AIR FORCE DOCTRINE PUBLICATION 3-60

TARGETING



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FOREWORD

Doctrine embodies the fundamental principles by which military forces guide their actions in support of national objectives. It is a body of carefully developed authoritative ideas that establishes a common frame of reference for solving military problems. Airmen today are serving in a time of consequence marked by the rapid evolution of the character of war and increasingly formidable competitors challenging our freedom of maneuver and freedom of action.

The United States Air Force (USAF) should advance solutions to deter, compete, and win by focusing on readiness and lethality. Air Force Doctrine Publication (AFDP) 3-60, *Targeting*, though firmly rooted in existing best practices, also looks to the future, adapting where needed to enable continued warfighting effectiveness. Targeting links ends, ways, means, and risk to ensure appropriate responses are aligned to operational objectives. The targeting process is informed by planning, intelligence, and the air tasking cycle, ensuring alignment between operational objectives and the employment of airpower.

This updated version of AFDP 3-60, *Targeting*, provides Airmen with a shared understanding of targeting as a process and its importance in the modern battlespace. It outlines the fundamental principles and framework that guide the planning and execution of targeting. This publication also provides an overview of organizations with targeting responsibilities and air component-level processes for deconflicting and integrating target nominations and engagements across the joint force.

AFDP 3-60 serves as a vital tool for Airmen at the operational level, equipping them with the knowledge to synthesize targeting processes across the spectrum of conflict-from deterrence and competition to large-scale combat operations. Throughout history, innovative Airmen have developed methods to meet operational requirements. The airman's perspective is fundamental to targeting due to airpower's ability to create effects across both the theater and globe. This doctrine reinforces the USAF's ability to prevail amid complex challenges.

CHAPTER 1: INTRODUCTION TO TARGETING

Targeting is the process of selecting and prioritizing targets, and matching the appropriate response to them, considering operational requirements and capabilities.[1] While targeting integrates all joint military capabilities to achieve the objectives of the joint force commander (JFC), the process is heavily shaped by the air component. The unique speed, range, flexibility, and precision of airpower make it a primary tool for creating desired effects against a wide array of targets, thus influencing how targets are developed, prioritized, and engaged. This process is not the exclusive province of one specialty or division, such as intelligence or operations, but blends the expertise of many disciplines to leverage the decisive capabilities the air component brings to the joint force.

The targeting process unfolds as a continuous, analytic, and integrative cycle that occurs at the intersection of intelligence, planning, and operations. The targeting process is not a standalone activity but is deeply integrated with and dependent upon these other processes. Targeting relies on intelligence for the detailed information necessary for target development, vetting, and assessment. In turn, targeting receives direction from the planning process, which provides commander's objectives, guidance, and desired effects. Outputs of the targeting process feed operations by providing the necessary inputs for mission planning and execution of the air tasking cycle. Subsequently, the execution of air operations provides feedback into the intelligence and targeting processes through assessment, allowing for continuous refinement of the overall effort. This complex and continuous interplay of intelligence, planning, operations, and targeting contributes to the success of the air component and the joint force.

FUNDAMENTALS OF TARGETING

The purpose of the targeting process is to create desired effects in the operational environment (OE) to support the achievement of commanders' objectives by prioritizing, integrating, synchronizing, and applying fires and other capabilities.[2] To accomplish this purpose, the air component relies on several fundamentals. It adheres to the established principles of targeting, applies them across the entire competition continuum, integrates capabilities and effects in all domains, operates with global integration, and conducts all actions in accordance with the rule of law.

PRINCIPLES OF TARGETING

Five fundamental principles guide the air component's targeting process. The first principle, *objectives-based* targeting, dictates that the entire process focuses on achieving the JFC's objectives and that all targets nominated for engagement should contribute in a discernible way to attaining the JFC's desired end state. *Effects-based* targeting emphasizes that effects are created or generated to achieve objectives. Effects are primarily labeled as lethal or nonlethal, but can also be classified as desired or undesired, intended or unintended, direct or indirect, cumulative, and cascading.[3] This

[1] For the definition of "targeting," see Joint Publication (JP) 3-0, *Joint Campaigns and Operations.*
[2] For additional information on the joint targeting process, see JP 3-60, *Joint Targeting*.
[3] For additional information on effects, see AFDP 5-0, *Planning*, and JP 3-60, *Joint Targeting*.

principle reinforces a tenet of airpower (synergistic effects), which entails the proper application of a coordinated force across multiple domains.[4] The third principle emphasizes the *interdisciplinary* nature of targeting which requires the combined expertise of personnel from many functional disciplines, including strategists, operators, and intelligence analysts. As a *systemic* process, the air component executes a rational, iterative, and methodical targeting process, providing a structured framework for analyzing, prioritizing, and matching capabilities to targets. Finally, *estimative* is the fifth principle, encompasses predicting future outcomes to encourage planners to understand an enemy's decision-making cycle and anticipate the effects of operations, enabling the efficient use of limited airpower resources.[5]

Adhering to these principles ensures that the targeting process does not devolve into merely selecting the same number of targets to match the number of munitions available. These principles ensure that capabilities from all domains are considered to generate effects to achieve the JFC's objectives.

TARGETING WITHIN THE COMPETITION CONTINUUM

The air component contributes to the joint targeting process throughout the competition continuum. The competition continuum describes three broad categories of strategic relationships among actors in the OE: cooperation, competition below armed conflict, and armed conflict/war.[6] Much of the targeting process can occur well prior to armed conflict, especially target development conducted in support of planning. During cooperation, air component targeting efforts can include building joint capability and capacity through supporting joint exercises or humanitarian assistance and disaster relief operations. Within competition below armed conflict, the focus shifts to deterring adversaries and understanding their networks and decision-making processes with an emphasis on matching nonlethal effects to cyberspace or information capabilities. The transition to armed conflict requires a robust process to analyze, integrate, and prioritize targets for lethal and nonlethal effects. The foundational work done during the cooperation and competition phases, such as target development and target system analysis, can enable rapid, effective application of airpower when required, ensuring the joint force achieves decisive results.

GLOBAL INTEGRATION

Global integration enables the joint force to act in a coordinated manner against transregional adversaries and threats. Since airpower can deliver effects across vast distances, a target's geographic location is often less important than the adversary system to which it belongs. This global integration is managed through supported/supporting command relationships, guidance from the Secretary of War (SecWar), and the Global Integrated Target List (GITL).

The GITL is an adversary-focused, rather than a geographically oriented, list of targets.

[4] For additional information on tenets of airpower, see AFDP 1, *The Air Force*.
[5] For additional information on estimative intelligence, see AFDP 2-0, *Intelligence,* and JP 2-0, *Joint Intelligence*.
[6] For additional information on competition continuum, see JP 3-0, *Joint Campaigns and Operations*.

It is the combined joint (JTL) and restricted target lists (RTL) from multiple combatant commanders (CCDRs) for a specific adversary, maintained by the supported CCDR. The GITL provides a coordination mechanism for the supported CCDR to request effects globally against a specific adversary. This mechanism allows an air component commander in one theater to nominate a target outside their area of responsibility, recognizing that striking that target may be critical to achieving their own commander's objectives. This global perspective is imperative for air component planners, ensuring that the right capabilities are matched against the right targets, regardless of their location.

TARGETING IN JOINT ALL-DOMAIN OPERATIONS

While all Services rely heavily on integration, joint all-domain integration is fundamental to how Airmen employ airpower within the joint force. Joint all-domain operations (JADO) require the convergence of capabilities from all domains to overwhelm an adversary, presenting them with layered dilemmas at a speed and complexity they cannot match. For the air component, this means the targeting process should include understanding how capabilities employed from the air domain integrate with effects generated from other domains, including space, cyberspace, and the electromagnetic spectrum. The air component should also contribute to the development of targets in other domains, which allow the air component commander to better support the joint force.[7]

DEFINITIONS, ENTITY TYPES, AND CHARACTERISTICS

Personnel involved in the targeting process should use a common, precise language. A shared understanding of fundamental definitions is critical to ensure that intelligence, planning, and operations Airmen are aligned with joint force language. Standard targeting vocabulary revolves around the definition of target, the types of entities that can become targets, and the formal characteristics used to describe targets.

A *target* is defined as an entity (or object) that performs a function for the adversary or enemy and is considered for possible engagement.[8] An *entity* is a facility, individual, virtual feature, equipment, or organization (also known as “FIVE-O”). An *object* is a digital representation of a real-world physical thing, action, or abstraction that serves as a single point of convergence for intelligence production to facilitate analysis. *Object-based production (OBP)* is the intelligence community’s framework for organizing and sharing information, relating data from all sources to known objects.[9] Neither an entity nor an object are considered a target until they have been vetted (if required) and validated through the target development process.

[7] For additional information on JADO in the targeting process, see AFDP 3-0, *Operations*, and JP 3-0, Appendix D, *Fundamentals of Joint All-Domain Operations.*
[8] Joint doctrine removed the word “object” from the definition of “target” during the 2024 update to JP 3-60, Joint Targeting. The Air Force retains the word “object” due to the importance of object-based processes, such as OBP and object-based intelligence, which feed the targeting process.
[9] See JP 2-0, *Joint Intelligence,* for additional information.

ENTITY TYPES

An entity performs a function for the adversary or enemy. Its location, purpose, or use can contribute to an adversary's overall warfighting or war-sustaining capability. During the targeting process, entities are analyzed by intelligence and considered for development into targets. Entities are typically grouped into one of five types (FIVE-O).[10]

Facilities. A physical structure, group of structures, or area that performs one or more functions contributing to an adversary's capability. These measurable geophysical parameters define the real property boundary and ensure no target duplication or boundary conflicts break unique identification.

Individuals. A person (or persons) who provides one or more critical functions that contribute to an overall adversary capability. This type of entity should be reserved for personnel who perform unique functions rather than serve as an individual part of a larger group.

Virtual. Typically, a nontangible entity within cyberspace that enables equipment to function is a virtual element. This could include a collection of programs, files, websites, or personas that represent a physical unit, person, location, or event.

Equipment. An object is made up of any number of devices and components, integrated and codependent, upon which engagement of one component results in an effect upon the whole. For instance, mass-produced equipment (tanks, aircraft, trucks) are entities associated with a larger system to which they contribute.

Organizations. A group or unit that provides a function contributing to an adversary's capability. Elements could include facilities, individuals, equipment, and virtual entities; however, this target type is delineated by the overall function the organization provides.

TARGET CHARACTERISTICS

A characteristic is any distinctive, intrinsic, or acquired feature that forms the basis of target development. Characteristics are used to describe an object, to provide context, and to support analysis by identifying similar or related data. In general, targets are defined by five characteristics: physical, functional, cognitive control and information, environmental, and temporal.[11]

Physical. These are features discernible to one or more of the five senses or through sensor-derived signature, which describe a target's physical nature. They may significantly affect the types and numbers of weapons and the methods employed against the target.

Functional. These are features that describe what the target does and how it does it. They describe the target's function within the system, how the target or system operates, the target's level of activity, the status of its functionality, and its importance to the enemy.

[10] For additional information on entity types, see Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3370.01, Target Development Standards.
[11] See JP 3-60, *Joint Targeting*, for additional information.

Functional characteristics are often difficult to discern because they may not be directly observed. Reaching plausible conclusions can often entail speculation through deductive and inductive reasoning. Some examples include: target use, target status, functionality, materials required, ability to reconstitute, target vulnerabilities, and target capabilities.

Cognitive Control and Information. These describe how individuals, groups, or automated systems think, exercise control functions, or process information. Understanding a target's decision-making process, sources of influence, or cultural factors can be critical to creating desired effects, especially when targeting a system's central controlling function. As with functional characteristics, these are often difficult to discern or deduce. Potentially exploitable characteristics include the target's required inputs, information processing capacity, control functions, patterns and signatures, and cultural, social, and economic considerations.

Environmental. These describe the effect of the environment on the target and its surroundings. They include factors such as weather, terrain, camouflage, and the civilian environment, all of which can influence engagement tactics and weapon selection.

Temporal. These describe the target's vulnerability to detection, engagement, or attack in relation to a time horizon. Because target priority and accessibility can change rapidly, this time factor can help determine when and how to find or engage a target. By comparing this factor to information latency and knowledge of friendly capabilities, the staff can make better recommendations regarding possible actions.

PROCESSES, CATEGORIES, TYPES, SPECIAL CONSIDERATIONS

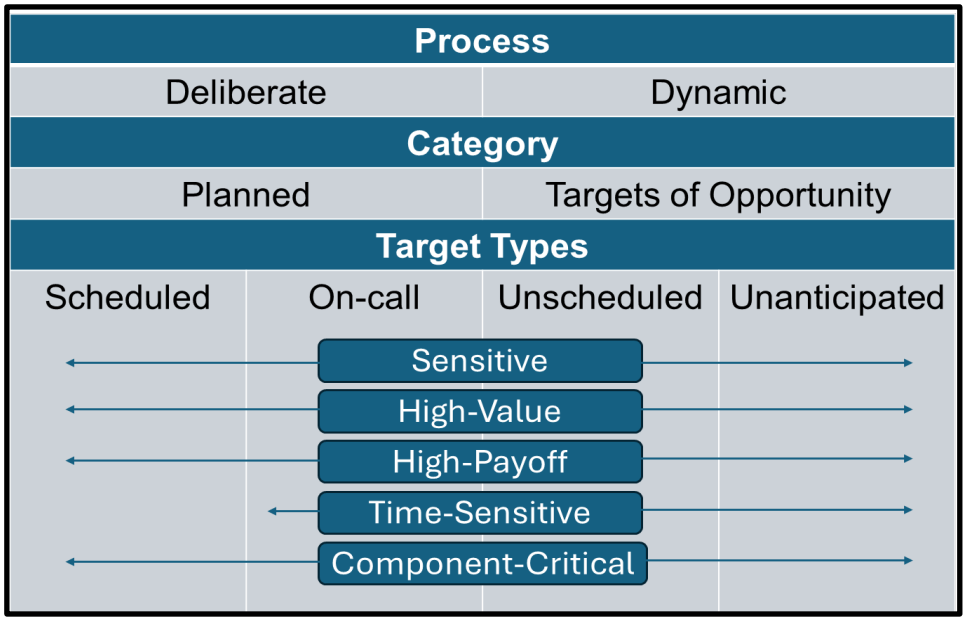
Airmen involved in the targeting process should understand how targets are processed, categorized, and prioritized. The standard targeting framework revolves around the two core processes (deliberate and dynamic), the categories and types of targets managed within them, and the special considerations applied to targets of unique importance.

DELIBERATE TARGETING (PLANNED)

Deliberate targeting is the systematic process for planned targets, the category of targets detected, identified, and developed in sufficient time to schedule actions against them in a specific tasking cycle. Planned targets are split into two types: scheduled and on call.

Scheduled Targets. These are planned targets upon which fires or other actions are scheduled for prosecution at a specified time. These targets appear on an air tasking order (ATO) to synchronize actions with a specific delivery time or time on target. Diverting capabilities from scheduled targets could negatively impact desired effects during the execution period and should be weighed against the commander's targeting guidance.

On-call Targets. These are planned targets upon which fires are determined using the deliberate targeting process and executed using the dynamic targeting process. This means these targets have dedicated capabilities listed against them on the ATO; however, no specific delivery time or time on target is identified. The commander expects to find, fix, and track targets during the execution period to prosecute them.



DYNAMIC TARGETING (TARGETS OF OPPORTUNITY)

The dynamic targeting process prosecutes targets identified too late or not selected for action in time to be included in deliberate targeting. The category of targets for this process is called "targets of opportunity." The term "dynamic target" is improper and not a type of target. Targets of opportunity are split into two types: unscheduled and unanticipated.

Unscheduled Target. These are targets of opportunity known to exist in the operating environment. Unscheduled targets may have had the same amount of target development as planned targets and reside on the joint target list (JTL) or the restricted target list (RTL); however, they were neither nominated nor approved for inclusion on the joint integrated prioritized target list (JIPTL) or were not available for engagement within the execution period. Changes to the target status based on priority, access, or permissions could result in the need or opportunity to engage the target during the current operations cycle.

Unanticipated Target. These are targets of opportunity that were unknown or unexpected in the operating environment. These targets may not have been developed in the deliberate targeting process nor included on a JTL or RTL. Nevertheless, an evaluation of the candidate target is required before it can be engaged.

SPECIAL CONSIDERATIONS

Engaging a target could create unintended effects. Some examples include diplomatic repercussions, high-risk of collateral damage, or collateral effects. Thus, certain targets

may require special consideration and caution.

Sensitive Target. These are targets for which planned actions warrant Presidential or SecWar approval. Sensitive target criteria are normally delineated by JFCs in plans, orders, or ROE.[12]

High-Value Target (HVT). A target the enemy requires for the successful completion of the mission. The loss of HVTs would be expected to seriously degrade important enemy capabilities or functions. HVT lists should describe the relative value of each target to be nominated for target development and further identify high-payoff targets (HPTs).

High-Payoff Target (HPT). A target whose loss to the enemy could significantly contribute to the success of the friendly course of action. Given their importance, the JFC and components prioritize these targets. This list also identifies these HPTs by time and space, which is vital to a commander within a given OA.

Time-Sensitive Target (TST). A TST is a JFC-validated target or set of targets requiring immediate response because it is a highly lucrative, fleeting target of opportunity or it poses (or could soon pose) a danger to friendly forces. This target is considered a special type of HPT. The air component commander synchronizes maneuver fires against TSTs within their targeting process. Subsequently, the dynamic targeting process, which occurs during execution of the air tasking cycle, is often used to specifically engage TSTs.

Component-Critical Target (CCT). These targets are HPTs that pose a threat to their mission or force for cross-component execution. They are considered a type of HPT and are nominated by Component commanders as TSTs.

NUCLEAR TARGETING

Nothing discussed within this document, including the law of war (LoW) and targeting implications, precludes the use of nuclear weapons. Nuclear targeting mirrors conventional targeting principles, with consideration given to the specific weapon's effects. Commanders should assess the military and political impact a nuclear strike would have on operations.[13] Nuclear planning guidance issued at the CCDR level is based on national-level political considerations and is influenced by the military mission. USAF targeteers assigned to US Strategic Command (USSTRATCOM) conduct nuclear planning in coordination with supported CCDRs and certain allied commanders. However, the supported commander does not control the decision to use nuclear weapons. Effects-based targeting should account for the potential use of nuclear weapons across the conflict continuum. Nuclear weapons' effects should be understood in relation to the conventional operations they support or are supported by.

[12] For additional information on sensitive targets, see CJCSI 3122.06, *Sensitive Target Approval and Review (STAR) Process*.

[13] For additional information on operating in CBRN environments, see AFDP 3-40, *Counter-Weapons of Mass Destruction Operations*, and JP 3-11, *Operations in Chemical, Biological, Radiological, and Nuclear Environments.*

LEGAL CONSIDERATIONS

NOTE: This section is not all-encompassing and is no substitute for legal advice from the appropriate staff judge advocate (SJA) office or designated judge advocate. Constant coordination between planners, operators, and judge advocates is essential. Commanders, planners, operators, and targeteers must understand the pertinent legal framework to comply with the laws and policies, the application of which may be challenging given the nature of non-kinetic operations (e.g., ubiquity of cyberspace operations, authorities across multiple areas of responsibility (AOR) and domains, or regional effect of information activities), irregular and modern warfare, and the often geographic orientation of domestic and international law.[14]

Legal authorities, principles, and international legal obligations directly affect all phases of targeting. Those involved in targeting should include their legal advisors from the beginning of the targeting process and seek counsel to obtain a thorough understanding of their obligations as they apply to targeting analysis. The legal and policy considerations impacting targeting include:

- Basic principles of the LoW.
- Specific LoW concepts concerning personnel, objects, places, and collateral damage minimization.
- ROE considerations.
- Civilian harm mitigation and response.
- The early and continuous involvement of judge advocates in targeting.

Targeting must adhere to the LoW and all applicable rules of engagement (ROE). It is the policy of the Department of War (DoW) to comply with the LoW "during all armed conflicts, however characterized." Every Airman must comply with LoW, particularly its basic principles explained below, and its requirements for the humane treatment of detainees. LoW encompasses all international law for regulating the conduct of hostilities binding on the US, including treaties and other international agreements to which the US is a party, as well as applicable customary international law.[15] Military necessity does not authorize or justify acts that are otherwise prohibited by LoW. Instead, military necessity must be applied in conjunction with other LoW principles.

BASIC PRINCIPLES OF THE LAW OF WAR

LoW rests on five fundamental principles that are inherent to all targeting decisions: military necessity, distinction (discrimination), proportionality, unnecessary suffering (humanity), and honor (chivalry).

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[14] For additional information on international law, the Law of War, and legal support, see AFDP 3-84, *Legal Support*, JP 3-84, *Legal Support*, and *Department of Defense (DoD) Law of War Manual*.

[15] See DoD Directive (DoDD) 2311.01, *Law of War Program,* and DoD *Law of War Manual* for additional information.

SPECIFIC TARGETING RESTRICTIONS

Targeting restrictions under LoW prohibit intentional attacks on civilians, civilian populations, and protected entities such as the wounded, sick, prisoners of war, medical units, religious and cultural sites, and civilian objects unless they are recharacterized as military objectives due to their use or function. The Geneva Conventions mandate clear markings for protected sites, and commanders must balance military advantage with minimizing collateral damage, including environmental harm, by implementing strategies to mitigate adverse effects during and after conflict.[16] [17]

Regarding the protection of civilian objects specifically, civilian objects may not be intentionally targeted for attack. However, civilian objects can be recharacterized as military objectives if, by their nature, location, purpose, or use, they make an effective contribution to military action and their total or partial destruction, capture, or neutralization offer a concrete and definite military advantage. Use also refers to the object's current function, which is one of the primary target characteristics within both joint and USAF targeting doctrine. "Dual-use" facilities and objects serve both a military and civilian function. Though from a legal perspective, such objects cannot be both civilian objects and military objectives. That is, if an object is considered a military objective per the LoW two-part test, it is not a civilian object.[18] Dual-use targets may also require a higher level of approval authority due to their potential impact on the civilian population.

RULES OF ENGAGEMENT

Rules of Engagement (ROE). ROE are a commander's tool to regulate the use of armed force in military operations. ROE provide a framework that encompasses national policy goals, mission requirements, and the law. ROE are directive in nature and must be issued by competent military authorities. Essentially, ROE are rules for a particular operation that govern the use of force to reflect the will of the civilian and military leadership. ROE constrain the actions of US military forces to ensure their actions are consistent with domestic and international law, national policy, and objectives. Although ROE are not law, they are authoritative restrictions issued at the appropriate level of command to control the use of force. ROE may be more *restrictive* than LoW for a given situation, but they cannot be more *permissive* than allowed under LoW; therefore, compliance with ROE should guarantee compliance with LoW.

Standing ROE (SROE). ROE may be found in the SROE, a CCDR's theater-specific ROE, and ROE issued specifically for an operation. SROE are contained in a classified Chairman of the Joint Chiefs of Staff Instruction (CJCSI). The SROE provide implementation guidance on the inherent right of self-defense and the application of force for mission accomplishment. The SROE also provides a framework for the development and implementation of ROE across the competition. The important point to remember is that the SROE are not tailored to specific military operations. They provide guidance in the absence of operation-specific ROE and do not include targeting restrictions or

[16] See *DoD LoW Manual*, for additional information.
[17] See *Convention (III) Relative to the Treatment of Prisoners of War*, for additional information.
[18] For additional information on two-part test, see *DoD LoW Manual*.

considerations specific to a given operation.

Theater-Specific ROE. The CCDR's theater-specific ROE addresses strategic and political sensitivities of an AOR and approved by the CJCS. Theater-specific ROE may be issued in a separate message. Like the SROE, these may not provide specific targeting restrictions or considerations tailored to the circumstances of a specific operation.

Operation-Specific ROE. These ROE are promulgated by the President, Secretary of Defense, CCDR, and component commanders, and are based on the specific factors underlying the operation. The ROE might be sent to the components via message from the CCDR or incorporated into operations orders (OPORDs). *The ROE are usually re-stated in the joint air operations plan (JAOP) and in Section Five of the air component's daily* Special Instructions (SPINS).

Legal Support. AFDP 3-84, *Legal Support*, provides guidance on developing ROE. Considerations include: ROE development is a collaborative effort (vertical and horizontal among organizations), should integrate all players (judge advocates, commanders, planners, and operators), should not be too specific or restrictive, and should provide simple, clear guidance to accomplish the mission.

CIVILIAN HARM MITIGATION AND RESPONSE

The success of air operations depends on airmen acting consistently with the fundamental principles of the LoW. Preventing, mitigating, and responding to civilian harm should be integrated into mission objectives and the targeting process. Department of Defense Instruction 3000.17, *Civilian Harm Mitigation and Response*, includes requirements to protect elements within the civilian environment (i.e., the personnel, organizations, resources, infrastructure, essential services, and systems on which civilian life depends). Furthermore, this policy requires operations personnel to report collateral damage to civilian harm assessment cells (CHACs).[19]

ROLE OF THE JUDGE ADVOCATE

Judge advocates assist the commander, planners, and operators with reviewing targets for compliance with applicable LoW and ROE restrictions (including collateral damage and other CCDR restrictions) before mission execution. Judge advocates also provide legal advice to commanders and their staffs on the conduct of military operations ensuring consistency with international and domestic legal obligations and the governing ROE. Legal advice and counsel are necessary to develop, interpret, modify, and properly implement the ROE. Judge advocates and their support staff are trained, operationally oriented, and readily accessible to assist commanders, planners, and operators with legal considerations and ROE-related issues. Judge advocates should be engaged early and often in the targeting process.

The complexity of legal considerations, along with ROE, requires judge advocates to be

[19] For additional information on protection of civilians, see DoD Instruction (DoDI) 3000.17, *Civilian Harm Mitigation and Response.*

constantly engaged with the strategy, plans, and operations divisions within an Air Operations Center (AOC) at all stages in the air tasking cycle. Additionally, judge advocates are usually available at the expeditionary wing and group level to assist commanders, aircrew, and planners at the tactical level with targeting-related issues. It should be emphasized, however, the military commanders and operators, with proper authority, make the ultimate targeting decisions after counsel from the judge advocates. Nonetheless, legal considerations should always be addressed when analyzing military necessity, distinction, hostile act, imminent threat, or military advantage by the air component commander and JFC.

CHAPTER 2: ROLES AND RESPONSIBILITIES

The targeting process requires robust direction and organization to enable the conduct of campaigns and operations across the competition continuum. The targeting process is a command responsibility with support from many organizations. Targeting occurs from the combatant command (CCMD) level to the tactical unit level. Across this organizational span, the USAF focuses on various issues within and outside the targeting cycle, including intelligence gathering, target planning, target materials production, targeting database maintenance, target systems analysis, targeting automation, and support to weapons acquisition. The air component enacts the targeting process for the JFC and servicing approved targets, regardless of which Service or functional component nominates them. Within this command structure, the targeting cycle follows a very structured process and is normally compressed.

JOINT FORCE COMMANDER AND STAFF RESPONSIBILITIES

JFCs organize forces to accomplish their mission based on their vision and concept of operations (CONOPS). They have many options for organizing the joint force, for providing direction and guidance on command relationships, and for designating the air component commander. If a joint force air component commander (JFACC) is appointed, that commander directs the execution of all air component capabilities and forces made available for joint or combined operations. Regardless of the organizational option chosen, fundamental doctrinal principles of the joint targeting process should be employed, and the air component commander should establish a close working relationship with the JFC.

JFC Responsibilities and Authorities. The JFC should provide the operational direction and guidance to focus the targeting process for the joint operation area (JOA). The JFC should establish the division of JTC responsibilities among the JFC staff and component commanders, including the air component commander. The JFC should direct the formation, composition, and specific responsibilities of the joint targeting coordination board (JTCB) and approve or delegate approval of the JIPTL. The JFC will typically include targets nominated by other CCMDs through the GITL process for consideration in the JIPTL and nominate targets outside their JOA onto the GITL of the appropriate supporting command. **The JFC may delegate the JTCB and JIPTL responsibilities to the air component commander.**[20]

JFC Intelligence Directorate J-2. The J-2 prioritizes intelligence efforts for joint targeting activities. The J-2 staff conducts JIPOE to assist with the development of targeting guidance. Normally, J-2 manages theater collection priorities via the joint collection management board (JCMB). Typically, the deputy directorate for targets (J-2T) focuses on the targeting process. The air component A2 staff should integrate into J-2 processes.

JFC Operations Directorate J-3. The J-3 assists the commander in directing and

[20] Per JP 3-60, *Joint Targeting*, the JFC may delegate certain authorities (such as JIPTL Coordination Authority) to component commanders. Also, JP 3-60 refers to JP 3-30, *Joint Air Operations*, to fully describe development of the JIPTL, highlighting the air component's role for that portion of the targeting process.

controlling operations. The J-3 typically synchronizes and integrates joint operations via a joint operations center (JOC) and may serve as the chair of the JTCB. The J-3 can also organize and serve as the chair for the joint fires element (JFE) if the JFC approves this optional staff element. The air component A3 staff should integrate into J-3 and JFE processes.[21]

Joint Fires Element (JFE)

If the JFC does not delegate the authority for joint target planning, coordination, and deconfliction to the JFACC, and approves the formation of a JFE, the air component needs to ensure linkages to this organization. The JFE will integrate and synchronize fires planning and coordination and is composed of representatives from the J-3, the components (land, maritime, air, and special ops), elements of the JFC's staff and directorates, representatives from space and cyberspace operations, interagency partners and the intelligence community, and closely tied to the JFC J-2 for execution of the joint targeting process. The JFE will be key for JIPTL management and JTCB collaboration with the J-2.

Other JFC staff organizations. The air component should integrate with counterparts across the JFC staff. The J-4 logistics directorate can provide guidance about critical munition supplies and expenditure rates. The J-5 plans directorate can identify changes to future, long-range planning efforts. The JFC's SJA can provide interpretations of host nation, ROE, and LoW issues. The JFC public affairs advisor can provide public perception of target prosecution and any detrimental second- or third-order effects. Information planners can provide input on tasks related to the targeting process.[22]

AIR COMPONENT ROLES AND RESPONSIBILITIES

The targeting responsibilities of the air component commander are assigned by the JFC. As the air component facilitator for servicing all targets nominated for airpower effects, the air component commander establishes a targeting process to meet the needs of the JFC and other components within the joint force. The air component commander provides a robust staff and an extensive command and control (C2) capability to facilitate targeting.

AIR COMPONENT STAFF

Within the Commander Air Force Forces (COMAFFOR) role, the air component commander has a staff to facilitate the targeting process. The AFFOR staff, in coordination with the AOC, supports USAF requirements and integrates air component capabilities into the JFC's planning and targeting processes. Some air components keep their AFFOR staff separate from the AOC, but some integrate their AOC into the AFFOR staff. For example, some air components have subordinated the AOC to the A3.

[21] For additional information on the J-3 and JFE, see JP 3-09, *Joint Fires*.
[22] For additional information on the responsibilities of the JFC and JFC staff, see JP 3-60, *Joint Targeting*.

Air Force Forces (AFFOR) A2. The AFFOR A2 provides intelligence support to the air component commander and assigned or attached Service component forces. The A2 guides Service component intelligence forces and prioritizes intelligence efforts to support targeting activities. The A2 develops and maintains theater intelligence support to the targeting process, including federated and reachback support agreements consistent with JFC and air component commander guidance. The A2 integrates, prioritizes, deconflicts, and oversees target intelligence production in support of the air component. The A2 coordinates and collaborates with the JFC J-2 and the intelligence, surveillance, and reconnaissance division (ISRD) for issues impacting the JCMB and JTCB.

AFFOR A3. The AFFOR A3 supports the air component commander in directing and controlling air forces. With the A2, the A3 develops and maintains targeting guidance and procedures and integrates, prioritizes, deconflicts, and oversees target nomination and target development production to support the air component. The A3 can also represent the air component commander's prioritized target equities to the JFC, the intelligence, surveillance, and reconnaissance (ISR) enterprise, and national agencies. In some cases, the A3 will directly oversee the AOC.

Other Air Component Staff Organizations. The air component staff should align efforts with their joint counterparts to facilitate the targeting process. For example, the AFFOR A4 can help plan, monitor, and assess munitions availability and assist in assessing adversary sustainment capabilities in support of the targeting cycle. The A5 plans directorate can conduct comprehensive force-level movement and execution planning and is a focal point for planning not under the purview of the AOC. The commander's SJA can provide counsel throughout the targeting process to ensure adherence to ROE and LoW issues. The public affairs staff can help advise, plan, and assess the effects of targeting on the information environment in coordination with the JFC public affairs staff.[23]

UNIT LEVEL TARGETING

Individual units have targeting responsibilities that support and enhance AOC efforts and tactical level execution. Commanders, mission planners, and intelligence specialists within these units should ensure the validity and accuracy of the targeting information provided to them for mission planning purposes. This responsibility may include verifying ATO guidance, targeting coordinates, and adjudicating ATO errors or conflicts. Specific data provided to mission planners should be checked for integrity, including verification of target coordinates, elevations, weapon azimuths, and impact dive angles, fuzing instructions, collateral damage considerations, and target area graphics, when direct electronic transfer of such data is not possible or fails.

Air and ground units realize significant benefits when working together to plan missions at the tactical level. Army ground liaison officers working with tactical air units can provide insight into ground component plans and coordinate directly with missions flown in support of ground commanders. Air liaison officers are aligned with tactical ground maneuver units and serve as advisors to ground commanders on targeting and other

[23] For additional information on the AFFOR staff, see AFDP 3-0.1, *Command and Control*, and AFI 13-103, *Air Component Headquarters AFFOR Staff Operations, Readiness, and Structures*.

aspects of airpower. Such coordination is essential for joint operations.

In contested, degraded, and operationally limited (CDO-L) environments, units may continue operations and targeting responsibilities despite the lack of continuous communications with higher headquarters (HHQ). Subordinate commanders with the necessary authority, capability, and capacity to conduct the C2 process may be delegated authority to conduct operations. In this situation, subordinate commanders should ensure they operate in accordance with the air component commander's targeting intent and within the bounds of issued constraints and restraints.[24]

DISTRIBUTED OPERATIONS, REACHBACK, AND FEDERATED SUPPORT

To best manage the volume of targeting process requirements, the air component commander will arrange forces as required. The air component commander can internally arrange for distributed or split operations. If the requirements outpace internal capacity or if there are deficiencies in manpower and specialized expertise, the air component may request reachback support from other USAF organizations. However, to fully implement the targeting process, the air component should rely on a federated approach. Formal relationships for targeting support, through distributed operations, reachback, or federation, should be established and documented.

Distributed operations. Distributed operations in support of targeting occur when independent or interdependent forces, some of which may be outside the JOA, participate in the operational planning or decision-making to accomplish missions and objectives for the commander. Forces conducting distributed operations should be assigned or attached to a CCDR. The design of a distributed operation should enable a more resilient C2 network capable of distributing tasks, information, and responsibilities. The commander may establish a formal supported or supporting relationship between distributed nodes. In other instances, distributed nodes may have a relationship permitting direct liaison or coordination. Theater manning limitations and force protection concerns, coupled with advanced communications capabilities and C2 systems, have driven and enabled air component commanders to conduct distributed operations more frequently.[25]

Split operations. Split operations are a type of distributed operation. The term describes distributed operations conducted by a single C2 entity across two or more geographic locations. A single commander should have oversight of all aspects of a split operation. For example, sections of the ATO may be developed from a rear area or backup operation center to reduce the deployed AOC footprint. In this case, the AOC is geographically separated and is a split operation. During split operations, the air component commander has the same degree of authority over geographically separated elements as over the deployed AFFOR and AOC.

Reachback. Reachback is the process of obtaining products, services, applications,

[24] For additional information on unit level targeting, see AFTTP 3-3.IPE, *Integrated Planning and Employment*, AFTTP 3-4.14, *Contingency Intelligence Network (CIN)*, and Department of the Air Force Manual (DAFMAN) 14-401, *Intelligence Analysis and Targeting Tradecraft.*

[25] For additional information on distributed operations, see AFDP 3-0, *Operations*, and JP 3-30, *Joint Air Operations*.

forces, equipment, or material from organizations that are not co-located with the requestor.[26] Reachback may be provided from a supporting or supported relationship or by Service retained forces. This relationship provides the air component commander with the support needed to conduct operations while maintaining a smaller deployed footprint. The primary reachback capacity for air component targeting issues resides within Air Combat Command (ACC) and the 363rd Intelligence, Surveillance, and Reconnaissance Wing (ISRW) at Joint Base Langley-Eustis (JBLE-Langley), Virginia.

Reachback Support and the 363rd ISRW

The 363rd ISRW is a Service retained force that serves as the primary reachback organization for air component targeting process support. Requirements for production are communicated from the air components to the Wing on both an annual and ad-hoc basis. The commander, Air Combat Command (COMACC), prioritizes targeting and analysis resources and authorizes support to air components through an apportionment process.

Federation. Federated targeting support is a whole-of-government approach to target development and assessment that can provide support for the JFC and component commanders. Federated support is based on the needs of CCDRs, other JFCs, or the air component commander. Joint targeting federation needs are coordinated with the larger joint community and national agencies through the JTF staff J-2's targeting directorate. Coordination should delineate specific duties for federated partners, establish timelines, and determine the communication methods to be used.

Support Considerations. Air component and AOC strategists, planners, targeteers, and intelligence analysts are generalists in the sense that they know a wide variety of weapons, targets, and political systems. Reachback and federated targeting organizations have specialists with extensive knowledge of specific target systems and adversaries. Using this expertise is necessary to conduct effective target development that imposes the specific effects chosen by planners to achieve commanders' objectives.

Knowing the capabilities of various units and organizations is key to effectively using the reachback and federated system. Many organizations produce information and intelligence useful to targeting and assessment efforts. Leveraging the expertise of these organizations has always been important, but it is essential for an effects-based approach to operations, which relies on greater situational awareness, more comprehensive planning, and deeper knowledge of the adversary than an attrition-based approach.

Traditional approaches to targeting and assessment support have emphasized imagery intelligence, usually overhead imagery from satellites and reconnaissance aircraft. While imagery is still important, human intelligence (HUMINT), signals intelligence (SIGINT), measurement and signature intelligence (MASINT), and open-source intelligence

[26] JP 3-30, *Joint Air Operations,* approved in 2025, changed the definition of reachback from "…not forward deployed" to "…not co-located with the requestor."

(OSINT) can be equally, and sometimes more, important to targeteers and planners.[27] Collaboration with reachback and federated organizations may enable analysts to pull together this multitude of intelligence sources for targeting.

The USAF controls only its own reachback capabilities to meet air component requirements, whereas the joint and national systems are based on the needs of CCDRs or JFCs. These higher-level needs are coordinated with the wider joint community through the joint staff (JS) J-2, and the air component commander should submit requirements through the CCDR or JFC for joint or national federated support. In all cases, targeting support should be coordinated prior to hostilities. Such coordination should delineate specific duties for partners, establish timelines, and determine communication methods. Additionally, air component commanders should coordinate federated partner participation alongside internal reachback capabilities in theater exercises. Without proper coordination, federated partners may be unclear of duties once hostilities begin. Exercise participation may reveal points of friction, process errors, and operational limitations that coordination alone may not reveal. Federated partners may also face conflicting priorities when multiple contingencies occur simultaneously across different theaters, as most are not subordinate to a single, specific theater. Solid peacetime working relationships and shared experiences of targeting functions through exercise participation may help reduce the impact of such seams or priority conflicts.

Communications, information, and targeting systems of record should be established, tested, and coordinated to provide a seamless information flow of data between forward and rear locations. Denied, degraded, intermittent, or limited (DDIL) communication environments place additional stress on operations, and the development of resilient communication paths and robust primary, alternate, contingency, and emergency plans (PACE) can mitigate disruption to targeting information flow. Operations in a chemical, biological, radiological, or nuclear (CBRN) environment present significant challenges for communication of information among commanders, federated and reachback organizations, and fielded forces.[28]

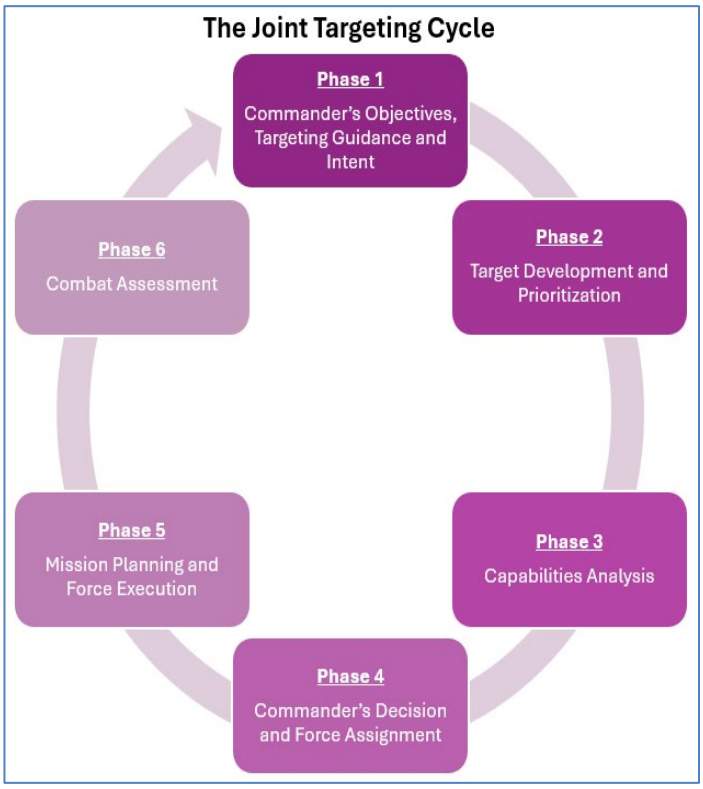
[27] For additional information on intelligence disciplines, see AFDP 2-0, *Intelligence*.
[28] For additional information on CBRN, see AFDP 3-40, *Countering WMD Operations.*

CHAPTER 3: THE TARGETING PROCESS

The targeting process is both a joint- and component-level process. The overall joint process is complicated by the need to deconflict target nominations across components and to integrate the engagement of those targets into the entire joint force. An effective joint targeting cycle framework, coupled with the separate yet related air tasking cycle, is essential for the air component commander to plan and execute joint air operations.

AIR COMPONENT CONTRIBUTION TO THE JOINT TARGETING CYCLE

Joint targeting requires extensive planning and support to enable military operations across the competition continuum. The joint targeting cycle described in joint doctrine is a framework to conduct the joint targeting process.[29] It is composed of six interrelated phases, which may occur independently or concurrently and are not necessarily constrained by time. This framework supports both deliberate and dynamic targeting while providing flexibility for changes in the OE. Many processes support or are supported by the joint targeting cycle, often in a symbiotic relationship, including the joint planning process, the joint planning process for air (JPPA), the joint intelligence process, and the air tasking cycle. The six phases are listed in the Joint Targeting Cycle figure.

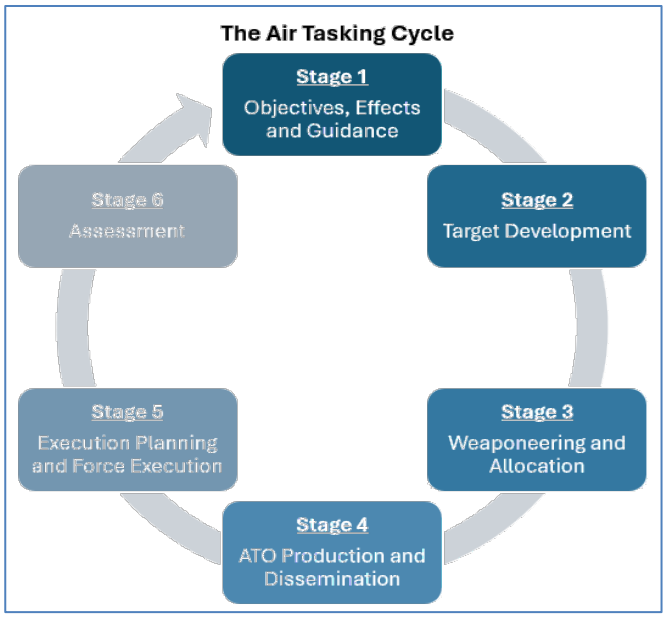


AIR COMPONENT SUPPORT TO THE JOINT TARGETING CYCLE

The joint targeting cycle is ongoing, with Airmen and the air component contributing to it daily across the entire competition continuum. The air component's primary effort during periods of cooperation and competition below armed conflict is concentrated on the foundational work of the first three phases. The preparatory effort ensures that if a crisis emerges, the joint force has a deep understanding of the adversary and a well-developed set of options ready for immediate consideration. This work includes developing and understanding the commander's objectives, developing and validating targets, and analyzing available capabilities. Air component involvement in these phases increases **if the JFC delegates joint targeting coordination authority to the JFACC**.

[29] See JP 3-60, *Joint Targeting*, for additional information.

TARGETING AND THE AIR TASKING CYCLE



The joint air tasking cycle is an analytical, systematic cycle that focuses air efforts on accomplishing operational requirements. Much of the cycle is conducted through an interrelated series of information exchanges and active involvement in planning, target development, air execution, and assessment, which provide a means to request and schedule joint air missions.

The air component leverages the six stages of the air tasking cycle to fulfill targeting tasks and to support the six phases of the joint targeting cycle. However, unlike the joint targeting cycle, the air tasking cycle is constrained by time. The six stages of the air tasking cycle promote flexibility and versatility with a series of ATOs and related products in progress at once and by responding during execution to changes in the OE. To review air component processes at each stage of the air tasking cycle, it is assumed they occur during the conflict portion of the competition continuum.

STAGE 1: OBJECTIVES, EFFECTS, AND GUIDANCE

Prior to this stage occurring, the continuous joint targeting cycle integrates the other processes of planning, intelligence, and operations to generate joint force guidance and develop targets. During this time, the air component develops a JAOP that supports the overall JFC objectives. These objectives provide focus for staff at all stages of the air tasking cycle and give targeting personnel the overarching purpose for their efforts.

To implement guidance, the JFC establishes a formal operational battle rhythm. This series of recurring meetings and working groups provides key touchpoints to integrate the targeting process across the joint force. Two such forums are the JTCB and JCMB.

Joint Targeting Coordination Board (JTCB). The JTCB is a group formed by the JFC to perform broad targeting oversight functions, typically chaired by the deputy JFC, the J-3, or a component commander. The JTCB provides a forum where components synchronize their targeting priorities and activities with their respective schemes of maneuver, ensuring all efforts are integrated to meet the JFC's objectives.

During this stage, representatives from the AOC Strategy Division (SRD) attend the JTCB to provide input on air component operations and, in turn, receive JFC guidance, intent, and apportionment decisions. Output from the JTCB will start development of the AOD.

Air apportionment recommendation. The AOC SRD determines the expected effort, expressed as a percentage or priority, to be devoted to the various air operations for a

given period. Air apportionment guidance should reflect prioritized operational objectives and applicable tactical tasks, with approximate weights of effort for each objective. The apportionment recommendation is approved by the JFC. Once approved, guidance from the JTCB and relevant cyberspace and space directives is integrated within the AOD.

Air Operations Directive (AOD). Formal AOD development starts with the JTCB. The SRD drafts the AOD for air component commander approval. The AOD is the primary vehicle for the air component commander to express intent, communicate the JFC's air apportionment decision, and outline desired effects for targeting. The AOD provides detailed, logical lists of effects-based tasks, ISR collection requirements, target prioritization, and guidance on considerations for TSTs. Measure of performance (MOP) and measures of effectiveness (MOE) are typically listed for collection requirements and to appropriately assess operations.

Joint Collection Management Board (JCMB). The JCMB is a group formed by the JFC to serve as a joint forum managing collection requests and coordinating collection operations. The JCMB chair is typically the J-2, and co-chaired by the J-3. Typically, the air component A2 or a member of the AOC ISRD coordinates with the JCMB and focuses on collection requirements to help assess the targeting process.

STAGE 2: TARGET DEVELOPMENT

The bulk of target development is completed by phase 2 of the continuous joint targeting cycle. In the time-bound air tasking cycle, the air component receives targeting guidance along with the joint target list (JTL), the restricted target list (RTL), and the no-strike list (NSL) from the JTCB. A JTL is a list of validated targets with no target engagement restrictions, whereas the RTL contains validated targets with engagement restrictions. The NSL is not a target list, but contains a list of entities that are protected from the effects of military operations under international law or ROE.

Component target nomination list (TNL). Guided by the desired effects listed in the AOD, the targeting effects team (TET) within the combat plans division (CPD) analyzes the menu provided by the JTL and RTL and avoids entities listed on the NSL. The TET coordinates with other AOC teams within the information warfare team (IWT) and the ISRD to select targets that best achieve the guidance listed in the AOD. This collaborative effort results in the creation of the air component target nomination list (TNL). Once approved by the air component commander, the TNL is sent to the joint fires element (JFE) for inclusion in the joint integrated prioritized target list (JIPTL). The JIPTL is a prioritized list of targets approved by the JFC that feeds the ATO process. After the JTCB review, the JFC approves the JIPTL.

The JFACC and the JIPTL

The JFC may delegate JIPTL coordination authority to the JFACC. In these cases, the TET will consolidate TNLs from the various components and create the draft JIPTL based on JTC Phase 2 processes outlined in JP 3-60. The JFC still serves as the final approval authority for the JIPTL.

Target Development Nomination (TDN). During this phase, the air component can submit TDNs to the JFC for inclusion on the candidate target list (CTL). The submitted TDN is developed, vetted (if required), and validated during the joint targeting cycle, then submitted to the JFC for approval. If rejected, the TDN can be subject to further target development. If approved, the target could be placed on the JTL, RTL, or GITL. The JFC may also prohibit or restrict joint force attacks on the TDN based on military risk, LoW, ROE, or other considerations such as civilian harm mitigation.[30] These restriction categories include an NSL and RTL.

Component Prioritized Collection List (CPCL). In parallel with the JTCB, the JCMB will propagate collection guidance to the components. Based on this guidance, the ISRD reviews the AOD and then begins identifying collection and exploitation requirements. Targeteers work closely with collection managers to ensure that target development, prestrike, and poststrike requirements are integrated into the collection plan, along with any changes that occur throughout the tasking cycle. Intelligence support is also required to prepare for future targeting during execution (e.g., to pre-task real-time ISR assets) and to support poststrike assessment of success. The initial effects of non-kinetic operations are often subtle or may be of short duration, serving primarily to enable other actions. It may take days, months, or even longer for their full effect(s) to emerge, if at all.

Joint Integrated Prioritized Collection List (JIPCL). Once the air component commander has approved the CPCL, the ISRD forwards it to the JCMB for inclusion in the JIPCL. The JIPCL is a prioritized list of intelligence collection and exploitation requirements needed to support future target development efforts and to measure whether desired effects and objectives are being achieved.

The JFACC and the JIPCL

The JFC may delegate authority to the JFACC to coordinate the JIPCL based on having the preponderance of theater ISR assets. In these cases, the ISRD will consolidate CPCLs from the various components and create the draft JIPCL prior to sending it for approval to the JCMB.

[30] For additional information on protection of civilians, see DoDI 3000.17, *Civilian Harm Mitigation and Response*.

Targeting Process Lists

Target Development Nomination List. A list of nominated entities that meet basic target development criteria but require intermediate target development before submittal as a candidate target. Once an entity has been identified as a potential target an electronic target folder (ETF) should be created.

Candidate Target List (CTL). A list of entities submitted by component commanders, appropriate agencies, or the joint force commander's staff for further development and inclusion on the joint target list, restricted target list, or the no-strike list.

Joint Target List (JTL). A consolidated list of validated and unrestricted targets of military significance within a joint force commander's operational area.

Restricted Target List (RTL). A list of restricted targets nominated by elements of the joint force and approved by the JFC or directed by higher authorities. Targets are restricted because certain types of actions against them may have negative political, cultural, or propaganda implications, or may interfere with projected friendly operations. Actions that exceed specified restrictions are prohibited until coordinated and approved by the establishing headquarters.

No-Strike List (NSL). A list of entities characterized as protected from the effects of military operations under international law or rules of engagement. The NSL is not a target list. The NSL, and the process inherently necessary to create one, reflect essential elements of US policy regarding the mitigation of civilian harm.

Global Integrated Target List (GITL). A list of targets not restricted to a geographic area that reflects joint or restricted validated targets to be prioritized and synchronized inside or outside of a supported combatant commander's area of responsibility.

Target Nomination List (TNL). A prioritized list of targets drawn from the JTL, or RTL, and nominated by component commanders, appropriate agencies, or the joint force commander's staff for inclusion on the JIPTL.

Joint Integrated Prioritized Target List (JIPTL). A prioritized list of targets approved by the joint force commander that feeds the integrated tasking order/air tasking order process. Of note, only those validated targets on the JTL, RTL, or GITL can be nominated to a JIPTL.

- JP 3-60, Joint Targeting

STAGE 3: WEAPONEERING AND ALLOCATION

Weaponeering and allocation are two aspects of the air tasking cycle that function together to produce the MAAP and are integral to targeting. During this stage, the approved JIPTL is pushed to the air component by the JFE. However, coordination for both weaponeering and allocation commences before this final JIPTL approval and continues into execution planning (stage 5).

Weaponeering. This is the process of determining the specific means required to create a desired effect on a given target. Weaponeering identifies the whole range of engagement options that may affect the target and highlights or selects the most appropriate engagement capabilities commensurate with desired effects for each phase of the campaign. Targeteers quantify the expected results of kinetic and non-kinetic capabilities employed against prioritized targets to create desired effects. This results in probable outcomes over many replications of an event. It does not predict the outcome of every munition delivery but represents statistical averages based on modeling, weapons tests, and real-world experience. Weaponeering is normally done by the Targets and Tactical Assessment (TTA) team from the ISRD using validated data and methodologies (see Appendix A).

Weaponeering for non-air domain targets is typically conducted by other components. Weaponeering for space (non-terrestrial) targets is conducted by the Combined Space Operations Center (CSpOC), in conjunction with US Space Command.[31] The 616th Operations Center coordinates solutions for cyberspace targets in conjunction with United States Cyber Command (USCYBERCOM), which is subsequently published via a cyberspace tasking order (CTO).[32]

The final weaponeering solution is chosen by the MAAP team. All approved targets are weaponeered and include the following weapon systems and collateral damage considerations:

Weapon System Considerations. Some weapons or capabilities require long lead times in planning, deployment, and approval, so they should be considered early and included at the beginning of the JPPA. Weaponeering should consider the availability of certain high-value weapons, which are normally limited in number and should be used only against targets that both require the weapon for a successful attack and are of sufficient priority to warrant expenditure. Many units specialize in weaponeering or point mensuration for specific munitions or target categories and can provide reachback capability (see Appendix B).

Collateral Damage. Collateral Damage is a form of collateral effect that causes unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time. Precautions should be taken to reduce the risk of harm to civilians, other persons, and protected objects.[33]

According to the LoW, expected incidental damage to civilian objects should not be excessive in relation to the expected concrete and direct military advantage to be gained. Collateral damage criteria were established based on this foundational principle. Furthermore, established ROE and the LoW also address concerns about collateral damage. Targeteers should comply with CDE directives and instructions.[34]

Collateral damage methodologies are aids to the decision-maker when approving targets for military action. They provide logical and repeatable methods to ensure due diligence in limiting civilian suffering while enabling the commander to assess risk in accomplishing military objectives. CDEs are not designed to limit military action, but to mitigate, as much as possible, unintended consequences. Certain levels of CDE require expertise beyond the air component commander or JFC and should be coordinated through the TTA team via reachback and federated relationships.

This also applies to non-AOC weaponeering and attack planning processes for non-kinetic operations and NLRPs. Coordination with the IWT is critical during this stage

[31] For additional information on US Space Command and targeting, see AFDP 3-14, *Space Support* and SDP 3-101, *Targeting*.
[32] For additional information on cyberspace operations, see AFDP 3-12, *Cyberspace Operations*.
[33] For additional information on protection of civilians, see DoDI 3000.17, *Civilian Harm Mitigation and Response.*
[34] See CJCSI 3160.01, *No-Strike and Collateral Damage Estimation Methodology,* for additional information.

to ensure all-domain operations (space, cyberspace, information, and electromagnetic warfare) are deconflicted, appropriately resourced, and phased over the operating area. TTA provides planners with a variety of tools to help summarize and quantify the effects of non-kinetic operations. Furthermore, it may be necessary to leverage specialized teams, as authorities may reside at CCMD or higher levels.

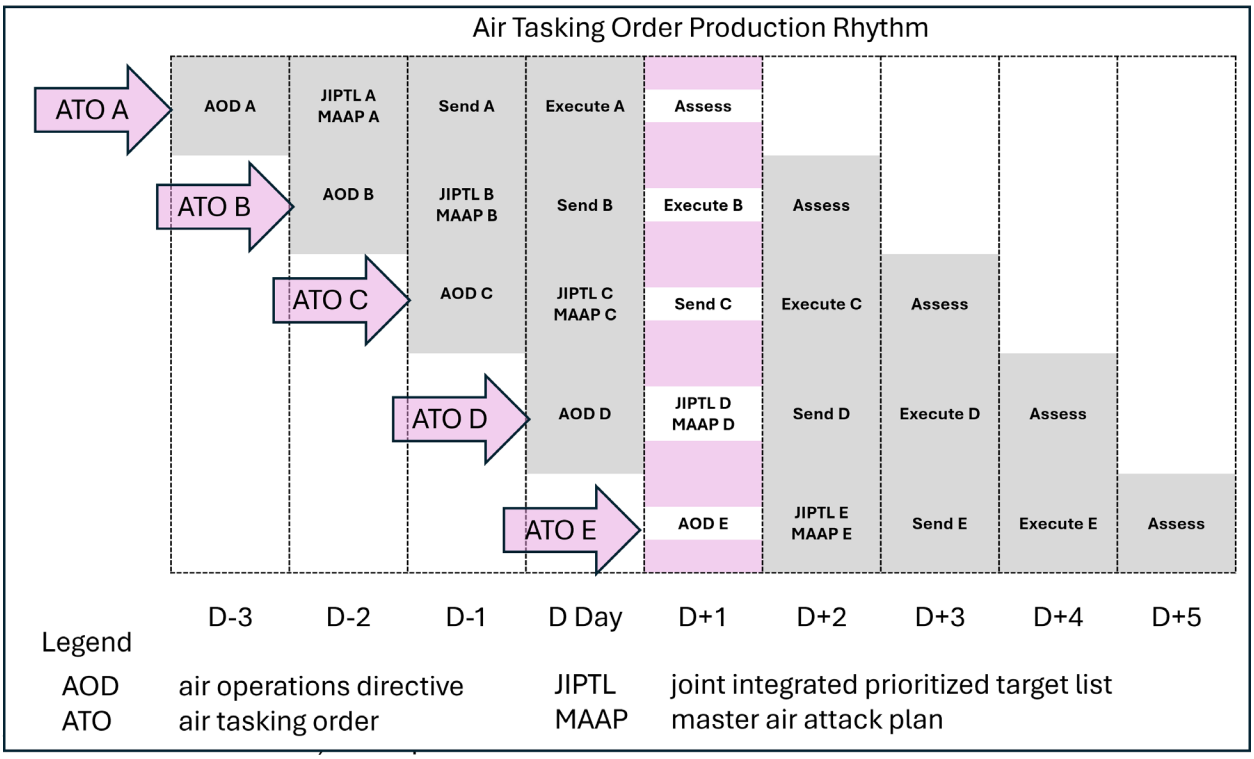
MAAP. The MAAP is the air component commander's time-phased air component scheme of maneuver for a given ATO period, synthesizing commander's guidance, desired effects, supported components' schemes of maneuver, friendly capabilities, and likely enemy COAs, and allocating friendly resources against approved targets.[35]

STAGE 4: ATO PRODUCTION AND DISSEMINATION

This stage finalizes the ATO and associated orders and disseminates them to combat units and is accomplished by the ATO production team located in the AOC's CPD. This stage is based upon commander's guidance (especially the AOD), the MAAP, and component requirements. The ATO, ACO, and SPINS provide operational and tactical direction at appropriate levels of detail. Concurrently with the ATO, the AOC should make targeting instructions and target materials available to tactical units to assist in their mission planning.

Considering the air tasking cycle is time-dependent, production requirements are built around time periods for planning, preparing, executing, and assessing. The Air Tasking Order Production Rhythm figure shows that on any given execution day, five ATOs are either being developed or processed.

STAGE 5: EXECUTION PLANNING AND FORCE EXECUTION



Execution planning includes the detailed preparation conducted by combat units after receipt of the ATO to enable decentralized execution. Targeting products created in previous stages become the primary references distributed to the unit level for execution planning, including coordinating and deconflicting changes to targeting information with tasked units. *Force execution* refers to the timeframe within which an ATO is executed by combat units (typically 24 hours). During force execution, targets are engaged and effects are created.

During this stage, the AOC is the focal point for changes to the ATO and serves as the centralized control node for tasking joint air capabilities and forces. The AOC's Combat Operations Division (COD) supervises the detailed execution of the ATO. Targeteers in the COD should be aware of all significant information on the current ATO, including targets, desired effects and objectives, guidance, ROE, weaponeering, and CDEs. Targeteers monitor ATO execution and recommend alternate targets when necessary.

During force execution, the OE changes due to factors such as weather fluctuations and the enemy response to friendly actions. The senior intelligence duty officer (SIDO) in the COD monitors the enemy during execution and provides further support via analysis, collection management, targeting, and assessment. Because of these dynamic factors in the OE, the air component commander may adjust planned operations and coordinate the redirection of specific sorties with the affected component commanders. The dynamic targeting portion of the JTC is established to facilitate this process.

The offensive operations team of the COD, led by the senior offensive duty officer (SODO), typically includes a dynamic targeting cell that coordinates the air component's dynamic targeting process. The DT cell integrates and synchronizes assets for all targets of opportunity and contributes to the deliberate planning and dynamic execution of on-call targets, as well as potential reattacks on planned targets. The dynamic targeting process will be discussed in the next section of this chapter.

STAGE 6: ASSESSMENT

Assessment is a continuous process that measures the overall effectiveness of employing joint force capabilities during military operations and is one of the four major C2 activities.[36] It is also the determination of the progress made toward accomplishing a task, creating a condition, or achieving an objective.[37] It helps answer basic questions that link performance and effects, such as:

- ✪ "Are we doing the right things?"
- ✪ "Are we doing things, right?"
- ✪ "Are we measuring the right things?"

Assessment is interwoven throughout the planning and execution stages. From the air

[36] For additional information on four major C2 activities and assessment, see AFDP 3-0.1, *Command and Control*.
[37] See JP 3-0, *Joint Operations*, for additional information.

component perspective, assessment is conducted at the unit level with intelligence and operational personnel estimating the mission's success and providing supporting data. These assessments include, but are not limited to, in-flight reporting, weapon system video (WSV), mission reports (MISREPs), full motion video (FMV), and cyberspace activities. At the operational level for the air component, an assessment is typically led by the operational assessment team (OAT) located in the SRD, which may leverage other organizations for reachback support. Assessment products are standardized but can be tailored to the level and type of assessment.[38]

Battle Damage Assessment (BDA). The purpose of BDA is to estimate target damage or effects resulting from the application of kinetic and non-kinetic capabilities.[39] Comprehensive BDA requires a coordinated and integrated effort between intelligence and operations functions. The SIDO can pass BDA collected in real time during the execution phase with the ISRD's TTA producing BDA reports. BDA is defined by three phases:

- **Phase I BDA:** The initial target assessment reporting on physical damage assessment (PDA) of the target. This BDA level phase is often derived from single-source reporting (e.g., sortie debrief, WSV review, initial imagery report).
- **Phase II BDA:** The initial functional damage assessment (FDA) of the target and an estimate of the recuperation time required to repair or reconstitute the target's function. This BDA level is often derived from the assessed physical damage and all-source intelligence.
- **Phase III BDA:** This is the target system damage assessment (TSDA), which encompasses all-source assessments of the change and remaining target system functional capabilities and capacities relative to the targeting objectives after military operations began. It is based on the FDAs of individual targets within the system and on changes driven by second- and third-order effects. This is normally produced by national-level intelligence agencies working closely with the joint force assessment teams (J2, J3, and J5).

Collateral Damage Assessment (CDA). This compares the CDE with the observed, inferred, or reported damage. If analysts anticipated collateral damage, CDAs may inform and refine CDEs.

Munitions effectiveness assessment (MEA). This combined operations and intelligence function evaluates if a munition performed as intended. Its findings provide immediate feedback to adjust current weaponeering and long-term data to update the Joint Munitions Effectiveness Manual (JMEM), ensuring more accurate future analysis.

Reattack Recommendations. These merge the picture of what was done (BDA) with how it was done (MEA) and compare the result with MOEs. Reattach recommendations

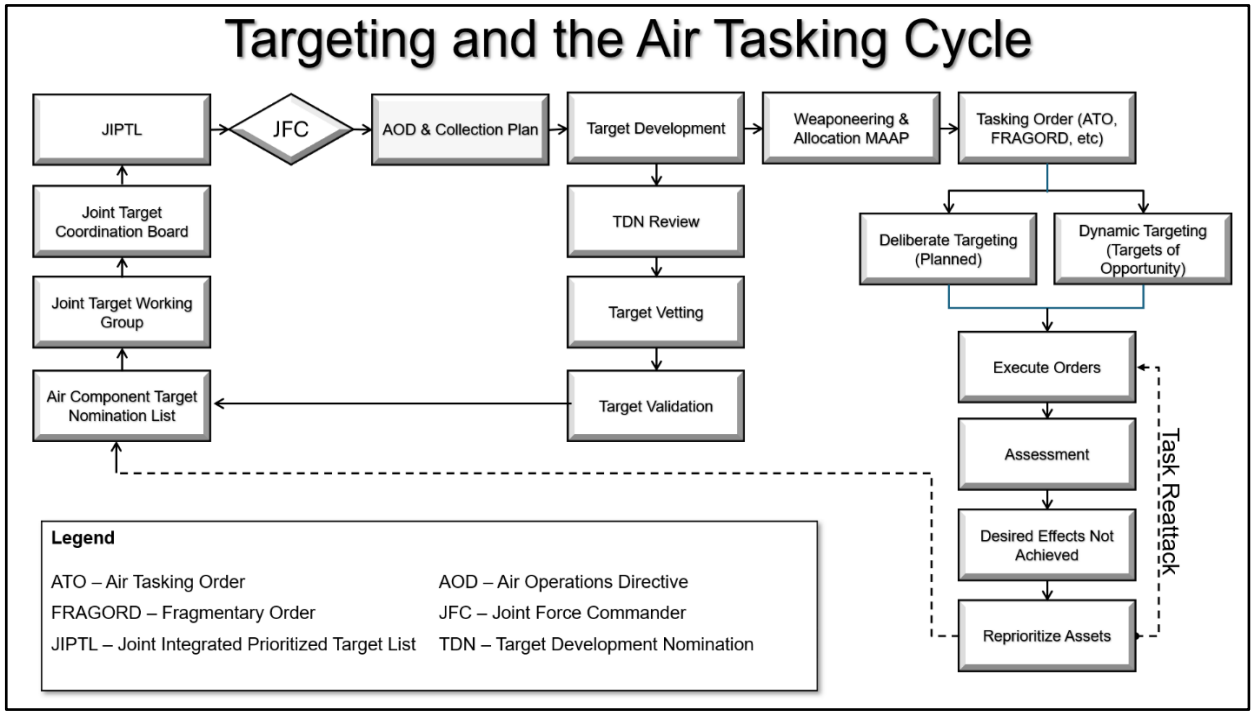
[38] For additional on tactical and combat assessment, refer to JP 5-0, Joint Planning, JP 3-60, *Joint Targeting*, AFTTP 3-2.87*, MTTP for Operation Assessment*, AFMAN 13-1AOCV3, CJCSI 3162.02, *Methodology for Combat Assessment,* and CJCSI 3370.01, *Target Development Standards*.
[39] See JP 3-60, *Joint Targeting*, for additional information.

typically come from the ISRD's TTA team.

The purpose of the assessment phase is to determine the degree of success in achieving objectives, formulate any required follow-up actions, or indicate readiness to move on to new tasks on the path to achieving overall JFC objectives. Assessment can happen internal to the AOC, but reachback and federated partners can assist with post-attack target assessment. Ideally, the same units that provide support for target development should also assist with assessment, regardless of the means of attack.

TARGETING AND THE AIR TASKING CYCLE KEY PROCESSES

Overall, the targeting process is integral to the air tasking cycle. This systematic cycle focuses the air component staff and joint air efforts on accomplishing operational requirements through a framework that is both deliberate and dynamic. The Targeting and the Air Tasking Cycle graphic highlights key processes within the air tasking cycle related to targeting in support of the overall JFC guidance and intent.



DYNAMIC TARGETING PROCESS

Dynamic targeting is defined as targeting that prosecutes targets identified too late or not selected for action in time to be included in deliberate targeting. Dynamic targeting is a process and not a mission type.[40] For the air component, the dynamic targeting process is typically coordinated by a dynamic targeting cell within the AOC's COD; however, each AOC may have a unique dynamic targeting process based on JFACC targeting guidance and theater requirements. JADOCS is usually the collaboration tool used within the AOC

[40] For further clarification of counterland missions versus the dynamic targeting process, see AFDP 3-03, *Counterland Operations*.

for detecting, engaging, and assessing targets prosecuted via dynamic targeting (see Appendix A: Targeting Automation). During dynamic targeting, on-call, unscheduled, and unanticipated targets are prosecuted using the condensed process of find, fix, track, target, engage, and assess (F2T2EA).

DELIBERATE VS DYNAMIC TARGET PROCESSES IN THE AIR TASKING CYCLE

Although the dynamic targeting process occurs during the execution stage of the air tasking cycle, targets prosecuted by dynamic targeting are still processed through all six stages. The Deliberate vs Dynamic Targeting in Air Tasking Cycle diagram highlights the similarities and differences between the deliberate and dynamic targeting processes across target types and the air tasking cycle stages. The target type most associated with dynamic targeting is the unanticipated target. However, most targets prosecuted via dynamic targeting fall into the on-call or unscheduled target categories. On-call targets are included in the ATO along with the planned targets, but since the coordinates are unknown, no precise engagement time is listed. Unscheduled targets are developed similarly to on-call targets but do not meet the priority to make the ATO and are accounted for in planning in case they are detected (thus the change in doctrine from “unplanned” to “unscheduled” targets). Overall, both deliberate and dynamic targeting adhere to target development standards throughout the six stages of the air tasking cycle. However, during the dynamic targeting process, target development is accomplished with compressed timelines. Targets engaged through dynamic targeting may not be characterized to the same level of detail before prosecution as occurs with deliberate targeting. Thus, a target should be considered fully developed when sufficient target intelligence and legal reviews support engagement.

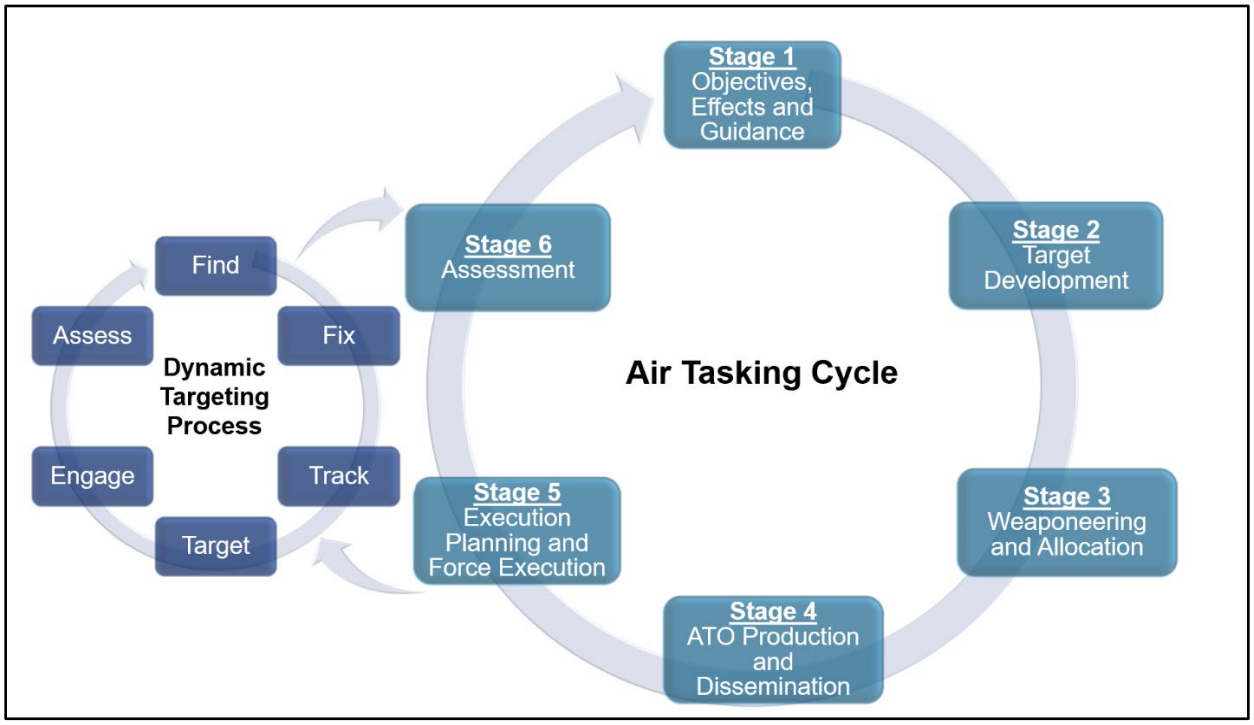
Deliberate Vs Dynamic Targeting in Air Tasking Cycle

Air Tasking Cycle Stages	Deliberate Targeting (Planned)		Dynamic Targeting (Targets of Opportunity)	
	Scheduled Targets	On-Call Targets	Unscheduled Targets	Unanticipated Targets
Stage 1: Objectives, Effects, & Guidance	Known targets	Known targets	Target of opportunity known to exist in the operation environment	Unknown or unexpected targets
Stage 2: Target Development	Included on JIPTL and ATO	On JTL/RTL and on JIPTIL but unlocated	On JTL/RTL but not on JIPTL. Engagement not expected	Not initially on JTL/RTL. Can be developed for JTL/RTL
Stage 3: Weaponeering & Allocation	Databased coordinates & CDE	Coordinates not databased	Coordinates not databased	Coordinates not databased
Stage 4: ATO Production & Dissemination	MAAP for deliberate strikes	MAAP for force packaging	Packages dynamically tasked	Packages dynamically tasked
Stage 5: Execution Planning & Force Execution	Planned for a specific time per the ATO	No planned engagement time, executed dynamically	Packages dynamically tasked	Packages dynamically tasked
Phase 6: Assessment	Typically, imagery based	Can be single source; physical damage	Can be single source; physical damage	Can be single source; physical damage
The same standards apply to all targets. Time constraints lead to rapid development.				

Dynamic Targeting within the Air Tasking Cycle

DYNAMIC TARGETING KILL CHAIN

The USAF follows the F2T2EA method for dynamic targeting process. This method is colloquially referred to as the "kill chain." The kill chain applies not just to kinetic means, but also to military capabilities that achieve lethal or nonlethal effects through non-kinetic means, such as operations in the information environment, the electromagnetic spectrum, cyberspace, or space. The decision to employ these capabilities is based on their availability, desired effects, potential consequences, and the JFC's guidance. Of note, aircraft systems that carry both ISR and weapons capability, along with target engagement authority, may accomplish all six steps from a single platform. See each step of the kill chain in the Dynamic Targeting Process and Air Tasking Cycle diagram.[41]



DYNAMIC RESCUE

Dynamic rescue is the utilization of the DT process to complete the rescue and recovery of isolated personnel (IP). Dynamic rescue offers a streamlined approach to personnel recovery (PR), especially in hostile or time-sensitive situations. Adapting the familiar DT process enables clear communication and coordination across teams, integrating resources like ISR, C2, and kinetic/non-kinetic capabilities. This mirroring of combat operations procedures, using established terminology and processes, allows for rapid assessment, prioritization, and execution of tasks, which are crucial when the recovery window is limited.

Recognizing the potential need for significant force reallocation and mission reprioritization in PR, dynamic rescue mandates close collaboration between DT and PR

[41] For additional information on dynamic targeting process and air component activities during DT, see ALSSA MTTP, *Dynamic Targeting*, and AFTTP 3-3.AOC, *Combat Fundamentals Air Operations Center*.

teams. This fosters a shared understanding and maximizes the impact of available resources. By employing the well-understood DT process, commanders can rapidly identify, plan, and direct resources to execute a successful rescue.[42]

[42] For additional information on dynamic rescue, see AFDP 3-50, *Personnel Recovery*, ALSSA MTTP *Personnel Recovery*, and AFTTP 3-3.IPE, *Integrated Planning and Employment.*

APPENDIX A: TARGETING AUTOMATION

Inputting, updating, and verifying the vast amount of data needed to execute every stage of the targeting cycle requires automation to function successfully. Targeting automation leverages technological advances in software coding, computing, and network bandwidth to support the joint targeting process more efficiently and effectively. Targeting automation uses artificial intelligence and machine learning systems, applications, and database technologies to accelerate intelligence-driven development, data management, and information accessibility, systematically linking objectives and guidance to the target information and assessments required.

Two foundational elements of targeting automation are common target data standards and data interoperability. These elements enhance the ease of information sharing amongst components, joint force elements, federated and reachback organizations, and multinational partners. This emphasis on sharing allows targeting automation to facilitate real-time, virtual, collaborative, and multilayered security analysis and planning.

Finally, target automation is necessary to achieve the mass and speed required for targeting in a peer conflict. Targeting automation architecture should accommodate data transfer in contested, degraded, or operationally limited environments. It should also evolve to include both kinetic and non-kinetic capabilities to more fully exploit an effects-based approach to operations. [43]

COMMON TARGETING TOOLS AND APPLICATIONS

Joint Targeting Intelligence Modernization (JTIM). JTIM is a combined Office of the Undersecretary of Defense (OUSD) for Intelligence and Security and JS J-2 initiative to enhance the targeting cycle and targeting enterprise to deliver intelligence to warfighters by defining and monitoring progress toward a resilient, secure, and scalable array of enterprise-level data, products, and services.

Modernized Integrated Database (MIDB) / Machine-assisted Analytic Rapid-repository System (MARS). MIDB is DoW's authoritative, all-source repository of worldwide general military and target intelligence. The Defense Intelligence Agency (DIA) is the functional manager for MIDB. MIDB's architecture consists of databases that continuously replicate worldwide amongst hundreds of nodes on a variety of networks and between different security levels. This architecture provides the infrastructure for data exchange between intelligence and operational consumers from national to tactical levels. MIDB provides a baseline source of intelligence on installations, facilities, military forces, population concentrations, C2 structures, and equipment, as well as target details. Because of MIDB's replication architecture and business rules designed to protect data integrity, MIDB serves as the national database for all target lists, NSLs, and textual data in electronic target folders. Many targeting automation tools pull from MIDB. The replacement for MIDB will be MARS.

[43] For additional information on targeting automation, see Appendix B of JP 3-60, *Joint Targeting*.

Joint Targeting Toolbox (JTT). JTT is the joint targeting tool of record. JTT is a suite of software modules specifically engineered to optimize the joint targeting process throughout the entire JTC. JTT pulls data from MIDB and provides functionality for target development and analysis, weaponeering, and the nomination of applicable targets for attack. JTT is used to access target details and target lists and to create the JIPTL. JTT utilizes the Global Command and Control (GCCS) System Integrated Imagery and Intelligence (GCCS-I3) data architecture for connectivity to all components and CCMDs.

Digital Imagery Exploitation Engine (DIEE). DIEE is a government off-the-shelf (GOTS) software tool initially designed to perform ATD. DIEE is a vital software program for the entire targeting enterprise and provides digital solutions for essential JTC functions across the US and coalition partners. DIEE functions include geographically locating and characterizing the target, weaponeering the target, performing target coordinate mensuration, determining CDE using the Digital Precision Strike Suite Collateral Damage Estimation (DCiDE) tool, and providing product and output graphics.

Joint Munitions Effectiveness Manual (JMEM) Weaponeering System (JWS). JWS combines a series of weapon system characteristics, delivery accuracy, and target vulnerability data to estimate the final aimpoint, delivery conditions, and the number of weapons on target necessary to achieve CCDR's desired lethal effects.

Cyberspace Operations Lethality Estimation (COLE). COLE is a cyberspace operations weaponeering system that enables accurate characterization of targeted networks, identification of vulnerabilities, and matching capabilities to estimate the probability of success for cyberspace effects operations.

Digital Precision Strike Suite Collateral Damage Estimation (DCiDE). DCiDE is the program of record for CDE. CDE is the holistic process of determining the potential for collateral damage resulting from target engagement. While CDE can be calculated manually, automated tools help identify undesired consequences and hazards posed by weapons effects and aid in making recommendations to mitigate those effects in compliance with ROE and LoW. CDE analysts should apply the specific guidance and data in CJCSI 3160.01D, *No-Strike and CDE Methodology*.

Joint Automated Deep Operations Coordination System (JADOCS). JADOCS is an Army-developed mission management software application used by joint and coalition forces that can reside on all classified networks and facilitate the entire JTC. JADOCS provides a suite of tools and interfaces that enable nominating, vetting, assigning, and planning cross-component, multi-domain dynamic targeting missions. It can also build target lists for the deliberate targeting process. It interfaces with systems and applications such as the GCCS family of systems, theater battle management core system (TBMCS), MIDB, and certain coalition systems. JADOCS software provides integration between multiple joint C2 systems of the uniformed services involved in the targeting process, including the AOC. JADOCS increases situational awareness from CCMD JFE through component fires, coordinating an executive-level update of the target, including the estimated and actual times on target as well as a common operational picture (COP). The AOC uses JADOCS as a collaboration tool for detecting, engaging, and assessing a target of opportunity or a JFC/component critical target, and for planning, coordinating,

and conducting operational fires and precision engagements against deep and TSTs. In the AOC, JADOCS is typically used by the dynamic targeting cell, the PR cell, and the SIDO team in the Combat Ops Division.

JADOCS pulls in coalition information for real-time targeting and fires coordination between multiple Joint and coalition forces. As a software-only capability loaded on the unit's laptops, it provides multiple users with a COP to help them determine which forces observe, track, and strike the target. JADOCS provides detailed information about each target, including capabilities to enable fire support personnel to positively identify targets, estimate collateral damage, avoid fratricide, and assess battle damage poststrike.

Theater Battle Management Core System (TBMCS). TBMCS is a force-level, integrated air C2 system. TBMCS provides hardware, software, and communications interfaces to support the preparation, modification, and dissemination of the force-level air battle plan. TBMCS provides applications and communication interfaces that allow the ground commander to nominate, track, and verify targets in the ATO and deconflict airspace with the ACO.

Geospatial Intelligence (GEOINT) Tools. GEOINT 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.[44] GEOINT is necessary for visualizing the operating environment, enabling planners to view natural and cultural features. Most geospatial products are now presented in digital formats and available through web access and automated means.

Targeteers need access to current imagery for target development and assessment. Numerous types of geospatial imagery products can be requested from various joint and national agencies, service centers, and component organic production, exploitation, and dissemination organizations. Imagery sources include national technical, tactical, or commercial means.

Targeteers also require mensuration tools to provide precise coordinates with the accuracy necessary for precise munitions employment. Point mensuration tools needed for these activities include a digital point position database, controlled and rectified by the National Geospatial-Intelligence Agency (NGA).

Integrated Munitions Effects Assessment (IMEA). IMEA is specialized weaponeering software that supports the targeting of hard and deeply buried targets (HDBT) and WMD. IMEA can characterize buildings, bunkers, tunnels, and open-air targets, predict weapons effects from conventional weapons, and calculate the number of weapons and associated aimpoints that achieve a commander’s objectives. IMEA can also augment JWC.

[44] See DoD Dictionary definition for GEOINT.

APPENDIX B: TARGETING SUPPORT AGENCIES

Support organizations and agencies to provide the air component with in-depth knowledge and targeting expertise. Since theater forces typically cannot fulfill all targeting and assessment requirements internally, multiple organizations collaborate to facilitate the targeting process via federated, reachback, and general analytic support to target intelligence. The following list includes potential partners for this support. This list is not all-inclusive, nor will all these organizations necessarily support every operation.

AIR FORCE

AF/A2 and AF/A3 are the focal points for coordinating the USAF's targeting and assessment reachback support. AF A2 provides oversight of USAF targeting policy, administration, and readiness, including AF TCM and CDE training programs. Additionally, these organizations are executive members of the Military Targeting Committee (MTC) Executive Steering Committee (ESC).

National Air and Space Intelligence Center (NASIC) is the USAF's service intelligence center and a field operating agency that reports directly to the Deputy Chief of Staff for Intelligence (HAF A2). NASIC produces integrated and predictive air, space, and specialized intelligence supporting military operations while also enabling forces to avoid technological surprise by countering existing and evolving air and space threats.

Air Combat Command (ACC) is the lead command for integrating, synchronizing, and advocating USAF targeting requirements. They also organize, train, equip, and present assigned forces and capabilities to joint warfighters. ACC/A2 plays a large part in coordinating reachback support for the targeting process.

Sixteenth Air Force (16 AF) leverages ISR, cyberspace operations, electromagnetic warfare, weather, public affairs, and information capabilities to provide multi-source intelligence, targeting support, and mission integration support to the USAF targeting enterprise, as well as mission integration at the operational and tactical levels via the 616th Operations Center (616 OC).

The 363d ISRW is the USAF's lead wing for targeting. It provides operations planning and execution support to major commands, component numbered air forces, and theater AOCs. The 363 ISRG, formerly known as the Air Force Targeting Center, executes targeting functions, including intelligence and nonlethal targeting support, through end-to-end analysis and production. Subordinate 363 ISRG units also include Air Force Reserve Command and Air National Guard targeting units that provide steady-state and surge-to-war target production and analysis capability accomplished through the use of imagery analysts, targeteering analysts, signals analysts, all-source analysts, and intelligence applications. The 363 ISRW also executes additional targeting functions through the 365 ISRG, including exercise support and direct intelligence support to United States Air Force Central Command (USAFCENT).

The 480th ISRW is the lead wing for the AF DCGS and provides national cryptologic, information technology, cyberspace ISR, tactical analysis, DOF, air component command

support, and national-to-tactical SIGINT integration. The 480 ISRW leverages federated mission partners to synchronize timely, significant intelligence using a problem-centric, sensor-agnostic approach in support of priority theater intelligence problems.

The 70th ISRW serves as the USAF's cryptologic wing. The 70 ISRW executes global ISR missions to enable effects for the National Command Authority, the joint warfighting team, air component operations, and USAF mission partners. Additionally, the 70 ISRW directs ISR support to US Cyber Command, with a focus on digital network analysis and computer network exploitation to enable cyberspace effects.

Air Force Office of Special Investigations (AFOSI) is a field operating agency under the administrative guidance and oversight of the Inspector General of the Air Force (SAF/IG). It is a federal law enforcement agency, and its primary responsibilities are criminal investigations and counterintelligence (CI) services. AFOSI is also a combat ready military organization that provides the USAF a wartime capability to conduct counter-threat operations, including counterespionage, counterterrorism, and other force protection activities. AFOSI is the USAF's focal point for working with US and foreign nation law enforcement and security services to provide timely and accurate threat information in all environments. AFOSI is the only USAF entity with CI authority, and per JP 3-60, *Joint Targeting*, CI is a key element of federated production planning and BDA.

AMC Intelligence Directorate (AMC/A2) coordinates with US Transportation Command (USTRANSCOM) to maintain databases on airfields worldwide in the event AMC must use those bases. Such information may be useful when targeting enemy airfields.

Air Force Materiel Command (AFMC) manages installation and mission support, discovery and development, test and evaluation, and life cycle management services and sustainment for every major USAF weapon system. AFMC also provides effective nuclear materiel management (NMM) support to the warfighter by managing human capital, organizations, processes, and procedures used to conduct, execute, and support nuclear deterrence. NMM responsibilities span all AFMC and HQ organizations and focus on providing agile cradle-to-grave support to the warfighter.

Air Force Nuclear Weapons Center (AFNWC) is the AFMC-supported center that synchronizes NMM on behalf of AFMC and in direct support of Air Force Global Strike Command (AFGSC). Commander, AFNWC is dual-hatted as the Air Force Program Executive Officer for Strategic Systems with a mission to deliver nuclear capabilities warfighters use every day to deter and assure.

Air Force Life Cycle Management Center (AFLCMC) Armament Directorate designs, develops, produces, fields, and sustains a family of air-to-ground and air-to-air munitions for both US and allied nations to defeat a spectrum of enemy targets. The information they provide may be beneficial during weaponeering and conducting MEA.

Air Force Research Laboratory (AFRL) is the DAF’s primary scientific research and development center and plays an integral role in leading the discovery, development, and integration of warfighting technologies for air, space, and cyberspace forces. AFRL's Munitions Directorate (RW) develops superior technology and cost-effective weapons for

high-accuracy, all-weather, day-or-night strikes against ground targets.

Air Force Global Strike Command (AFGSC) is a component MAJCOM of USSTRATCOM. AFGSC provides combat ready forces for deterrence and global strike operations on behalf of the President and CCDRs.[45] Per Air Force Program Directive 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*, AFGSC is the lead command for intercontinental ballistic missile systems (Minuteman III and Sentinel), B-1 conventional bombers, B-2/B-52 bombers with nuclear and conventional missions, B-21 development and fielding, E-4B (National Airborne Operations Center) aircraft, UH-1N/MH-139 helicopters with escort and emergency response missions, gravity and precision guided nuclear weapons, nuclear cruise missiles, Mobile Consolidated Command Center, the USAF nuclear command, control, and communications (NC3) weapon system, and supporting squadrons.

JOINT ORGANIZATIONS

Intelligence Directorate (J-2), **Deputy Director for Targeting (J2T)** is the national-level focal point for crisis intelligence support to military operations, indications and warning intelligence in DoW, and Unified Command intelligence requirements. J2T is the coordinator for all joint and national federation target intelligence needs of a CCMD or JTF and works with the National Joint Operations and Intelligence Center (NJOIC). The AOC coordinates its federation needs with the JFC's J-2 after determining which of its needs can be met using USAF reachback partnerships.

Joint Information Warfare Center (JIWC) enables the application of information power at the strategic level as a Chairman of the Joint Chiefs of Staff-controlled activity under the supervision of the JS Director for Operations. This center supports global integration of the Information joint function and leads Joint Information Force development to improve the DoW's ability to gain, maintain, and exploit information advantages across the competition continuum. Planners should coordinate with the JIWC to enable the application of informational power and facilitate information environment related intelligence that can be tailored for integration into TSA and electronic targeting folders.

Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME) was chartered in 1968 to serve as the DoW's focal point for munitions effectiveness information. Under the oversight of the Secretary of Defense's Office of the Director for Operational Test and Evaluation, the JTCG/ME program develops, advances, and sustains modern targeting software. These tools, frequently referred to as JMEM products, are used to develop operational effectiveness and CDEs and optimize all non-nuclear munitions for the DoW. JTCG/ME is managed through the program office within the Army Materiel Systems Analysis Activity at Aberdeen Proving Grounds, Maryland.

COMBATANT COMMAND ORGANIZATIONS

Joint Intelligence Operations Centers (JIOCs) centralize theater intelligence tasking, collection, analysis, and production. Their targeting offices create target folders based on

[45]See AFI 13-500, Air Force Nuclear Mission Responsibilities, for additional information.

deliberate planning and taskings. JIOCs are located within all CCMDs (referred to as the Joint Analysis Center in US European Command). They coordinate with theater J2s and maintain the JTL, NSL, and RTL for specific OPLANs or contingency plans (CONPLANs). JIOCs have liaisons from the major national intelligence agencies to facilitate effective national intelligence support to the theaters. The functional commands: USSTRATCOM, USTRANSCOM, and USSOCOM, also have a JIOC.

Air Component A2 Staff validates and endorses target development priorities with ACC, 363 ISRW, the 616 Operations Center, and 16 AF on behalf of the Command's AOCs. This coordination enables reachback, distributed, and federated requirements are properly estimated based on internal AOC capacity and documented in plans and directives such as the AOD.

United States Cyber Command (USCYBERCOM) plans, coordinates, integrates, synchronizes, and conducts activities to direct the security, operation, and defense of the DoD information network (DoDIN). When established, in accordance with AFMAN 13-1AOCV3, the Director of Cyberspace Forces (DIRCYBERFOR/DC4) is the senior cyberspace advisor to the COMAFFOR/JFACC for the integration of the DoDIN, defensive cyberspace operations, and offensive cyberspace operations capabilities in support of air component operations.

United States Space Command (USSPACECOM) supports the joint targeting process by planning, coordinating, integrating, and executing offensive and defensive space operations. USSPACECOM also provides key space capabilities to other CCMDs for precision targeting and deterrence, supporting the JFCs' objectives. A USSPACECOM Joint Integrated Space Team (JIST) co-located within each CCMD provides additional advice on the employment of space capabilities. The CSpOC supports duties associated with the coordination of space operations.

Combined Space Operations Center (CSpOC) executes operational C2 for space forces under Space Forces Space to achieve theater and global objectives. It continuously coordinates, plans, integrates, synchronizes, and executes space operations, providing tailored space effects on demand to support CCDRs. The CSpOC ISRD provides timely, predictive, and actionable intelligence to support the space tasking cycle and target development for worldwide terrestrial operations.

United States Strategic Command (USSTRATCOM) supports targeting with assigned forces including the JWAC, the joint electromagnetic spectrum operations (JEMSO) office, and the 608 AOC.

Joint Warfare Analysis Center (JWAC) is a functional component of USSTRATCOM that provides CCMDs, Joint Staff, and other customers with effects-based, engineering, and scientific analysis and precision targeting options for selected networks and nodes to carry out the national security and military strategies of the United States during peace, crisis, and war. JWAC provides innovative and accurate engineering and modeling-based targeting options with an understanding of risks and consequences, including CDEs.

Joint Electromagnetic Spectrum Operations (JEMSO) Office is aligned under USSTRATCOM J-3 as the DoW operational lead for electromagnetic spectrum operations. The JEMSO Cells develop and execute processes to integrate command EMS related staff actions, offices, and activities to support mission requirements and to carry out JEMSO related responsibilities for each specific CCMD. EMSO planners, including weapons system SMEs who serve as liaison officers, are integrated into each AOC division.

US Strategic Command (USSTRATCOM) Joint AOC (608 AOC) executes USSTRATCOM's Air Tasking Cycle through all phases of conflict. It provides the JFACC assessments of operational-level plans and target development for global bomber missions. It also provides situational awareness of all USSTRATCOM airborne/alert aircraft through all phases of conflict. Other responsibilities include building enduring processes with the geographic CCMDs and other functional AOCs through planning and integration to enable unity of effort in support of military and national security operations.

United States Special Operations Command (USSOCOM) provides planning and execution of global special operations activities and missions with four components and one sub-unified command, the Joint Special Operations Command (JSOC). Within the AOC, SOLE personnel enable targets, teams, air taskings, and missions are coordinated during all planning and execution phases.

OTHER DOW ORGANIZATIONS

The National Ground Intelligence Center (NGIC) is the US Army's main intelligence production center that provides a wide variety of ground forces intelligence. The NGIC produces scientific and technical intelligence and military capabilities analysis on foreign ground forces in support of national policymakers, joint force warfighters, and research and development communities.

The Office of Naval Intelligence (ONI) is the leading provider of maritime intelligence to the US Navy and joint warfighting forces, as well as national decision-makers and other consumers in the Intelligence Community. ONI has five Centers of Excellence, each a distinct command. It also has the Farragut Technical Analysis Center, which conducts strategic scientific and technical intelligence analysis of foreign technologies, sensors, weapons, platforms, combat systems, C4ISR, and cyber capabilities.

The Marine Corps Intelligence Activity (MCIA) is the service intelligence center of the US Marine Corps that provides tailored intelligence for littoral areas.

The National Space Intelligence Center (NSIC) is a field operating agency of HQ US Space Force that provides foundational, scientific, and technical intelligence to inform national leaders, joint force warfighters, and acquisition professionals.

NATIONAL AGENCIES AND ORGANIZATIONS

Defense Intelligence Agency (DIA) is a major producer and manager of foreign military intelligence with a worldwide outlook. DIA provides worldwide support to military operations by producing completed target intelligence for SecDef, CCDRs, and JFCs.

Analysts across the agency directly support joint targeting efforts by performing foundational military intelligence, all-source analysis, and production to support target development, target material production, and assessment, center in Washington, DC, also maintains two specialized centers, the Missile and Space Intelligence Center (MSIC) and the National Center for Medical Intelligence (NCMI).

Missile and Space Intelligence Center (MSIC) provides worldwide scientific and technical intelligence concerning threat guided missile systems, directed energy weapons, selected space programs or systems, and related command, control, and communications to support operationally deployed forces. MSIC has experts knowledgeable on surface-to-air missiles (SAMs), systems as well as short-range ballistic missiles.

National Center for Medical Intelligence (NCMI) produces finished, all-source medical intelligence in support of military planning and operations. It prepares assessments, forecasts, and databases on worldwide infectious disease occurrence, global environmental health risks, foreign military and civilian healthcare capabilities and trends, and militarily significant life science technologies.

National Geospatial-Intelligence Agency (NGA) is the primary national producer of GEOINT, which is the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the Earth. NGA's analysts assist in federated target development and assessment using GEOINT analytical techniques and technologies, controlled source material, and refined mensuration techniques and data. NGA contributes to military operations by supplying the intelligence, mission-specific datasets, and foundational data to support targeting. NGA also produces many of the maps and charts Airmen use.

National Security Agency (NSA) is a combat support agency that employs mathematicians, linguists, engineers, and computer scientists focusing on SIGINT and information assurance. NSA's employees collect, process, analyze, and exploit adversaries' communications to better understand adversary capabilities, actions, and intent. NSA maintains its HQ at Fort Meade, Maryland, and has four cryptologic centers, each with a regional focus.

Defense Threat Reduction Agency (DTRA) is a combat support agency charged with providing cross-cutting solutions to enable the DoW, the US Government, and international partners to: deter strategic attacks against the United States and its allies, prevent, reduce, and counter WMD and emerging threats, and prevail against WMD-armed adversaries in crisis and conflict.[46]

Central Intelligence Agency (CIA) gathers, analyzes, and produces most of the nation's HUMINT. This type of intelligence may provide targeteers with information unavailable through other collection methods, which may be particularly important for terrorist organizations with distributed networks and limited physical infrastructure.

Department of State (DOS) is the lead foreign affairs agency and enabler of US

[46] For additional information DTRA, see DoDD 5105.62, *Defense Threat Reduction Agency (DTRA).*

diplomacy with a unique perspective on the nations of the world. The point of contact with DOS for intelligence, analysis, and research is the Bureau of Intelligence and Research (INR). Information concerning political and military leaders, cultural trends, and economics can be valuable for a truly effects-based approach to conflict.

Department of Homeland Security (DHS) encompasses Customs and Border Protection, Transportation Security Administration, Secret Service, and the Coast Guard. DHS gathers intelligence via its domestic counterterrorism and disaster response missions. Airpower planners may be able to use DHS-derived intelligence to identify foreign-based terrorist organizations and infrastructure.

The Department of Energy (DOE), through its national laboratories, provides significant CBRN analysis data related to facilities and installations associated with the proliferation of WMD. The Department of Energy can also provide prediction models and assist in consequence analysis of CBRN threats. The Department's Office of Intelligence and CI provides timely technical intelligence analysis supporting policymakers, national security missions in defense, homeland security, cyber security, intelligence, and energy security.

The Department of the Treasury (DOT) can support the joint targeting process for counter-threat finance issues. The Department of the Treasury's Office of Foreign Assets Control and Office of Terrorism and Financial Intelligence administer and enforce economic and trade sanctions, based on US foreign policy and national security goals, against certain national security threats (e.g., rogue nations, terrorist facilitators, WMD proliferators, money launderers, transnational criminal organizations).

Department of Justice (DOJ) subordinate organizations, such as the Federal Bureau of Investigation (FBI) and the Drug Enforcement Administration (DEA), can aid targeting efforts when their investigations lead to foreign-based terrorist or criminal infrastructure. The FBI is tasked with penetrating terrorist organizations and other national security threats, while the DEA shares drug-related information with the intelligence community.

REFERENCES

All websites accessed 05 April 2026.

US AIR FORCE DOCTRINE: https://www.doctrine.af.mil/

- AFDP 1, *The Air Force*
- AFDP 2-0, *Intelligence*
- AFDP 3-0, *Operations*
- AFDP 3-0.1, *Command and Control*
- AFDP 3-03, *Counterland Operations*
- AFDP 3-12, *Cyberspace Operations*
- AFDP 3-14, *Space Support*
- AFDP 3-40, *Countering Weapons of Mass Destruction Operations*
- AFDP 3-50, *Personnel Recovery*
- AFDP 3-84, *Legal Support*
- AFDP 5-0, *Planning*

JOINT DOCTRINE

- JP 2-0, *Joint Intelligence*
- JP 3-0, *Joint Campaigns and Operations*
- JP 3-09, *Joint Fires*
- JP 3-11, *Operations in Chemical, Biological, Radiological, and Nuclear Environments*
- JP 3-30, *Joint Air Operations*
- JP 3-31, *Joint Land Operations*
- JP 3-60, *Joint Targeting*
- JP 3-84, *Legal Support*
- JP 5-0, *Joint Planning*

DOCTRINE FROM OTHER SERVICES

US Space Force

- SDP 3-101, *Targeting*

TACTICAL DOCTRINE

Multi-Service Tactics, Techniques, and Procedures (MTTPs)

- AFTTP 3-2.3, *MTTP for Dynamic Targeting*
- AFTTP 3-2.17, *MTTP for the Theater Air-Ground System*
- AFTTP 3-2.87, *MTTP for Operation Assessment*
- AFTTP 3-2.90, *Personnel Recovery*

Air Force Weapon System TTPs (AFTTPs):

- AFTTP 3-1.DCGS, *Distributed Common Ground Station*
- AFTTP 3-3.*AOC, Combat Fundamentals–Air Operations Center*
- AFTTP *3-3.TACS, Combat Fundamentals-TACS*
- AFTTP 3-4.14, *Contingency Intelligence Network*

MISCELLANEOUS PUBLICATIONS

- DoD Dictionary
- DoD, *Law of War Manual*
- DoD Directive 2311.01, *Law of War Program*
- DoD Instruction 3000.17*, Civilian Harm Mitigation and Response*
- DoD Directive 5105.62, *Defense Threat Reduction Agency (DTRA)*
- CJCSI 3122.06, *Sensitive Target Approval and Review (STAR) Process*
- CJCSI 3160.01, *No Strike and Collateral Damage Estimation Methodology*
- CJCSI 3162.02, *Methodology for Combat Assessment*
- CJCSI 3370.01, *Target Development Standards*
- AFI 13-103*, Air Component Headquarters AFFOR Staff Operations, Readiness, and Structures*
- AFI 13-500, *Air Force Nuclear Mission Responsibilities*
- AFMAN 13-1AOCV3, *Operational Procedures-Air Operations Center*
- DAFMAN 14-401, *Intelligence Analysis and Targeting Tradecraft*
- ACC CONOPS for Air Force Reachback Targeting, 24 May 2023
- *Convention (III) relative to the Treatment of Prisoners of War*