move.
- **Stationary state.** The target can move but must be in a static location from which to operate.
- **Mobile state.** The target operates on the move or requires very limited time to setup and execute its intended function.

TARGETING PRINCIPLES

1-12. Targeting is based on the enemy's assets, which can limit the friendly scheme of maneuver and tactical plans. Therefore, its purpose is to disrupt, delay, degrade, or limit threat interference with friendly courses of action (COAs). The targeting process assesses the benefits and costs of engaging various targets to achieve the desired end state. Every target must contribute to attaining the commander's objectives. Adhering to the four targeting principles—focused, effects-based, interdisciplinary, and systematic—should increase the probability of creating desired effects while diminishing undesired or adverse collateral effects:

- **Focused.** Targeting focuses on understanding the commander's intent and guidance to achieve the commander's objectives.
- **Effects-based.** Targeting seeks to create specific desired effects through lethal and nonlethal actions or capabilities.
- **Interdisciplinary.** Targeting encompasses many disciplines and requires participation from many staff elements and components.
- **Systematic.** Targeting creates effects systematically. If desired effects are not created, targets may be considered again in the process, or operations may have to be modified.

1-13. Knowing the commander's intent assists in clarifying the intelligence support to the targeting effort. The commander's guidance on using lethal and/or nonlethal capabilities is expressed to ensure the desired effects. Continuous intelligence updates assist the commander in creating various windows of opportunity and desired effects if the threat's actions are predicted.

1-14. Synchronizing intelligence efforts from specialized intelligence disciplines with G-2/S-2 and G-3/S-3 staffs generates the timely, relevant, accurate, and predictive intelligence needed to accomplish the mission. This intelligence presents commanders with alternate options to decide if targets should be reengaged or if modifications to friendly COA are required.

TARGETING CATEGORIES

1-15. To target the enemy effectively, friendly forces use deliberate and dynamic targeting. Deliberate targeting generally allows for more time and a larger resource pool from which to leverage against a target. Dynamic targeting is generally restricted by time, resources available, and command priorities. (See FM 3-60.) Each targeting category has two subcategories, as shown in figure 1-2.

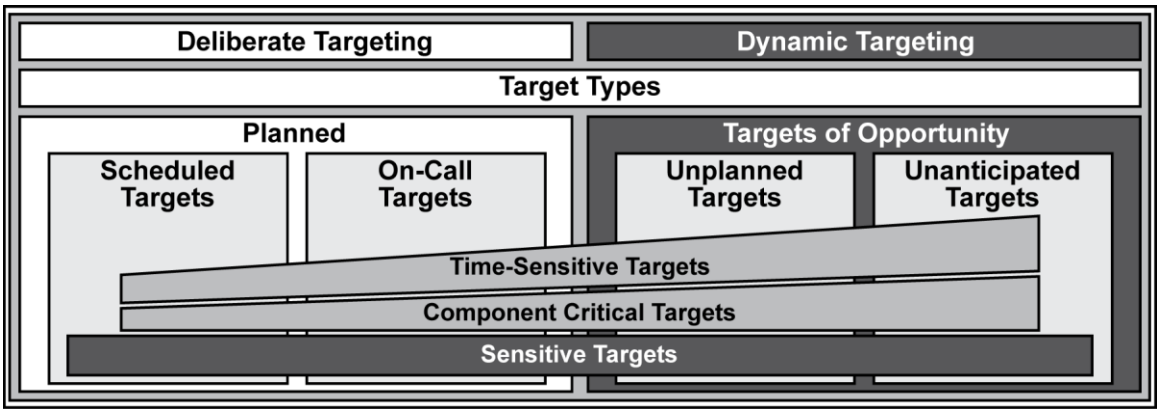


Figure 1-2. Targeting categories

DELIBERATE TARGETING

1-16. Deliberate targeting prosecutes planned targets assessed to be in the unit's assigned area for future operations that have a time horizon of days or weeks out. Planned targets can range from targets on target lists in the applicable plan or order to targets detected in enough time for placement on the air tasking order or integrated tasking order, mission type orders, or fire support plans.

1-17. There are two types of planned targets:

- **Scheduled targets** exist in the area of operations (AO) and are located in enough time so fires or other actions upon them are identified for engagement at a specific, planned time.
- **On-call targets** have planned actions but not for a specific delivery time. The commander expects to locate these targets in enough time to execute planned actions.

DYNAMIC TARGETING

1-18. *Dynamic targeting* is targeting that prosecutes targets identified too late or not selected for action in time to be included in deliberate targeting (JP 3-60). Dynamic targeting prosecutes targets of opportunity outside the 24-hour integrated target order/air tasking order cycle and focuses on the current battle with a time horizon of hours. The commander approves targets of opportunity during the current operations' planning and execution.

1-19. There are two types of targets of opportunity:

- **Unplanned targets** are known to exist in the AO, but no action has been planned against them. The target may not have been detected or located in enough time to meet planning deadlines, or the target may have been located but not previously considered important enough to engage.
- **Unanticipated targets** are unknown or not expected to exist in the AO.

1-20. Targets of opportunity may present themselves at any time and location on the battlefield; they are processed the same as planned targets. Targets of opportunity are first evaluated to determine when, or if, they should be engaged. The decision to engage them follows the rules of engagement and attack guidance and is based on factors, including but not limited to the following:

- Target's activity.
- Dwell time. (The amount of time a target is expected to remain in one location.)
- Target's criticality compared to other targets being processed for engagement.
- Lethality.
- Proximity. (How close is the target?)

TARGET CONSIDERATIONS

1-21. The following targets require special consideration due to the threat they pose, potential consequences of engaging them, and their priority on the targeting list:

- Time-sensitive target (TST).
- Component critical target.
- Sensitive target.

Time-Sensitive Target

1-22. *Time-sensitive target* is a joint force commander-validated target or set of targets requiring immediate response because it is a highly lucrative, fleeting target of opportunity or it poses (or will soon pose) a danger to friendly forces (JP 3-60). A TST is of such high priority—as it impinges on accomplishing the joint force commander's (JFC's) mission and objectives, or it presents such a significant strategic or operational threat to friendly forces or allies—that the JFC dedicates intelligence collection and attack assets to ensure success.

Component Critical Target

1-23. An echelon commander designated as the land component commander identifies and nominates component critical targets. A Service component commander may designate high-priority targets that present significant risks to, or opportunities for, component forces and missions. These are generally targets that the Service component commander has nominated to the JFC TST list but were not approved as TSTs. These targets, known as component critical targets, may require dynamic execution with expedited cross-component coordination and assistance. JFC and Service component commanders should clearly designate these targets before executing military operations. Component critical targets should receive the highest priority possible, just below targets on the JFC TST list.

Army Critical Targets

Army critical targets are those high-priority targets approved by the component commander as crucial to the scheme of operations. These targets require immediate engagement because they pose (or will soon pose) a significant threat to friendly forces. Generally, Army critical targets have been nominated for consideration as TSTs but do not meet the TST criteria. However, they may still require timely cross-component coordination to facilitate synchronized execution with other targets. Army Service component commanders should identify Army critical targets within their targeting cycle, provide clear guidance to develop and approve the appropriate asset priority, and, when required, provide rapid cross-component coordination to minimize confusion and facilitate execution.

Sensitive Target

1-24. Certain targets require special care or caution because failure to engage them or engaging them improperly could cause adverse consequences. Some examples of targets requiring special care or caution include—

- Leader targets (high-value individuals [HVIs]) that must be handled sensitively due to potential political repercussions.
- Targets located in areas with a high risk of collateral damage.
- Weapons of mass destruction (WMD) facilities where an attack can lead to long-term environmental damage.

1-25. Such targets are often characterized as *sensitive targets*—those targets for which planned actions warrant Presidential or Secretary of Defense approval. How these targets are attacked is sensitive and may require coordination with the JFC or higher authorities. In most situations, it is best to establish detailed criteria during planning, before combat commences, for engaging such targets.

THE ARMY TARGETING PROCESS

1-26. Targeting is a commander-driven process that can be conducted across a range of military operations. As an integrative process, targeting must adapt to changing circumstances and influence decisions, resource allocation/distribution, and critical staff actions. Army forces at each echelon, including supporting commands and combat supporting agencies, must understand the Army targeting process.

1-27. The Army targeting process applies the decide, detect, deliver, and assess (D3A) methodology. (See figure 1-3.) The process is integrated with the operations process, joint targeting process (see appendix B), and the military decision-making process (MDMP). Using the D3A methodology as a foundation, the fire support element (FSE)—

- Recommends targeting guidance to the commander.
- Develops targets.
- Selects targets for attack.
- Coordinates, integrates, and assigns allocated joint, interagency, multinational, and organic assets to specific targets and target systems.

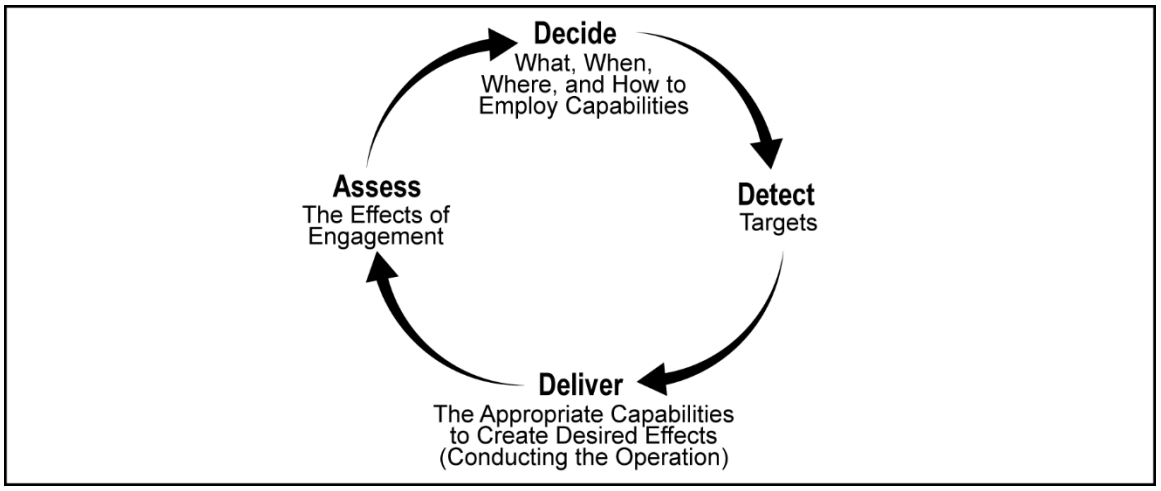


Figure 1-3. Army targeting process: decide, detect, deliver, and assess methodology

1-28. The Army targeting process is a complex, multidiscipline effort that requires a continuous coordinated effort among many elements. These collaborative elements—together referred to as the targeting team—include but are not limited to the fire support cell, intelligence cell, operations cell, and plans cell. Representatives from each of these cells are essential to a comprehensive targeting process. Other staff members assist the targeting team in planning and executing targeting. (See FM 3-60.)

Note. Coordination is crucial for a successful targeting effort. Sensors and collection capabilities under external agencies' control must be closely coordinated for the efficient and immediate reporting of fleeting or dangerous targets. Additionally, the vulnerabilities of different types of targets must be attacked by the appropriate means and munitions.

1-29. The D3A methodology organizes the commander and staff's efforts to accomplish key targeting requirements. It assists the commander and staff in deciding—

- Which targets must be acquired.
- Lethal or nonlethal engagement options.
- Whether organic or nonorganic assets should be allocated against the target.

PROCESS CONSIDERATIONS

1-30. Table 1-1 lists various considerations for each D3A function.

Table 1-1. Army targeting process considerations

Decide	*Detect*	*Deliver*	*Assess*
• Target development • Target value analysis • High-payoff and high-value targets • Target selection standards • Attack option • Attack guidance	• Target detection means • Detection methods • Target tracking	• Attack • Planned targets • Targets of opportunity • Desired effects • Attack systems	• Tactical level • Operational level • Combat assessment • BDA • MEA • Restrike • Feedback
Note. Tracking the target applies during all functions. BDA battle damage assessment MEA munitions effectiveness assessment			

Note. Targeting occurs continuously throughout an operation. Corps and below units typically use the Army targeting methodology. Army commanders and staffs at echelons above brigade must understand and interface with the joint targeting process. (See JP 3-60.) Corps and divisions serving as the base headquarters for a joint task force or land component headquarters employ joint planning and develop joint formatted plans and orders.

TARGET REFINEMENT

1-31. During the Army targeting process, targets are continuously refined as intelligence is received and the operation evolves. During this refinement process, targets are placed on one or more target lists; for example, targets at the joint level can be placed on a candidate target list, joint integrated prioritized target list, and/or many other lists. The following are refined targets derived from targets lists:

- High-value targets (HVTs) (any FIVE-O entity the threat commander requires for successful completion of the mission).
- High-payoff targets (HPTs) (any FIVE-O entity whose loss to the enemy contributes significantly to the success of the friendly COA).
- Restricted targets.

No-Strike List

The no-strike list is not a target list although it is a critical part of the joint targeting process. A no-strike list is a list of entities characterized as protected from the effects of military operations under international law or rules of engagement (JP 3-60). Protected entities may lose their protective status under specific situations. (CJCSI 3160.01E provides more information on no-strike lists and no-strike entities.)

High-Value Target

1-32. A *high-value target* is a target the enemy requires for the successful completion of the mission (JP 3-60). An HVT can also be a system that the enemy commander requires to successfully complete the mission. The loss of an HVT is expected to seriously degrade important enemy or system functions throughout or beyond the commander's operational area. The HVT list should describe the relative worth of each target, which will vary under specific situations and over the course of the operation. Targets from this list should be nominated for further target development and/or action.

High-Payoff Target

1-33. A *high-payoff target* is a target whose loss to the enemy will significantly contribute to the success of the friendly course of action (JP 3-60). An HPT has a direct effect on the function of a system or the center of gravity within its respective system. An HPT is an HVT that must be acquired and successfully attacked to defeat a system or enable the success of the friendly commander's mission. TSTs and Army critical targets are usually special types of HPTs. Target development and priorities focus on HPTs to ensure mission success.

Restricted Target

1-34. A *restricted target* is a valid target that has specific restrictions placed on the actions authorized against it (JP 3-60). Actions that exceed specified restrictions are prohibited until coordinated and approved by the establishing headquarters. With timely coordination, identified restricted targets are compiled into a restricted target list, as directed by higher authorities. The following are examples of specified actions against a restricted target:

- No striking during daytime.
- Striking with certain weapons.
- Preserving select ammunition for final protective fires.
- Proximity to no-strike facilities, such as—
  - Medical facilities.
  - Religious establishments.
  - Schools.
  - United Nations Educational, Scientific, and Cultural Organization (also known as UNESCO) sites.

Note. Targets with restrictions on lethal effects do not negate the use of nonlethal capabilities to achieve desired effects or objectives.

Chapter 2

Interrelationship Between Intelligence and Targeting

OVERVIEW

2-1. The interrelationship between the intelligence and fires warfighting functions is integral to effective targeting. Commanders and staffs need timely, accurate, relevant, and predictive intelligence to support the targeting effort, which includes selecting, prioritizing, executing, and assessing targets. Precise intelligence is critical to target threat capabilities at the right time and place and to open windows of opportunity across multiple domains and dimensions, particularly during large-scale combat operations. The intelligence support to targeting effort must be prioritized, resourced, planned, and supported by a large portion of the intelligence architecture.

2-2. The *provide intelligence support to targeting* IWFT has three subtasks:

- Provide intelligence support to target development. (See chapter 5.)
- Provide intelligence support to target detection. (See chapter 6.)
- Provide intelligence support to combat assessment. (See chapter 6.)

2-3. Characteristics that best describe intelligence support to targeting include—

- Deliberate planning.
- Collaboration across the intelligence enterprise.
- Precise intelligence to target threat capabilities at the right time and place.
- Accurate and timely assessment of military engagements.

2-4. These combined characteristics, when well executed, open windows of opportunity to achieve positions of relative advantage. The effective execution of these characteristics can be especially challenging when locating, tracking, updating, and engaging highly rapid and mobile targets, targets in complex terrain (for example, subterranean, jungle, and mountainous terrain and dense urban areas), and targets across multiple domains and dimensions (for example, targeting threat information systems).

2-5. Providing intelligence support to targeting occurs across most of the intelligence warfighting function. While all intelligence disciplines and complementary capabilities support the targeting effort, the task includes the work performed by more than just the intelligence targeting element. For example, the entire staff, led by the G-2/S-2, performs part of the *provide intelligence support to targeting* IWFT during the MDMP. The FSE coordinates with and assists the intelligence targeting element during some subtasks. Likewise, the entire staff, led by the fire support coordinator (FSCOORD) or fire support officer (FSO), performs part of this task while conducting D3A. The intelligence cell coordinates with the FSE to accomplish some of its supporting tasks. Each staff section, including the intelligence staff, and targeting working group members bring their expertise to support the targeting effort. (See appendix C for target-related working groups.)

Note. *Fire support coordinator* is the senior field artillery commander for the theater, corps, division, brigade combat team who is the maneuver commander's primary advisor to plan, coordinate, and integrate field artillery and fire support in the execution of assigned tasks (FM 3-09). *Fire support officer* is the operational to tactical level field artillery officer responsible for advising the supported commander or assisting the senior fires officer responsible for coordinating fire functions and fire support (FM 3-09).

STAFF COLLABORATION

2-6. The staff is a key component of the command and control (C2) warfighting function. Effective targeting requires a common understanding of the warfighting functions and staff officers' duties and responsibilities. Intelligence support to targeting requires communication, deconfliction, support, and concurrence from other elements within the command or external entities to understand the OE. For example, G-2/S-2 subsections

assist in building intelligence information to support target development and the MDMP throughout the cycles of operations and targeting; the fires cell collaborates closely with the intelligence targeting element. The intelligence staff uses knowledge management and information management to provide commanders with the information needed to establish and maintain their understanding and to make effective decisions.

2-7. The entire staff takes part in the intelligence warfighting function completing its tasks. The rest of the staff must participate in key intelligence processes, meetings, and working groups, and the intelligence staff must fully engage in other warfighting function processes, meetings, and working groups. Certain intelligence tasks are more effective when the rest of staff, especially key members, participates with the intelligence staff at key times. This applies primarily during—

- Pre-mission analysis of the OE.
- Intelligence preparation of the operational environment (IPOE).
- Situation development.
- Collection management.
- Intelligence support to targeting.

2-8. This comprehensive staff participation is necessary to adequately conduct targeting, support protection, and perform other staff tasks. These personnel participate in both ad hoc and permanent elements, such as the intelligence targeting element (with all-source and collection management participation), the fires cell, and the targeting working group. Close collaboration among commanders, staffs, intelligence professionals, fires professionals, and information activity communities is critical to a successful targeting effort.

INTELLIGENCE ANALYSIS AND COLLECTION MANAGEMENT

2-9. Intelligence analysis is the basis for conducting many staff activities, to include planning. It begins with information collected based on commander and staff requirements (which are part of collection management), such as priority intelligence requirements (PIRs), targeting intelligence requirements, and other intelligence requirements. Collection management encompasses the development of those requirements (within the context of existing intelligence analysis) using well-established procedures and flexible planning to support decisions, track emerging targets, and conduct combat assessment.

2-10. Both intelligence analysis and collection management are critical to targeting. The G-2/S-2 must synchronize these activities. The analysts and other personnel from both activities must cooperate and collaborate closely within the target intelligence element to effectively support targeting. Intelligence analysis and collection management mutually support each other when supporting target development and target detection, respectively, as well as combat assessment.

Note. Intelligence synchronization integrates intelligence with operations and ensures all requirements are met, as much as feasible, through close collaboration between the commander, G-2/S-2, G-3/S-3, and other members of the intelligence warfighting function. (ADP 2-0 and FM 2-0 provide doctrine on intelligence synchronization.)

INTELLIGENCE ANALYSIS

2-11. *Intelligence analysis* is the process by which collected information is evaluated and integrated with existing information to facilitate intelligence production (ADP 2-0). (See ATP 2-33.4.) Intelligence analysis supports the following, as shown in figure 2-1:

- The commander's decision making and situational understanding.
- The staff's situational awareness.
- The Army design methodology, the MDMP, the rapid decision-making and synchronization process (RDSP), and troop leading procedures. (See FM 5-0.)
- Information advantage activities.
- The targeting methodology.
- Force protection. (See ADP 3-37.)
- Continuous assessments.

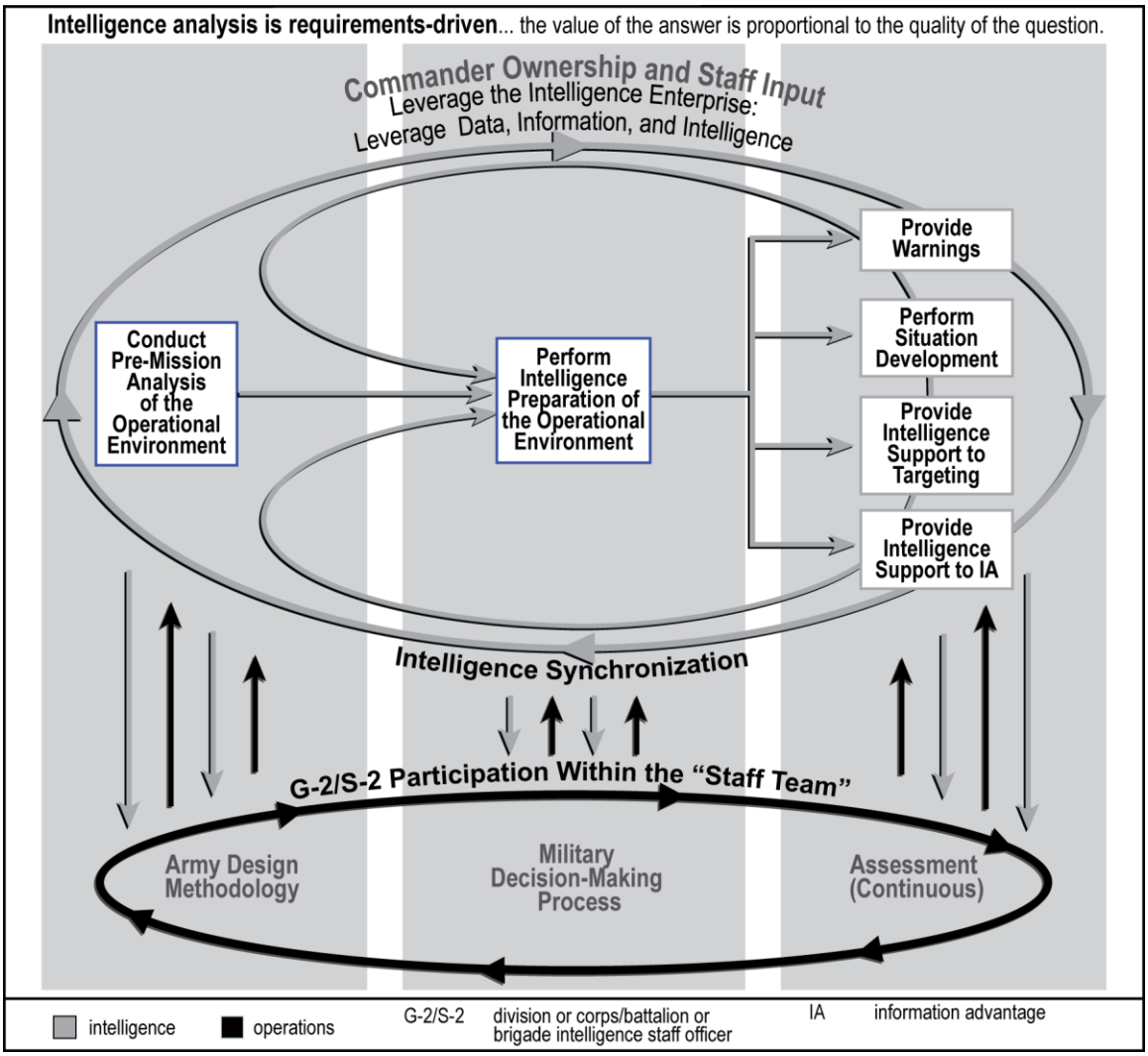


Figure 2-1. The intelligence analysis continuum

2-12. In any operation, friendly and enemy forces will endeavor to set conditions to develop positions of relative advantage. Setting these conditions begins with *conducting pre-mission analysis of the OE* and *performing IPOE*, which are critical in providing intelligence about the OE to support targeting. (See chapters 3 and 4, respectively.) In some situations, both tasks may even overlap, such as when conducting—

- An initial analysis of target systems during pre-mission analysis of the OE.
- Functional analysis during IPOE to identify threat vulnerabilities.

COLLECTION MANAGEMENT

2-13. *Collection management* is, in intelligence usage, the process of converting intelligence requirements into collection requirements, establishing priorities, tasking or coordinating with appropriate collection sources or agencies, monitoring results, and retasking, as required (JP 2-0). Collection management is integral to targeting. Although support to targeting is not collection management's only focus, targeting intelligence requirements, balanced against PIRs and other intelligence requirements, are incorporated into the collection management plan—the primary input in the development of the information collection plan, as captured in Annex L (Information Collection). The collection management plan is updated and refined throughout the targeting process as planning changes or the operation evolves. (ATP 2-01 provides doctrine on collection management.)

2-14. Collection management is driven by the commander and is a collaborative effort between the collection management team and the entire staff. After receiving input from the commander and staff, the collection management team and intelligence staff, in close coordination with the operations staff, perform the five tasks of the collection management process. They then consider all available collection assets, including ancillary assets, and select the most appropriate assets to provide information and intelligence. This enables the commander and staff to make quick decisions and maintain positions of relative advantage. The collection management process tasks are continuous but not necessarily sequential; they are the basis for creating and updating the information collection plan. This is accomplished by balancing requirements management, mission management, and execution management. (See figure 2-2.)

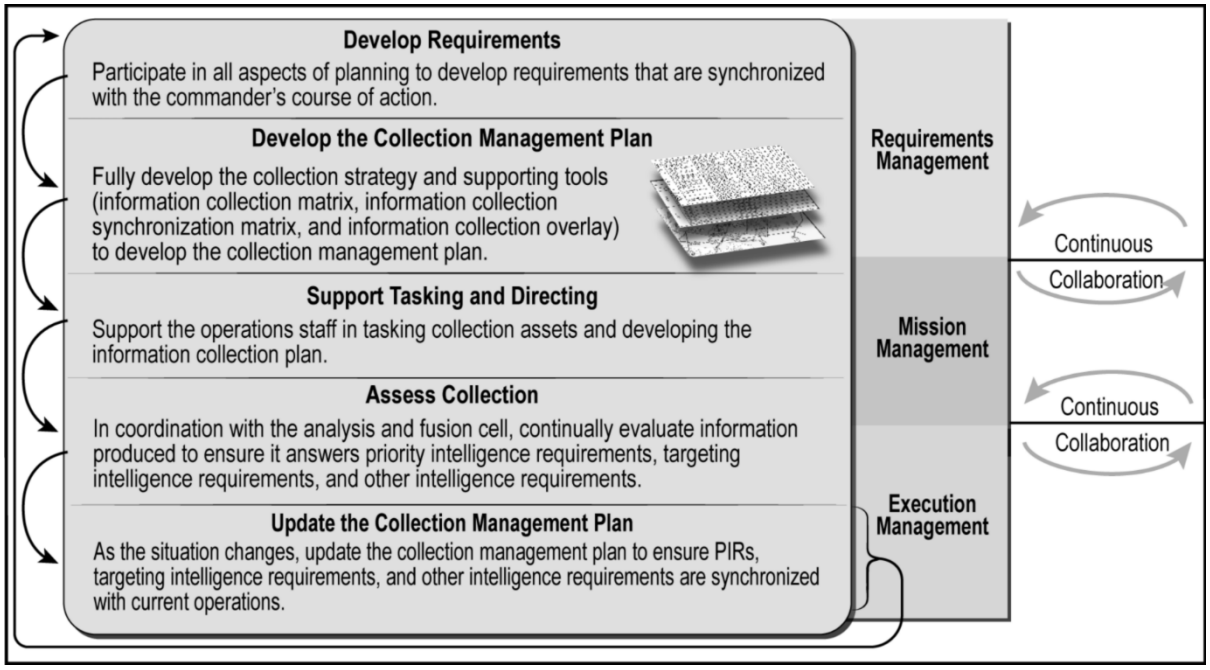


Figure 2-2. The collection management process

2-15. Collecting against targets that include electromagnetic warfare (EW), the cyberspace and space domains, and information advantage activities is as important as collecting against integrated air defense systems and conventional targets. Assets that collect on intelligence requirements are not only conventional collection assets but also any entity that collects relevant information at multiple echelons, including special operations forces, host nations, coalition forces, and joint and other nonintelligence assets.

2-16. The following collection management considerations are critical in supporting lethal and nonlethal targeting and battle damage assessment (BDA):

- Tipping and cueing multiple assets.
- Immediate and dynamic/ad hoc tasking/retasking of assets.
- Coordinating processing and exploitation support and intelligence analysis support.
- Mission synchronization.

INTELLIGENCE SUPPORT TO THE ARMY TARGETING PROCESS

2-17. Army intelligence provides most of its support to the decide, detect, and assess functions of the D3A methodology, with some intelligence support provided during the deliver function. The intelligence warfighting function provides support to D3A—from developing plans during the MDMP to executing the operation after the MDMP. Just like IPOE, intelligence support to targeting is based on the data, information, and intelligence that result from planning, establishing, and revising the intelligence architecture; conducting pre-mission analysis of the OE; and leveraging data, information, and intelligence. While not all-inclusive, figure 2-3 shows intelligence support to targeting before receipt of mission and during and after the MDMP.

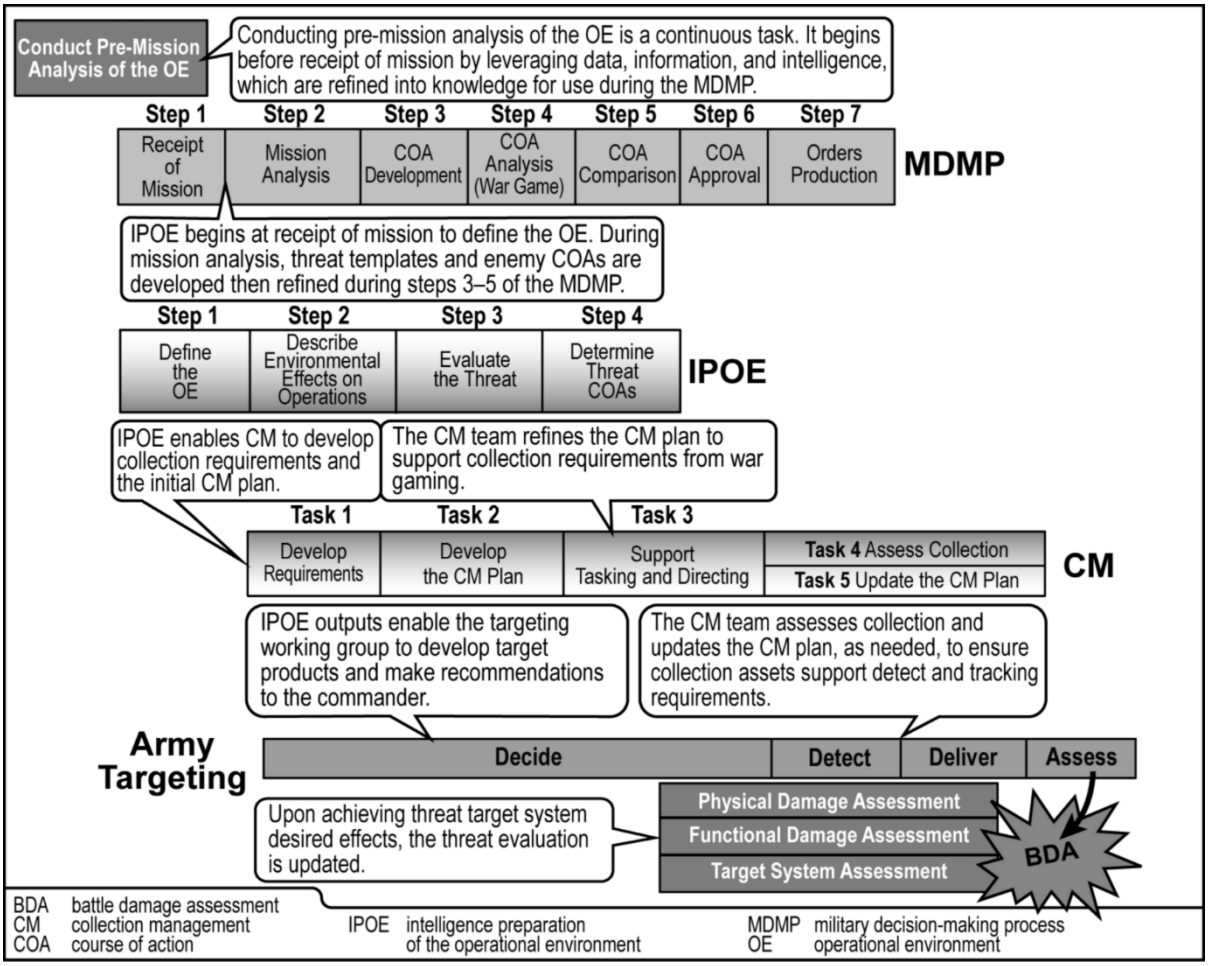


Figure 2-3. Intelligence support to targeting before, during, and after the MDMP

INTELLIGENCE SUPPORT TO TARGETING BY ECHELON

2-18. Each Army echelon—from theater army to brigade levels—has assigned intelligence support elements, most of which (as part of the overall information collection effort) support the targeting effort, directly or indirectly. Although intelligence supports targeting across echelons, considerations at each echelon may cause differences in how intelligence cells support targeting. The primary differences include—

- The unit's AO or area of interest.
- Intelligence assets/capabilities available at each echelon.
- The intelligence architecture available at each echelon.
- The time available to plan and execute the targeting process.

2-19. For example, the AO of a battalion-sized element is considerably smaller than a theater army's; each echelon's targeting focus differs based on its mission and the commander's intent and desired effects. Additionally, capabilities organic to each echelon dictate the type of collection assets available to support each echelon's respective targeting and fires cells. Lower-echelon intelligence cells must coordinate and request support from higher-echelon intelligence cells to cover gaps in the lower-echelon's information collection capabilities to answer their requirements. In many instances, higher-echelon information requirements may overlap with lower-echelon requirements, thus answering the lower-echelon's requirements.

2-20. Each echelon has a specific organization designated to support the targeting effort, as well as an intelligence staff section to lead this support. The following echelons and MI organizations support this effort:

- Theater army—military intelligence brigade-theater (MIB-T).
- Corps and division—intelligence and electronic warfare (IEW) battalion (corps) and IEW battalion (division).
- Brigade combat team (BCT)—BCT S-2 section.
- Battalion—battalion S-2.

THEATER ARMY

2-21. Theater army intelligence capabilities provide support to the target development of threat integrated air defense systems and integrated fire control elements in large-scale combat OEs. Intelligence capabilities also provide support to the target development of nonlethal effects generations. A MIB-T, as the theater army's permanently assigned ground intelligence organization, can deploy scalable and tailorable intelligence capabilities to meet combatant command (CCMD), Army Service component command (ASCC), and joint task force intelligence requirements. The MIB-T—

- Provides the theater army G-2 analysis and control element (ACE) and performs highly complex queries using advanced analytical tools to determine precisely when, where, and how targets of interest operate.
- Prioritizes intelligence assets to support targeting intelligence requirements.
- Can nominate targets to be destroyed, deceived, degraded, or neutralized as well as targets to disrupt, deny, degrade, or destroy information in computers, computer networks, or the computers and networks themselves.

CORPS AND DIVISION

2-22. Corps and division intelligence capabilities provide the rapid detection, identification, and dissemination of threat HPTs—all of which are essential to the timely targeting required to disintegrate threat systems. An IEW battalion detects, locates, identifies, and tracks targets across multiple domains. During large-scale combat operations, IEW battalion assets support corps and division cross-domain target development and combat assessment. IEW battalions support target development, target detection, and combat assessment; they—

- Provide a multidomain sensing and target development capability to support corps and below operations.
- Provide corps- and division-level engagement and targeting product development.
- Create target intelligence folders and recommend targets for action to the commander.
- Provide intelligence collection, exploitation, and limited analysis to detect, track, and locate targets.
- Provide a dedicated capability to conduct BDA at corps and division levels.

BRIGADE COMBAT TEAM

2-23. Targeting at the BCT level is largely defined by the capability and capacity of personnel and equipment. The BCT S-2 section requires support from its division and possibly the corps, depending on the operation. The amount of support from the division changes based on the mission variables (mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations [METT-TC (I)]). The BCT S-2 section requires support to fulfill its intelligence support to the targeting effort for targets that are beyond the close area, part of deep operations, or critical to lines of effort.

BATTALION AND BELOW

2-24. The battalion S-2 is the principal staff officer responsible for providing intelligence to support current operations and plans. The S-2 gathers and analyzes information for the commander and participates, with the staff, in performing IPOE. IPOE informs mission analysis, which drives the development of the information collection plan. The S-2, together with the S-3 and FSO, assists the commander in coordinating, integrating, and supervising information collection planning and execution, operations, and targeting. This effort facilitates executing the battalion's fire support plan.

OPERATIONAL FRAMEWORK

2-25. An *operational framework* is a cognitive tool used to assist commanders and staffs in clearly visualizing and describing the application of combat power in time, space, purpose, and resources in the concept of operations (ADP 1-01). An operational framework organizes an area of geographic and operational responsibility for the commander and provides a way to describe the employment of forces. Figure 2-4 illustrates a generic operational framework of a corps with two subordinate division elements (each with multiple brigades) defining the fight at echelon by space, establishing an assigned area—AO.

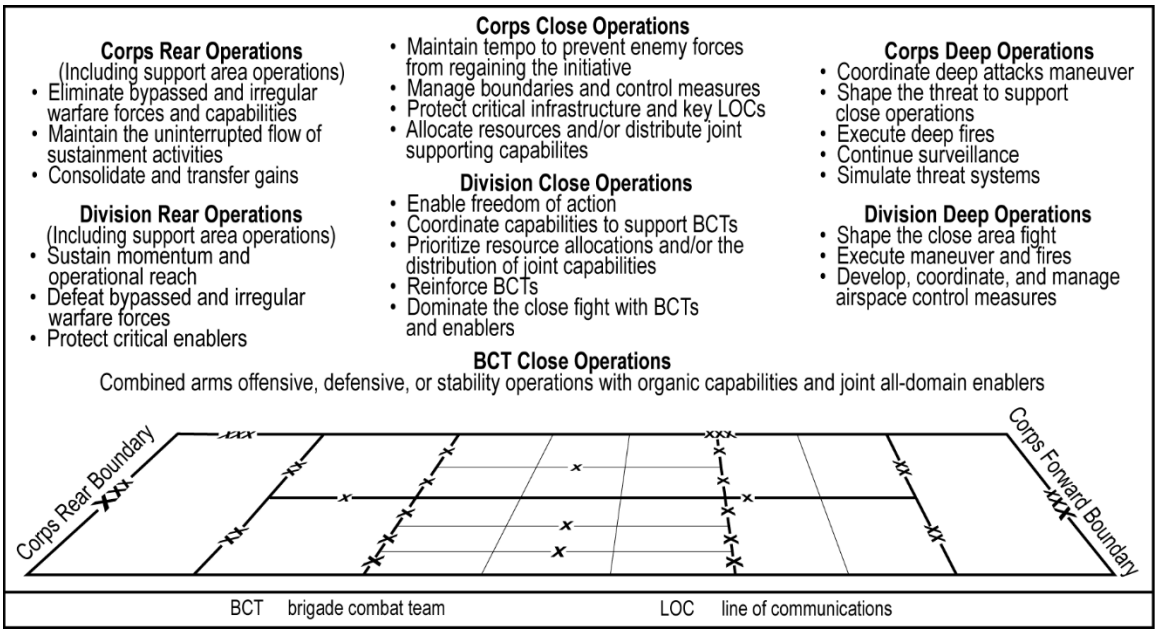


Figure 2-4. Defining the fight at echelon by space (example)

2-26. At the tactical level, deep operations focus on enemy forces that are not in direct fire contact with the main body of the formation but may be in the future. At corps and division levels, which have assigned and attached long-range fires capabilities, deep operations may occur well beyond the forward line of troops. Commanders use graphic control measures in the deep area to delineate responsibility for targets, the employment of fires, the axis of advance, and future ground objectives. Forward boundaries, coordinated fire lines, kill boxes, and restricted fire areas are all fire support coordination measures that commanders use to integrate deep operations among echelons.

2-27. Echelons must focus on the right planning horizon to shape future operations. Planning is conducted along various *planning horizons*—points in time commanders use to focus the organization's planning efforts to shape future events (ADP 5-0). Figure 2-5 on page 16 illustrates the fight at echelon by time—or sequencing and synchronization of tasks or operations to attain end state conditions with the least cost in personnel and resources—showing corps deep operations beyond Phase Line (PL) Titanium and planning beyond PL Platinum. This allows the corps to focus 24 to 72 hours ahead of its division elements and 48 to 96 hours ahead of the brigade fight. Echelon-level movements through areas of conflict are synchronized for visibility of lines of effort. Synchronizing the fights enables division elements' visibility of higher- and lower-echelon shaping efforts.

	PL Bronze	PL Silver	PL Titanium	PL Platinum	PL Gold	PL Rhodium	
Corps: Coordinates deep cross-domain maneuver, shapes the deep area to support the close area, executes operational deep fires			D-day Corps Fight	D+1 Corps Synchronize and Review	D+2 Corps Validate and Integrate	D+3 Corps Approve HPT Lists	D+4 Corps Guidance
DIV: Shapes the close area, executes deep maneuver and fires, converges multidomain capabilities		D-day DIVs Fight	D+1 DIVs Synchronize and Review	D+2 DIVs Validate and Integrate	D+3 DIVs Approve HPT Lists	D+4 DIV Guidance	
BCT: Dominates the close fight with enablers	D-day BCTs Fight	D+1 BCTs Synchronize and Review	D+2 BCTs Validate and Integrate	D+3 BCTs Approve HPT Lists	D+4 BCT Guidance		
Rear Area Forces: Dominate the asymmetric fight and consolidate tactical gains	Rear Area	Rear Area + 24 hours					

BCT brigade combat team
D+ number of days after D-day
D-day the day on which a particular operation commences or is to commence
DIV division
HPT high-payoff target
PL phase line

Figure 2-5. Defining the fight at echelon by time (example)

2-28. Deep operations targeting enables the commander and staff to take the initiative to divide, disrupt, or degrade the enemy's uncommitted forces or key systems. When considering targeting, the commander prioritizes resources, solves emerging problem sets, synchronizes the staff and subordinate unit operations, and manages the overall tempo of operations. Detailed planning and integration across all warfighting functions enable fire support and effects in the deep area, facilitating elements of surprise, concentration, and audacity. The effective integration, synchronization, and employment of fire support and targeting are essential in creating conditions that provide the supported commander freedom of action.

2-29. Targeting operations in corps and division support areas focus on identifying bypassed elements and irregular forces operating independently in small teams, blending within the local population. Targeting operations in corps and division rear areas require robust analysis and continuous collaboration with intelligence discipline capabilities in the rear area to facilitate the early warning and identification of bypassed elements and irregular force networks. This mitigates impacts to U.S. logistics and resupply in the close fight. Bypassed elements, irregular forces, and insider threats present a critical vulnerability to U.S. forces, infrastructure, and resources. Friendly forces operating in the support area should participate in the rear area command post's targeting process to highlight targeting priorities and ensure the protection of friendly forces' critical capabilities.

2-30. During joint operations, Army forces employ capabilities across the domains and dimensions to create and exploit positions of relative advantage to defeat enemy forces and consolidate gains during competition, crisis, and armed conflict. Army forces may be required to conduct operations across multiple domains to gain freedom of action for other members of the joint force.

2-31. Army commanders must continually assess how their operations influence threats and populations to erode the threat's will and achieve the commander's intended purpose. Army commanders must also continually assess how threats and populations affect friendly operations to assist in determining relevant actors for lethal and nonlethal target nomination. The commander is responsible for integrating the D3A methodology into the joint targeting process, usually bridging phases II and III of the joint targeting process (see paragraph B-3). To close the gap and comply with joint target development standards, Army forces must understand target system analysis (TSA) at the joint level, entity-level target development, and target list management.

2-32. This approach is achieved through the continuous planning, integration, and coordination between commanders and their staffs and the integrated and coordinated operations between Army units and Service, joint, coalition, and/or allied forces. Integration, synchronization, and deconfliction throughout the Army and joint targeting processes are critical in securing joint and unified action partner capabilities, which are integral for Army commanders and their organizations operating at all levels of warfare. (See appendix B.)

PART TWO

KEY INTELLIGENCE ACTIVITIES THAT SUPPORT TARGETING

Chapter 3

Conduct Pre-Mission Analysis of the Operational Environment

PRE-MISSION ANALYSIS OF THE OPERATIONAL ENVIRONMENT

3-1. The *conduct pre-mission analysis of the OE* IWFT is a continuous task driven by the commander. It is the foundation for performing IPOE and mission analysis. To perform IPOE and the other important intelligence tasks that support operations—such as large-scale combat operations (which demand additional time and planning)—the intelligence staff must conduct a significant amount of analysis before receipt of mission. The intelligence staff cannot wait until receipt of mission to start intelligence analysis. Initial and revised intelligence products facilitate the commander and staff's understanding of the OE, focus information collection, and support the targeting effort once a mission is received. Therefore, the analytical effort must start as early as possible. (FM 2-0 provides detailed doctrine on pre-mission analysis of the OE.)

3-2. Conducting pre-mission analysis of the OE entails—

- Analyzing the significant aspects of the domains and dimensions.
- Analyzing the operational variables (political, military, economic, social, information, infrastructure, physical environment, and time [PMESII-PT]).
- Preparing relevant mission variable information and intelligence. Intelligence overlaps directly with the IPOE process.
- Completing studies.

3-3. Intelligence officers and other staff sections begin pre-mission analysis of the OE by leveraging data, information, and intelligence, which is an inherent part of intelligence support to targeting.

LEVERAGING DATA, INFORMATION, AND INTELLIGENCE

3-4. The data, information, and intelligence leveraged to conduct pre-mission analysis of the OE are refined into knowledge for use in mission analysis through functional analysis to directly support the decide function of the D3A methodology. Leveraging data, information, and intelligence is an IWFT that consists of three subtasks:

- Create and maintain intelligence databases.
- Conduct intelligence reach.
- Conduct intelligence collaboration.

3-5. Units collect data, information, and intelligence by conducting research, completing studies, data mining, and requesting access to other databases. Upon collecting data about the OE, the intelligence staff and other staff sections organize the data into databases and categorize the data via intelligence folders that meet the commander's visualization requirements. Executing this task must follow all applicable policies and regulations on information collection and operations security.

Notes. Intelligence folders contain a unit's current intelligence holdings. These folders are the foundation from which target intelligence folders are created.

Strategic databases and systems (such as the Modernized Integrated Database [MIDB], including the Machine-assisted Analytic Rapid-repository System [MARS]—the core military data system) provide baseline intelligence data to support understanding the OE.

3-6. An echelon does not possess all the information it needs, and an intelligence staff does not conduct all the intelligence analysis and production it needs to support the commander and staff. Every echelon leverages data, information, and intelligence from higher, lower, and adjacent intelligence staffs and elements to generate current intelligence holdings. Allies and other multinational partners have unique collection capabilities and valuable intelligence, including insight into specific regions and ongoing tensions. The joint force and other Services have unique and specialized data, information, and intelligence on many areas, especially within the maritime, air, space, and cyberspace domains (including electromagnetic support data and information).

3-7. Deploying units' intelligence needs can be met through several information sources (intelligence reach; publicly available information [PAI] research; data mining; database access; academic studies, products, or materials; intelligence archives; and other information sources). Before deployment, echelon corps and below units receive initial information in their intelligence and targeting files, primarily from the MIB-T assigned to the specific theater and the ASCC G-2. They also receive an intelligence update about the theater where they are deploying from the theater's CCMD. Once deployed, echelon commands receive intelligence about the threats and other conditions of the OE, primarily through organic collection assets and intelligence channels at all echelons (through push and pull). Intelligence and combat information received from higher, adjacent, and subordinate units facilitate the successful integration of intelligence into the targeting process.

Push and Pull Principles

The *push principle* allows analysts to transmit intelligence to requesters along with other relevant information. Typically, the intelligence cell at each echelon manages intelligence dissemination.

The *pull principle* provides intelligence organizations at all levels with a direct reach capability via electronic access to central databases, intelligence files, or other repositories containing intelligence data and products.

Create and Maintain Intelligence Databases

3-8. Units create and/or maintain intelligence databases to hold current intelligence holdings to support IPOE and mission analysis. Analysts reference current intelligence holdings to develop the initial intelligence estimate of the threat situation for the warning order produced during the MDMP. As part of the intelligence cell's actions, analysts identify information gaps in battle books; review all threat characteristic holdings, files, and intelligence annexes; and update material, as required.

3-9. Part of maintaining intelligence databases is to constantly update them by data mining information from other databases. The G-2/S-2 staff conducts data mining using national, multinational, joint, and higher-echelon databases to determine intelligence gaps. Data mining can assist in organizing the mass of collected data to define the OE in IPOE.

3-10. Database access, when granted, enables intelligence professionals to establish products centric to the commander's mission. This entails establishing and providing access to classified and unclassified programs, databases, network systems, and other web-based collaborative environments for Army and multinational organizations. Database access facilitates intelligence reporting, production, dissemination, sustainment, and intelligence reach.

Notes. Depending on local procedures and the systems available (such as the fielded Army Intelligence Data Platform [also known as AIDP]), Army intelligence personnel may use various means to request information and or access to required databases.

Combatant commands (command authority) and the Defense Intelligence Agency update MIDB/MARS. Corps, division, and brigade G-2/S-2s do not directly update MIDB/MARS; inputs are coordinated through the combatant command (command authority) to update the Defense Intelligence Agency's MIDB/MARS.

CONDUCT INTELLIGENCE REACH

3-11. Intelligence obtained through *intelligence reach*—the activity by which intelligence organizations proactively and rapidly access information from, receive support from, and conduct direct collaboration and information sharing with other units and agencies, both within and outside the area of operations, unconstrained by geographic proximity, echelon, or command (ADP 2-0)—assists the staff in planning and preparing for operations and answering intelligence requirements, to include targeting intelligence requirements, without the information requiring a formal hierarchy. (See ADP 2-0 and FM 2-0 for doctrine on intelligence reach.)

3-12. During predeployment, corps and division intelligence cells routinely reachback for information and intelligence that can assist them in collecting the intelligence necessary to support their planning. Intelligence cells may—

- Reachback to MIB-Ts and to national intelligence organization and agency databases.
- Forward information requests through the chain of command to joint force intelligence staffs and deployed units.

3-13. Intelligence reach supports distributed analysis. IEW battalions (corps and division) can conduct reach operations from home-station intelligence reach operations center sites or the Army Global Processing, Exploitation, and Dissemination (also known as PED) Center. (Intelligence reach enhances processing and exploitation capabilities at centralized locations where sensor data is disseminated for intelligence analysis support.) IEW battalion (corps and division) intelligence reach functions include the—

- Processing and exploitation of collected information.
- Reporting of information.
- Distribution of information and intelligence back to forward deployed commands and other appropriate national to tactical intelligence organizations.

3-14. IEW battalions (corps and division) can conduct reach operations in combination with expeditionary processing and exploitation efforts. The integration and collaboration of processing and exploitation elements across the Army not only increases processing and exploitation capabilities but also reinforces expeditionary intelligence reach operations by providing access to multiple intelligence sources and expertise.

CONDUCT INTELLIGENCE COLLABORATION

3-15. Collaboration is the central principle of conducting analysis across intelligence organizations to support targeting. Army units provide intelligence about the threat and other relevant aspects of the OE (especially those related to Army activities) through the intelligence enterprise. The structure and design of the intelligence enterprise make up the intelligence architecture—the compilation and interrelationship of all relevant intelligence and communications capabilities, data centers, organizations, supporting capabilities, concepts of operations, and personnel necessary to ensure the successful execution of the intelligence process. The commander and staff determine and allocate resources and bandwidth for the intelligence architecture based on requirements for information collection, processing and exploitation, and intelligence analysis. Intelligence support to targeting must be resourced, carefully planned, and supported by a large portion of the intelligence architecture. (FM 2-0 provides doctrine on planning, establishing, and revising an intelligence architecture.)

3-16. The commander and staff must establish and support a seamless intelligence architecture, including an effective dissemination and integration plan. Just because intelligence is delivered does not mean it will be used effectively for planning, decision making, or targeting. The G-2/S-2 and the intelligence staff plan, establish, and revise the intelligence architecture in close collaboration with higher-level and subordinate G-2/S-2s and the MI unit commander and staff at that echelon. Additionally, the intelligence staff must coordinate with key staff members, especially the G-6/S-6 and G-3/S-3. The entire intelligence staff collaborates to create an architecture plan that integrates sensors, processors, dissemination systems, databases, information systems, and communications systems. This enables collection assets to report and disseminate collected information timely, accurately, and effectively to the appropriate elements. To accomplish this task, collection management teams and the intelligence staff should—

- Develop standard operating procedures (SOPs) that address all communications strategies and considerations and then refine them during the MDMP and rehearsals.
- Collaborate with intelligence collectors to ensure they know and practice their communications plan before conducting intelligence operations.
- Include existing requirements management tools, such as community on-line intelligence system for end-users and managers (also known as COLISEUM), into the intelligence architecture and supporting SOPs.
- Ensure unit access to required national to tactical databases to receive and distribute information.

3-17. The intelligence staff must identify the specific intelligence warfighting function requirements to the unit's overall communications architecture to develop an intelligence architecture. Terrain and weather effects may affect the secure, efficient, reliable, and expeditious transmission of intelligence information; therefore, they must be incorporated into planning.

Note. A technique for dealing with the complexities of planning, establishing, and revising an intelligence architecture is to use a Digital Intelligence Systems Master Gunner Course graduate to inform leaders of integration factors with other networks and systems to enable OE visualization and digital MI capabilities.

Chapter 4

Perform Intelligence Preparation of the Operational Environment

INTELLIGENCE PREPARATION OF THE OPERATIONAL ENVIRONMENT

4-1. *Intelligence preparation of the operational environment* is the systematic process of analyzing the mission variables of enemy, terrain, weather, and civil considerations in an area of interest to determine their effect on operations (FM 2-0). Performing the IPOE process entails the following steps, described in ATP 2-01.3: step 1, define the OE; step 2, describe environmental effects on operations; step 3, evaluate the threat; and step 4, determine threat COAs.

Note. IPOE must seamlessly combine with pre-mission analysis of the OE; the leveraging of data, information, and intelligence; and situation development to serve as a continuous effort, with all staff members providing support to the intelligence warfighting function. Continuous analysis and assessments are necessary to maintain situational understanding of the OE in constant flux.

4-2. IPOE is critical to the MDMP, the RDSP, and the targeting process. It results in intelligence products that are used during the MDMP and RDSP to assist in developing friendly COAs and decision points for the commander. The conclusions reached and the products developed during IPOE (which are included in the intelligence estimate) and the MDMP are critical in planning information collection and targeting operations. (See figure 4-1.)

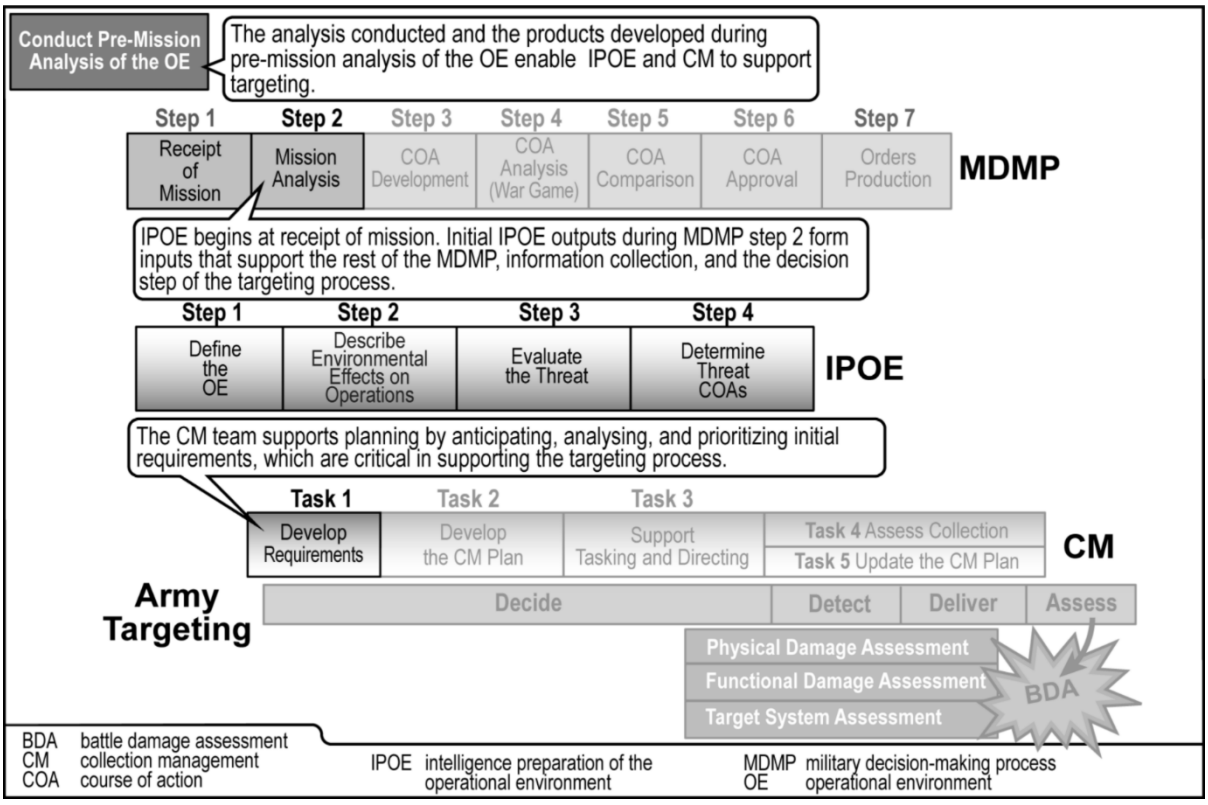


Figure 4-1. IPOE support to the targeting effort

4-3. IPOE products assist in visualizing threat characteristics, predicting enemy intentions, and developing enemy COAs (at least three, but more, if time allows) with COA statements. IPOE products also assist in the initial identification of potential HVTs and support target value analysis (TVA) in prioritizing identified HVTs based on the commander's initial targeting guidance. The following are IPOE products, which are detailed in ATP 2-01.3:

- Modified combined obstacle overlays (MCOOs), terrain effects matrices, and terrain assessments.
- Weather effects products.
- Civil considerations (areas, structures, capabilities, organizations, people, and events [ASCOPE]) products and overlays.
- Threat characteristics charts.
- Threat models with recommended HVTs.
- Threat capabilities.
- Situation templates with threat time PLs, associated COA statements, and HVT lists. Situation templates assist in refining HVTs for specific AOs and enemy COAs.
- Event templates and matrices, which have named areas of interest (NAIs).

INTELLIGENCE REQUIREMENTS AND TARGETING

4-4. Army intelligence staffs assist in developing requirements during the MDMP. Requirements development forms the foundation of the information collection plan, which also contains the targeting collection plan, if available. Requirements development identifies, prioritizes, and refines uncertainties about the OE that a unit must resolve for mission accomplishment. It ensures the appropriate collection occurs by specifying *what* must be collected, *why* it must be collected, *where* it must be collected, and *when* it must be collected and reported so a unit can successfully conduct operations. The *so what* of requirements development is ensuring the development of relevant and accurate intelligence requirements. (ATP 2-01 provides doctrine on developing requirements.)

4-5. An *intelligence requirement* is 1. Any subject, general or specific, upon which there is a need for the collection of information or the production of intelligence. 2. A requirement for intelligence to fill a gap in the command's knowledge or understanding of the operational environment or threat forces (JP 2-0). Intelligence requirements primarily consist of PIRs but may also include targeting intelligence requirements and other intelligence requirements. After the staff determines all intelligence requirements, the commander must prioritize them so the staff understands the exact prioritization of all requirements. The collection management team and the rest of the intelligence staff manage intelligence requirements for the commander:

- ***Priority intelligence requirements*** are the intelligence components of commander's critical information requirements used to focus the employment of limited intelligence assets and resources against competing demands for intelligence support (JP 2-0). In Army usage, PIRs refer to intelligence requirements that the commander and staff need to understand the threat and other aspects of the OE.
- ***Targeting intelligence requirements*** refer to those HPT-related requirements, outside of what is already captured in PIRs, that the commander specifies as part of the information collection effort. Units are not required to develop targeting intelligence requirements. However, in some situations, a unit may want to develop targeting intelligence requirements to conduct dedicated collection and focus more thoroughly on detecting and tracking HPTs and conducting BDA.
- ***Other intelligence requirements*** refer to those commander-specified requirements that are either—
  - Information requirements that do not qualify as PIRs.
  - Unanticipated requirements over the course of an operation that are not characterized as PIRs.

4-6. Once intelligence requirements are established, collection managers develop a collection management plan to integrate and synchronize collection assets and address intelligence requirements through proposed information collection tasks. Collection managers should integrate targeting assets into the collection management plan. Analysts use the intelligence requirements levied against these targeting assets to develop the targeting collection plan, which should nest within the overall information collection plan and align to the commander's intelligence requirements.

DEVELOPING HIGH-VALUE TARGET LISTS

4-7. Although the entire IPOE process is important to the targeting effort, steps 3 and 4 are the most critical in supporting targeting. During steps 3 and 4, the intelligence staff identifies HVTs associated with each threat capability or COA. This assists the staff (primarily the intelligence and fires sections) in conducting TVA, which supports target development. (See chapter 5.)

4-8. The HVTs identified during step 3 of the IPOE process (see figure 4-2) are initially refined during step 4 of the IPOE process (see figure 4-3). They are refined again during the MDMP's COA analysis step. The HVT list is developed based on identified HVTs.

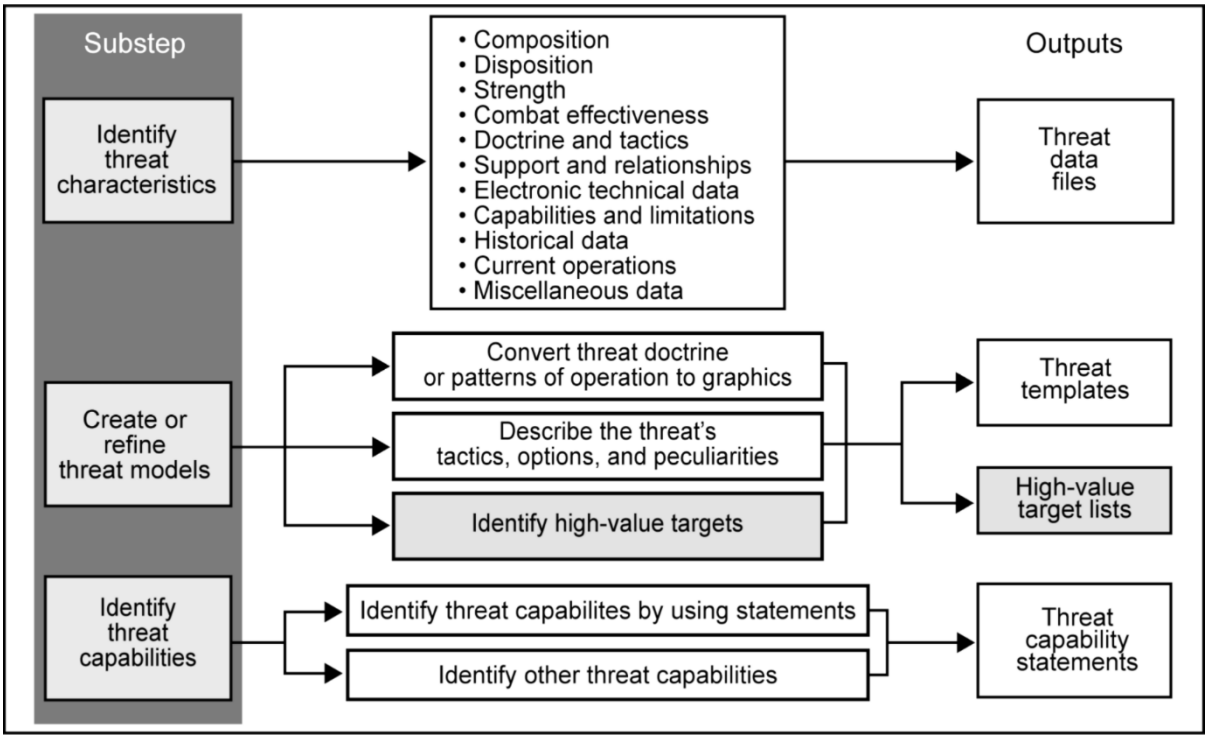


Figure 4-2. Substeps and outputs of step 3 of the IPOE process

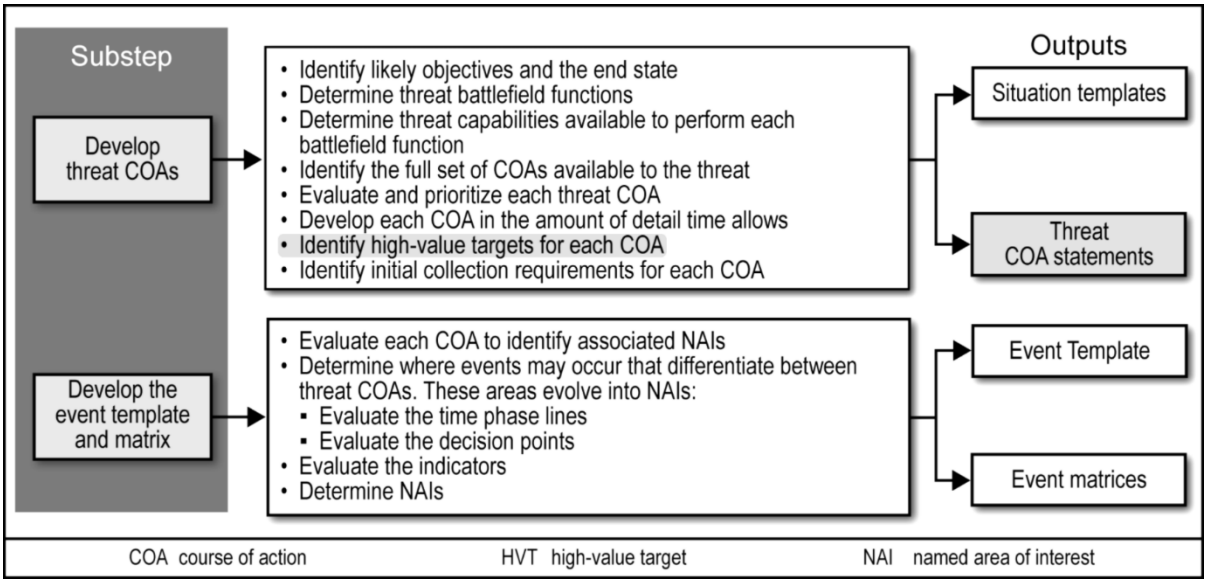


Figure 4-3. Substeps and outputs of step 4 of the IPOE process

4-9. The following techniques may be useful in identifying and evaluating HVTs:

- Identify HVTs from—
  - Existing intelligence holdings.
  - Database searches.
  - Patrol debriefs.
  - Size, activity, location, unit, time, and equipment (also called SALUTE) reports.
- Conduct analysis of threat systems.
- Review threat tactics, techniques, and procedures and previous threat operations.
- Understand the threat's task, purpose, method, and end state.
- Identify friendly assets that are key to facilitating or executing the primary operation, branches, or sequels.
- Determine how the threat might react to the loss of each identified HVT.
- Consider the threat's ability to fill identified HVT gaps and adopt branches or sequels.
- Consider AO and area of interest effects and potentially broader effects or implications.
- Consider how the threat may use multiple capabilities to create the effects of one or more HVTs.
- Consider how the threat may use assets by phases of an operation. This may lead to classifying certain threat assets, functions, or systems as HVTs across the domains and dimensions.
- Consider the multidomain nature of complex and dynamic OEs.
- Explore conventional and unconventional means that threat forces may use assets or resources to disrupt friendly operations at multiple echelons and locations.
- After identifying HVTs, organize them based on their worth to the threat's operation and record them as part of the threat model. The value of an HVT varies throughout an operation.

4-10. The intelligence staff, with input from other staff sections, also identifies indicators associated with those targets that can assist in determining the targets' locations and activities. Identifying HVTs during IPOE is essential to—

- Developing HPTs during the decide function of the D3A methodology.
- Refining targets throughout the operations process, particularly during targeting working groups, target decision boards, and other effects or assessment working groups.

STAFF ROLES

4-11. A large part of the staff's support to IPOE also feeds into the targeting effort. Table 4-1 lists staff sections and the expertise they provide to IPOE and the targeting effort.

Table 4-1. Staff support to IPOE and the targeting effort

Staff section	*Support to IPOE and targeting*
Chief of staff or executive officer	• Ensures IPOE is performed collaboratively. • Synchronizes staff activities during IPOE.
G-2/S-2: Analyzes the mission variables of enemy, terrain and weather, and civil considerations.	• Assists the commander in improving the understanding of how the mission variables of enemy, terrain and weather, and civil considerations can affect operations by producing intelligence assessments that support the military decision-making process, targeting, risk management, information collection, and security operations. • Informs the staff on intelligence capabilities, limitations, and operations. • Conducts pre-mission analysis of the operational environment. • Continually coordinates with the staff, outside agencies, and organizations for input to situational understanding. • Identifies areas of interest and areas of influence with the G-3/S-3. • Assists the staff with threat capabilities, vulnerabilities, and intent. • Conducts terrain analysis. • Determines the threat's composition and disposition. • Develops threat templates by warfighting function. • Determines threat missions, objectives, schemes of maneuver, and desired end states with staff input. • Coordinates with the staff to identify HVTs and threat COAs. • Determines named areas of interest with staff input.

Table 4-1. Staff support to IPOE and the targeting effort (*continued*)

Staff section	*Support to IPOE and targeting*
G-3/S-3 and/or G-5/S-5: Provides subject matter expertise on the art and science of military operations.	• Reviews the G-2/S-2's evaluation of threat COAs. • Reviews the G-2/S-2's identification and evaluation of the threat's composition and disposition. • Identifies areas of interest and areas of influence with the G-2/S-2. • Assists the G-2/S-2 with terrain and weather effects on friendly and threat operations. • Ensures the staff integrates all information activities and associated tasks into the concept of operations. • Leads the integration of influence and attack information activities into operations. • Employs specific information capabilities to collect information in the area of operations that support operations and the targeting process. • Employs influence capabilities to assess the psychological effects of military operations on friendly, neutral, and threat individuals and groups in the area of operations. • Employs influence capabilities to assess how threats and populations affect friendly operations. This assists in determining relevant actors for lethal and nonlethal target nominations. • Ensures the G-2/S-2 and other staff members understand the area of operations and other friendly maneuver limitations and parameters specified by higher headquarters. • Ensures the G-2/S-2 and other staff members understand available friendly maneuver forces. • Assists in selecting high-payoff targets, targets of interest, and decision points. • Assists in developing the decision support template. • Evaluates threat COAs to ensure they are valid from an operational perspective. • Evaluates threat situation templates, COA statements, HVT lists, civil considerations overlays, and assessments to ensure they contain the information necessary to support friendly COA development and analysis. • Evaluates the event template and matrix to ensure they contain the information necessary to support friendly COA analysis and the development of the decision support template.
G-4/S-4: Provides subject matter expertise on sustainment operations.	• Assists in identifying and evaluating threat and host-nation logistics capabilities. • Assists in identifying potential supply routes, resupply points, and other logistic HVTs. • Identifies threat logistic vulnerabilities.
G-6/S-6: Provides subject matter expertise on friendly communications systems.	• Assists the G-2/S-2 in identifying and evaluating friendly communications systems' vulnerabilities to cyberspace and electromagnetic attack. • Coordinates with the spectrum manager to determine friendly forces' vulnerabilities to known threat systems.
G-9/S-9: Provides subject matter expertise on CA operations.	• Assists in identifying and evaluating civil considerations on military operations and in evaluating the effect of military operations on civilian populations, in conjunction with the G-2/S-2 and G-3/S-3. • Assists in identifying protected targets. (The CA staff, along with the chief of fires or fire support officer, provides this assistance.) • Assists in creating and maintaining civil considerations overlays, assessments, data files, and/or databases. • Assists in providing information on the neutral population and how it supports/opposes the host nation, friendly forces, and threat forces.

CA	civil affairs	G-5/S-5	division or corps/battalion or brigade plans staff officer
COA	course of action	G-6/S-6	division or corps/battalion or brigade signal staff officer
G-2/S-2	division or corps/battalion or brigade intelligence staff officer	G-9/S-9	division or corps/battalion or brigade CA operations staff officer
G-3/S-3	division or corps/battalion or brigade operations staff officer	HVT	high-value target
G-4/S-4	division or corps/battalion or brigade logistics staff officer	IPOE	intelligence preparation of the operational environment

STAFF COORDINATION

4-12. The intelligence staff coordinates with key supporting elements, whose expertise supports IPOE and the targeting effort:

- **Operations security officer**, collocated with the S-3, provides subject matter expertise on friendly vulnerabilities during the phases of an operation. For example, friendly forces may be vulnerable to different threat capabilities; the operations security officer can assist in identifying by phase which threat assets and capabilities should be the focus of information collection and targeting.

- **Information operations officer** assists in integrating information activities into the concept of operations through informational considerations. (See ADP 3-13.) The information operations officer—
  - Assists the G-2/S-2 in identifying and evaluating threat information capabilities and deception and denial capabilities, as well as the means to influence the population.
  - Provides information on friendly, neutral, and threat key communicators to use as part of a nonlethal engagement strategy.
- **FSCOORD** or **FSO** provides subject matter expertise on fires. The fires (artillery and air defense) subject matter expert—
  - Assists the G-2/S-2 in—
    - Developing threat fires-related HVTs.
    - Evaluating threat fire support operations, including identifying potential friendly HPTs from the threat perspective.
    - Assessing potential threat artillery.
    - Developing both situation and event templates regarding the likely threat employment of fire support assets.
    - Positioning threat fire support assets on the situation template.
  - Coordinates with the G-2/S-2 in identifying types of threat artillery and evaluating likely threat artillery and/or missile positions.
  - Assists the staff in identifying and evaluating potential engagement areas and kill zones.
  - Assists, in coordination with the G-2/S-2 and the United States Air Force (USAF) staff weather officer (SWO), in determining what effect weather and terrain will have on threat artillery systems.
  - Participates in the selection of HPTs, target areas of interest (TAIs), and decision points.
- **Engineer coordinator** provides subject matter expertise on mobility and countermobility and assists the G-2/S-2 in developing threat obstacle plans for the situation template. The engineer coordinator—
  - Assists the staff in identifying and assessing obstacles along friendly avenues of approach (AAs).
  - Assists the G-2/S-2 with terrain analysis and those terrain analysis products that support IPOE.
  - Assists the G-2/S-2 in developing the MCOO.
  - Provides staff input about threat mobility, countermobility, and survivability doctrine, tactics, and equipment capabilities.
  - Assists in developing both situation and event templates regarding the likely employment of threat engineer assets and obstacle emplacement.
- **Chemical, biological, radiological, and nuclear (CBRN) officer** provides subject matter expertise and assists the G-2/S-2 in determining the locations of CBRN assets, research and development, production, and storage facilities; the availability of precursor CBRN materials; and the potential areas of CBRN employment. The CBRN officer—
  - Provides input to the G-2/S-2 on threat CBRN doctrine, capabilities, and employment.
  - Assists the staff in templating likely locations of threat CBRN assets.
  - Assists the staff in locating water sources that friendly and threat forces could use for CBRN decontamination operations.
  - Advises the G-2/S-2, in coordination with the USAF SWO, on the impact of terrain and weather and civil considerations in a CBRN environment.
- **Air defense artillery (ADA) officer** provides subject matter expertise on ADA and assists the G-2/S-2 in determining the locations of ADA assets and potential areas of employment. The ADA officer—
  - Advises the G-2/S-2, in coordination with the USAF SWO, on the impact of terrain and weather on friendly and threat ADA operations.
  - Provides input to the G-2/S-2 on threat ADA doctrine, capabilities, and employment.
  - Assists the staff in templating likely locations of threat ADA assets.
  - Assists the staff in determining terrain and weather effects on friendly and threat ADA operations.
  - Provides staff input about threat ADA doctrine, tactics, capabilities, and equipment.

  - Assists in developing threat HVTs.
  - Assists in identifying threat air AAs and assessing threat fixed-wing and rotary-wing air defense capabilities. An *air AA* refers to the air route of a threat aerial or tactical ballistic missile force of a given size leading to its objective or to the key terrain in its path. (See ATP 3-01.16.)
  - Provides expertise on threat air capabilities and air AAs.
- **Cyber EW officer** (also known as CEWO) is the designated staff officer responsible for integrating, coordinating, and synchronizing actions in cyberspace, the electromagnetic spectrum (EMS), and cyberspace electromagnetic activities (CEMA). The cyber EW officer—
  - Advises on effects in cyberspace, including associated rules of engagement impacts and constraints.
  - Advises on risks posed by possible cyberspace and EW vulnerabilities and threat capabilities.
  - Provides an understanding of how the OE impacts operations within cyberspace and the EMS.
  - Assists in developing the electromagnetic order of battle. (See ATP 2-22.6.)
  - Processes all requests for cyberspace and EW support.
  - Provides guidance and direction for organic and attached cyberspace and EW assets.
- **External assets**, such as the following, provide additional subject matter expertise to the IPOE process: red teams, red cells, foreign-area officers, international affairs officers, cultural enablers, State Department officers, regional experts, psychological operations units, and other special operations units.

TERRAIN ANALYSIS CONSIDERATIONS FOR TARGETING

4-13. Intelligence analysts, along with geospatial engineers, analyze and describe the terrain of a general area and categorize it. This analysis focuses on terrain effects to friendly and enemy forces in relation to targeting. For example, the terrain may restrict or canalize certain threat elements and indicate key locations to set up NAIs and TAIs to support the detect, deliver, and assess functions of the D3A methodology. Terrain analysis focuses on those aspects that have the most bearing on operations and support the commander's decision making. Therefore, intelligence analysts must ensure all threat information, including cyberspace and EMS threats and obstacles, is gathered and analyzed for inclusion in IPOE products (threat overlays, threat description tables, event matrices, or MCOOs).

4-14. During IPOE, intelligence analysts provide predictive and deductive analysis of enemy capabilities, strengths, and vulnerabilities, as well as terrain effects on friendly collection and delivery assets, based on terrain analysis of the OE. For tactical operations, terrain analysis uses the five military aspects of terrain: observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment (OAKOC). Table 4-2 provides terrain analysis considerations using OAKOC.

Table 4-2. Terrain analysis considerations

Military aspects of terrain factors	*Terrain analysis considerations*
Observation and fields of fire	• Analyze terrain factors that impact the observation capabilities of electronic line-of-sight surveillance systems and unaided visual observation. • Determine terrain effects on the trajectory of munitions (direct and indirectfire) and tube elevation. • Evaluate the potential engagement area, including the— ▪ Defensibility of the area (for friendly and threat forces) based on terrain effects on specific equipment or equipment positions. ▪ Vulnerability of friendly forces based on threat observation and fields of fire.
Avenues of approach	• Identify mobility corridors based on equipment and preferred doctrinal formations. • Categorize mobility corridors by size or type of force accommodated. • Evaluate avenues of approach by comparing mobility (such as speed based on vegetation, slope, obstacles, and soil conditions), observation, sustainability, and accessibility.
Key terrain	• Display nominations for key terrain based on the mission, concept of operations, threat, and environment. • Evaluate the following key terrain: ▪ Urban environment—tall structures, choke points, intersections, bridges,and industrial complexes. ▪ Open environment—terrain features that dominate an area with good observations and fields of fire, choke points, and bridges.

Table 4-2. Terrain analysis considerations (*continued*)

Military aspects of terrain factors	*Terrain analysis considerations*
Obstacles	• Evaluate the effects of natural and man-made obstacles based on— ▪ Current and projected weather conditions. ▪ Type of movement (foot, wheeled, tracked, or air). ▪ Capabilities of vehicles and equipment. • Analyze water features (and surface drainage), including width, depth,velocity, and bank slope for potential river- or gap-crossing sites. • Identify and evaluate effects of potential dam breaches. • Analyze on- and off-road surface conditions, including slope, vegetation, complex terrain, and road characteristics (curves, slope, width, clearance, and load bearing [bridge classification]). • Analyze air movement obstructions, including— ▪ Elevation that exceeds aircraft service ceilings. ▪ Restrictions to flying the nap-of-the-Earth or vertical obstructions that affect flight profiles (buildings, power lines, communications towers). • Create cross-country mobility to reflect severely restricted, restricted, and unrestricted terrain on both combined obstacle overlays and modified combined obstacle overlays.
Cover and concealment	• Analyze aspects of terrain that offer protection from bullets, exploding rounds, and explosive hazards (cover). • Analyze aspects of terrain that offer protection from observation (from aerial and ground detection), such as vegetation and surface configuration (concealment).

WEATHER ANALYSIS CONSIDERATIONS FOR TARGETING

4-15. Weather analysis is collecting, processing, evaluating, and interpreting relevant military aspects of weather; it is evaluating forecasted weather effects on operations. The G-2/S-2, in coordination with the USAF SWO, provides weather analysis products that primarily support the detect, deliver, and assess functions of the D3A methodology. Analysts should evaluate the effects of each military aspect of weather on enemy target activities, friendly collection assets, and friendly delivery assets. However, they should focus on those aspects that have the most bearing on operations and support the commander's decision making.

Note. It is important to provide weather updates to fire direction centers. Using precision weapons requires continuously updated wind speed, wind direction, barometric pressure, temperature, and precipitation information.

4-16. The military aspects of weather are visibility, wind, precipitation, cloud cover, temperature, humidity, and atmospheric pressure (as required). They can affect collection assets' ability to detect targets and impact BDA and lethal and nonlethal fires systems' ability to achieve their desired effects on the target. Evaluating each weather aspect should begin with the local climatology, and analysts should refine the evaluation with the most current forecasts. Weather analysis has two substeps:

- Analyze the military aspects (characteristics) of weather.
- Evaluate the weather's effects on military operations.

4-17. Analysts must also consider potential space weather effects on friendly and enemy space-based capabilities. Solar flares or other adverse space weather may impact satellite communication links and ground stations, which may have cascading effects on Army ground operations. Space weather effects on satellite communications may have adverse effects on operations and mission success. Different solar event types can have different effects on equipment, and the effects may be forecasted to occur within 2 to 3 minutes or 1 to 2 hours, or they can occur the next day. (For space weather doctrine, see FM 3-14.)

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR CONSIDERATIONS

4-18. Units and staffs analyze the CBRN threat and integrate it into the OE using operational variables (PMESII-PT) and mission variables (METT-TC [I]) to account for CBRN conditions and their impacts on

operations. The following CBRN considerations must be integrated into all target-related meetings, working groups, and boards (see appendix C):

- At higher echelons, nonlethal effects should include the instruments of national power to deter the enemy's employment of WMD. This could also include deploying CBRN defense capabilities as a deterrent option, or targeting leaders assessed to have WMD release authority. (See ATP 3-90.40.)
- CBRN modeling is required to assess potential hazards generated by targeting WMD capabilities. These results can inform the targeting process and assist in determining if targets should be designated as restricted or sensitive based on predicted CBRN effects.
- Assessments must include infrastructure with dual-use capabilities that contain toxic industrial materials in the OE. This can create collateral damage if targeted by conventional munitions.
- CBRN effects can have a major impact on civilian populations, which generally lack CBRN protective equipment. Coordination with the G-9 is required to mitigate civil military effects.

4-19. Collaboration between intelligence and CBRN staffs during IPOE is critical in understanding the OE and CBRN targets and in analyzing threat systems. In some theaters, intelligence staffs may develop a list of WMD facilities to prioritize targeting those CBRN capabilities of greatest concern. Factors may include the type of WMD materiel, its intelligence value, means of delivery, and the immediacy of employment. CBRN considerations must also be integrated into developing intelligence requirements, NAIs, TAIs, and HVTs. Coordination between intelligence, operations, fires, and CBRN staffs is key to executing the targeting process for CBRN targets.

4-20. Collaboration can be challenging, particularly for intelligence and CBRN staffs at brigade and battalion levels. Post-attack analysis, including the technical intelligence (TECHINT) of CBRN materiel, is important in updating IPOE, particularly for emerging capabilities that have not been assessed previously.

CIVIL CONSIDERATIONS

4-21. The intelligence staff maintains civil considerations (ASCOPE) data in a file or database that organizes the collected and analyzed information based on civil considerations characteristics. Civil and foreign affairs officers can provide detailed information and analysis pertaining to sociocultural factors as aspects of civil considerations. During large-scale combat operations, civil considerations can play a primary role in identifying restricted fire areas or no fire areas. For example, declaring a nuclear power plant as a no fire area can avoid creating a nuclear hazard that could adversely impact operations. Typically, civil considerations are more important during stability operations. Understanding local social, economic, and political patterns, as well as the importance of local infrastructure and cultural centers, can be critical in avoiding unintended consequences when conducting targeting within a local population.

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Chapter 5

Provide Intelligence Support to Target Development

OVERVIEW

5-1. The intelligence cell provides the commander with an understanding of the threat in terms of probable intent, objectives, strengths, vulnerabilities, probable COAs, most dangerous COAs, values, and critical vulnerabilities. Intelligence analysts recommend objectives based on enemy capabilities, vulnerabilities, centers of gravity, and likely COAs.

5-2. The commander determines objectives and provides targeting guidance, which focuses on essential threat capabilities and functions that interfere with achieving friendly objectives; it must be clearly articulated and understood by all warfighting functions. The intelligence staff must continuously review the objectives and guidance regarding the threat and the changing situation to ensure they remain relevant to the commander's intent. The targeting team incorporates information from the intelligence cell and the rest of the staff into the commander's targeting guidance to create targeting products, through the IPOE process, the MDMP, the collection management process, and the targeting process. (See figure 5-1.)

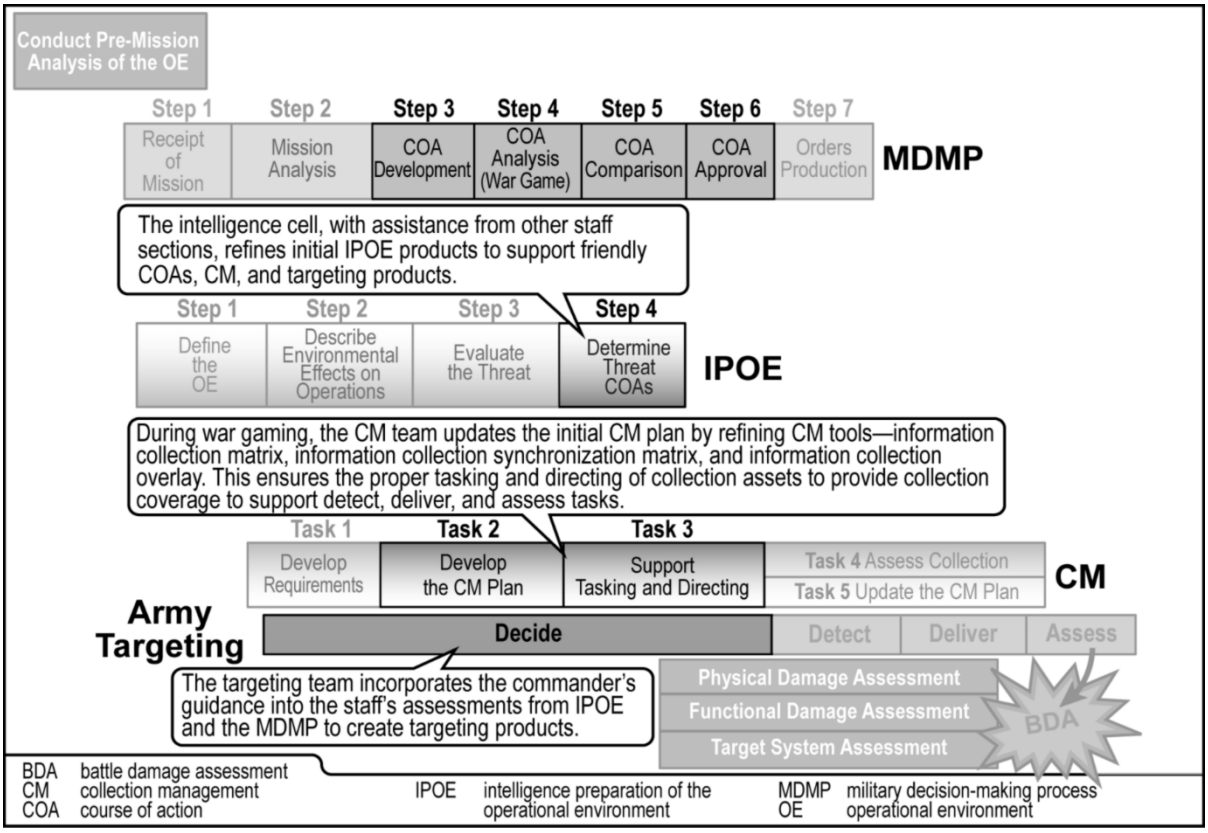


Figure 5-1. Intelligence support to target development

5-3. The commander's targeting guidance also describes the desired effects to be generated by fires, physical attacks, CEMA, and other information-related capabilities against threat operations. Targeting enables commanders, through lethal and nonlethal capabilities, to produce desired effects. Capabilities associated with one desired effect may also contribute to other effects. For example, delay can result from disrupting, diverting, or destroying enemy capabilities or targets. (See FM 3-60 for doctrine on desired effects.)

Note. Appendix D provides a fictional vignette for MI professionals that highlights intelligence support to targeting across the D3A methodology.

TARGET DEVELOPMENT

5-4. *Target development* is the systematic examination of potential target systems—and their components, individual targets, and even elements of target—to determine the necessary type and duration of an engagement (JP 3-60). Target development involves the systematic analysis of threat forces and operations to determine HVTs, HPTs, systems, and system components for potential engagement through lethal and nonlethal means. Target development is a process that integrates all-source analysis (IPOE), collection management, and targeting functions to evaluate target systems to identify, characterize, and nominate targets, when engaged, and support achieving the commander's objectives.

Note. When supporting joint operations, CJCSI 3370.01D guidance must be adhered to on basic, intermediate, and advanced target development.

TARGET SYSTEM ANALYSIS

5-5. *Target system analysis* is an all-source examination of potential target systems to determine relevance to stated objectives, military importance, and priority of attack (JP 3-60). The purpose of conducting TSA is to identify targeting plans that enable a commander to use targeting to create effects that accomplish objectives and to identify HPTs that support those strategies. Through TSA, considerations can be established during the evaluation of a target's value or payoff and how much its engagement will contribute to the commander's objective. TSA is a joint process used during joint targeting and target development to produce TSA products to support detailed targeting within the joint targeting cycle. In some situations, TSA products at the joint level may be inputs that assist the Army in analyzing threat systems, performing IPOE, or conducting TVA.

Note. TSA is not an IWFT. It creates a requirement for the intelligence warfighting function to provide products and intelligence to enable the commander and staff to create targeting strategies to produce desired effects. The *analyze threat systems* IWFT is not conducted to joint standards and is not captured in the same format as TSA and target development at the joint level. Army forces working as part of or supporting the joint force conduct joint TSA and target development to joint standards.

INTELLIGENCE SUPPORT TO THE TARGET DEVELOPMENT PROCESS

5-6. Intelligence support to target development involves a flexible and continuous but detailed process, shown in figure 5-2. The tasks of the process are—

- Analyze threat systems.
- Conduct TVA.
- Develop initial and continually update target intelligence folders.
- Identify specific HVTs.
- Refine/Adjust HVTs, when necessary.
- Support the selection of HPTs and other products.
- Support subsequent target development.

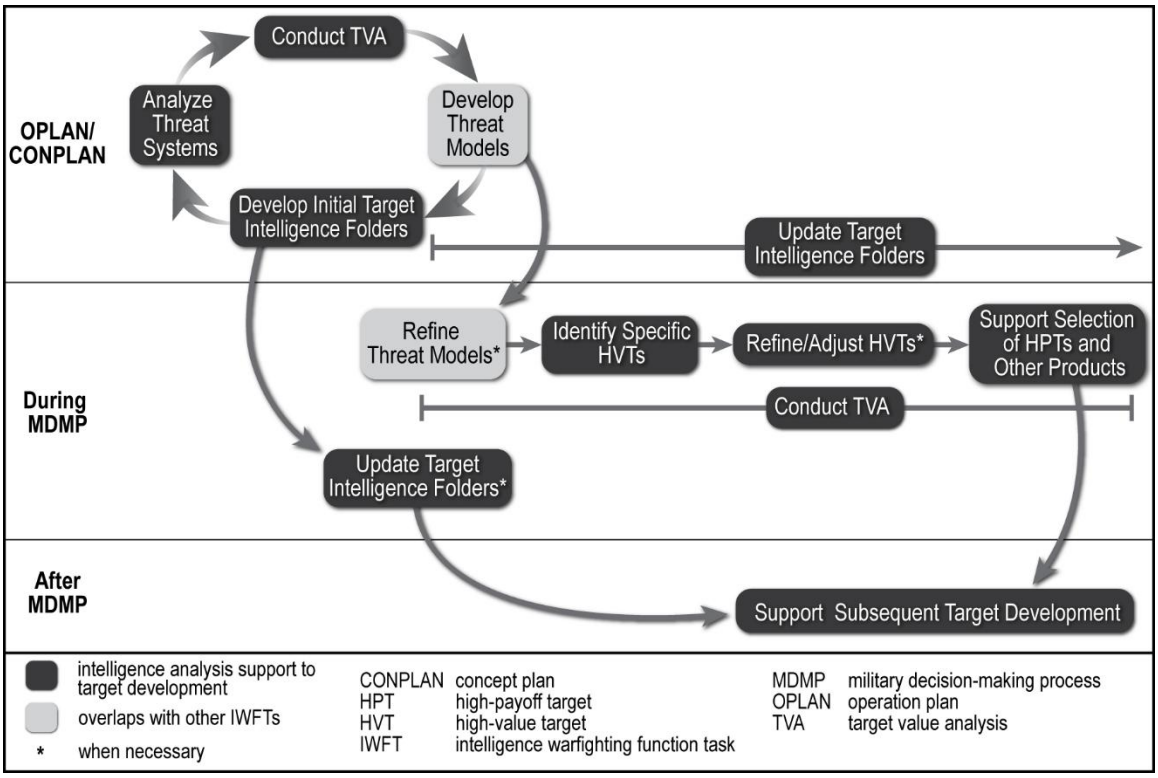


Figure 5-2. Intelligence support to the target development process

ANALYZE THREAT SYSTEMS

5-7. A *system* is a functionally, physically, and/or behaviorally related group of regularly interacting or interdependent elements that form a unified whole (JP 3-0). A system perspective provides a comprehensive, holistic view of the fundamental elements (nodes) and their interconnectedness (links) to each relevant system. A disciplined understanding of a system is crucial to viewing the OE holistically. The following are essential to a system:

- The components and/or system elements.
- The synergy among components and other systems.
- A functional boundary separating it from other systems.

5-8. Friendly forces cannot target threat forces and capabilities without understanding threat target systems—from general to detailed target elements (a macro to micro approach). This effort results in intelligence that is pushed from the combatant commander, the joint force, or theater army to Army echelons. Analyzing threat systems overlaps with developing threat models and should be conducted as early as possible before actual operations—preferably before the MDMP—and continuously updated. This analysis is a priority for organizations during the Army strategic contexts; however, it may be conducted at any time during planning.

5-9. Analyzing threat systems is not solely an intelligence function; it requires extensive collaboration between intelligence, fires, and all members associated with the targeting process. Analyzing threat systems is a priority, primarily for theater organizations during competition and crisis. However, the task may be conducted at any time if the staff does not have general HVTs or it lacks an understanding of the components of a threat function and how that threat performs that function. Often, there are major differences in how and when this task is conducted to support stability operations versus offensive and defensive operations. Analyzing threat systems is more likely conducted at the lower tactical levels—as well as during the MDMP, when necessary—to support stability operations.

5-10. When possible, the targeting working group participates in the Army analysis of threat systems effort led by the intelligence targeting element. This focuses on breaking down threat systems into successive elements to identify HVTs and HVT elements. Resulting products and the development of threat models support subsequent and more detailed target development. Firstly, analysts evaluate which threat systems are relevant to current or future operations. Typically, a threat system comprises a set of interrelated and functionally associated components that produce a common output or have a shared mission (such as the air defense structure within a specific threat unit). From that threat system, analysts determine all associated threat system components, general HVTs, and HVT elements. With each level, there is a growing number of entities. (See figure 5-3.)

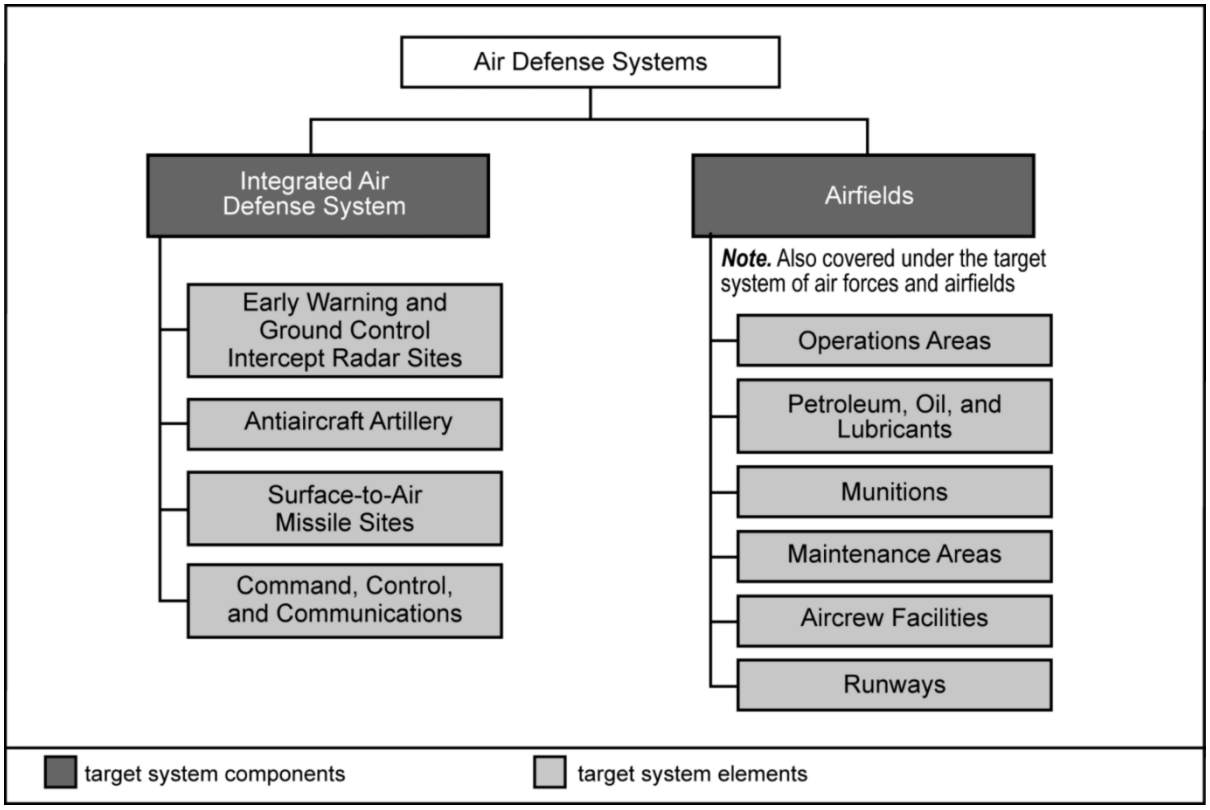


Figure 5-3. Notional Army analysis of threat systems (example 1)

5-11. Analyzing threat systems is related to or supported by functional analysis using critical factors analysis—an advanced structured analytic technique detailed in ATP 2-33.4. Critical factors analysis is an overarching analytic framework that assists analysts in identifying threat critical capabilities, threat critical requirements, and threat critical vulnerabilities, which they may integrate into other structured analytic techniques. Functional analysis supports the analysis of threat systems in identifying windows of opportunity and threat vulnerabilities. At echelons above corps, critical factors analysis assists in identifying threat centers of gravity. Figure 5-4 and table 5-1 illustrate examples of Army analysis of threat systems using critical factors analysis.

5-12. As the number of entities grows with each level, all entity relationships are mapped. These relationships can occur from a physical, logical, or complex social system or from another perspective. While a threat system component or HVT may be significant because of its characteristics, the component or target's real importance is in its relationship to other components or targets within a threat system. Components and HVTs are both intradependent (in performing specific functions) and interdependent (in supporting threat capabilities). For example, the capabilities of a certain theater army-level integrated air defense threat system may depend on logistics, C2, radar coverage, and automation, as well as on many other components. Analysts must link the components to HVTs and HVT elements, when necessary, to properly template all elements of the threat system.

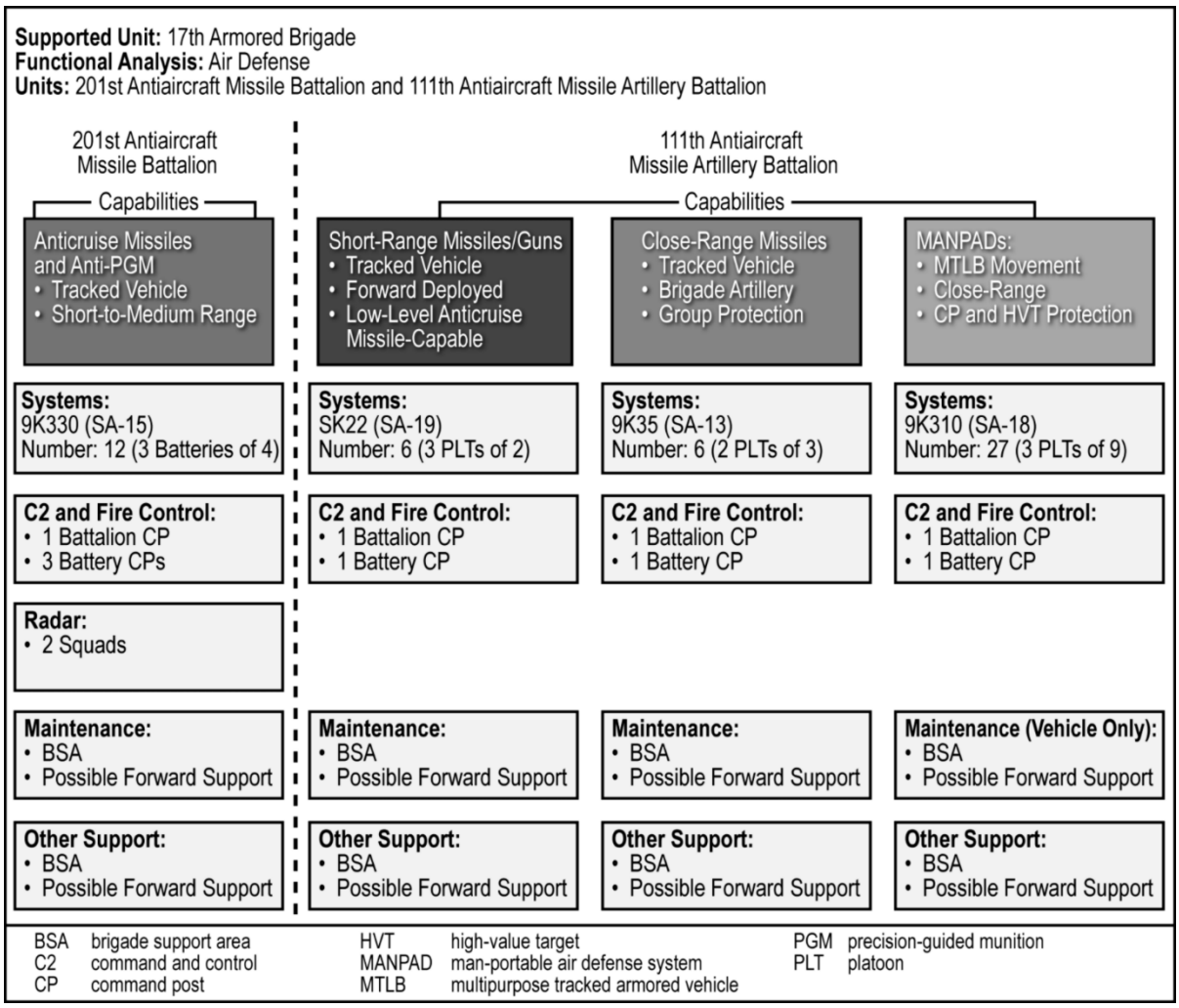


Figure 5-4. Notional Army analysis of threat systems (example 2)

Table 5-1. Notional air defense capability matrix (example)

Number	*Subfunction*	*Units/Nodes*	*Analysis*
1	Command and control	17th Armored Brigade and higher-level air defense unit command posts (CPs) to antiaircraft missile (AM) battalion CP	• Higher-level air defense guidance • Supported brigade orders and control functions • Some administrative functions
2		AM battalion CP to AM battery CP	• AM battalion guidance, • AM battalion orders and control functions • Some administrative functions
3		AM battery CP to 9K330 (SA-15) teams	• Exact guidance and control functions • Some administrative functions
4	Fire control	AM battery CP (fire control squad) to 9K330 (SA-15) teams	• Initial fire control solutions • General fire control measures
5	Radar	Higher-level air defense radar data feeds to AM battalion radar squads	• Sharing of radar data • Long-range early warning • Cross-check radar accuracy
6		AM battalion radar squad data feeds to 9K330 (SA-15) teams	• Medium-range early warning • Initial/Projected intercept data
7	Maintenance	Maintenance platoon (in motor transport operations [MTO] area) to forward support area	• Maintenance team support, as needed • Associated communications

Table 5-1. Notional air defense capability matrix (example) (*continued*)

Number	*Subfunction*	*Units/Nodes*	*Analysis*
8	Motor transport/ Other support	Combat support platoon (in MTO area) to forward support area	• Class V resupply • Associated communications
9		Support platoon (in MTO area) to forward support area	• Classes I, III, IX, and other resupply • Associated communications

Target Characteristics

5-13. Every target has distinct, intrinsic, or acquired characteristics that should be considered through stages of target development and included when databasing; they form the basis for target detection, location, identification, and classification for future surveillance, analysis, strike, and assessment. Table 5-2 shows the five referenced target characteristics used to define targets.

Table 5-2. Target characteristics

Target characteristics	*Description*	*Considerations*
Physical	Physical characteristics or features assist in describing a target and are generally discernible to the five senses or through sensor-derived signatures. They may shape or influence the selection of the type and number of weapons, the weapon systems, and the methods or tactics employed against the target.	• Location • Shape • Size or area covered • Appearance and possible concealment • Number and nature of target element • Dispersion or concentration of target elements • Reflectivity • Electromagnetic spectrum signature • Mobility-fixed, transportable, mobile
Functional	Functional characteristics describe what the target does and how the target does it and are often difficult to discern. They describe the target's function within a greater target system, how the target or target system operates, its level of activity, the status of its functionality, and, in some situations, its significance.	• Target normal or reported activity • Target's status • Degree, proportion, or percentage of functionality • Materials the target needs to perform its functions • Functional redundancy • Ability to reconstitute the target or its function • Self-defense capability • Target importance within the strategic structure • Relationships • Target vulnerabilities • Target capabilities
Cognitive, control, and information	Cognitive, control, and information characteristics refer to *where* and *how* individuals or groups process, perceive, judge, and then make decisions. If a target is virtual, cognitive characteristics describe data storage, transmission, information processing, virtual capabilities, and system vulnerabilities. Cognitive and information characteristics are important to properly assess the critical nodes in a target system since nearly every target system possesses some central function.	• How the target thinks, including sources of influence and motivation • Target ability and capability to process, store, and protect information • Target decision process, including span of control
Environmental	Environmental characteristics describe the effect of the environment on the target. These characteristics may also affect the methods used to affect or observe them.	• Atmospheric conditions affecting the target • Terrain features • Denial and deception measures • Physical relationships • Dependencies
Temporal	Temporal or time-based characteristics describe the target's vulnerability to detection, attack, or other engagement in relation to the time available. Many targets may be fleeting, and some may be critical to friendly operations.	• Time of appearance • Dwell time • Time to target functionality • Identifiable time

5-14. Target characteristics and equipment evaluations entail obtaining detailed information and intelligence about threat characteristics/tactical order of battle factors affecting operations. The intelligence cell obtains this information through intelligence reach; research; data mining; database access; academic studies, products, or materials; intelligence holdings; and PAI. The information, intelligence, products, and materials obtained are refined (through functional analysis and other analytic techniques [see ATP 2-33.4]) for use during mission analysis, IPOE, and other planning processes. (See ATP 2-01.3 for doctrine on threat characteristics.)

Considerations for Analyzing Target Systems

5-15. Considerations for conducting analysis of threat systems include but are not limited to—

- PAI research.
- Existing intelligence, databases, and files.
- Existing threat centers of gravity and other forms of functional analysis.
- Conducting TVA (for example, using the CARVER technique [see paragraph 5-19]) iteratively as part of analyzing the threat system.
- Signatures emitted from HVTs and the ability to collect on those HVTs.
- Understanding the peer threat's five methods (information warfare, preclusion, isolation, sanctuary, and systems warfare) used to employ their instruments of power. (ADP 3-0 provides doctrine on peer threats.)
- Theater army-level guidance on conducting analysis of threat systems.

CONDUCT TARGET VALUE ANALYSIS

5-16. TVA is the Army's methodology for prioritizing potential HVTs and identifying HVT sets with a given tactical situation. This methodology ranks the value or worth of target sets. Initially, the intelligence targeting element conducts TVA with the targeting working group or fires cell (based on unit SOPs) in conjunction with analyzing threat systems and developing analytical products. However, TVA is a valuable tool that can be applied multiple times during intelligence support to target development as well as—

- Before receipt of mission based on foundational intelligence products.
- During step 3 of the IPOE process (evaluate the threat) to identify general HVTs.
- During step 4 of the IPOE process (determine threat COAs) to identify specific HVTs.
- During step 3 of the MDMP (friendly COA development) to select HPTs.
- At any point to support subsequent target development.

5-17. The G-2/S-2 leads TVA during initial IPOE. To complete the threat model, TVA quantifies the relative value of specific unit-type HVTs with each other in relation to a specific mission-type, based in part on conclusions reached from evaluating threat characteristics.

5-18. The G-2/S-2, in coordination with the G-3/S-3, FSCOORD/FSO, and other staff members, uses TVA while war-gaming the operation to finalize staff estimations and develop a friendly and enemy decision support template (DST). A by-product of this is determining enemy assets critical to the success of the enemy's mission and HVTs. War gaming can assist in identifying requirements for the information collection plan as well as *when* and *where* indicators and specific information requirements (SIRs) are likely to appear on the battlefield. These indicators and SIRs should be disseminated to all collection assets.

Target Value Analysis Tool

5-19. The CARVER matrix is a TVA tool used to identify and prioritize specific targets, so attack resources can be used efficiently. CARVER, also a risk assessment tool, stands for the following:

- **Criticality (target value).** Items to consider:
  - How valuable is the target to the function of the system?
  - What does this target need to perform its intended mission/function?
  - How rapidly will the impact of an attack on the target affect the system operations?
  - What function (or percentage of it) will be curtailed by action on the target?
  - How many targets are there?

- **Accessibility (detect).** Items to consider:
  - What are the target characteristics that can be used to enable target detection, location, identification, and classification for future surveillance, analysis, strike, and assessment.
  - Describe the physical characteristics for sensor-derived signatures.
  - Describe the function characteristics associated with the target by reviewing known facts and using deductive and inductive reasoning.
  - Describe the cognitive, control, and information characteristics of how the target thinks, exercises control functions, or processes information by reviewing known facts and using deductive and inductive reasoning.
  - Describe the environmental factors and their effects on the target and its surroundings through sensor and area analysis.
  - Describe the temporal characteristics of the target's vulnerability to detection, attack, or other engagement in terms of time available through information latency and knowledge of the capability.
- **Recuperability (measured in time).** Items to consider:
  - How long will it take to replace, repair, or bypass the destruction of or damage to the target?
  - What other like capabilities are available to supplement the damaged or destroyed system?
- **Vulnerability (detection, destruction, and exploitation).** Items to consider:
  - Is the target vulnerable to detection?
  - Is the target vulnerable to direct or indirect attack or exploitation?
  - Are the means and capability to action this target readily available?
  - What percentage of damages is required to achieve the desired effects?
  - What is the impact to the system/function?
- **Effect (impact to target or system).** Items to consider:
  - Does the effect support the achievement of the commander's objectives?
  - What are the physical, psychological, sociological, political, and/or economic effects at the target, target system, and beyond?
  - Can the effect be amplified or exploited?
- **Recognizability (degree to which target can be recognized).** Items to consider:
  - Does the target have distinguishable features easily recognized in all environmental conditions?
  - Does the target have distinguishable signatures that can be easily acquired and processed?

5-20. Using the CARVER matrix entails determining evaluation criteria and a numerical value rating system to rank order CARVER factors for each potential target; the criteria value rating scale is usually 1 to 5. The higher number indicates a desirable rating (from the attacker's perspective), and the lower number reflects an undesirable rating. Units may choose to use their own criteria rating and value system. Table 5-3 illustrates a CARVER value rating matrix. The matrix must be tailored to suit the strategic, operational, or tactical situation. Table 5-4 illustrates a CARVER application matrix used to prioritize targets.

Table 5-3. CARVER value rating matrix (example)

Factors	*Criticality*	*Accessibility*	*Recuperability*	*Vulnerability*	*Effect*	*Recognizability*
Value	*Evaluation criteria*					
5	Major impact. System cannot function without it; immediate halt to target system operations.	Easily acquired via multi-intelligence capabilities (physical and functional characteristics) for the immediate execution of actions or activities.	Requires one week or more to repair, replace, or substitute.	Target can be detected and engaged with organic capabilities.	Cumulative effects; number of direct and indirect effects combined to produce a greater effect than the sum of an individual effect.	Target can be positively identified under all conditions.

Table 5-3. CARVER value rating matrix (example) (*continued*)

Factors	*Criticality*	*Accessibility*	*Recuperability*	*Vulnerability*	*Effect*	*Recognizability*
Value	*Evaluation criteria*					
4	Moderate impact. System functions reduced, disrupted, and/ or degraded.	Acquired via multi-intelligence capabilities but requires some assessment and analysis to confirm target before execution.	Requires 3-6 days to repair, replace, or substitute.	Target can be engaged with lethal and or nonlethal capabilities.	Direct effect; immediate and easily recognized.	Easily recognized by collection assets.
3	Minimum impact. Target system compensates for loss/damage to node.	Acquired via single-source intelligence capabilities but requires more collaboration with other systems to confirm.	Can be repaired within 24-48 hours with readily available repair-parts and/or substitution.	Target can be detected and engaged with supporting capabilities.	Indirect, delay, or displaced second-, third-, and higher-order effects by intermediate events or mechanisms.	Target is easily confused with other targets, elements, or components.
2	Loss may reduce mission performance.	Difficult to gain access.	Within 24 hours, function and or task easily rerouted to other systems.	Little capability to attack.	No effect on forces, adverse effect on civilians.	Hard to recognize, confusion probable
1	Loss would reduce mission performance.	Very difficult to gain access.	Easily replaced in a short time (days).	Very little capability to attack.	Unfavorable effect; assured adverse effect on civilians.	Extremely difficult to recognize without extensive orientation.

Table 5-4. CARVER application matrix to prioritize targets (example)

Potential targets	*C*	*A*	*R*	*V*	*E*	*R*	*Total*	*Priority*
Advanced Field Artillery Tactical Data System	5	4	1	2	5	3	20	2
Microsoft Exchange server	2	3	2	3	1	5	16	7
SharePoint server	3	3	2	3	1	5	17	6
Unit shared drive	3	4	2	4	1	5	19	3
Unit active directory	5	4	2	4	4	5	24	1
Air and missile defense workstation	4	4	1	2	4	3	18	5
Global Combat Support System-Army	5	3	1	2	4	3	18	4

Intelligence Gain/Loss Considerations

5-21. Intelligence gain/loss considerations apply to information sources being exploited for combat information and intelligence. The G-2/S-2 must ensure the commanders and staffs understand the process of evaluating whether destroying a target has a higher payoff than sustaining intelligence collection against the target to further understand the enemy as a network/system. An example of this is a guarded frequency for signals intelligence (SIGINT) exploitation. The G-2/S-2 recommends to the commander to not jam or interfere with the frequency during ongoing exploitation. A guarded frequency is time-oriented, changing as the threat assumes different combat postures. This frequency can be jammed after the commander has weighed the potential operational gain against the loss of the intelligence exploitation.

Develop Initial and Continually Update Target Intelligence Folders

5-22. Target intelligence folders should be developed and maintained for HVTs and continually updated with detailed information and intelligence throughout operations. During planning, HVTs selected as HPTs should receive greater priority. The information within and the layout of target intelligence folders are based on unit tactics, techniques, and procedures. However, all target intelligence folders contain a compilation of discreet

data about potential targets/target systems and completed intelligence analysis about these potential targets/target systems. Target intelligence folders normally include as much information and analysis about the target, including threat characteristics, as is currently available.

5-23. Initially, a target intelligence folder includes the same level of detail as the associated threat model, except for unit and geographic specificity. Over time, the target intelligence folder includes analysis, supporting intelligence, and information, such as a detailed assessment of target element vulnerabilities and a historical record of HVT collection and analysis. Initial target intelligence folders may contain—

- A unique intelligence identifier.
- HVT/HVI description.
- Element-related threat characteristics (such as parent unit and support associations).
- Latest known location (date-time group and type of report).
- Associated target system and target components.
- Target elements.
- Target/Target system vulnerabilities.
- Target/Target system critical nodes.
- Primary target image, template, sketch, or graphic.
- Key references (such as an electronic target folder [ETF], MIDB intelligence, associated general threat model, associated biometric and forensic information).
- Unique signatures and methods to detect and/or positively identify the target.
- Likely targeting effects and second- and third-order effects (both positive and negative).

5-24. Updated (supporting contents) target intelligence folders may contain—

- HVT value matrix.
- Latest related intelligence products (such as relevant significant activities or assessments).
- Available maps and geospatial intelligence (GEOINT) products of the target and surrounding area (including AAs and infiltration/exfiltration routes).
- Geospatial data collection and production.
- Associated personnel and biographic intelligence and other identity intelligence.
- Associated electronic technical data.
- Target history.
- Most current intelligence/reporting on the target by intelligence discipline and complementary intelligence capabilities (listing the date-time group of the intelligence).
- Most current all-source analytical products.
- Most current enemy significant activities relevant to the target or target activity.
- Current predictive analysis on likely target actions and any expected second- or third-order effects from a successful targeting mission.

5-25. If the target is a specific system or piece of equipment, a layout/diagram of the system/equipment may be useful (including different types, possible modifications, and basic eight photos of the equipment [front, back, sides, and four obliques of the equipment]), if available. If the target is an individual (such as an HVI or an enabler), a physical description and most recent photo of the target and graphics of known or suspected geological locations support targeting efforts. (See appendix E for more information.)

5-26. If the target is a fixed facility, include all relevant, detailed subterranean, ground-level, and above-ground maps, images, templates, or graphics. Also include characteristics of the facility, such as wall thickness, structural reinforcements, depth, and components within the facility that affect ammunition selection. These targets are usually identified by a basic encyclopedia number. If the facility is a strategic-level or operational-level target, then more information may be required, such as—

- Detailed GEOINT/imagery.
- Requirements for engineer support.
- In-depth predictions of potential second- and third-order effects upon assaulting/destroying the facility.
- Results from long-term surveillance of the facility.

- Considerations for a cordon force.
- HVIs/Key personnel associated with the facility (some may not be on the site and others may only be present because of coercion).

Basic Encyclopedia Number

Basic encyclopedia is a compilation of identified installations and physical areas of potential significance as objectives for attack (JP 2-0). A basic encyclopedia number is a ten-character alpha/numeric code unique to an installation for incorporation within various national and tactical systems (CJCSI 3370.01D).

A basic encyclopedia number must be used to classify the function or purpose of a facility; it must be assigned by the end of basic target development (see paragraph E-3). Basic encyclopedia numbers may be added to all CBRN, human, or environmental health hazard elements.

5-27. Army-focused analysis of threat systems—

- Builds from the joint force's analysis and is more common at theater army and corps levels. It occurs during concept plan/operation plan planning in association with the initial development of threat models before IPOE—preferably well before armed conflict (large-scale combat operations)—and the development of the initial target intelligence folder.
- Results in a threat template and an association matrix (with relationships) of a specific threat system, including target elements. The threat template and association matrix can then be used to develop a general threat model, leading to the development of a target intelligence folder. (See ATP 2-33.4 for doctrine on an association matrix.)

IDENTIFY SPECIFIC HIGH-VALUE TARGETS AND REFINE/ADJUST, WHEN NECESSARY

5-28. Steps 3 and 4 of the IPOE process are the most critical steps regarding products produced to support targeting; the HVT list and enemy COA statement are key products required to enable D3A. HVTs are developed during step 3 (evaluate the threat) and initially refined during step 4 (determine threat COAs). Analysts must understand threat operational art and tactics when determining HVTs and threat COAs.

5-29. The *analyze threat systems* IWFT focuses on dividing target systems into successive elements to eventually identify HVTs and HVT elements. The resulting products and the development of threat models support specific and subsequent HVTs. Identifying and refining HVTs occur continuously during IPOE, which occurs during the MDMP; during TVA; and as the operational situation changes.

5-30. When performing intelligence support to Army targeting tasks, G-2/S-2s may have a field artillery intelligence officer (FAIO) integrated into the intelligence function. FAIOs are assigned to fires cells at echelons above corps and to FSEs at echelons corps to BCT. The FAIO functions as a liaison between the G-2/S-2, the fires cell, and chief of operations; provides the intelligence cell with requests for intelligence support; supports target development; assists in developing the information collection plan; analyzes BDA to evaluate the effectiveness of the attack; coordinates with subordinate, adjacent, and higher headquarters intelligence elements to support the development of targets. During target development, provides support to develop and prioritize HVTs.

SUPPORT THE SELECTION OF HIGH-PAYOFF TARGETS AND OTHER PRODUCTS

5-31. As the staff war-games each friendly option, the G-2/S-2 identifies HVTs, from which the staff nominates HPTs. HPTs are HVTs that, if successfully attacked, contribute substantially to the success of friendly plans. HPTs are based on the friendly concept of operations and support the friendly force commander's scheme of maneuver.

5-32. The staff records HPTs on the DST for a specific phase of a battle as well as for the means decided upon to deliver the attack based on the operation. HPTs may include enemy C2 nodes, ADA assets, and engineering equipment. However, if friendly forces plan an air attack, only enemy C2 nodes and ADA assets might be identified as HPTs.

5-33. Designating HVTs as HPTs requires careful staff coordination. The G-2/S-2 and collection manager evaluate HVTs at different points in the battle to determine if collection assets can detect the HVTs and provide the necessary target resolution—for example, time and location to permit effective action. In analyzing threat systems and developing threat models, the G-2/S-2 identifies initial HVTs based on the importance of their relationship to the threat system and subsequently prioritizes them based on their relative value to the threat's operation.

Note. The importance of the HPTs prioritizes the allocation of the target detection systems. This priority is weighed against the same systems needed for collection to support situation development.

5-34. The FSCOORD/FSO uses their knowledge of friendly weapon systems to determine if the capability to attack the HPTs with lethal assets exists; the EW officer and others assist the FSCOORD/FSO regarding nonlethal systems. The availability of weapon systems does not usually affect the attack since HPTs have precedence over other targets.

5-35. Using friendly weapon systems' capabilities to attack targets, the G-2/S-2 analyzes and predicts the enemy's response to each system. This analysis determines if attacking the HVTs is necessary to ensure the success of friendly operations. The commander uses the analysis to develop attack guidance. The HVTs that meet the criteria of being acquirable, attackable, and capable of ensuring friendly success are designated as HPTs, which are formatted for easy reference on a high-payoff target list (HPTL). The G-3/S-3 or FSCOORD/FSO prepares the HPTL and gives it to the commander for approval.

5-36. HPTs are critical to both the threat's needs and the friendly concept of operations. The staff prioritizes HPTs on a list, associating them to a specific point in the battle. HPTs are incorporated into the scheme of fires and used to develop target selection standards (TSS), the attack guidance matrix (AGM), and the targeting synchronization matrix (TSM) for each friendly COA.

Target Selection Standards

5-37. TSS refer to criteria by which personnel determine which systems produce valid targets and which systems require confirmation before considering their targets for attack. The FSE leads the development of TSS, collaborating with the G-2/S-2 and G-3/S-3 since collection asset capabilities and limitations must be known. The G-2/S-2 collection management section provides most of these capabilities and limitations.

5-38. TSS—

- Do not determine if the information the sensor receives is a target; the analyst determines this.
- Reflect the system's capabilities to produce targets.
- Are dynamic; therefore, terrain and weather effects on collection assets and enemy equipment must be considered.
- Focus on the tactical situation. Care is taken in dealing with potential enemy deception and in ensuring the reliability of the source or agency that is reporting.
- Are designed to allow targeting personnel in the command post to readily distinguish between targets and suspect reports.
- Are developed for all target systems.

5-39. TSS usually comprise the essential elements listed in the TSS matrix. (Table D-3 on page 71 provides a TSS matrix example.) Units may develop their own TSS matrix format:

- **HPT.** Designated HPTs.
- **Timeliness.** Valid targets must be reported to the weapon system within the designated timeliness criteria.

- **Accuracy.** Valid targets must be reported to the weapon system meeting the required target location error (TLE) criteria. The criteria are the least restrictive TLE, considering the available weapon system's capabilities.
- **Size.** Echelons should understand the size of the element being engaged. This assists in efficiently using capabilities to maximize resource employment. Echelons should establish discrimination criteria based on capabilities or objectives. The targeting team must determine engagement standards during TSS development.

5-40. Different TSS should exist for a given enemy activity and weapon system. Intelligence analysts use TSS to quickly determine targets from battlefield information and pass the targets to the FSE. Weapon system managers use TSS to identify targets for expeditious attack. Targets that do not meet TSS should be validated before being engaged. (See FM 3-60 for doctrine on TSS.)

Attack Guidance Matrix

5-41. Understanding target vulnerabilities and the effect that attacking the target has on enemy operations allow the staff to propose the most efficient attack option available. Once the staff decides on whether the target is best disrupted, delayed, or destroyed, it selects attack options. The decision on *what* attack option to use and the decision on *when* to acquire and attack the target are made simultaneously. Coordination is required when an attack with two different means is decided; this decision is recorded on the DST and made during war gaming.

5-42. The commander is the approval authority for attack guidance. The commander's guidance is captured on an *attack guidance matrix*—a targeting product approved by the commander, which addresses the how and when targets are engaged and the desired effects (FM 3-09). The AGM includes the following elements (table D-4 on page 71 provides an AGM example):

- **HPT.** A prioritized list of HPTs by phase of the operation.
- **When.** The time the target should be engaged.
- **How.** The weapon system that will engage the target.
- **Effect.** The desired effects on the target or target system.
- **Remarks.** Whether BDA is required, whether coordination occurs, and any restrictions.

Collection Management Tools

5-43. The collection management team, with assistance from the rest of the intelligence staff, develops collection management tools to assist the operations staff in developing the information collection plan and the rest of the staff in understanding the information collection plan. Collection managers use collection management tools to ensure collection tasks are tied to the scheme of maneuver in time and space, linking reconnaissance and surveillance to maneuver and effects.

5-44. Collection management tools—information collection matrix (ICM), information collection synchronization matrix (ICSM), and information collection overlay (ICO)—depend on each other and are not interchangeable. Each tool serves a specific purpose and should be used toward that purpose to avoid confusion between the staff and collectors. (ATP 2-01 provides doctrine on the collection management tools.)

Note. The staff, using the situation template and the MCOO, must assess the risk to a collection asset versus the effectiveness of the collection asset.

Information Collection Matrix

5-45. An ICM comprehensively links requirements with collection assets and other key information. Although the ICM can include other information and supporting worksheets, it must include (see figure 5-5 on page 44) the following:

- PIRs and other intelligence requirements.
- Indicators tied to PIRs.
- SIRs tied to indicators.
- Decision points.
- NAIs.
- Each NAI's active window.
- All available collection assets.

PIRs	Indicators	SIRs	NAI/TAI	Start	Stop	Assets											Decision Point
						53d ID						Higher					
						53d CAB	1st ABCT	2d ABCT	3d ABCT	4th IBCT	15th SUST Brigade	GEOINT/ FMV	MTI	SIGINT	HUMNT	CI	
1. What routes will the enemy use in a ground attack against the 53d ID?	1.1. Armored vehicle MTIs in or along mobility corridors	1.1.1. Report the MTI type, size, and direction of travel	3001 3002 3003	H-24	H+24	C TA							R				1,2
	1.2. Company or larger-sized units in march/convoy	1.2.1. Report presence of 10 or more armored vehicles in march/convoy	3001 3002 3003	H-24	H+24	C TP	C TA	C TA		C TA		R					1,2
	1.3 Battalion-sized armored formations	1.3.1. Report presence of 10 or more T-90s and/or 30 or more BMP-3s	3001 3002 3003	H-24	H+24	C TP	C TA	C TA		C TA		R					1,2
2. Which enemy SMIBs will attack 53d ID?	2.1. Military-unit communications in the area	2.1.1. Report presence of military-unit communications	3004 3005 3006	H+72	H+12									R			
	2.2. T-90s or BMP-3s larger than company size	2.2.1. Report presence of 10 or more T-90s or 30 or more BMP-3s	3004 3005 3006	H+72	H+12	C TP						R	R				
	2.3. Company or larger-sized units in march/convoy	2.3.1. Report presence of 10 or more armored vehicles in march/convoy	3004 3005 3006	H+72	H+12	C TP						R	R				
	2.4. Military units preparing to depart the area	2.4.1. Report on locals hearing about pending unit departures	3004 3005 3006	H+72	H+12	C TP						R	R		R		
3. Where are enemy RECON/ SPF teams operating in the 53d ID AO?	3.1 RECON/SPF employed as RECON units	3.1.1. Report presence of military unit communications	3007 3008	H-24	H+24		C TA	C TA	C TA	C TA				R			
		3.1.2. Report on locals hearing/ seeing suspicious activity	3007 3008	H-24	H+24		C TA	C TA	C TA	C TA	C TA				R		
	3.2. SPF employed as combat engineer or direct action teams	3.2.1. Report discovery of IEDs, weapons/munitions, or supply caches	3007 3008	H-24	H+24		C TA	C TA	C TA	C TA	C TA	R					
		3.2.2. Report destruction of critical systems or bridges	3007 3008	H-24	H+24	C TP	C TA	C TA	C TA	C TA	C TA						

ABCT	armored brigade combat team	HUMINT	human intelligence	SIGINT	signals intelligence
AO	area of operations	IBCT	infantry brigade combat team	SIR	specific information requirement
C	capable	ID	infantry division	SMIB	separate mechanized infantry brigade
CAB	combat aviation brigade	IED	improvised explosive device	SPF	special purpose forces
CI	counterintelligence	MTI	moving target indicator	SUST	sustainment
FMV	full-motion video	NAI	named area of interest	TA	tasked as alternate
GEOINT	geospatial intelligence	PIR	priority intelligence requirement	TAI	target area of interest
H-hour	specific time at which an operation or exercise commences	R	requested	TP	tasked as primary
		RECON	reconnaissance		

Figure 5-5. Information collection matrix (example)

5-46. If targeting intelligence requirements are required and developed, the collection management team accounts for them in a targeting addendum to the ICM. If a targeting addendum is not developed, the collection management team must graphically account for TAIs and HPTs through other means. (ATP 2-01 provides doctrine on developing the targeting addendum.)

Information Collection Synchronization Matrix

5-47. The collection management team develops the ICSM, in conjunction with the ICM and ICO, to synchronize information collection activities with enemy activities and friendly force operations, as well as to show actual tasked and requested assets. The ICSM is developed based on the current intelligence running estimate, threat situation template, intelligence requirements, and the event template and event matrix. Figure D-2 on page 73 provides an ICSM example.

5-48. The ICSM—

- Ensures collection tasks are tied to intelligence requirements and the DST in time and space, linking information collection to operations.
- Synchronizes information collection activities with the maneuver synchronization matrix.
- Provides adequate detail and context to collection assets or controlling units, when possible.
- Assists the targeting team in building an accurate and detailed TSM.

Information Collection Overlay

5-49. The collection management team creates the ICM, ICSM, and ICO simultaneously. The mission and echelon determine whether a detailed ICO or multiple ICOs are developed. Typically, the ICO includes—

- Friendly boundaries, PLs, and objectives.
- Reconnaissance and intelligence handover lines.
- NAIs and TAIs.
- Limits of reconnaissance.
- Unmanned aircraft system flight paths and restricted operations zones.

5-50. The collection management team coordinates with the operations staff for the latest operational graphics to develop the ICO. Figure D-3 on page 74 provides an overlay example.

Targeting Synchronization Matrix

5-51. The targeting working group and the rest of the staff produce an initial TSM at the end of step 3 (COA development) of the MDMP; the targeting commander is the approving authority for a TSM. The TSM provides a way of synchronizing targets by identifying responsibilities to detect, deliver, and assess specific HPTs listed on the matrix by priority in categories. The TSM ensures planned activities are coordinated and their execution is feasible in time and space; all collection assets are used and not overtaxed. Table D-5 on page 72 provides a TSM example. (FM 3-60 provides doctrine on TSMs.)

5-52. Once completed, the TSM serves as a basis for updating the information collection plan and issuing a fragmentary order. The TSM also facilitates the distribution of results produced or decisions made by the targeting working group and targeting board.

SUPPORT SUBSEQUENT TARGET DEVELOPMENT

5-53. Support to subsequent target development usually focuses on target validation and dynamic target development. Although this task falls under target development, it is usually performed during the detect function of the Army targeting process.

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Chapter 6

Provide Intelligence Support to Target Detection, Delivery, and Assessment

OVERVIEW

6-1. The planning and preparation activities of the operations process have been employed. The staff publishes orders with the current mission and approved commander's guidance to execute planned intelligence and targeting operations. The intelligence cell focuses on assessing collection to execute, evaluate, and update the collection management plan and the information collection plan. The collection management team ensures collection assets focus on the correct HPTs at the assessed time and space to support the detect, deliver, and assess functions of the D3A methodology.

6-2. As collection assets detect planned targets or targets of opportunity, the FSE is notified to effectively engage the targets. The collection management team cross-cues collection assets to support tracking the targets through engagement, and the intelligence cell conducts BDA to determine delivered effects. Figure 6-1 shows the main steps of each process to support the detect, deliver, and assess functions of the targeting effort.

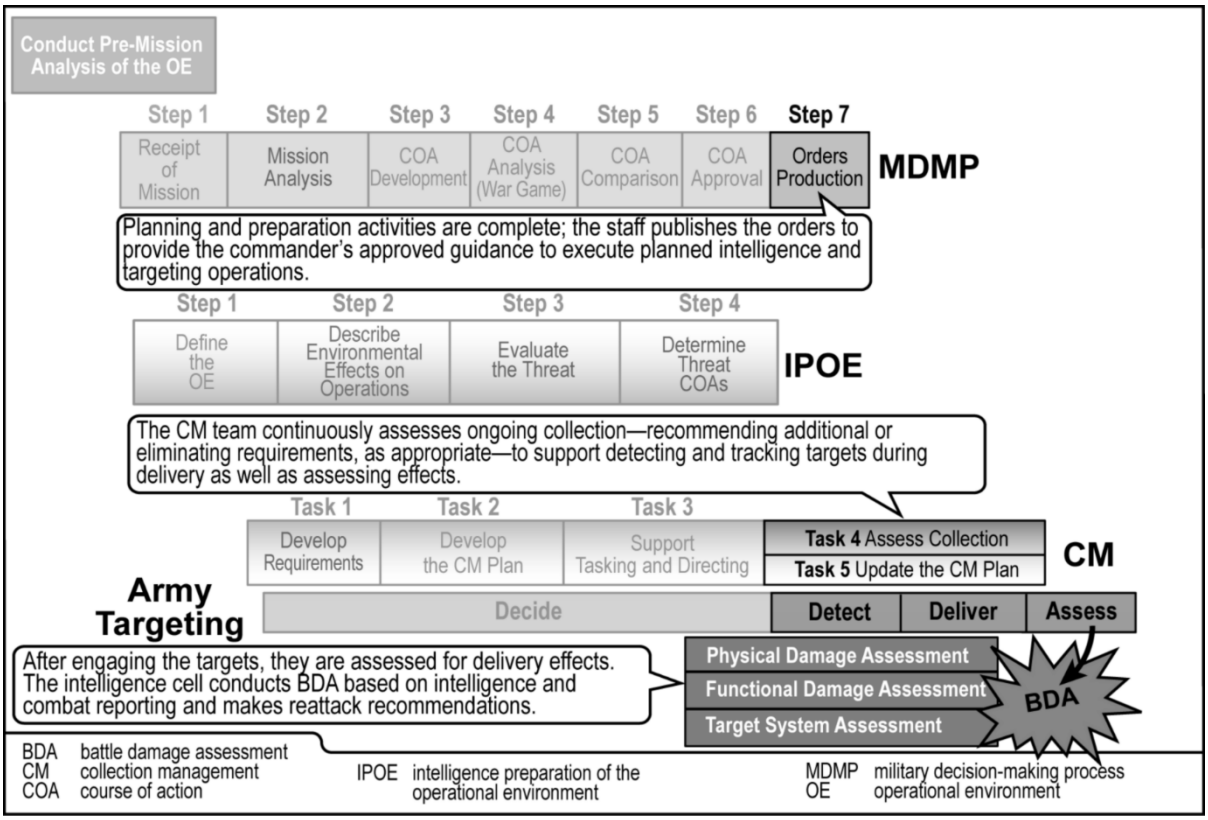


Figure 6-1. Intelligence support to target detection, delivery, and assessment

INTELLIGENCE SUPPORT TO TARGET DETECTION

6-3. The detect function of the D3A methodology comprises target detection and additional target development, when necessary. It is designed for the tracking and acquisition of threat units selected as HPTs during the decide function. The continual tracking of threat units not only enables flexibility in attacking HPTs, but it also assists in informing the combat assessment process.

6-4. Based on targeting priorities, the targeting working group establishes target detection and tracking priorities; target tracking is inherent in target detection. The fires cell provides the intelligence cell with the required degree of accuracy and the dwell time for a target to be eligible for engagement. Then the collection manager can match those requirements to the collection asset's TLE.

6-5. The collection manager directs the information collection synchronization effort, focusing on PIRs and targeting intelligence requirements. The collection manager ensures the information collection plan supports the finalized targeting plan. Target acquisition assets gather information and report their findings to the controlling headquarters, which disseminates the information to the requester. Some collection assets provide actual targetable information while other collection assets provide information that requires additional analysis to produce valid targets. The target priorities developed during the decide function are used to expedite the processing of targets.

6-6. As much as possible, the procedures and supporting products used during the detect function should be established during the decide function. However, the targeting team must periodically update decisions made during the decide function concerning IPOE products, HPTLs, TSS, TSMs, AGMs, the information collection plan, and the operation order. Updating these products must occur continuously throughout the detect, deliver, and assess functions.

6-7. Executing the information collection plan begins as early as possible during planning and continues through the assess function. This assists units in transitioning unit operations into the next mission. Executing the information collection plan to answer targeting intelligence requirements is central to the detect function. Targets are detected using the appropriate collection assets.

6-8. The current operations integration cell is the primary cell responsible for directing the execution of the information collection effort to detect HPTs identified in the decide function. The unit intelligence cell (with the current operations integration cell) must focus its intelligence analysis efforts to support both situation development and the targeting effort. Therefore, close coordination between the unit intelligence cell and the FSE is critical. Key staff members in this effort include the—

- G-2/S-2.
- G-3/S-3.
- Information operations officer.
- FAIO.
- Targeting officer.
- FSCOORD/FSO.

6-9. The G-2/S-2 focuses intelligence acquisition efforts on designated HPTs and PIRs. Situation development information, through target detection and tracking, accumulates as collection assets satisfy PIRs, targeting intelligence requirements, and other intelligence requirements. The collection manager—

- Considers collection assets' capabilities and availability within the echelon and those assets available to subordinate, higher, and adjacent units.
- Considers joint or combined force assets.
- Arranges the direct dissemination of target information—from the collection asset to the targeting cell or targeting intelligence to the fires cell, if possible.

6-10. When detecting a planned HPT, the information is quickly disseminated to the FAIO (or fire officer) to determine if the target is an HPT, the target's priority, and if the target complies with TSS. If the target is an HPT, the FAIO coordinates with the unit intelligence cell and disseminates the target directly to the fires cell or FSE.

Note. To ensure the target information is disseminated quickly, collocate the FSCOORD/FSO with the unit's intelligence cell with direct communication to the fires cell.

6-11. When the situation dictates developing a new HPT or a significant change to an existing HPT, subsequent target development must occur. When this is necessary, the target information is forwarded for intelligence analysis, and the target development process must occur quickly. Upon identifying a target specified for attack, analysts pass the target to the FSE, who tasks the appropriate capability to execute the attack against the target.

6-12. Intelligence requirements that support the detection of HPTs are incorporated into the overall unit information collection plan. Requirements for target detection and action are expressed as SIRs. Their priority depends on the importance of the target to the friendly COA and tracking requirements. Tracking priorities are based on the commander's concept of operations and targeting priorities. Tracking is executed through the information collection plan.

6-13. Table 6-1 lists the most important activities by intelligence capability associated with intelligence support to target detection.

Table 6-1. Intelligence support to target detection by intelligence capability

Intelligence discipline	*Collectors/Platforms*	*Example capabilities/sensors*	*Target detection*	*Reports/Products*
CI	• CI agent • CI team	• Source operations • Insider threat	Detect, identify, exploit, or neutralize threat intelligence activities.	• IIR • Spot/SALUTE report
GEOINT	• Satellite systems (national and commercial) • Airborne systems (manned and unmanned) • Terrestrial systems (ground reconnaissance, unattended ground sensors, publicly available information)	• Panchromatic • LIDAR • Electro-optical sensor • Thermal • Radar • Multispectral • Hyperspectral • wide area airborne surveillance • Full-motion video • Overhead persistent infrared	• Change detection. • Identify threat characteristic/tactical order of battle factors. • Make positive identifications. • Generate precision coordinates. • Characterize facilities.	• IIR (reconnaissance exploitation report) • Imagery interpretation report (initial phase report and supplemental phase report)
HUMINT	• HUMINT collector • HUMINT team	• Military source operations • Strategic debriefing • Interrogation • Forward collection point and detainee operations	Identify threat— • Capabilities and limitations. • Combat effectiveness. • Composition. • Disposition. • Doctrine and tactics. • Intentions. • Personalities. • Strength. • Vulnerabilities.	• IIR • Spot/SALUTE report
MASINT	• Airborne collection • Satellite • Ground collection • Terrestrial, underground/ subsurface • Maritime collection	• Radar • Electro-optical • Radio frequency • Geophysical • Nuclear • Materiel • Human signatures	Detect, locate, identify, and describe specific characteristics of targets and sources.	• IIR • Spot/SALUTE report • Event report • Data analysis report
OSINT	• OSINT analyst • OSINT team	• Public speaking forums • Public documents • Public broadcasts • Open internet and websites	• Identify networks and associations. • Identify media or internet websites. • Identify prominent actors in the area of operations. • Identify threat characteristics/ capabilities/doctrine.	• OSINT report • OSINT tippers (succinct and relevant open-source information notes used for fast and wide dissemination) • OSINT summaries

Table 6-1. Intelligence support to target detection by intelligence capability (*continued*)

Intelligence discipline	*Collectors/Platforms*	*Example capabilities/sensors*	*Target detection*	*Reports/Products*
SIGINT	• Satellite systems • Rivet joint • Guardrail Common Sensor • Airborne Reconnaissance Low • EMARSS • EP-3E • U-2 Global Hawk • Ground collection • Terrestrial layer systems • National technical means	• Communications intelligence • Electronic intelligence	• Threat emitters • Unmanned aircraft system • Unmanned aircraft system ground control • Radars	• TGRAM (tactical serialized SIGINT report) • KLIEGLIGHT report • Tactical report
TECHINT	TECHINT team	• Analysis of foreign materiel • Technical assessments • Identification of threat capabilities and vulnerabilities	• Identify threat characteristic/tactical order of battle factors. • Identify threat equipment and vulnerabilities. • Confirm equipment modifications.	• Complementary technical report • Detailed technical report • IIR • Spot/SALUTE report

ACES-HY	Airborne Cueing and Exploitation System–Hyperspectral	HUMINT	human intelligence
BDA	battle damage assessment	LIDAR	light detection and ranging
CI	counterintelligence	MASINT	measurement and signature intelligence
EMARSS	Enhanced Medium Altitude Reconnaissance and Surveillance System	OSINT	open-source intelligence
EP-3	Electronic Patrol-3E	SALUTE	size, activity, location, unit, time, and equipment
GEOINT	geospatial intelligence	SIGINT	signals intelligence
IIR	intelligence information report	TECHINT	technical intelligence

THREAT DECEPTION CONSIDERATIONS

6-14. Intelligence analysts must consider the possibility of threat deception capabilities when identifying and developing recommended targets as well as during the detect function. Many threats, especially peer threats, are adept at using visual, electromagnetic, physical, multispectral, and cyberspace deception techniques to hide their critical systems/nodes and attempt to deceive friendly forces to expend valuable munitions and other resources on false or irrelevant targets.

6-15. Peer threats conceal the time and place of attack using deception operations. The intelligence staff must be prepared to provide support to the operations staff for deception planning. The intelligence staff incorporates all available collection means to achieve as much mix and redundancy as possible. Sensor mixing increases the probability of collection and reduces the risk of successful threat deception.

TRACKING TARGETS

6-16. Once the targeting working group establishes tracking priorities, the FSE provides the intelligence cell with the degree of accuracy required and dwell time for a target to be eligible for engagement. The collection manager can then match those requirements to the difference between the coordinates generated for a target and the actual location of the target. Managing intelligence handover lines and coordinating with adjacent or higher units are critical in tracking targets beyond the unit's capabilities.

6-17. As the operation unfolds and the situation develops, the collection management team maintains synchronization with operations, assisting in refining the latest time information is of value. This may cause requirements to be updated or new requirements to be developed, forcing adjustments or retasking collection assets.

6-18. The collection management team assesses collection using developed measure of performance (MOP) and measure of effectiveness (MOE) assessment standards. This assists in determining if collection assets are used correctly and allows the commander to adjust friendly COAs effectively. MOP and MOE assessments assist in updating the collection management plan and keeping the commander, staff, and working groups informed.

DYNAMIC TARGETS

6-19. Unplanned or unanticipated targets are potentially identified as an operation progresses. Unforeseen variables in the operation can cause a change in the commander's attack guidance. This causes the intelligence cell and the rest of the targeting team to react to operational changes and deviate from AGM and TSS planned guidance.

6-20. Dynamic targets, once detected, are processed the same as planned targets. Targets of opportunity are first evaluated to determine when or if they should be engaged. During this time, the intelligence cell and others supporting the targeting effort weigh the commander's engagement guidance and other factors (such as the criticality of a target compared to other targets being processed for engagement, the activity of the target [risk to friendly forces], and dwell time). If the decision is to engage the target, the target is processed further. The collection management team assesses the availability and capability of assets to track or assess the target. If the target exceeds the unit's means to track and assess the target and conduct BDA, the target should be sent to a higher echelon.

INTELLIGENCE SUPPORT TO TARGET DELIVERY

6-21. Targeting products developed during the decide function simplify and expedite delivery decisions during execution. The targeting team's efforts during planning enable predictability and assist the staff in executing the commander's guidance.

6-22. The deliver function's main objective is to attack targets in accordance with the attack guidance provided. The tactical solution leads to a technical solution for the selected weapon. The attack guidance identifies the delivery assets to be used to engage the target and the delivery effects (lethal or nonlethal) to support shaping future operations. The collection management team cues collectors in near real time to continue tracking targets during their engagement. Sensors continue to track targets during and after the engagement to facilitate assessments.

Note. HPTs that meet the criteria outlined in TSS should be tracked until they are attacked in accordance with the AGM. Targets that do not meet TSS should be confirmed by all-source analysis before they are engaged as on-hand resources or capabilities may be limited during large-scale combat operations.

INTELLIGENCE SUPPORT TO COMBAT ASSESSMENT

6-23. The assess function of the targeting methodology is nested in the continuous assessment of the operations process. Assessment is directly tied to the commander's decisions throughout the planning, preparation, and execution of operations. Planning for assessment identifies—

- Key aspects of the operation the commander directs be closely monitored.
- Where the commander wants to make the decisions.
- Assessment ways, means, and measures.

6-24. Intelligence supports combat assessment by determining if targeting actions have met the commander's intended effects and if reattack is necessary to perform essential fires tasks and achieve the commander's intent for fires. Intelligence support to combat assessment relates to specific targets by completing physical damage assessments and functional damage assessments. Offensive and defensive operations require continuous assessments of the battlefield. Commanders must conduct assessments of the operational area and plan for reattack to prevail in ground combat, breaking the enemy's will to continue fighting. During large-scale combat operations, Army targeting, in conjunction with the effectiveness of the intelligence warfighting function, defines effectiveness on the battlefield.

6-25. *Combat assessment* is the determination of the effectiveness of friendly attack (JP 3-60). Combat assessment encompasses many tactical-level assessment actions and has implications at the operational level as well. Combat assessment, at all levels of warfare, focuses on identifying recommendations for maneuver operations and on evaluating the results of weapons and target engagement (with lethal and nonlethal capabilities), thus providing data for fires and the Army and joint targeting processes.

6-26. To conduct combat assessment, it is important to understand the linkage between the targets and the objectives, targeting guidance, and desired effects. This linkage begins with targeting tasks, effects, and objectives, which support assigned operational tasks, effects, and objectives. It is important to understand the difference between operational objectives/effects, targeting objectives/effects, and munitions effects.

6-27. Combat assessment comprises three elements: BDA, munitions effectiveness assessment (MEA), and reattack recommendation. Together, BDA and MEA provide the commander and staff with an assessment of the effects achieved against targets and whether the targeting guidance was met. Based on this information, the staff can recommend reattack, when necessary.

BATTLE DAMAGE ASSESSMENT

6-28. *Battle damage assessment* is the estimate of damage composed of physical and functional damage assessment, as well as target system assessment, resulting from the application of fires (JP 3-0). BDA compares post-execution results with the commander's intended effects on the target. Comprehensive BDA requires a coordinated and integrated effort between the intelligence staff and the operations staff, as well as other staff sections. BDA requirements are recorded on the AGM and translated into information requirements for inclusion in the information collection plan.

6-29. BDA—

- Enables commanders to obtain timely and accurate snapshots of the effectiveness of the targeting effort on the enemy based on the commander's intent and targeting guidance.
- Provides commanders with an estimate of the enemy's combat effectiveness, capabilities, and intentions. From this information, commanders determine when or whether their targeting effort accomplishes their objectives.
- Assists in determining if restrike is necessary. Commanders use BDA to allocate or redirect attack systems to use available combat power.

6-30. BDA is a three-part analytical process, encompassing—

- *Physical damage assessment*—the estimate of the quantitative extent of physical damage to a target (JP 3-60). This assessment is a post-attack target analysis, coordinated among all unit elements.
- *Functional damage assessment*—the estimate of the effect of military force to degrade or destroy the functional or operational capability of the target to perform its intended mission and on the level of success in achieving operational objectives established against the target (JP 3-60). All-source intelligence analysts fuse information and assess the remaining functional or operational capability of the target or target system. The assessment—
  - Focuses on measurable effects and estimates the threat's ability to reorganize or find alternative means to continue operations.
  - Must include an estimation of the time required for recuperation or replacement of the target's function. BDA analysts must compare the desired effect for the engagement with the status of the target to determine if the commander's intended effect on the target was achieved.
- *Target system damage assessment*—the broad assessment of the overall impact and effectiveness of military force applied against the operation of an enemy target system, significant subdivisions of the system, or total combat effectiveness relative to the operational objectives established (JP 3-60). All-source intelligence analysts assist the staff in assessing either the threat's combat effectiveness or major threat subordinate elements or the capabilities required to accomplish a threat mission. Target system damage assessments are developed by compiling the functional damage assessments of individual targets within a system and applying them to current system analysis or threat order of battle. This is a relatively permanent assessment (compared to functional damage assessment) that can be used for more than one mission.

6-31. BDA requirements for specific HPTs are determined during the decide function. Collection assets can often answer requirements for target development and target acquisition or BDA but not both. An asset used for BDA may be unavailable for target development and target acquisition requirements. The intelligence cell receives and processes attack results, which are analyzed in terms of desired effects, and disseminates attack results to the targeting team. The team considers the following BDA principles:

- BDA measures what is important to commanders—not make important what is easily measurable.
- BDA should be objective. When receiving a BDA product from another echelon, conclusions should be verified (time permitting) to identify and resolve discrepancies among BDA analysts at different headquarters.
- BDA's reliability and credibility rely mostly on collection assets. The quantity and quality of collection assets influence whether the assessment is highly reliable (concrete, quantifiable, and precise) or has a low reliability (estimation). An effective BDA uses more than one source to verify each conclusion.
- G-2/S-2s and commanders must consider enemy reinforcement and equipment resupply rates when calculating BDA to continue—
  - Creating an accurate picture of the enemy.
  - Planning against the enemy.

6-32. BDA is more than determining the number of casualties or the amount of equipment destroyed. The targeting team can use other information such as—

- Whether the targets are moving or hardening in response to the attack.
- Changes in deception efforts and techniques.
- Whether the damage achieved is affecting the threat's combat effectiveness as expected.

6-33. MI professionals must understand the analytical approach to conducting BDA. Depending on the echelon, operational context, and mission variables (METT-TC [I]), the *how* and *when* battle damage reporting is obtained can vary. Considerations for BDA do not begin after the target has been engaged; rather, they start in the decide function. This enables the synchronization of information collection and analysis and the dissemination of timely and accurate BDA. The lack of capabilities, personnel, or time should not hinder BDA. Units must create processes with available resources and leverage higher headquarters assets when possible.

MUNITIONS EFFECTIVENESS ASSESSMENT AND REATTACK RECOMMENDATION

6-34. *Munitions effectiveness assessment* is the assessment of the military force applied in terms of the weapon system and munitions effectiveness to determine and recommend any required changes to the methodology, tactics, weapon system, munitions, fusing, and/or weapon delivery parameters to increase force effectiveness (JP 2-0). The G-3/S-3, in coordination with the fires cell and the targeting working group, conducts MEA concurrently with BDA and uses MEA to recommend an increase in the effectiveness of the methodology, tactics, weapon systems, munitions, and weapon delivery parameters.

6-35. The G-2/S-2, G-3/S-3, and FSCOORD/FSO use BDA and MEA analysis results to determine if operational objectives have been achieved and make recommendations to the commander. *Reattack recommendation*—an assessment provided to the commander derived from the results of battle damage assessment and munitions effectiveness assessment (JP 3-60)—and other recommendations must address objectives relative to—

- Targets.
- Target critical elements.
- Target systems.
- Enemy combat force strengths.
- Friendly maneuver.

6-36. Future target nominations and reattack recommendations merge the picture of *what* was accomplished (BDA) with *how* it was accomplished (MEA) and compare the results with predetermined MOPs and MOEs that were developed at the start of the targeting process. This assists in determining the degree of success in achieving objectives and formulating any required follow-up actions or indicating readiness to move on to new tasks in achieving the overall objectives.

REPORTING, TRACKING, AND ASSESSING BATTLE DAMAGE ASSESSMENT

6-37. Producing BDA data is an intelligence responsibility requiring coordination with operational elements. Commanders use BDA to obtain timely and accurate snapshots of effects on the enemy. Assessing the different BDA components allows the targeting team to fuse the data into tools, charts, or other products to assist the staff in determining if targeting efforts accomplished objectives.

6-38. The targeting team at each echelon must turn BDA reports into detailed combat assessments for the commander and staff. The targeting team uses BDA to assist the commander in visualizing the threat to make informed decisions. BDA is normally discussed during targeting working group meetings. Based on personnel, time, and battle rhythm, units develop a method to refine BDA with subordinate units and higher headquarters in unit SOPs. The intelligence cell's understanding of the unit's BDA methodology reduces the time it takes to develop BDA data and answer BDA requirements.

Note. Units and Service members supporting joint operations reference CJCSI 3162.02A for joint methodologies concerning combat assessment, BDA, MEA, and reattack recommendation.

6-39. Intelligence analysts must know threat capabilities and the combat power affecting threat COA possibilities. This supports the development of combat assessment and BDA products. BDA trackers, as shown in figure 6-2, provide a snapshot of a threat unit's destroyed equipment to determine the threat's combat power and current capabilities. Units may create their own format or template for a BDA tracker. Figure 6-2 shows HPT categories with a designated color code as well as the threat's assessed order of battle and capabilities. As BDA is confirmed, intelligence analysts update the tracker with destroyed HPTs.

Engineer			100.00%
System	Total	DES	
BAT-2M	52	0	0%
PTS-4	36	0	0%
PMM-2M	42	0	0%
PMP-M	64	0	0%
MTU-90	20	0	0%

Air Defense Artillery			70.56%
System	Total	DES	
SA-13	6	1	17%
SA-15	12	3	25%
SA-19	6	1	17%
2S6M	36	14	39%
9K51M	36	18	50%

Artillery			75.56%
System	Total	DES	
Howitzer	18	4	22%
2A45M	6	2	33%
MT-12	12	5	42%
2A65	1	0	0%
9P149	12	3	25%

RSTA			80.56%
System	Total	DES	
MXM-4	4	0	0%
Bird Eye-400	1	0	0%
Searcher MKII	1	0	0%
RKhM-4-01	3	2	67%
RXM-4	4	0	0%
ZOOPARK	4	2	50%

Maneuver			87.47%
System	Total	DES	
T-90	41	11	27%
BMP-1	1	0	0%
BMP-2M	2	0	0%
BMP-3	120	23	19%
BMD-4	98	8	8%
BTR-80	35	3	9%
GAX-2975	12	3	25%

Command and Control			65.11%
System	Total	DES	
BMP-1KSH	26	7	27%
1V111/1V110	7	3	43%

DES destroyed OH on hand RSTA reconnaissance, surveillance, and target acquisition

Figure 6-2. Battle damage assessment tracker (example)

6-40. The staff continuously assesses (monitors and evaluates) the OE to identify variances that may affect the conduct of operations. BDA may reflect a change in the number of available threat forces and assets indicated in IPOE products. During the targeting board, the G-2/S-2 updates the staff on the BDA and provides a threat assessment. This requires the staff to reassess/reexamine IPOE step 3 and 4 products and develop new or potential threat COAs based on the BDA. (See figure 6-3.)

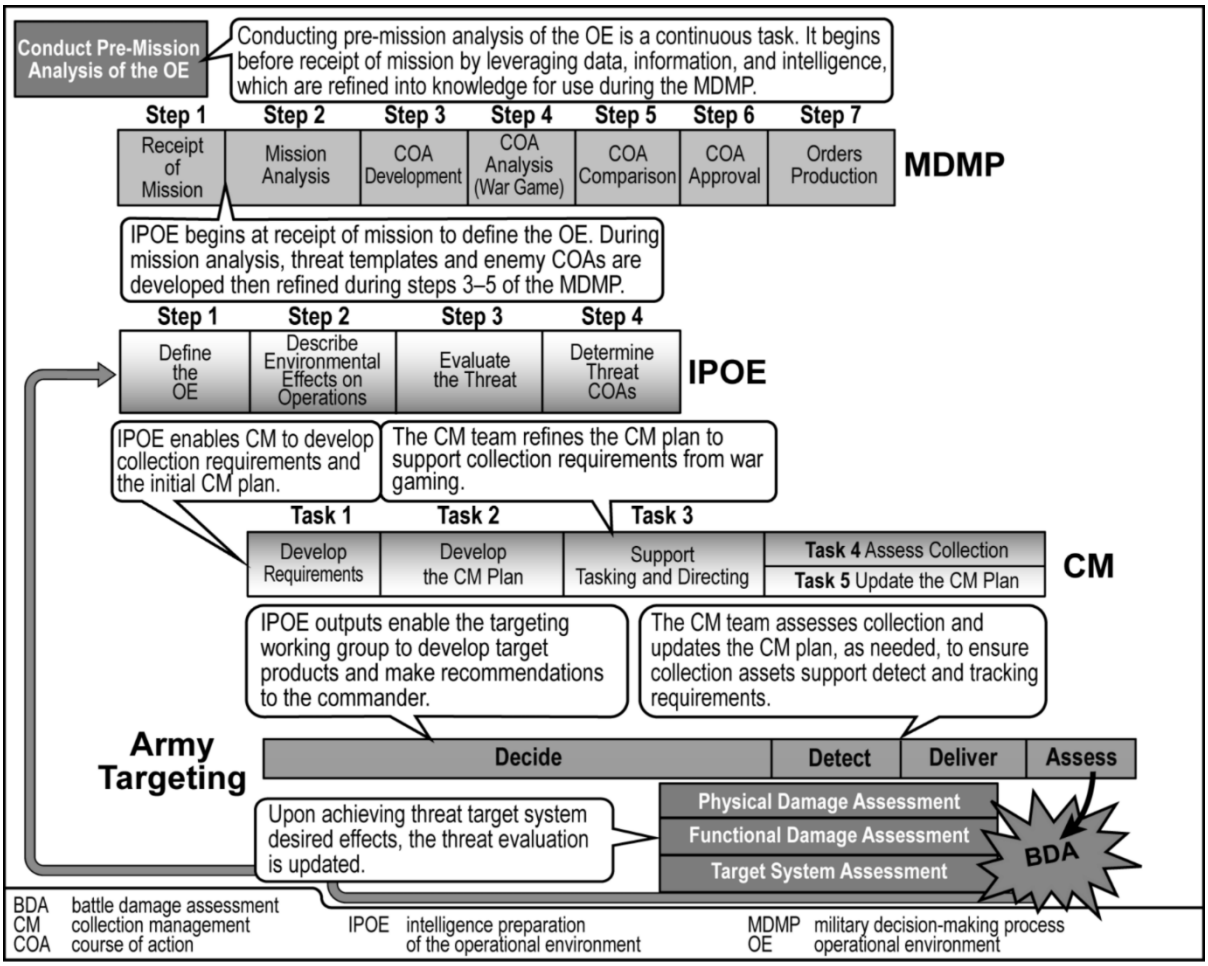


Figure 6-3. Using BDA to continuously monitor and evaluate the threat

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Appendix A

Intelligence Support to Targeting by Capability

INTELLIGENCE CAPABILITIES

A-1. The intelligence warfighting function executes the intelligence process by employing intelligence capabilities comprising personnel, systems, and supporting technology—all of which are maintained, trained, and employed to conduct intelligence operations to facilitate situational understanding and provide intelligence support to targeting. The intelligence warfighting function—through all-source and single-source intelligence capabilities—contributes to the joint intelligence effort.

ALL-SOURCE INTELLIGENCE

A-2. *All-source intelligence* is the integration of intelligence and information from all relevant sources in order to analyze situations or conditions that impact operations (ADP 2-0). Army forces conduct operations based on all-source intelligence assessments and products, which form the backbone of intelligence support to targeting. All-source analysts produce most of the intelligence reports and analytical products provided by the intelligence staff during target development. All-source analysts are also instrumental in developing combat assessment data and products. (See ADP 2-0 and FM 2-0 for doctrine on all-source intelligence.)

SINGLE-SOURCE INTELLIGENCE

A-3. Single-source intelligence capabilities are employed through intelligence operations and the other information collection tactical tasks and missions (reconnaissance, surveillance, and security operations). (See ATP 2-01.) MI units can conduct intelligence operations with a single intelligence discipline or complementary capability or as a multifunction intelligence operation, which combines activities from two or more intelligence disciplines or complementary capabilities.

INTELLIGENCE DISCIPLINES

A-4. Each *intelligence discipline*—a well-defined area of intelligence planning, collection, processing, exploitation, analysis, and reporting using a specific category of technical or human resources (JP 2-0)—is integrated to ensure a multidiscipline approach to intelligence analysis. Table A-1 lists the intelligence disciplines, their definitions, and associated Army military occupational specialties/additional skill identifiers.

Table A-1. Intelligence disciplines and associated Army military occupational specialties

Intelligence discipline	*Associated Army MOS/ASI*
Counterintelligence is information gathered and activities conducted to identify, deceive, exploit, disrupt, or protect against espionage, other intelligence activities, sabotage, or assassinations conducted for or on behalf of foreign powers, organizations or persons or their agents, or international terrorist organizations or activities (JP 2-0).	35A SI2E/351L/35L
Geospatial intelligence is the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on or about the Earth. Geospatial intelligence consists of imagery, imagery intelligence, and geospatial information (JP 2-0).	35A SI1D/350G/35G
Human intelligence is the collection by a trained human intelligence collector of foreign information from people and multimedia to identify elements, intentions, composition, strength, dispositions, tactics, equipment, and capabilities (ADP 2-0).	35A SI2F/351M/35M
Measurement and signature intelligence is information produced by quantitative and qualitative analysis of physical attributes of targets and events to detect, characterize, locate, and identify targets and events; and derived from specialized, technically derived measurements and signatures of physical phenomenon intrinsic to an object or event (JP 2-0).	352S, 350G/35S, 35G
Open-source intelligence is intelligence that is produced from publicly available information and is collected, exploited, and disseminated in a timely manner to an appropriate audience for the purpose of addressing a specific intelligence requirement (Public Law 109-163).	35A SIY6/350F/35F, 35M, 35G

Table A-1. Intelligence disciplines and associated Army military occupational specialties (*continued*)

Intelligence discipline	*Associated Army MOS/ASI*
Signals intelligence is intelligence derived from communications, electronic, and foreign instrumentation signals (JP 2-0).	35A SI2G/352N, 352S, 352T/35N, 35N, 35S
Technical intelligence is intelligence derived from the collection, processing, analysis, and exploitation of data and information pertaining to foreign equipment and materiel for the purposes of preventing technological surprise, assessing foreign scientific and technical capabilities, and developing countermeasures designed to neutralize an enemy's technological advantages (JP 2-0).	Currently none
ASI additional skill identifier MOS military occupational specialty	

Counterintelligence

A-5. Counterintelligence (CI) collection activities support the targeting process with information from CI sources at echelon. CI collection supports the targeting process through foreign intelligence entity collection analysis (also known as FIECA) to determine interrelationships, trends, and contextual meaning about foreign intelligence entity threats. This information is then divided into target lists for friendly, neutral, or hostile persons; organizations; installations; or facilities based on the assessed threat to U.S. forces or their cooperation with U.S. forces. (See ATP 2-22.2-1 for doctrine on CI.)

Geospatial Intelligence

A-6. GEOINT plays an essential role in specific aspects of D3A:

- **Decide.** The GEOINT cell supports targeting through the development of IPOE products and by refining relevant products.
- **Detect.** The GEOINT cell answers PIRs developed while gathering GEOINT capabilities essential to the area of interest. The GEOINT cell gathers ETFs and target materials to better understand the unique characteristics of each target and provides precise target mensuration to reduce TLE.
- **Assess.** The GEOINT cell analyzes GEOINT capabilities and is involved in developing physical damage and functional damage assessments and BDA reports, which assist in—
  - Assessing collateral damage and weapon system effectiveness.
  - Determining physical and functional damage.
  - Informing the commander's decision making about potential target reengagement.

A-7. The GEOINT cell also provides high-resolution GEOINT products that include extracted GEOINT target data with positional accuracy. These products and services support the G-2/S-2 in updating targeting products. (See ATP 2-22.7 for doctrine on GEOINT.)

Human Intelligence

A-8. Human intelligence (HUMINT) collectors or HUMINT collection teams must have the mission and authorities for any collection operation. HUMINT collection teams may obtain information from screenings, intelligence interrogations, debriefings, liaison, and source operations. (ATP 2-22.1-1 and FM 2-22.3 provide doctrine on HUMINT.)

A-9. The types of input HUMINT collection teams provide to support targeting includes but are not limited to—

- Target photographs (individuals or buildings).
- Target locations (strip maps, sketches, map reconnaissance, grid searches).
- Target status. (When will the target be in the AO? When will the target be at the target site?)
- Target communications (target communications means, call signs, frequencies).
- Target intentions.
- Assessments.

Measurement and Signature Intelligence

A-10. Measurement and signature intelligence (MASINT) measures a characteristic, plots it against an appropriate standard, and stores the information in a database against which other measurements can be compared. MASINT data source information can be obtained from multiple capabilities, including but not limited to radar, radio frequency, electro-optical, geophysical, nuclear, materiel, and human signatures.

A-11. Data collected from radar cross sections, radiance intensities, or temperatures can be used to identify and characterize military targets and activity. Measurements of target characteristics can describe target speed, direction, motion, and location. Signatures are derived from measurements consistently collected over broad spectral or frequency ranges over time or during multiple observations of similar targets or events under varying circumstances over time. To the tactical commander, MASINT provides situational awareness, warning intelligence, combat assessment, and target information. Using MASINT systems enables target detection, identification, and tracking from extended distances based on target features that are difficult to conceal. (See ATP 2-22.8 for doctrine on MASINT.)

Open-Source Intelligence

A-12. Open-source intelligence (OSINT) personnel use basic research techniques to acquire PAI to support targeting. These techniques confirm the presence of planned targets and provide a baseline of activity and information about sources within the AO for further development and future validation. OSINT products provided to other intelligence and operational elements facilitate all-source intelligence, targeting, and tipping and cueing other disciplines to TSTs. (See ATP 2-22.9-1 for doctrine on OSINT.)

A-13. To support targeting, OSINT—

- Provides alerts on current events to inform dynamic targeting.
- Produces current intelligence on HVTs and HPTs.
- Contributes to target development by providing information to support products such as watch lists, target lists, target folders, target briefs, and collection and exploitation requirements.
- Supports TSA by identifying components, elements, and characteristics of specific lethal and nonlethal targets.
- Provides open-source information on threat capabilities and limitations.
- Provides information to support BDA.

Signals Intelligence

A-14. As a component of the intelligence warfighting function, SIGINT provides timely, relevant, accurate, and predictive assessments and products, leveraging and focusing national to tactical capabilities or assets against local requirements. SIGINT gives commanders insight into the structure, capability, intent, and disposition of enemy forces by intercepting and analyzing enemy electromagnetic emissions. (For doctrine on SIGINT, see ATP 2-22.6.)

A-15. SIGINT provides intelligence (through the G-2/S-2 ACE) and direct combat information from organic and tasked assets and provides the fires cell with target identification and location in direct support of lethal fires and electromagnetic attack, as well as input supporting intelligence gain/loss assessments. SIGINT also provides continuous insight into the intent and location of the threat and the atmospherics necessary to understand the overall use of the EMS.

Technical Intelligence

A-16. TECHINT supports IPOE, targeting, risk management, analysis, and BDA. The TECHINT team conducts technical analysis of foreign materiel based on the commander's requirements, and the team reports information gained from the technical analysis to supported intelligence cells. The team also provides recommendations about the development and use of friendly tactics and procedures to counter threat technology. (See ATP 2-22.4 for doctrine on TECHINT.)

COMPLEMENTARY CAPABILITIES

A-17. The Army recognizes various specialized capabilities that can contribute to all-source or single-source intelligence through intelligence coordination with other warfighting functions and branches to support identity intelligence production. These specialized and technical capabilities, many of which are not typically conducted by MI units, provide insight into threat activities and intentions as well as fill intelligence gaps from the human dimension. The *human dimension* encompasses people and the interaction between individuals and groups, how they understand information and events, make decisions, generate will, and act within an operational environment (FM 3-0).

A-18. Complementary capabilities may provide critical information that supports security, consolidating gains, and rear area operations. These capabilities, discussed extensively in FM 2-0, include but are not limited to—

- Biometrics.
- Cyberspace.
- Document and media exploitation.
- EW capabilities.
- Forensics.
- Identity activities.
- Space.

Appendix B

Joint Targeting

JOINT TARGETING PROCESS

B-1. The joint targeting process supports the commander's campaign plan, objectives, and scheme of maneuver for the employment of military force to achieve a desired military end state. The process integrates the capabilities of national assets, geographic CCMDs, subordinate joint forces, and multinational forces, all of which possess varying capabilities and requirements. Joint targeting provides geographic CCMDs with a list of targets supporting campaign objectives and subordinate component commander's supporting objectives. The JFC sets priorities and provides clear targeting guidance.

B-2. Components must understand the joint targeting process to—

- Identify the right target for the right reason.
- Be engaged with the right asset at the right time and place.
- Produce the desired effects necessary to accomplish the JFC's objectives while mitigating risk and collateral concerns. (See JP 3-60.)

B-3. The joint targeting process includes sequential phases that are continuously operating, closely related, interacting, and with interdependent functions. These six interrelated phases make up the joint targeting cycle, which provides an essential framework to conduct joint targeting:

- **Phase 1: Commander's objectives, targeting guidance, and intent.** Summarizes—
  - Targets to be engaged and under what conditions.
  - Desired effects.
  - Risks the commander is accepting.
  - The delegation of any authority with the execution of targets, such as TSTs.
- **Phase 2: Target development and prioritization.** Identifies and characterizes potential targets that, when successfully engaged, support achieving the commander's objectives. These targets can be fully developed and validated or be candidates that are determined to support the commander's objectives. Regardless, each target must be in accordance with the commander's guidance, the law of armed conflict, and the applicable rules of engagement.
- **Phase 3: Capabilities analysis.** Estimates the most likely outcome resulting from the use of lethal and/or nonlethal capabilities against specific targets to create desired effects while minimizing collateral effects.
- **Phase 4: Commander's decision and force assignment.** Fuses target nominations with available forces, sensors, and weapon systems into operationally sound target packages. It includes approval of the joint integrated prioritized target list; force apportionment and/or allocation to support lethal, nonlethal, and collection plans; and risk management. The joint targeting coordination board translates the commander's planning guidance and approved targeting tasks into tasks to subordinate units, including what is to be achieved, where, when, and why.
- **Phase 5: Mission planning and force execution.** Upon receipt of the tasking orders, subordinate commands conduct planning for the execution of deliberate and dynamic operations. During execution, planners and commanders conduct continual analysis to determine if planned targets still contribute to the commander's objectives, if targets are accurately located, and how planned actions impact other friendly operations.
- **Phase 6: Combat assessment.** Measures the progress of the targeting tasks executed and the desired effects achieved, including their contribution to the specified objective, intent, and the evaluation of future actions.

B-4. Targeting leverages the commander's guidance and intent and the operational objectives from joint planning to identify the intelligence requirements for joint IPOE (also called JIPOE) and other products of the intelligence process (including IPOE). Capabilities are selected during the targeting process to create effects and achieve objectives developed during planning. Targeting encompasses many processes—all linked and logically guided by the joint targeting cycle—that continuously analyze, identify, develop, validate, assess, and prioritize targets for engagement by the joint force.

B-5. Each Service branch has established doctrine for targeting that is nested with the joint force targeting process. Joint targeting requires coordination among the Services to achieve the JFC's intent and objectives. All targeting processes decide in advance what is to be targeted and how to locate, attack, and asses the target to determine if the effects contributed to the overall strategy.

JOINT TARGETING METHODOLOGIES

B-6. The integration and synchronization of Army targeting with the JFC's joint targeting methodologies are critical in securing joint and multinational capabilities for Army commanders at all echelons. The JFC normally establishes a joint fires element with specific responsibilities to oversee the execution of the joint targeting process through a joint targeting coordination board and joint targeting working group.

FIND, FIX, FINISH, EXPLOIT, ANALYZE, AND DISSEMINATE PROCESS

B-7. The find, fix, finish, exploit, analyze, and disseminate (F3EAD) process is an aggressive targeting model that features massed, persistent joint intelligence, surveillance, and reconnaissance cued to a decentralized all-source intelligence enterprise. Within the joint force, identity intelligence principally supports F3EAD; the goal is to *find* HVIs—for example, looking for an individual amid a mass civilian gathering and attempting to *fix* their exact location. This process can be used to conduct targeting by leveraging and synchronizing forces, assets, and enablers to create a desired effect.

B-8. Considering the F3EAD targeting model from an information advantage perspective is essential. This model not only emphasizes the speed of removing a combatant from the battlefield, but it also creates a window of opportunity to gain more information on the threat. The *exploit* and *analyze* steps are often the main effort of the F3EAD model because they provide insight into the enemy's network and may offer new lines of operations. (See JP 3-26 for doctrine on the F3EAD process.)

FIND, FIX, TRACK, TARGET, ENGAGE, AND ASSESS PROCESS

B-9. Targets that are treated as TSTs and can be engaged use the dynamic targeting process. Dynamic targeting occurs when targets are prosecuted outside of the 24-hour integrated target order/air tasking order cycle using a condensed process known as find, fix, track, target, engage, and assess (F2T2EA). The F2T2EA or dynamic targeting process is integrated during phase 5 of the joint targeting cycle.

B-10. The F2T2EA process applies to all targets and is most commonly used on targets discovered during current operations to support dynamic targeting that focuses on the near and current battle with time horizons of hours. (See ATP 3-60.1 and JP 3-60 for doctrine on F2T2EA/dynamic targeting process.)

JOINT AND UNIFIED ACTION PARTNER CONSIDERATIONS

B-11. Commanders participating in a multinational operation develop policies and procedures for that operation. In most multinational operations, commanders must share intelligence with foreign forces as well as coordinate receiving intelligence from those forces. This requires a multilevel security system that can easily facilitate the sanitization and dissemination of information to U.S. and multinational commanders within security guidelines. (See FM 2-0, FM 3-16, and JP 3-16 for doctrine on multinational operations.)

B-12. A technique for sharing critical intelligence with multinational partners is having U.S. intelligence information written for release at the lowest possible classification level (with the fewest dissemination restrictions) within foreign disclosure guidelines. The write for release process enables increased information sharing with mission partners without sacrificing information security, avoiding over classification and improper portion marking through deliberate analysis of what information must be shared. The write for release process also describes how to share information in accordance with all published security classification guides and other constraints and limitations. (See ATP 3-16.02 for doctrine on write for release.)

UNIQUE INTELLIGENCE SUPPORT TO TARGETING CONSIDERATIONS

B-13. Joint IPOE analysts must use information from a variety of intelligence and nonintelligence sources and methods and the appropriate analytical strategies to develop the knowledge required for sociocultural analysis. Determining the sociocultural landscape of an operational area results from a fused intelligence effort and typically relies on information from open sources such as other U.S. Government departments and agencies, nongovernmental organizations, intergovernmental organizations, academic institutions, and host-nation authorities.

SINGLE-SOURCE INTELLIGENCE CONSIDERATIONS

B-14. Together, GEOINT, HUMINT, and other sources enable the creation of products used during irregular warfare. For example, U.S. and multinational forces operating in an urban environment must correctly orient their forces against specific street addresses based on local tip-off information. Operations directed against the wrong building or dwelling may have unintended and/or undesired consequences. However, many street addresses in foreign urban areas do not use conventional numbering or structured identification systems. In these situations, HUMINT and information derived from open sources and local postal officials may be combined with GEOINT to produce accurate street address maps.

COMPLEMENTARY CAPABILITIES CONSIDERATIONS

B-15. Employing biometrics and forensics can assist U.S., host-nation, and multinational forces in authenticating and confirming the identity of individuals. For example, during irregular warfare, insurgents, terrorists, and criminals seek to blend into the local populace and may carry false documentation. Biometrics can establish the true identity of these individuals, and forensics can link them to networks and past events. Mapping relevant sociocultural and environmental factors using information and intelligence from multiple sources (intelligence disciplines, weapons TECHINT [also called WTI], forensic-enabled intelligence, police units, military patrols, civil affairs units, provincial reconstruction teams) can produce network analysis diagrams and corresponding GEOINT products.

INTELLIGENCE SUPPORT TO TARGETING IN URBAN AREAS

B-16. *Urban operations* are operations across the range of military operations planned and conducted on, or against objectives on a topographical complex and its adjacent natural terrain, where man-made construction or the density of population are the dominant features (ATP 3-06). The density of both people and buildings in urban areas create familiar operational difficulties for a deployed force and directly and negatively influences intelligence collection to support operations, including targeting. Structures and public works infrastructure inhibit maneuver and firepower, open and close fields of fire, and severely degrade C2 capabilities.

B-17. Intelligence support to targeting is more demanding in urban areas due to the requirement to protect civilians. Although fires may destroy the threat, it may be counterproductive due to the collateral damage of civilian casualties. Among the people, terrain, buildings, and infrastructure in urban areas, people are the most challenging to analyze. As the only thinking component of an operational area, people have the capacity to significantly modify operations. There are several reasons why urban populations threaten operations and their attendant intelligence support functions. The overall population comprises several groups, each with its own interests. Relationships between groups might be congenial, hostile, or dependent. Understanding this diversity and complexity requires a lot of mental effort and flexibility.

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Appendix C

Target-Related Working Groups and Boards

OVERVIEW

C-1. Target-related working groups consist of predetermined staff representatives that play a role in targeting. They meet to provide analysis, coordinate and synchronize the targeting process, and provide recommendations to the targeting board. The G-2/S-2 plays a key role in all target-related working groups and boards.

C-2. Depending on the echelon and unit SOPs, there may be one or several different types of target-related working groups or boards. The lower the echelon, the fewer the number of target-related meetings, groups, and boards due to time and staff limitations.

Note. During high-tempo operations involving offense and defense (such as large-scale combat operations), planning and timelines for making decisions are often shortened. For operations dominated by stability (such as counterinsurgency), the planning and times for making decisions are often longer. Meetings can be less frequent and spread out over a weekly or monthly calendar. In addition, the staff may develop nonstandard working groups or boards not found in their unit SOPs.

TARGET DEVELOPMENT WORKING GROUP

C-3. The target development working group reviews the commander's objectives, guidance, and intent to ensure target development efforts focus on the appropriate target systems/targets and/or networks to achieve the desired end state. The working group identifies gaps in the target development effort and assigns responsibility to the appropriate organizations/elements to fill them. They also review/update event templates, running estimates, target nominations, HVT lists, PIRs, intelligence support matrices, and collection requirements. The target development working group, typically led by the G-2/S-2, includes but is not limited to the following participants:

- FSCOORD/FSO.
- Senior all-source analyst.
- Collection manager.
- Targeting officer.
- ACE chief.
- Single-source intelligence officer in charge.
- Civil affairs officer.
- FAIO.
- Information operations officer.
- Psychological operations officer.
- Space operations officer.
- Judge advocate general representative.
- CEMA/EW officer.
- CBRN officer.
- Additional special staffs.

C-4. Intelligence input typically includes the following:

- Current/Proposed HVT lists.
- Current PIRs.
- Event templates.
- Intelligence running estimates/Current situational assessments.
- New target nominations.

C-5. Target development working group outputs include the following:

- Focused target development.
- Updated event templates.
- Updated intelligence running estimates.
- Updated collection requirements/priorities.

TARGETING WORKING GROUP

C-6. The targeting working group focuses on targeting within the assigned area, assessing threat capabilities, and targeting strategies to achieve the commander’s objectives. The working group synchronizes lethal and nonlethal fires to support unit objectives and develops and discusses targeting products and guidance. The targeting working group, typically led by FSCOORD/FSO, includes but is not limited to the following participants:

- G-2/S-2.
- Collection manager.
- Psychological operations officer.
- Space operations officer.

- Targeting officer.
- Public affairs officer.
- Civil affairs officer.
- FAIO.
- Information operations officer.
- Judge advocate general representative.
- CEMA/EW officer.
- CBRN officer.
- Additional special staffs.

C-7. Intelligence input typically includes the following:

- Current intelligence estimates.
- BDA for the current targeting process.
- Disposition of important enemy units and associated systems that could impact the unit mission.
- Most likely enemy COAs in the next two to three targeting cycles.
- Proposed HVT lists (and supporting analytical products).
- Current and proposed PIRs.
- Updated event templates.
- Current information collection plan (including collection for BDA input).

C-8. Targeting working group outputs include the following:

- Synchronization of targeting with operations.
- Recommended changes/updates to the HPTL.
- Updated no-strike list, restricted target list, and other relevant target-related lists.
- Target prioritization.
- Draft targeting guidance.
- Updated assessments.
- Recommended collection assets to detect and engage targets.
- Recommended changes to the information collection plan and prioritization.
- Identification of the level of combat assessment required for each target.
- Recommended collection assets for combat assessment.
- Requests for information.
- Effects integration.
- Layered effects.

EFFECTS WORKING GROUP

C-9. The effects working group synchronizes lethal and nonlethal fires to support unit objectives in prioritizing; validating; and, when appropriate; approving resource requests. The working group develops and discusses targeting guidance and products and reviews sensitive target approval requests. The group also develops MOPs and MOEs used for BDA. The effects working group, typically led by the G-3/S-3, includes but is not limited to the following participants:

- G-2/S-2.
- G-4/S-4.
- Collection manager.
- Targeting officer.
- Public affairs officer.
- Civil affairs officer.
- FAIO.
- Information operations officer.
- FSCOORD/FSO.
- Psychological operations officer.
- Space operations officer.
- Judge advocate general representative.
- CEMA/EW officer.
- Additional special staffs.

C-10. Intelligence input typically includes the following:

- Current intelligence estimates.
- Current PIRs.
- Updated event templates.
- Current information collection plan (including collection for BDA input).

C-11. The effects working group outputs include the following:

- Layered effects matrices/plans.
- Synchronized effects matrices/plans.
- Resource requests.
- Authority delegation requests.
- Coordination requests.

TARGETING BOARD

C-12. The targeting board reviews current and future target assessments, progressing to the commander's objectives. The targeting board, typically chaired by the commander/designated representative, includes but is not limited to the following participants:

- G-2/S-2.
- G-3/S-3.
- G-4/S-4.
- Collection manager.
- Targeting officer.
- Public affairs officer.
- Civil affairs officer.
- FAIO.
- Information operations officer.
- FSCOORD/FSO.
- Psychological operations officer.
- Space operations officer.
- Judge advocate general representative.
- CEMA/EW officer.
- Additional special staffs.

C-13. Intelligence input typically includes the following:

- Current intelligence estimates.
- Current PIRs.
- Updated event templates.
- Current information collection plan (including collection for BDA input).

C-14. The targeting board outputs include the following:

- Updated relevant target-related lists.
- Approval of the HPTL, targeting priorities, effects, and targets for inclusion on the no-strike list and restricted target list.
- Approval of the allocation and priority of resources (collection and delivery) to support targeting.
- Approval of targets for nomination to higher support and targets for dynamic engagement.
- Priority of effort and updated targeting guidance for the next targeting cycle.

ASSESSMENT WORKING GROUP

C-15. The assessment working group assesses the unit's lines of effort/objectives/subobjectives, targeting efforts, and desired battlefield effects; validates the current targeting guidance/approach and associate objectives; identifies gaps, including associated risks and opportunities; and assesses future operations, enabling the commander to plan accordingly. The assessment working group, typically chaired by the chief of staff/executive officer, includes but is not limited to the following participants:

- G-2/S-2.
- G-3/S-3.
- G-4/S-4.
- Collection manager.
- Targeting officer.
- Public affairs officer.
- Civil affairs officer.
- FAIO.
- Information operations officer.
- FSCOORD/FSO.
- Psychological operations officer.
- Space operations officer.
- Judge advocate general representative.
- CEMA/EW officer.
- Additional special staffs.

C-16. Intelligence input typically includes the following:

- Physical damage/change assessments.
- Functional damage/change assessments.
- Target system damage assessments.
- Current intelligence estimates.
- Current PIRs.
- Updated event templates.
- Current information collection plan.

C-17. The assessment working group outputs include the following:

- Revised assessments.
- Initiating a fragmentary order or branch/sequel plans.
- Changes to targeting priorities that affect objectives.
- Identifying emerging risks.
- Identifying opportunities and decisions for the next targeting cycle/phase of the operation.

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Appendix D

Intelligence Support to Targeting Vignette

OVERVIEW

D-1. Intelligence support to targeting consists of four main actions: support target development (decide), support target detection (detect), track targets through engagement (deliver), and support combat assessment (assess). The intelligence cell (supported by the entire staff) provides the FSCOORD/FSO, public affairs officer, cyberspace EW officer, space support element, and other staff officers with information and intelligence about targeting threat forces and systems with direct and/or indirect fires to create effects (through lethal and nonlethal means). The information and intelligence include identifying threat capabilities and limitations.

VIGNETTE

D-2. This fictional division-level vignette highlights intelligence support to the targeting process, including applicable intelligence-related products. The vignette begins with the situation, mission, and commander's intent.

53d Infantry Division (ID) Vignette: Intelligence Support to Targeting

Situation: A threat force occupying a neighboring U.S. allied country has also invaded two other countries, triggering NATO to invoke Article 5. In response, Combined Joint Task Forces South, West, and East and the Rapid Reaction Corps established defensive positions to prevent incursion further west into the allied country.

Mission: The 53d ID will execute a successful relief in place operation with an allied mechanized division and then establish a deliberate defense on PL Bronze.

Commander's intent: To arrange military units in defensive positions:
- **Phase I:** Block further enemy force expansion into western countries.
- **Phase II:** Build enough combat power to support possible offensive military campaigns and remove enemy forces from allied countries.
- **Phase III:** Garrison enough forces in the region to maintain peace and security.

Note. The products produced to support this vignette are only examples. Units may use their own formats to add additional information to support commander or mission requirements.

INTELLIGENCE SUPPORT TO TARGET DEVELOPMENT

D-3. The 53d ID produces multiple HVT lists and enemy COAs using the threat model, threat situation template, and event template. The intelligence staff assesses that the threat force will attempt to stop the 53d ID from seizing defensive battle positions. If the threat force does not conduct a spoiling attack to disrupt the 53d ID from conducting a relief in place with friendly forces, the intelligence staff assesses that the threat force will conduct an integrated attack to penetrate the 53d ID's defense and destroy its C2 and logistic nodes.

D-4. Based on the most likely and dangerous enemy COAs, the threat force will attempt to fix or destroy the 53d ID's rear echelons and adjacent units using a combination of mechanized infantry, special purpose forces, close air support, and long-range fires. Once friendly forces are fixed, the threat force will send exploitation forces to penetrate defensive positions, forcing the 53d ID to retrograde and allowing the threat force to continue moving westward. (See figure D-1 on page 70.)

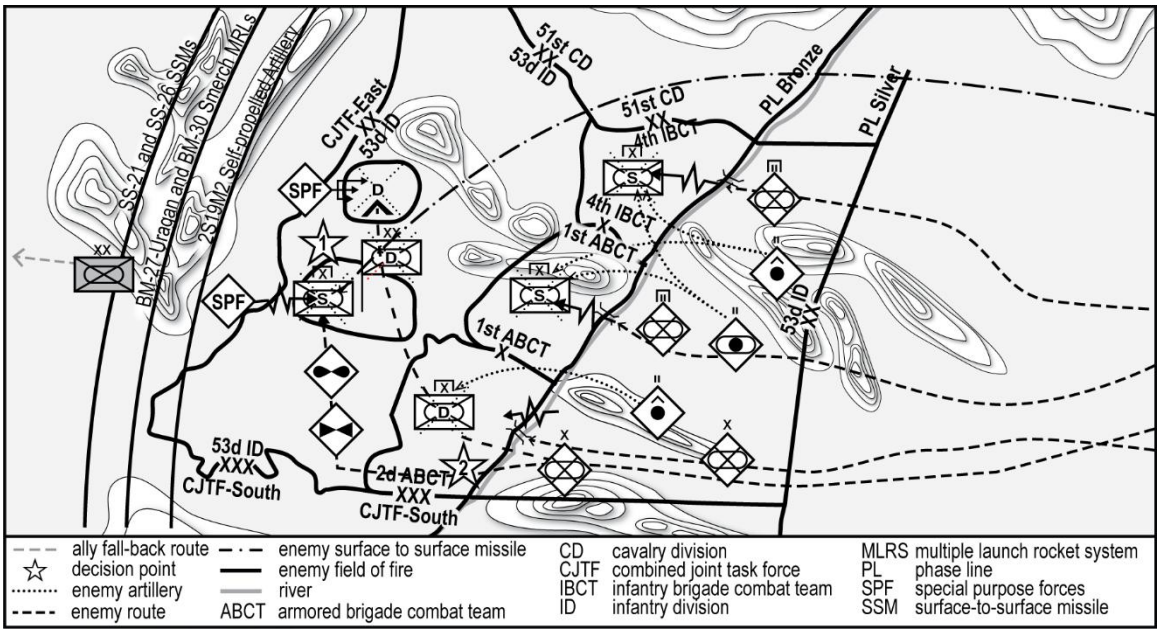


Figure D-1. Enemy most likely course of action (example)

High-Value Target List

D-5. The refined HVT list identifies specific HVTs for the most likely enemy COA and includes threat equipment and forces who can potentially assist the threat's integrated attack. Targeting these HVTs will prevent the threat from accomplishing their mission and allow the 53d ID to secure defensive positions. (See table D-1.)

Table D-1. High-value target list (example)

Threat element	*High-value targets*	
Command and control	• Surface-to-air missile (SAM) system fire control • Osa (SA-8 Gecko) • Command vehicle	• Short-range SAM system • Artillery control vehicle • Mobile counterbattery radar
Movement and maneuver	• Infantry fighting vehicle • Armored personnel carrier • Special purpose forces personnel truck • Battle tank	• Sukhoi • Kamov • Bridging equipment
Protection	• Nuclear, biological, and chemical reconnaissance vehicle	
Fires	• Man-portable surface-to-surface missile system • TOR-M1 • Air defense vehicle (Tunguska) • Antitank gun	• 122-millimeter (mm) multiple launch rocket system • 220-mm multiple launch rocket system • 152-mm self-propelled howitzer
Intelligence	• Battlefield surveillance radar	• Unmanned aircraft system
Sustainment	• Maintenance vehicle	• Fuel truck

High-Payoff Target List

D-6. During planning, the 53d ID targeting working group develops an HPTL for each phase of the mission or critical event to support the 53d ID mission. This provides adequate time for the collection management team to develop collection management tools to support collection, and the FSE to develop the TSS matrix, AGM, and TSM to support fires operations.

D-7. The 53d ID receives a mission to provide lethal and nonlethal fires across its assigned AO to neutralize enemy reconnaissance, disrupt enemy offensive operations, and suppress enemy air defense and indirect fires capabilities. The commander directs the unit to establish battle positions along PL Bronze in defense of any further adversarial expansion westward.

D-8. Phase III of the mission has BCTs in the defense along PL Bronze while air-reconnaissance elements continue to screen along PL Bronze. Table D-2 is the HPTL developed to determine attack guidance and refine collection management tools.

Table D-2. High-payoff target list (example)

Phase III deliberate defense		
Priority	***Category***	***High-payoff targets***
1	Fires	SA-15, SA-19, multiple launch rocket system, T-12
2	Reconnaissance and surveillance	Unmanned aircraft system, scouts, surveillance radar
3	Command and control	BMP-ikShM, 1V111, BTR-80
4	Movement and maneuver	BMP-3, BTR-60, T-90, SU-24

TARGETING PRODUCTS

D-9. The 53d ID targeting working group develops targeting products (TSS matrix, AGM, and TSM) together to deliver commander-approved targeting guidance decisions and priorities. The working group follows the same guidance used for developing the HPTL.

Target Selection Standards Matrix

D-10. To determine if the enemy activity is a target, the 53d ID uses the TSS matrix to assess the threat's activity and weapon systems. (See table D-3.) The TSS matrix supports the 53d ID's phase III HPTL and target acquisitions.

Table D-3. Target selection standards matrix (example)

High-payoff targets	***Timeliness***	***Accuracy***	***Size***
T-90, BMP-3, BTR-90	15 minutes	150 meters	Area
SA-15, SA-19	15 minutes	200 meters	Battery
Scout, surveillance radar, 1V111	30 minutes	100 meters	Section
Multiple launch rocket system, T-12, BMP-1kShM, BRT-80	30 minutes	100 meters	Battalion

Attack Guidance Matrix

D-11. The AGM establishes the when and how a target should be engaged to create the desired effects. The 53d ID ensures those targets identified on the HPTL for phase III of the mission are on the TSS matrix and AGM. The 53d ID develops and updates products as guidance and the enemy's situation change. For this planned phase, special instructions or restrictions (captured in the AGM's remarks column) are placed on certain targets regarding when they will be clear for engagement.

D-12. Table D-4 shows an AGM developed to support the 53d ID's phase III. It provides the targeting officer and FSE guidance on how to use the approved asset to achieve the desired effect on a specific target.

Table D-4. Attack guidance matrix (example)

High-payoff targets	***When***	***How***	***Effects***	***Remarks***
Scouts, surveillance radar, 1V111	I	Battery 155 millimeters	Neutralize	Neutralize enemy reconnaissance from directing friendly elements.
BMP-1kShM, BRT-80	A		Destroy	Engage only when east of PL Bronze.
SA-15, A-19, multiple launch rocket system, T-12	A		Suppress	Suppress enemy indirect fire assets that could affect friendly movement.
BMP-3, BTR-60, T-90	A		Disrupt	Disrupt enemy attacks that will stop friendly units from reaching defensive positions.
A as acquired		I immediate		PL phase line

Targeting Synchronization Matrix

D-13. The 53d ID targeting working group develops a TSM to visualize those HPTs approved or requested to be acquired and attacked during the upcoming phase with collection assets assigned for all functions of the D3A methodology. The TSM enables the 53d ID's staff to quickly determine if collection assets were used effectively and not overtaxed. An asset consideration includes those assets that must be requested from higher command, joint force, and national or theater resources.

D-14. The TSM supports the 53d ID's phase III. (See table D-5.) The 53d ID targeting working group builds the TSM in conjunction with the other targeting products and uses the ICSM (figure D-2) to ensure the TSM is accurate and detailed. When developing the TSM, the 53d ID synchronizes it with the DST, the maneuver plan, and the fire support plan.

Table D-5. Targeting synchronization matrix (example)

Decide			Detect		Deliver		Assess	
P	Category	HPT	Agency	Asset	Agency	Asset	Agency	Asset
1	Fires	• SA-15 • SA-19 • MLRS • T-12	• G-2 • G-2 • IEW BN • IEW BN	• Rivet joint • NTM • FMV • FMV	• AI • AOC • FAB • DIVARTY	• F16 • F35 • MLRS • Artillery	• G-2 • G-2 • G-2 • IEW BN	• Rivet joint • Rivet joint • NTM • FMV
2	R&S	• UAS • Surveillance radar • Scouts	• CEMA • EAD • BCT	• NTM • Sentinel • Organic	• FAB • DIVARTY BCT	• MLRS • Artillery • Artillery	• AOC • G-2 • BCT	• MSNREP • ELINT • Intelligence
3	C2	• BMP-1kShM • 1V111 • BTR-80	• G-2 • G-2 • CAB	• NTM • Rivet joint • FMV	• FAB • DIVARTY CAB	• MLRS • Artillery • AH 64E	• G-2 • G-2 • CAB	• Rivet joint • Rivet joint • FMV
4	M&M	• BMP-3 • BTR-60 • T-90	• FAB • CAB • IEW BN	• Q-53 • AH-64E • FMV	• FAB • FAB • DIVARTY	• MLRS • MLRS • Artillery	IEW BN	FMV

AI	air interdiction	G-2	division or corps intelligence staff officer
AOC	air operations center	HPT	high-payoff target
BCT	brigade combat team	IEW BN	intelligence and electronic warfare battalion
C2	command and control	M&M	movement and maneuver
CAB	combat aviation brigade	MLRS	multiple launch rocket system
CEMA	cyberspace electromagnetic activities	MSNREP	mission report
DIVARTY	division artillery	NTM	national technical means
EAD	echelons above division	P	priority
ELINT	electronic intelligence	R&S	reconnaissance and surveillance
FAB	field artillery brigade	UAS	unmanned aircraft system
FMV	full-motion video		

Time		0600	1200	1800	2400	0600	1200	1800	2400	0600	1200	1800	2400
Enemy Timeline		H-24	H-18	H-12	H-6	H-hour	H+6	H+12	H+18	H+24	H+30	H+36	H+42
Higher	GEOINT/FMV	NAI: 3001, 3002, 3003, 3007, 3008; PIR: 1, 3											
	MTI	NAI: 3001, 3002, 3003; PIR: 1											
	SIGINT	NAI: 3007, 3008; PIR: 3											
	HUMINT	NAI: 3007, 3008; PIR: 3											
	CI	NAI: 3007, 3008; PIR: 3											
53d ID	53d CAB	NAI: 3001, 3002, 3003, 3007, 3008; PIR: 1, 3											
	1st ABCT	NAI: 3002; PIR: 1											
	2d ABCT	NAI: 3003; PIR: 1											
	3d ABCT	NAI: 3007, 3008; PIR: 3											
	4th IBCT	NAI: 3001; PIR: 1											
	15th SUST BDE	NAI: 3007, 3008; PIR: 3											

ABCT armored brigade combat team
BDE brigade
CAB combat aviation brigade
CI counterintelligence
FMV full-motion video
GEOINT geospatial intelligence
H-hour specific time at which an operation or exercise commences
HUMINT human intelligence
IBCT infantry brigade combat team
ID infantry division
MTI moving target indicator
NAI named area of interest
PIR priority intelligence requirement
SIGINT signals intelligence
SUST sustainment

Figure D-2. Information collection synchronization matrix (example)

INFORMATION COLLECTION OVERLAY

D-15. The 53d ID collection management team, along with the rest of the staff, uses IPOE products to create the initial ICO to assist in developing the information collection plan. The collection management team continuously updates the information collection plan as new information about the OE and mission variables is analyzed.

D-16. Based on the 53d ID's understanding of the mission and enemy tactics, the staff develops an ICO to support each phase of the mission in time and space. As the situation evolves, the collection management team updates the information collection plan with additional graphics and/or details such as new NAIs and TAIs.

D-17. The staff develops an ICO to support phase I and II operations. (See figure D-3 on page 74.) During these phases, the 53d ID conducts relief in place operations with friendly forces and establishes battle positions along PL Bronze. Collection on NAIs to detect enemy activities must be coordinated with higher headquarters and adjacent units until the 53d ID and its subordinate units get into position. When paired with the ICO, the ICSM facilitates the correct allocation of collection assets in the correct place and time to detect enemy activities and permit effective targeting.

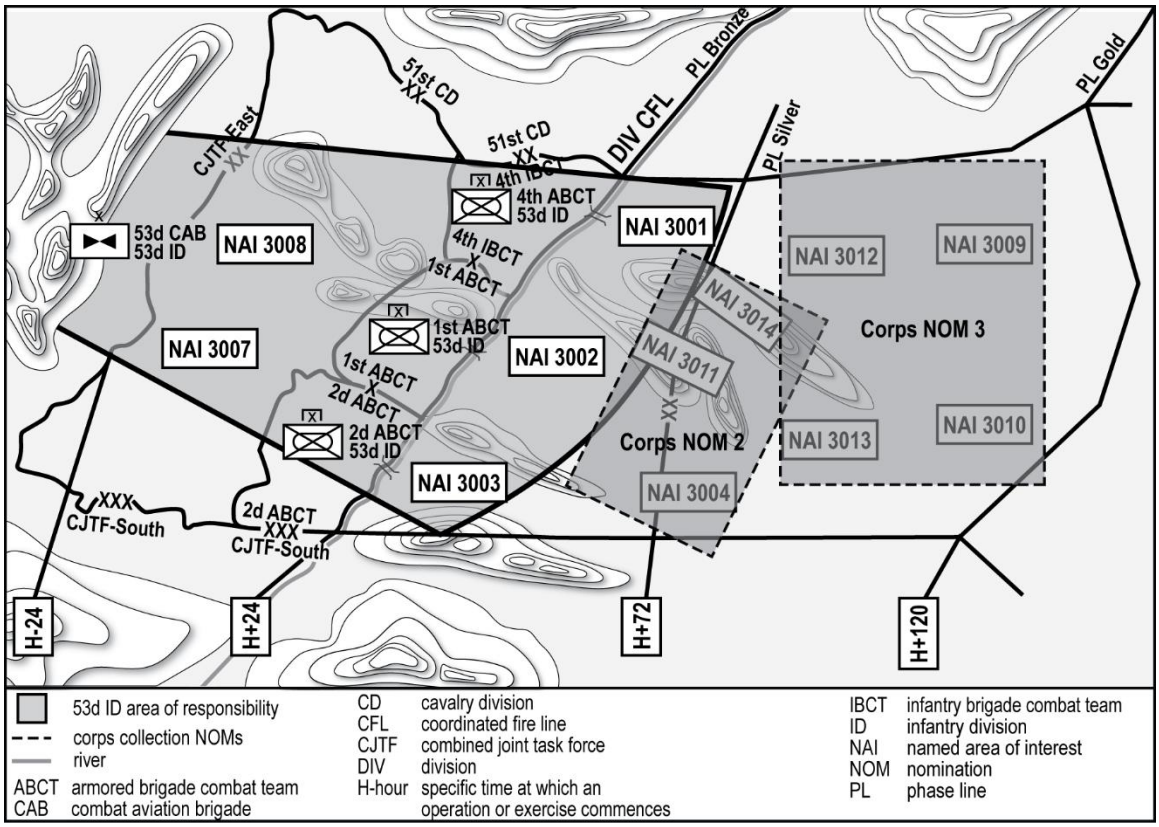


Figure D-3. Information collection overlay (example)

BATTLE DAMAGE ASSESSMENT

D-18. The 53d ID intelligence cell must conduct BDA, which provides estimates of the damage and/or delivered effects against targets, target critical elements, and target systems. The intelligence cell—

- References the AGM to ensure an understanding of targeting objectives and desired effects.
- Is notified through a fire mission report that a Tor (SA-15) is engaged using three 155-millimerter rounds.
- Uses the ICSM to check which assets were assigned to track the target via engagement and reports battle damage. Since one asset may not provide a clear picture, the intelligence cell looks at all available battle damage reporting from available assets to support its assessments.
- Determines the effects delivered to the target during engagement after completing physical damage, functional damage, and target system damage assessments. The cell assesses that the target is destroyed (80-percent confidence level)—functionally destroyed with a minimum two-day recuperation estimate.
- Produces BDA reporting derived from available imagery, intelligence reports, and other reporting from multiple sources. This allows the intelligence cell to confidently assess that the engaged SA-15 was destroyed. The intelligence cell submits the required reports and assessments to the targeting working group according to unit SOPs.
- Provides reattack recommendations, which support future targeting considerations. Based on the BDA and MEA for this engagement, the intelligence cell reattack recommendation is for future considerations. Although the desired effects were achieved against the target, the threat can recuperate the target to a point where reattack may be required.

Appendix E
Target Folder

ELECTRONIC TARGET FOLDER

E-1. A *target folder* is a folder, hardcopy or electronic, containing target intelligence and related materials prepared for planning and executing action against a specific target (JP 3-60). Target folders are built and disseminated to support the MDMP in preparation for combat operations and targeting. Target data must be in a shareable format, allowing the targeting teams to save progress, share, or database targets during the development process to satisfy requirements.

E-2. An ETF is a set of web pages and/or links to metadata-tagged dynamic target materials that are stored and maintained in central repositories. When an entity has been identified as a potential target, an ETF is started. ETFs store target intelligence and operational, planning, and legal information to support target development. ETFs are catalogued by a unique identifier to identify the specific target though the target's development stages.

E-3. Target development generally occurs in three stages:

- **Basic.** Basic target development standards are identification, location, function, target significance, target description, and source description.
- **Intermediate.** Intermediate target development standards are more detailed/up-to-date target significance, target description (graphic if applicable), and source description. Intermediate standards also add functional characterization, expectation statement, and critical target element statements.
- **Advanced.** Advanced target development standards include the following functions: weaponeering, aimpoint selection, and collateral damage estimation.

E-4. In a joint role, CJCSI 3370.01D establishes target development standards for presenting an ETF to a validation authority. Echelons above corps organizations are critical in developing ETFs. At echelons corps and below, the intelligence targeting element develops and refines the target intelligence folders based on their requirements.

TARGET INTELLIGENCE FOLDER

E-5. Developing target intelligence folders is optional at brigade and below levels. These echelons normally develop intelligence databases with specific target-related information identified before or during preparation for operations. Army intelligence targeting elements develop target intelligence folders based on joint TSA and Army target development requirements. The folder format generally follows unit requirements, standards, and SOPs. Folders are developed and maintained at each Army echelon (but referenced to the larger threat target system, component and element); they typically include a unique target intelligence number, which is maintained throughout operations.

E-6. Target intelligence folders include specific intelligence products and analysis, as required, from higher echelons. The folders are continuously updated with information and intelligence over time. Intelligence targeting elements develop target intelligence folders to account for HVTs, HPTs, or systems and system components. Target intelligence folders usually consist of two subfolders:

- **Work folder.** This folder contains raw data, working aids, and analyst notes used by individual analysts to form conclusions based on what the target development element presents to the ACE chief, G-2/S-2, and unit commander.
- **Target intelligence package (also known as intelligence target packet).** This package contains individual target intelligence used by the targeting working group to plan targeting operations. (See FM 3-60.)

E-7. *Target materials* are graphic, textual, tabular, digital, video, or other presentations of target intelligence primarily designed to support operations against designated targets by one or more weapon(s) systems (JP 3-60). Target materials are integral in developing target folders. They are standardized products of target intelligence and/or other information that support intermediate target development or are used as inputs to support the targeting process.

E-8. The target development process results in products used to develop target intelligence packages and target briefs. The target intelligence package identifies a target in relation to an operation by providing detailed information on the target. The target intelligence package takes IPOE products, war-gaming products, and other products that support the targeting methodology for a specific target. These products are placed in a single target graphic, which can be used as a visual aid to support a target brief. The target graphic correlates to the target information folder (also known as a baseball card) described in FM 3-60.

E-9. The target graphic must be in a digital format (for ease in sharing) to support target development. The graphic assists in tracking information related to targets. Figure E-1 shows an example target graphic.

Page 1

Target System/HPTL Category: X	**Supported OPS:** Phase, critical event, or OPS the target supports	**Date of Information:** Latest date of intelligence supporting this target
Target Identification Number: Target type or how the target is defined	**Location:** Geographic location (military grid reference system) or coordinated reference system.	**Targeting Tasks/Objectives:** Specific operational effort supported

Snapshot of Location Overview: If possible, include a snapshot of the location. **Picture of Target** 	**Target Summary** **Target Significance:** Address target affiliation and importance to the threat's target system or the capability the target provides to the threat. **Target Description:** Identify and characterize the target and differentiate the target from similar of collocated potential targets. **Functional Characterization:** Define the specific actions or activities that the target accomplishes, or the capabilities it provides to the target system. **Expectation Statement:** List the effects on the target system and its associated threat capabilities. **Critical Target Elements:** List critical target element analysis results to reveal aspects of the target system that, if engaged, can result in a reduction of the target's function.
Supporting Intelligence: Intelligence supporting statements made about target in essential target information section.	**Intelligence Gain/Loss:** List assessed intelligence gained and/or lost if desired effects were achieved against the target.

Page 2

Target System/HPTL Category: X	**Supported OPS:** Phase, critical event, or OPS the target supports	**Date of Information:** Latest date of intelligence supporting this target
Target Identification Number: Target type or how the target is defined	**Location:** Geographic location (military grid reference system) or coordinated reference system.	**Targeting Tasks/Objectives:** Specific operational effort supported

Supporting Intelligence
Signals Intelligence
Include the intelligence report with the report number, classification, and brief description.
Human Intelligence
Include the intelligence report with the report number, classification, and brief description. ***Note.*** For human intelligence, include a source validation statement, if applicable.
Geospatial Intelligence/Full-Motion Video Hours
Include the intelligence report with the report number, classification, and brief description
Other Supporting Intelligence
Include the intelligence report with the report number, classification, and brief description.
Assessment
Use to describe the target to a validation authority if the target cannot be briefed either in person or electronically.

HPTL high-payoff target list OPS operations

EXAMPLE

Figure E-1. Target graphic (pages 1 and 2) (example)

E-10. Unit SOPs determine the format for the target graphic, which typically contains the following sections:

- **Administrative data** of the target such as—
  - *Target system/HPTL category*.
  - *Supported operations*. Phase, critical event, or operation the target supports.
  - *Date of information*. Latest date of intelligence supporting the target.
  - *Target identification number*. Target type or how the target is defined (determine from basic encyclopedia, counterterrorist identification, unique identification).
  - *Location*. Geographic location (military grid reference system [also called MGRS]) or coordinated reference system. ***Note.*** If possible, include a snapshot of the location.
  - *Targeting tasks/objectives*. Specific operational effort supported.
- **Essential target information** includes how the target functions and supports the target system. It also includes the target's description. For example—
  - *Target significance*. Target affiliation and importance to the threat's target system or the capability the target provides to the threat.
  - *Target description*. Target identification and characterization. Differentiate the target from similar or collocated potential targets. ***Note.*** If possible, include a picture of the target.
  - *Functional characteristics*. Define the specific actions or activities the target accomplishes or the capabilities the target provides to the target system.
  - *Expectation statement*. List the effects on the target system and its associated threat capabilities.
  - *Critical target elements*. List critical target element analysis results to reveal aspects of the target system that, if engaged, can result in a reduction of the target's function.
  - *Intelligence gain/loss*. List assessed intelligence gained and/or lost if desired effects were achieved against the target.
- **Supporting intelligence** is the intelligence (by intelligence discipline or complementary capability) supporting the statements made about the target in the essential target information section. For example—
  - For each intelligence discipline (CI, GEOINT [full-motion video hours], HUMINT, MASINT, OSINT, SIGINT, TECHINT), include the intelligence report with the report number, classification, and brief description. ***Note.*** For HUMINT, include a source validation statement, if applicable.
  - For other supporting intelligence, include the intelligence report with the report number, classification, and brief description.
- **Assessment** can be used to describe the target to a validation authority if the target cannot be briefed either in person or electronically.

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Glossary

The glossary lists acronyms and terms with Army or joint definitions. Where Army and joint definitions differ, (Army) precedes the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

AA	avenue of approach
ACE	analysis and control element
ADA	air defense artillery
ADP	Army doctrine publication
AGM	attack guidance matrix
AO	area of operations
AR	Army regulation
ASCC	Army Service component command
ASCOPE	areas, structures, capabilities, organizations, people, and events (civil considerations)
ATP	Army techniques publication
BCT	brigade combat team
BDA	battle damage assessment
C2	command and control
CARVER	criticality, accessibility, recuperability, vulnerability, effect, recognizability
CBRN	chemical, biological, radiological, and nuclear
CCMD	combatant command
CEMA	cyberspace electromagnetic activities
CI	counterintelligence
CJCSI	Chairman of the Joint Chiefs of Staff instruction
COA	course of action
D3A	decide, detect, deliver, and assess
DA	Department of the Army
DOD	Department of Defense
DODD	Department of Defense directive
DODM	Department of Defense manual
DST	decision support template
EMS	electromagnetic spectrum
ETF	electronic target folder
EW	electromagnetic warfare
F2T2EA	find, fix, track, target, engage, and assess
F3EAD	find, fix, finish, exploit, analyze, and disseminate
FAIO	field artillery intelligence officer

FIVE-O	facility, individual, virtual, equipment, and organization
FM	field manual
FSCOORD	fire support coordinator
FSE	fire support element
FSO	fire support officer
G-2	assistant chief of staff, intelligence
G-3	assistant chief of staff, operations
G-4	assistant chief of staff, logistics
G-6	assistant chief of staff, signal
G-9	assistant chief of staff, civil affairs operations
GEOINT	geospatial intelligence
HUMINT	human intelligence
HPT	high-payoff target
HPTL	high-payoff target list
HVI	high-value individual
HVT	high-value target
ICM	information collection matrix
ICO	information collection overlay
ICSM	information collection synchronization matrix
ID	infantry division
IEW	intelligence and electronic warfare
IPOE	intelligence preparation of the operational environment
IWFT	intelligence warfighting function task
JFC	joint force commander
JP	joint publication
MARS	Machine-assisted Analytic Rapid-repository System
MASINT	measurement and signature intelligence
MCOO	modified combined obstacle overlay
MDMP	military decision-making process
MEA	munitions effectiveness assessment
METT-TC (I)	mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations (mission variables)
MI	military intelligence
MIB-T	military intelligence brigade-theater
MIDB	Modernized Integrated Database
MOE	measure of effectiveness
MOP	measure of performance
NAI	named area of interest
NATO	North Atlantic Treaty Organization
OAKOC	observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment (military aspects of terrain)

OE	operational environment
OSINT	open-source intelligence
PAI	publicly available information
PIR	priority intelligence requirement
PL	phase line
PMESII-PT	political, military, economic, social, information, infrastructure, physical environment, and time (operational variables)
RDSP	rapid decision-making and synchronization process
S-2	battalion or brigade intelligence staff officer
S-3	battalion or brigade operations staff officer
S-4	battalion or brigade logistics staff officer
S-6	battalion or brigade signal staff officer
SIGINT	signals intelligence
SIR	specific information requirement
SOP	standard operating procedure
SWO	staff weather officer
TAI	target area of interest
TECHINT	technical intelligence
TLE	target location error
TSA	target system analysis
TSM	targeting synchronization matrix
TSS	target selection standards
TST	time-sensitive target
TVA	target value analysis
U.S.	United States
USAF	United States Air Force
WMD	weapons of mass destruction

SECTION II – TERMS

all-source intelligence

(Army) The integration of intelligence and information from all relevant sources to analyze situations or conditions that impact operations. (ADP 2-0)

attack guidance matrix

A targeting product approved by the commander, which addresses the how and when targets are engaged and the desired effects. (FM 3-09)

basic encyclopedia

A compilation of identified installations and physical areas of potential significance as objectives for attack. (JP 2-0)

basic encyclopedia number

A ten-character alpha/numeric code unique to an installation for incorporation within various national and tactical systems. (CJCSI 3370.01D)

battle damage assessment

The estimate of damage composed of physical and functional damage assessment, as well as target system assessment, resulting from the application of fires. (JP 3-0)

collection management

In intelligence usage, the process of converting intelligence requirements into collection requirements, establishing priorities, tasking or coordinating with appropriate collection sources or agencies, monitoring results, and retasking, as required. (JP 2-0)

combat assessment

The determination of the effectiveness of friendly attack. (JP 3-60)

counterintelligence

Information gathered and activities conducted to identify, deceive, exploit, disrupt, or protect against espionage, other intelligence activities, sabotage, or assassinations conducted for or on behalf of foreign powers, organizations or persons or their agents, or international terrorist organizations or activities. (JP 2-0)

dynamic targeting

Targeting that prosecutes targets identified too late or not selected for action in time to be included in deliberate targeting. (JP 3-60)

fire support coordinator

The senior field artillery commander for the theater, corps, division, brigade combat team who is the maneuver commander's primary advisor to plan, coordinate, and integrate field artillery and fire support in the execution of assigned tasks. (FM 3-09)

fire support officer

The operational to tactical level field artillery officer responsible for advising the supported commander or assisting the senior fires officer responsible for coordinating fire functions and fire support. (FM 3-09)

functional damage assessment

The estimate of the effect of military force to degrade or destroy the functional or operational capability of the target to perform its intended mission and on the level of success in achieving operational objectives established against the target. (JP 3-60)

geospatial intelligence

The exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on or about the Earth. Geospatial intelligence consists of imagery, imagery intelligence, and geospatial information. (JP 2-0)

high-payoff target

A target whose loss to the enemy will significantly contribute to the success of the friendly course of action. (JP 3-60)

high-value target

A target the enemy requires for the successful completion of the mission. (JP 3-60)

human dimension

Encompasses people and the interaction between individuals and groups, how they understand information and events, make decisions, generate will, and act within an operational environment. (FM 3-0)

human intelligence

(Army) The collection by a trained human intelligence collector of foreign information from people and multimedia to identify elements, intentions, composition, strength, dispositions, tactics, equipment, and capabilities. (ADP 2-0)

intelligence

1. The product resulting from the collection, processing, integration, evaluation, analysis, and interpretation of available information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. 2. The activities that result in the product. 3. The organizations conducting such activities. (JP 2-0)

intelligence analysis

The process by which collected information is evaluated and integrated with existing information to facilitate intelligence production. (ADP 2-0)

intelligence discipline

A well-defined area of intelligence planning, collection, processing, exploitation, analysis, and reporting using a specific category of technical or human resources. (JP 2-0)

intelligence preparation of the operational environment

The systematic process of analyzing the mission variables of enemy, terrain, weather, and civil considerations in an area of interest to determine their effect on operations. (FM 2-0)

intelligence reach

The activity by which intelligence organizations proactively and rapidly access information from, receive support from, and conduct direct collaboration and information sharing with other units and agencies, both within and outside the area of operations, unconstrained by geographic proximity, echelon, or command. (ADP 2-0)

intelligence requirement

1. Any subject, general or specific, upon which there is a need for the collection of information or the production of intelligence. 2. A requirement for intelligence to fill a gap in the command's knowledge or understanding of the operational environment or threat forces. (JP 2-0)

intelligence warfighting function

The related tasks and systems that facilitate understanding the enemy, terrain, weather, civil considerations, and other significant aspects of the operational environment. (ADP 3-0)

measurement and signature intelligence

Information produced by quantitative and qualitative analysis of physical attributes of targets and events to detect, characterize, locate, and identify targets and events; and derived from specialized, technically derived measurements and signatures of physical phenomenon intrinsic to an object or event. (JP 2-0)

munitions effectiveness assessment

The assessment of the military force applied in terms of the weapon system and munitions effectiveness to determine and recommend any required changes to the methodology, tactics, weapon system, munitions, fusing, and/or weapon delivery parameters to increase force effectiveness. (JP 2-0)

no-strike list

A list of entities characterized as protected from the effects of military operations under international law or rules of engagement. (JP 3-60)

open-source intelligence

Intelligence that is produced from publicly available information and is collected, exploited, and disseminated in a timely manner to an appropriate audience for the purpose of addressing a specific intelligence requirement. (Public Law 109-163)

operational framework

A cognitive tool used to assist commanders and staffs in clearly visualizing and describing the application of combat power in time, space, purpose, and resources in the concept of operations. (ADP 1-01)

physical damage assessment

The estimate of the quantitative extent of physical damage to a target. (JP 3-60)

planning horizons—

Points in time commanders use to focus the organization's planning efforts to shape future events. (ADP 5-0)

priority intelligence requirement

The intelligence component of commander's critical information requirements used to focus the employment of limited intelligence assets and resources against competing demands for intelligence support. (JP 2-0)

reattack recommendation

An assessment provided to the commander derived from the results of battle damage assessment and munitions effectiveness assessment. (JP 3-60)

restricted target

A valid target that has specific restrictions placed on the actions authorized against it. (JP 3-60)

signals intelligence

Intelligence derived from communications, electronic, and foreign instrumentation signals. (JP 2-0)

system

A functionally, physically, and/or behaviorally related group of regularly interacting or interdependent elements that form a unified whole. (JP 3-0)

target

An entity that performs a function for the adversary or enemy considered for possible engagement. (JP 3-60)

target development

The systematic examination of potential target systems—and their components, individual targets, and even elements of target—to determine the necessary type and duration of an engagement. (JP 3-60)

target element

Specific features of a target entity that enable it to function. (JP 3-60)

target folder

A folder, hardcopy or electronic, containing target intelligence and related materials prepared for planning and executing action against a specific target. (JP 3-60)

targeting

The process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities. (JP 3-0)

target materials

Graphic, textual, tabular, digital, video, or other presentations of target intelligence primarily designed to support operations against designated targets by one or more weapon(s) systems. (JP 3-60)

target system analysis

An all-source examination of potential target systems to determine relevance to stated objectives, military importance, and priority of attack. (JP 3-60)

target system damage assessment

The broad assessment of the overall impact and effectiveness of military force applied against the operation of an enemy target system, significant subdivisions of the system, or total combat effectiveness relative to the operational objectives established. (JP 3-60)

technical intelligence

Intelligence derived from the collection, processing, analysis, and exploitation of data and information pertaining to foreign equipment and materiel for the purposes of preventing technological surprise, assessing foreign scientific and technical capabilities, and developing countermeasures designed to neutralize an enemy's technological advantages. (JP 2-0)

time-sensitive target

A joint force commander-validated target or set of targets requiring immediate response because it is a highly lucrative, fleeting target of opportunity or it poses (or will soon pose) a danger to friendly forces. (JP 3-60)

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