



## TARGETING AUTOMATION

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The forces the [commander, Air Force forces](#) (COMAFFOR) presents to the [joint force commander](#) (JFC) should include all the equipment they require to conduct combat operations. This includes target data and materials, especially for mission areas like [strategic attack](#) and [counterair](#), which are conducted principally by the air component.

Targeting data and information should pass seamlessly horizontally, vertically and across domains. Target and information systems of record between Service and joint organizations may not be identical or interoperable in all cases. Therefore when targeting support and supporting relationships are established they should confirm connectivity or identify agreed workarounds that allow [reachback](#), [distributed](#) and federated support functions. The following sections discuss common targeting tools and applications.<sup>1</sup>

**Targeting Tools.** Automated tools assist targeteers through the targeting process of the joint targeting cycle. Typically, there is no distinction between deliberate and dynamic targeting tools other than the time constraints for their use.

**Analytical Tools.** Targeting requires all-source intelligence data, systematic analysis and the appropriate tools for planning, execution and assessment during all phases of operations. While specific details are beyond the scope of this document, commanders should ensure that targeteers, all source analyst, and collection managers have the tools necessary to collect and analyze the information they need for targeting.

**Geospatial Intelligence Tools.** [Geospatial intelligence](#) (GEOINT) 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.” GEOINT is necessary for operational environment visualization, enabling planners to “see” natural and cultural features. Most geospatial products are now presented in digital formats and are available through web access and automated means. As one example, scene visualizations provided by [air operations center](#) (AOC) weather personnel incorporate atmospheric effects from sensor to and at the target and may aid targeteers and mission planners in seeing a variety of these features. Commanders need to

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<sup>1</sup> For more on targeting automation see [JP 3-60, Appendix B](#).

ensure that all planning processes have access to appropriate digital tools and back-up systems for use by AOC personnel.

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 (PED) organizations. Imagery sources include national technical means, tactical or commercial.

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 (DPPDB) controlled/rectified by the [National Geospatial-Intelligence Agency](#) (NGA).

**Capability Analysis Tools.** The Joint Munitions Effectiveness Manual (JMEM) Joint Weaponing System (JWS) provides the standard automated methodology for estimating the employment effectiveness of most non-nuclear, kinetic weapons and facilitating decision-making for force sizing. The JWS augmented by the Integrated Munitions Effectiveness Assessment (IMEA) tool, is a modeling application specifically designed to estimate weapon effectiveness against hard and deeply buried targets (HDBT) and chemical, biological, or radiological plume hazard in support of [collateral damage](#) estimation when targeting weapons of mass destruction (WMD) threats. The Joint Capabilities Analysis and Assessment System (JCAAS) includes tools that support weaponing for cyber, [electronic attack](#), and MISO. As nonlethal capabilities continue to evolve, decision-makers and targeteers may need to be trained in the integration and blending of traditional and non-traditional capabilities and methods in order to fully exploit [effects-based approach to operations](#) (EBAO). Commanders can assist by ensuring targeteers have tools to exploit such capabilities as they become available.

**Collateral Damage Estimation Tools.** [Collateral damage estimation](#) (CDE) is the process that determines undesired consequences and hazards presented by weapons effects and makes recommendations on how to mitigate those effects in compliance with [rules of engagement](#) (ROE) and [law of armed conflict](#) (LOAC). CDE analysts should apply the specific guidance and data of CJCSI 3160.01A, *No-Strike and Collateral Damage Estimation Methodology*; however, the joint community has mandated use of the Digital Precision Strike Suite Collateral Damage Estimation tool for collateral damage analysis of kinetic weapons.

**Common Operating Picture (COP) Tools.** A [COP](#) of the environment assists the targeteers in determining deliberate and dynamic targeting requirements.

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