Insights and Best Practices Focus Paper

Integration and Synchronization of Joint Fires

Fourth Edition

Deployable Training Division
Joint Staff J7

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This is the *Fourth Edition of the Insights and Best Practices Focus Paper on Integration and Synchronization of Joint Fires.* It is written by the Deployable Training Division (DTD) of the Joint Staff J7 and released by the J7 Deputy Director for Joint Training.

Fourth Edition: July 2018 *(Integration and Synchronization of Joint Fires)*
Third Edition: May 2016 *(Formerly: Targeting: Integration of Lethal and Nonlethal Actions)*
Second Edition: July 2013
First Edition: June 2011

Scope: Focused on joint targeting as the means to integrate and synchronize joint fires:

- Targeting as subset of planning.
- Joint targeting cycle.
- Leveraging all capabilities across all domains.
- Organization and process insights.

[We use several CJTF-OIR vignettes to better illustrate some of our insights.]

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Terminology and Acronyms: Numerous military acronyms and organizational names are used in this paper. They are defined in the glossary to improve readability in the body of the paper for the intended readership.

POC: Mr. Mike Findlay, e-mail: js.dsc.j7.mbx.joint-training@mail.mil
Deployable Training Division, Deputy Director Joint Staff J7, Joint Training
116 Lake View Parkway, Suffolk, VA 23435-2697

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Releasability: Approved for public release.

PREFACE

This paper shares joint targeting cycle challenges, insights, and best practices for integrating and synchronizing joint fires. The many joint fires available to Joint Commanders and mission partners can complement each other, create significant dilemmas for adversaries, and enable mission success.

> "for the longest time we kept different types of fires (example, strike, info ops, and cyber) separated and compartmented and did not fully realize their interdependencies. As we all know, this is an area that must be integrated and synchronized…" — *Senior Flag Officer*

Joint targeting is challenging due to the complexity of the environment, unpredictable and opportunistic adversaries, and the requirement to integrate and synchronize the many different joint fires available to achieve objectives.

This paper may be beneficial to four main audiences:

- Commanders as they provide guidance for joint fires.
- COS, J2, J3, and J5 as they plan, integrate, and synchronize fires with other joint functions: C2, intelligence, movement and maneuver, information, protection, and sustainment.
- Key staff: Joint Fires Element, Information Operations, and the supporting Intelligence staff.
- Partners who support targeting and fires (e.g., the JFACC).

> Joint Targeting: "A fundamental task of the fires function… Its primary purpose is to integrate and synchronize joint fires into joint operations by using available capabilities to create a specific lethal or nonlethal effects on a target."
> — *Joint Doctrine*

Six key insights underlie this paper:

- Apply the joint targeting cycle process to integrate and synchronize joint fires.
- Incorporate design and visualization of desired effects to focus targeting efforts.
- Engage the broader intelligence community to understand the environment and adversary.
- Apply mission command attributes through top-down commander's guidance and bottom-up target development. Provide guidance on centers of gravity, critical capabilities, vulnerabilities, and desired effects. Empower subordinates to increase agility and precision.
- Integrate kinetic and non-kinetic fires to achieve desired lethal and nonlethal effects on targets. Get beyond physical destruction thinking to include influencing behavior and actions.
- Codify roles and responsibilities for targeting internal and external to the HQ. Tailor HQ structure and processes based on the mission to leverage capacity and increase effectiveness.

This and other focus papers share observations and insights on joint force HQs observed by the Joint Staff J7 Deployable Training Division. *We appreciate the recommendations provided by several CCMD Joint Fires Elements and the CJTF-OIR staff for this paper*. We also recommend review of our focus paper "*Communication Strategy and Synchronization"* that addresses the related topics of strategic narrative, messaging, and influence activities.

We want to capture your ideas on these operational challenges and insights. Please pass comments to DTD's POC, Mike Findlay at: js.dsc.j7.mbx.joint-training@mail.mil.

STEPHEN M. NEARY
Brigadier General, U.S. Marine Corps
Deputy Director, Joint Training
Joint Staff J7

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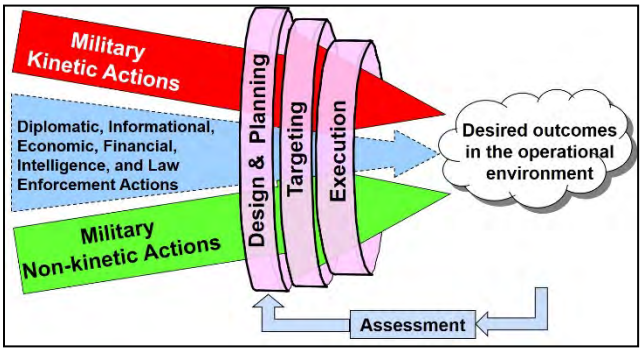
1.0 EXECUTIVE SUMMARY. Joint fires require a cradle-to-grave mindset that includes planning, targeting, execution, and an assessment feedback loop. The military operates in synergy with the full range of available diplomatic, informational, military, economic, financial, intelligence, and law enforcement (DIMEFIL) elements of power (figure).

Targeting: the process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities.
Fires: the use of weapon systems or other actions to create specific lethal or nonlethal effects on a target.

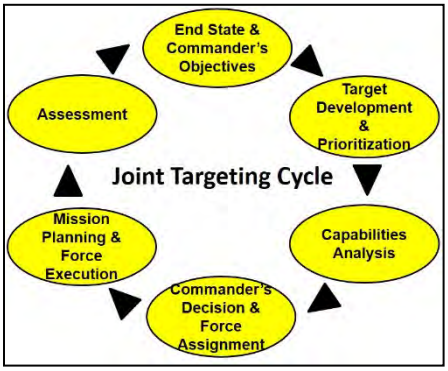
Targeting is an extension of planning. It resides in the future and current operations time horizons to integrate and synchronize joint fires.



Joint fires accomplish more than physical destruction; kinetic and nonkinetic fires also influence behavior and actions.

Challenges:

- Understanding the adversary to identify COGs, vulnerabilities, and capabilities.
- Gaining commander visualization of desired effects upfront to drive targeting.
- Viewing targets as entities and objects with the objectives of influencing behavior/actions and/or physical destruction.
- Gaining authorities and permissions for non-kinetic actions (in addition to kinetic fires).
- Applying all capabilities across all domains. A single domain focus or sole reliance on kinetic fires does not bring together the full range of options to place the adversary at a disadvantage and can increase risk, escalate the conflict, and accelerate expenditure of critical resources.
- Codifying responsibilities for each step of the joint targeting cycle within a construct of top-down guidance and bottom-up refinement.



Insights:

- Engage the broader intelligence community to understand the environment and adversary.
- Emphasize JIPOE, COG analysis, Target Systems Analysis, and collection management activities to inform target development, execution, and assessment.
- Nest joint targeting as part of a DIMEFIL approach.
- Provide visualization of desired effects informed by design and planning to guide targeting efforts.
- Gain authorities and permissions for Information Related Capabilities to broaden options.
- Use the joint targeting cycle to gain alignment and synergy across the targeting enterprise.
- Apply mission command to targeting. Emphasize top-down guidance and bottom-up development. Focus top-down guidance on command objectives, priorities, requirements, and target systems that support the operational approach and plan. Gain the benefits of bottom-up target development and fires synchronization to increase speed, agility, and precision of fires. Access capabilities of all fires regardless of ownership to achieve effects.
- Use lethal and nonlethal terms to describe desired effects. Use kinetic and non-kinetic (some use physical and informational) to characterize joint fires actions to improve integration.
- Codify roles and responsibilities internal and external to the HQ, and tailor HQ structure and processes to leverage capacity and increase effectiveness.

2.0 COMMANDER'S PERSPECTIVES. Commanders traditionally emphasized movement and maneuver in planning. Targeting was an add-on, sprinkled on top of a developed plan. However, recently we have seen targeting become much more integrated into the operational approach and plan. Targeting is being performed concurrent with planning.

Commanders have also recognized the importance of providing targeting guidance in terms of objectives and desired lethal and nonlethal effects to better visualize their concept for fires as part of the operational approach. Framing of the problem, and providing guidance on the center(s) of gravity, critical vulnerabilities, objectives, and the operational approach focus the targeting enterprise.

> "Clearly articulated Commander's guidance for desired lethal and nonlethal effects, issued early in the design and planning process, allows focused targeting efforts and kinetic and non-kinetic fires synchronization to be accomplished at lower levels."
>
> — *Senior Flag Officer*

Challenges:

- Insufficient visualization of the commander's view on COGs, vulnerabilities, and desired effects to focus the enterprise. Too often targeting begins with targeteers and fails to reflect the visualization of effects by the commander gained through design and planning.
- The tendency to associate the term 'target' only with a physical object to be destroyed. Targets also include leaders/people/entities whose behavior or action can be influenced.
- Limited nesting/alignment with DIMEFIL activities.
- A predisposition to centralize targeting instead of applying mission command that emphasizes top-down commander guidance and inclusive, bottom-up target development and fires synchronization to gain speed, agility, and increased precision.

Observation

The Commander of CJTF-OIR prioritized the 'inform and influence' aspect of targeting to compete in the information environment to consolidate gains in the campaign. This energized the targeting enterprise overseen by the Deputy Commanders, J3 and J34 to codify both lethal and nonlethal effects and leverage the full range of kinetic and non-kinetic fires to achieve objectives.

Insights:

- Operational design helps the Joint Force Commander and staff understand the environment, frame the problem, develop an operational approach to accomplish the mission, and inform targeting efforts.
- Gain the support of the broader Intelligence Community and coalition partners in JIPOE, COG analysis, and target system analysis in order to understand the adversary, and identify COGs, critical capabilities, requirements, and vulnerabilities. Prioritize target systems analysis and target development efforts.
- Inform and be informed by the broader US, interorganizational, and partner nation approaches (DIMEFIL) to enrich targeting and achieve desired outcomes.
- Be prepared to spend time gaining authorities and permissions for info-related capabilities.
- Emphasize integration of kinetic and non-kinetic fires to achieve desired effects.
- Spend time thinking through how the full range of non-kinetic fires can be employed more proactively to shape the environment as opposed to reactive responses to events (i.e., consequence management). Preemptive shaping/influence actions often have higher payoff.
- Provide top-down guidance to focus and empower the targeting enterprise. Guidance includes: framing of the problem, visualization of the adversary's COGs and vulnerabilities, intent for fires as part of the operational approach, and scope of desired lethal and nonlethal effects on associated target systems and objectives. A target's importance derives from its potential contribution to achieving a commander's objective or supporting task.
- Empower and support the enterprise and subordinates in performing bottom-up target development and fires synchronization to gain speed, agility, and increased precision.

3.0 TERMINOLOGY AND OPERATIONAL FORCE INSIGHTS. There are significant differences across the Joint and Service communities on targeting; this directly results in misunderstanding, inefficiencies, and lost opportunities within targeting. Two of most significant differences warrant highlighting in this section: differences in the targeting cycles and conflicting views on the terms - kinetic and non-kinetic fires.

Targeting cycle: The figure depicts various cycles for the Joint Force and the Services. We find that the joint targeting cycle is more holistic, and better incorporates both kinetic and non-kinetic fires to achieve desired lethal and nonlethal effects. At times we find that the lead Service forming the core of a JTF HQ incorrectly retains its Service's targeting cycle. This can bring a kinetic bias into targeting, and cause confusion with the CCMD, supporting components, subordinates, and internally among the JTF HQ joint individual augmentees.

Joint Targeting – Joint Doctrine Terminology

Target: An entity or object that performs a function for the adversary considered for possible engagement or other action.
Targeting: The process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities.
Joint Targeting: A fundamental task of the fires function… Its primary purpose is to ***integrate and synchronize joint fires*** into joint operations by using available capabilities to ***create*** a specific ***lethal or nonlethal effects*** on a target.
Fires: The use of ***weapons systems*** or ***other actions*** to create specific lethal or nonlethal effects on a target. **Joint fires** are fires delivered during the employment of forces from two or more components in coordinated action to produce desired effects in support of a common objective.

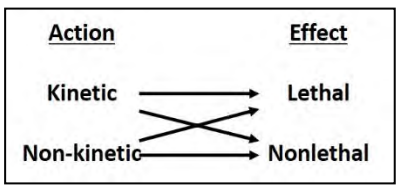
Kinetic and non-kinetic fires. We observe that many in the operational force use the lethal and nonlethal terms to describe desired effects and *opt to use the terms kinetic and non-kinetic* to better describe the actions producing those effects (see figures below). Joint doctrine correctly uses lethal and nonlethal to describe desired effects, but we find it does not adequately categorize the kinetic and nonkinetic means to achieve the effects.

Many joint HQs follow the Air Force doctrinal position on kinetic as "relating to actions designed to produce effects using the forces and energy of moving bodies and directed energy, including physical damage to, alteration of, or destruction of targets." They also follow the definition of non-kinetic as "relating to actions designed to produce effects without the direct use of the force or energy of moving objects and directed energy sources." These joint HQs recognize that kinetic actions can have lethal and/or nonlethal effects, and non-kinetic actions can also have lethal and/or nonlethal effects.

Vignette: Operation Just Cause
(Panama-1989)
The JTF opted to use a *kinetic* strike offset 500 meters from a Panamanian Defense Force base to achieve a *nonlethal* effect supplemented by leaflets and loudspeakers urging surrender instead of striking the base and causing casualties.

Insights:

- Adhere to the Joint Targeting Cycle at Joint HQs to ensure common understanding and gain synergy and harmony.
- Use kinetic and non-kinetic to codify types of actions. Use effects or outcomes to describe desired results.



4.0 TARGETING. Design, planning, and targeting constitute overarching integrating processes used to support decision making in headquarters and drive military force activity. These processes form the basis in determining and integrating actions to achieve lethal and nonlethal effects.

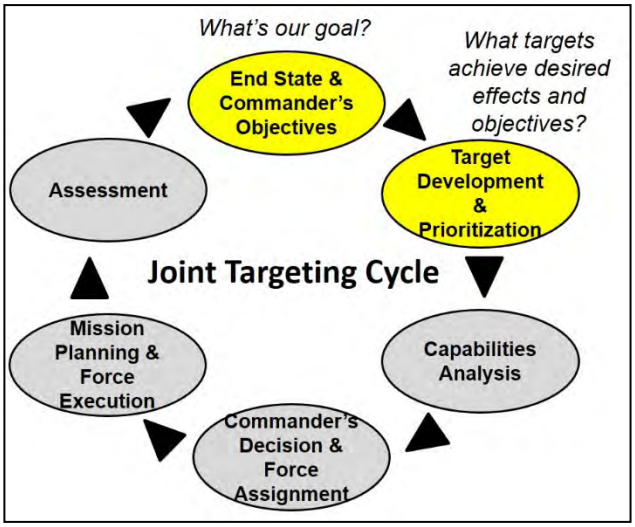
Operational design helps the Joint Force Commander and staff understand the environment, frame the problem, and develop an approach to accomplish the mission. ***Design informs planning*** and shapes the concept of operations. ***Design and Planning inform targeting***.

Targeting integrates available capabilities and synchronizes kinetic and non-kinetic fires to generate desired lethal and nonlethal effects on a target system or individual target. Targeting integrates and synchronizes fires with other joint functions (C2, intelligence, movement and maneuver, information, protection, and sustainment). The targeting process also prioritizes and apportions joint fires capabilities, not just for the joint fires support, interdiction, and influence activities that we have largely seen in Iraq and Afghanistan, but also for countering air and missile threats and strategic attack that we would conduct in a near-peer fight.

The following three aspects aligned to the joint targeting cycle are <u>key to effective</u> targeting.

1. Commander's guidance and target development
2. Capabilities analysis, force assignment, and mission execution
3. Assessment

1. <u>Guidance (Objectives) and Target Development</u>: These ultimately set conditions for success of targeting.



Design and planning inform and focus targeting through Commander's guidance. However, we find this can be *one of the least emphasized aspects in targeting organizations and processes* due to the traditional all-consuming and staff-oriented nature of target development and synchronization of fires.

Targeting guidance does not always clearly link fires to objectives and desired effects as part of an overarching plan. Targeteers do not receive the necessary focus so they develop targets on what *they think* is important, a time consuming, manpower intensive, but futile task. At times, operational-level targeting may even become fixated incorrectly on individual targets and lose focus on the broader concept of operation (albeit sometimes for good reason such as HVTs).

We find high performing targeting organizations are informed by top-down guidance anchored by commander's visualization of desired effects and focused on critical adversary systems that directly or indirectly support objectives or "*Named Operations.*" Targeting teams can then provide the bottom-up development and refinement of relevant targets *supported* by their higher HQs.

> "Power down target development. A centralized approach can lead to overdevelopment of targets and miss opportunities best seen by subordinates"
> — *CJTF J3*

JIPOE: The Joint Intelligence Preparation of the Operational Environment (JIPOE) process is essential to inform design, planning, and targeting. The process helps in analyzing adversary capabilities and center(s) of gravity and in identifying most likely and most dangerous adversary courses of action, all of which inform planning. JIPOE informs target systems analysis (TSA) and target development. The JIPOE process is continuous – it never ends; however, we observe that emphasis on JIPOE to further deepen commander and staff understanding unfortunately often diminishes after initial planning efforts.

Vignette: OIR

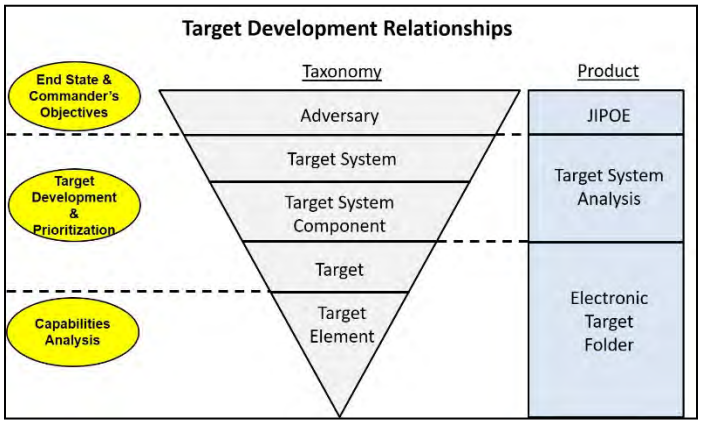
In 2015, the CJTF J2 requested CENTCOM and the intelligence enterprise to assist the CJTF with Target System Analysis (TSA) on three specific ISIS "systems" that had been deemed critical to the Commander subsequent to CENTCOM and the CJTF COG analysis and planning efforts. Producing these TSAs was manpower intensive, but informed subsequent target development. The CJTF employed both maneuver and kinetic and non-kinetic fires against critical areas of these systems resulting in the rapid defeat of ISIS in key areas in Iraq and Syria.

So what: **Focus targeting efforts for high payoff.**

Target Development is based on commander's guidance (with its direct linkage to planning) and the above JIPOE activities (see figure). Planning and guidance provide the overarching context for fires as part of the broader operation and specifies desired effects on target systems – the conditions necessary to achieve objectives. Guidance focuses a "target-system" level of target development, which provides the top-down guidance for the more detailed target development by the staff, subordinates, and supporting components and agencies.

"Don't go it alone on JIPOE and target development – it's a team sport. Anticipate and formally request through the CCMD the necessary intelligence and targeting community support to assist in target system analysis and development. Codify tasks and responsibilities to ensure this is a team fight." ─ Senior Intelligence Officer

As an analytic effort, target development examines each aspect of the targeting taxonomy (figure) from the system level downward. It identifies and describes adversary target systems, the target system components, related targets, and associated target elements. Target developers systematically examine the adversary using the targeting taxonomy, which hierarchically orders the adversary, its capabilities, and the targets. Target development approaches adversary capabilities from a systems perspective. While a single target may be significant because of its own characteristics, the target's real importance lies in its relationship to other targets within an operational system.



A systems perspective of the OE assists with identification of adversary COGs and their critical capabilities, requirements, and vulnerabilities. The staff, under the intelligence directorate's lead, analyzes the relevant systems in the OE based on objectives, desired effects, and the mission. This analysis identifies a number of nodes and links. System *nodes* are the tangible elements within a system that can be "targeted," *links* are

Observation: *Closed/open systems*

Most systems are open, adaptive systems versus much more predictable closed systems. That said, target system analysis provides insights into the system including key nodes and linkages to provide the basis for target development and can also inform the broader operational approach.

the behavioral or functional relationships between nodes. *[An example related to ISIS was the funding system based around oil production, transport, and sales.]* The purpose in targeting specific nodes is often to destroy, interrupt, influence, or otherwise affect the relationship between them and other nodes, which ultimately influences the system as a whole.

Identifying nodes and their links helps the staff assess the systems' important requirements and vulnerabilities, and is the foundation of the systems perspective of the OE. *These nodes and linkages allow for effective integration and employment of kinetic and nonkinetic fires to achieve desired effects.*

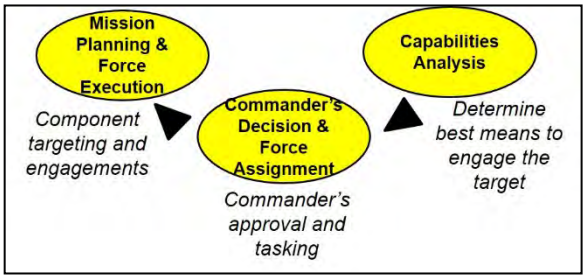
Observation

Many of the past 15 years of observations have been in a counterinsurgency fight in which targeting focused on integrating and synchronizing joint fires in assisting the maneuver of joint forces and in an interdiction role. In near peer scenarios, joint HQs must be able to conduct the *full spectrum* of targeting tasks incorporating both kinetic and nonkinetic fires to avoid miscalculation or escalation while achieving mission objectives.

Combined with a target systems perspective, commanders and staffs can use an understanding of desired and undesired effects to develop and prioritize targets that support commander's guidance and mission objectives. A target's importance derives from its potential contribution to achieving a commander's objective or otherwise accomplishing assigned tasks.

2. Capabilities Analysis, Force Assignment, Mission Execution: These three steps in the joint targeting cycle integrate and synchronize kinetic and non-kinetic fires and are central to the role of the Joint Fires Element and Components.

We are competent in the planning, integration, and synchronization of kinetic fires. However, we lag in the ability to integrate and synchronize non-kinetic fires with *each other*, with kinetic fires, and, in many cases, with movement, maneuver, and protection actions to achieve desired effects.



We find the best way to integrate kinetic and non-kinetic fires is against *target systems and supporting named operations*, not against broad objectives. This method of integration allows the tasked commander for the respective target system or named operation to examine and determine the best means/combination of actions to accomplish the task. That commander may be the CJTF Commander, a supporting commander such as the JFACC, or a subordinate commander. That respective commander is supported by the others in planning, analyzing, integration, and synchronization of their respective kinetic and non-kinetic capabilities. This complexity is the reasoning behind one of the key insights in the executive summary: leverage a bottom-up approach to permit detailed target development and fires synchronization to increase speed and agility. The above vignette accentuates the importance of this teamwork and bottom-up

Vignette - OIR

CJTF-OIR, together with its subordinates, CFACC, CENTCOM, and CYBERCOM all worked together to influence several key target systems (based on the TSA noted earlier). As a team, they brought together kinetic and non-kinetic fires over a period of time against different components of target sets to achieve significant effects. CJTF-OIR leveraged bottom-up target development and integration of the many kinetic and non-kinetic capabilities from its components, coupled with support from external agencies, to integrate and synchronize fires to achieve the effects. CJTF-OIR did not do this all by itself; it empowered subordinates, leveraged others and decentralized detailed synchronization. **So what: Targeting is a team fight.**

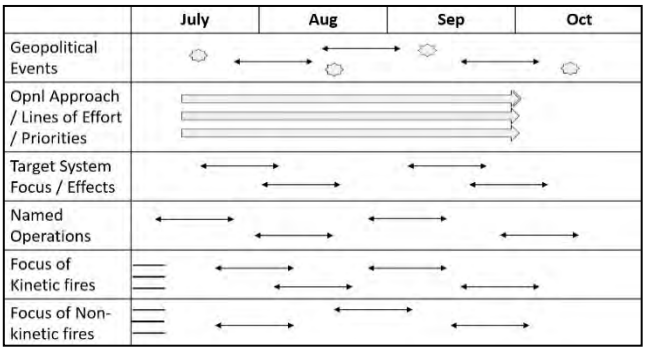
development out. CJTF-OIR kinetic and non-kinetic fires (and maneuver) were not synchronized against a nebulous objective, but rather against a defined target system to achieve desired effects.

Non-kinetic actions with lethal effects
Examples abound of deception operations, electronic warfare, or military information support operations actions placing an adversary in a vulnerable position for subsequent destruction.

Key to this integration of joint fires is the recognition that a combination of kinetic and non-kinetic fires can affect target systems and targets both lethally and nonlethally. A target can be physically damaged by a kinetic strike while also being isolated by a combination of kinetic and non-kinetic fires. An individual or organization can be manipulated by both kinetic and non-kinetic fires into a position of vulnerability or disadvantage.

*The **challenge** for most headquarters is how to integrate and prioritize these kinetic and non-kinetic fires in time, space, and purpose to achieve desired effects, and determining and empowering the HQs which are best positioned to integrate and synchronize these fires.*

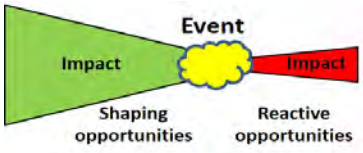
Two insights on overcoming this challenge:



- First is the *synchronization* of the named operations and target systems through the use of a synch matrix like that depicted. The higher Joint Force HQ must be able to lay out the significant events, efforts, and operations in time and space on a synch matrix, and the relative priorities of effort. Note: the depicted *separation* between kinetic and non-kinetic focus of actions on the synch matrix is for visualization, not a separation in planning and crosstalk. These joint fires are nested and aligned more closely with the respective named operations and target systems. This is addressed in the processes section.

  We are continuing to see the importance in timing of non-kinetic operations, especially in the information domain, to shape the environment at the time and place of our choosing. This coupled with the time required to develop a non-kinetic action and time to achieve an effect requires anticipatory planning; thus the importance of synch matrices and close linkage with planning.

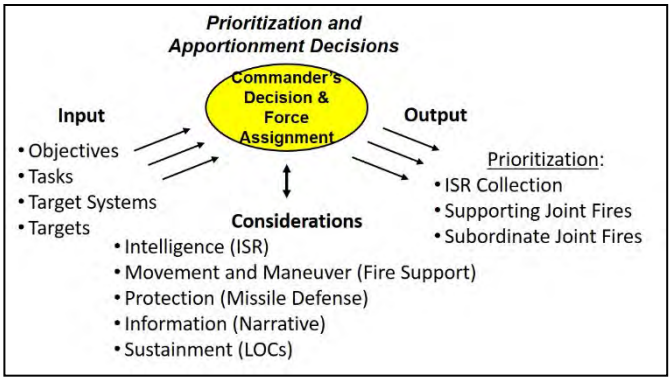
Observation
Proactive employment of some non-kinetic actions can often shape the environment more than their use in a reactive/response nature. Anticipate and shape.



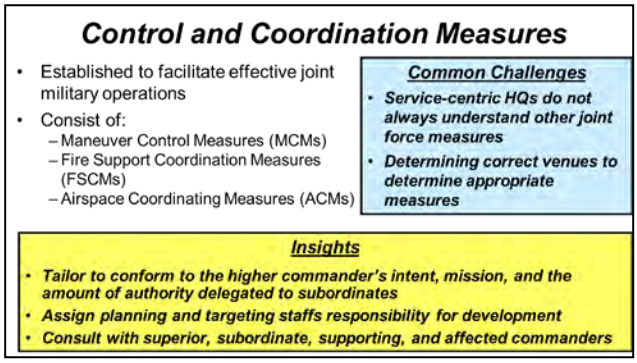
- Second is determination and alignment of the commanders best postured to be tasked as *supported commanders* for the respective named operations and target systems, and empowering them with access to kinetic and non-kinetic capabilities, which they don't own. For example, the JFACC may be empowered as supported commander for a certain target system, a ground force may be tasked with a specific named operation. They will all require support from non-organic assets, such as ISR, cyber, strike, MISO, or KLEs.

Prioritization and apportionment of joint fires is directly related to the above prioritization of named operations and target systems (see figure next page). The J3 planning and fires organizations must provide this analysis and recommendations. Prioritization and apportionment decisions for both kinetic and non-kinetic fires follows the same logic as air apportionment.

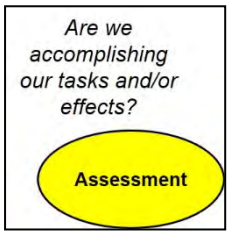
Overarching prioritization guidance by the JFC informs Component recommendations on apportionment of their respective fires assets for approval by the JFC.



Another means for synchronization of fires is through the full range of control and coordination measures, not just fire support coordination measures (see figure). We normally find that these measures are developed in the J3 planning and fires staff elements with input from subordinate and supporting components for approval by the commander. These measures must be aligned to the command and control structure, and the decisions on which commander is the lead for various target systems and/or named operations.



3. <u>Assessment</u>: The targeting community feeds the overarching HQ assessment task; they proceed from a micro-level examination of the damage or effect inflicted on a specific target element to informing macro-level conclusions regarding the functional outcomes created in the target system.



The targeting assessment phase is a continuous process which assesses the effectiveness of the activities that occurred during the first five phases of the joint targeting cycle. The targeting assessment process helps the commander and staff determine if the ends, ways, and means of joint targeting have resulted in progress toward accomplishing a task, creating an effect, or achieving an objective. It supports the commander's decisions within the joint targeting cycle and contributes to the overall operation or campaign assessment process.

The targeting enterprise must be able to assess the ultimate effects on the target or target system and enrich its understanding on the integration of kinetic and non-kinetic fires to engage the target or system.

<u>Vignette: OIR</u>

CJTF-OIR and its components learned much from the integration of the various Information Related Capabilities (IRCs) with kinetic strikes in attacking the target systems addressed earlier in the paper. They found that it was the integration and synchronization of fires that most greatly affected the system. This provided key insights for attacking other systems.

<u>So what</u>: Assessment is a key element of targeting.

<u>Insights</u>:

<u>Guidance and target development</u>:

- Conduct JIPOE to analyze adversary capabilities, identify potential adversary COAs, and assess the most likely and most dangerous adversary COAs to inform target systems analysis and detailed target development.
- Gain authorities and permissions for Information Related Capabilities to broaden fires beyond the more typical kinetic options.

- Provide top-down guidance addressing the overarching context and priorities for fires as part of the broader mission, the scheme of maneuver, future named operations, and scope of desired lethal and nonlethal effects on associated target systems and objectives.
- Conduct target systems analysis first to better discern critical capabilities, requirements, and vulnerabilities to focus detailed target development. Leverage the Intelligence Community through federation and codified responsibilities to assist or lead target systems analysis.
- Inform and be informed by the broader US, interorganizational, and partner nation approaches (DIMEFIL) to enrich targeting efforts against identified target systems.
- Articulate responsibilities across the targeting enterprise for detailed target development (inside the HQ, subordinates, partners, and the intelligence enterprise).

Capabilities analysis, force assignment, mission planning:

- Integrate kinetic and non-kinetic fires by analyzing and assigning joint force capabilities against named operations or strategic/operational level target systems.
- Prioritize joint fires apportionment to best address the target systems. Account for other kinetic and non-kinetic fires requirements in the prioritization recommendation and decision (e.g., air superiority, air defense, MILDEC supporting OPSEC within the protection function, MISO supporting local population inform and influence requirements).
- Synchronize joint fires during mission planning to achieve positions of advantage in time and space in respect to the enemy.
- Develop appropriate fire support coordination measures to empower and decentralize.

Vignette: OIR

CJTF-OIR used "named operations" as a means to enable integration and synchronization of kinetic and non-kinetic actions. Many of the named operations were assigned to a subordinate who was empowered to gain access to external organizational capabilities (such as CYBER, and other CCMD capabilities). The subordinate organization gained the benefit of the expertise of these external mission partners in COA development and timing of action. This was mission command at its finest.

Observation

It is somewhat easy to focus targeting in conflict, but possibly harder in security cooperation. Focusing the team on creating theater-level effects, some of which span years and multiple countries, often involve organizational-level targets, and require alignment of multiple, large processes (e.g., intel Program of Analysis, strategic assessment, and LOE synchronization).

Assessment:

- Get beyond damage or effect inflicted on a specific target element; assess the effect on a target system or assistance to a joint function like maneuver, protection, or sustainment.
- Use assessment to enrich understanding of the changing target systems and networks.
- Use assessment to inform and refine targeting guidance.
- Support broader operational and campaign assessments.

5.0 HQ ORGANIZATION. Organizing the staff to integrate and synchronize joint fires is a key task for all strategic, operational, and tactical level HQs.

Challenges:

- Codifying HQ and Component targeting responsibilities to gain synergy.
- Organizing the HQ to conduct targeting – specifically oversight of the targeting task, target development, and integration of kinetic and non-kinetic fires.
- Development, integration, and synchronization of non-kinetic fires.
- Linkages with the Joint Cyber Center (often in the J6 due to the defensive capabilities).

Joint and Component Targeting Responsibilities. Targeting mechanisms exist at multiple levels. The JFC makes the targeting and apportionment decisions, while components support target development, nominate targets outside their boundaries or exceed the capabilities of organic or supporting assets (based on the JFC's apportionment decision), and conduct mission planning and execution.

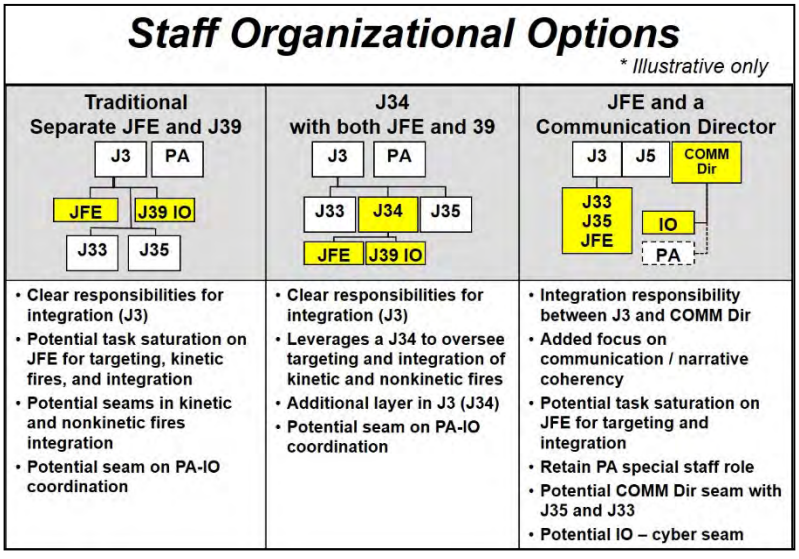
The JFC should determine the relative roles for targeting between the JFC staff and those of the component commanders. The JFC develops guidance, which directs and focuses planning and targeting to support operations. Supporting and subordinate commanders, functional and Services, may have their own targeting processes that will complement and support the supported JFC's targeting process. The supported JFC is responsible for coordinating these various targeting processes and delineating the responsibilities of each supporting and subordinate commander.

Vignette – Observation

CENTCOM's CAOC established a Non-kinetic Operations Cell (NKOC) to focus on capabilities analysis and integration of non-kinetic fires in support of CJTF-OIR's targeting direction.

HQ Organization. Most all joint commanders have established a Joint Fires Element (JFE) at both CCMDs and JTFs to perform the targeting function and oversee execution of joint fires nested with other J3 actions including future and current operations, and protection. The JFE ensures all available joint capabilities are considered by the staff and components in order to achieve the JFC's objectives. At CCMD level, cyberspace operations are often overseen by a Joint Cyber Center (JCC) under staff supervision of the J6 due to the heavy emphasis on protecting the network. A small cyber element may push forward to the JTF.

Most J3 staffs normally have a J33 current operations section, JFE, J35 future operations section, J36 protection, and J39 information operations (IO) element. The JFE is subordinate to the J3, with representatives from the J3, J2 targeting staff, and the components. The JFE is the proponent for many of the related targeting battle rhythm events, such as the Target Development and Joint Targeting Working Groups and the Joint Target Coordination Board (TDWG, JTWG, and JTCB respectively).



We have seen several staff organizational options for targeting (see figure on previous page):

- Most common are separate JFE and J39 IO sections that have close crosstalk and codified roles and responsibilities. The JFE may be empowered with targeting lead responsibilities.
- Some HQs have designated an overarching J34 with two subordinate divisions – a kinetic-focused JFE and a non-kinetic focused J39. The J34 conducts the overarching targeting functions, retains integration responsibilities, and empowers its subordinate divisions to focus on the kinetic and non-kinetic fires. This option enhances the integration of kinetic and nonkinetic fires due to its focused purpose of targeting and integration.
- The J33 and Chief of Operations (CHOPs) have authority to dynamically integrate fires in the current operations event horizon. The J34 or JFE has targeting responsibilities in the future operations event horizon.
- We sometimes see establishment of a Communications Directorate to develop and execute the narrative and supporting inform and influence operations when the need exists for a heavy communications role (e.g., humanitarian assistance operations). We also find this Directorate more common at a CCMD HQ; however, the J39 is retained in the J3.

Adequate representation from J33, J35, and J5 should be consistent in all organizational options to ensure joint fires are directly tied to the commander's overall end state and objectives. Almost all HQs keep the Public Affairs (PA) as a special staff to maintain appropriate separation of focus and purpose while retaining a PA planner/representative to the non-kinetic element to ensure shared situational awareness and crosstalk. Every command we observe clearly specifies the PA "inform" role in providing facts and directly responding to the commander. They all guard this role and keep a clear divide between the PA "inform" tasks and operational influence activities.

Insights:

- Empower subordinates and leverage supporting components to retain fidelity and speed.
- Continue J3 as the lead for integration of kinetic and non-kinetic fires (as an operation).
- Retain the JFE and J39 IO cell under the J3. Empower the JFE and J39 to drive targeting.
- Consider establishment and empowerment of a J34 (or similar staff element) under the J3 to focus on the overarching targeting guidance, prioritization, and integration of kinetic and non-kinetic fires. This may help keep the JFE from being overwhelmed with both kinetic fires development and the overarching integration of kinetic and non-kinetic fires.
- Empower the J34 or JFE with coordinating authority for targeting. This includes coordinating authority with the JCC/cyber element, and with the Public Affairs office to ensure alignment (while retaining the PAO as a special staff).
- Consider close linkage, even a degree of subordination, for ISR collection management with the J3 and JFE to maintain balance in effectiveness and efficiency of ISR operations.
- Empower the CHOPS to decide and direct dynamic targeting in the current event horizon. Consider where to physically place key fires team personnel (such as an IO and JFE staff officer) in the JOC to enable this dynamic integration and rapid decision-making.
- Targeting proficiency takes time. Keep JFEs and J34s at high readiness through rehearsals.
- A separate staff element for communication synchronization may be of value in a more population-centric mission such as counterinsurgency (COIN) operations, stability operations, or disaster relief. In this case, this directorate may include both an IO and PA section, while retaining the "inform" role of PA and its direct access to the commander. We often see the lethal-oriented JFE and supporting IO elements remaining in the J3. Retain close alignment with the J3 and J5 to preserve synergy with operations.

6.0 HQ PROCESSES. As previously noted, commanders and their planners in the J33, J35, and J5 are central to effective early on fires integration through guidance and operational planning. The commander's decision cycle and the targeting cycle are integrated and inform each other. We find staffs in many HQs use attributes of both the planning process and targeting cycle to plan and coordinate various non-kinetic actions. These include those used to guide key leader engagement (KLE), military information support operations (MISO), Cyberspace, and military deception (MILDEC) operations. We also find the decision cycle and joint targeting cycle are effectively postured to guide subordinate service-unique targeting cycles and mission partner processes. The joint targeting process allows component commanders to plan, coordinate, and employ organic fires and fire support in their areas of operation (AOs) nested within the joint force HQ concept.

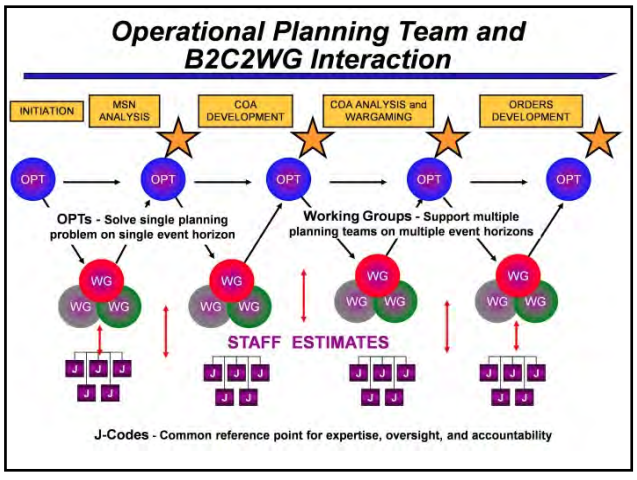
Observation
Integration of kinetic and non-kinetic fires often seems "unnatural." Leadership needs to take proactive control to ensure these capabilities are integrated to achieve the desired effects.

Vignette - Observation
USSTRATCOM analyzes all the kinetic and non-kinetic capabilities resident within its Joint Force Component Commands in the Joint Targeting Cycle to provide the JFC multiple options to support all phases of operations.

Central Role of Planning for Integration. As noted, we have observed as a best practice that commanders and their planners lead the integration of joint fires up front in the design and planning process, rather than "adding on" available kinetic and non-kinetic options at the end. The inclusion of appropriate IO planners early in this process is critical to informing planners of IRCs that may be best employed preemptively, may otherwise be overlooked, or require lead time to develop and execute. Similarly, inclusion of the Staff Judge Advocate or their representative ensures early identification of authorities and ROE issues and requirements necessary for the employment of fires.

"The Commander needs to give broad guidance and intent and allow subordinates to be able to respond at the speed of war. There are inherent risks but I believe the speed of delivery is worth it, especially in today's social media environment." - *Senior Flag Officer*

We also noted earlier that a clear understanding of the problem, planning guidance, commander's intent, and the operational approach provide the necessary up front direction for the coherent integration of joint fires at the operational level while appropriately leaving synchronization of detailed execution to subordinate tactical units. The adjacent figure depicts the lead role of the operational planning teams (OPT) in informing and being informed by the functional working groups and J-code staff elements in integrating actions. These OPTs ensure planning both drives and leverages targeting and other planning efforts across the staff.

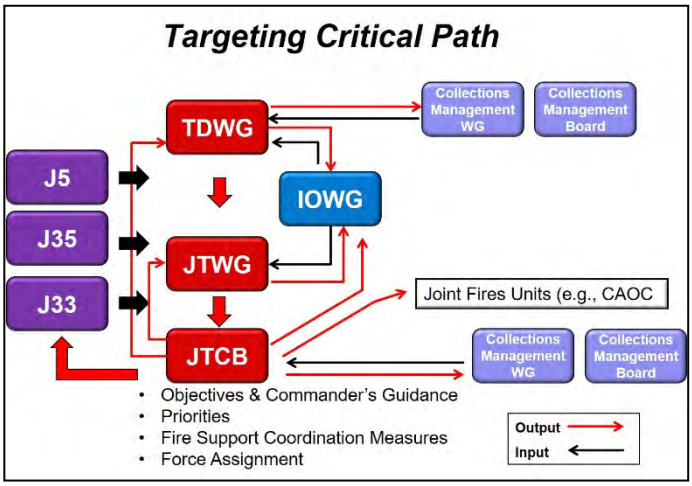


There is a requirement for some degree of *synchronization* for designated actions to ensure we don't experience effects "fratricide." However, the operational level headquarters cannot synchronize every tactical action. First, such detailed synchronization is contrary to the reasoning behind mission command and mission-type orders. Any attempt to fully synchronize every individual action would slow and even possibly paralyze subordinate agility. We

would not be able to operate at the speed of the problem. Second, centralized synchronization cannot keep up with the totality of actions, effects, and assessment occurring throughout the battlespace in all five domains. Trust, intent, empowerment, and decentralization applies to integration and synchronization of fires.

Relevant Processes and Boards, Bureaus, Centers, Cells, and Working Groups (B2C2WGs). Most HQ conduct a critical path analysis to logically organize battle rhythm events. This construct, coupled with the directed crosstalk and cross-representation noted on the figure, helps mitigate the inclination to develop more and more battle rhythm events to synchronize staff actions. We find many Chiefs of Staff are limiting staff tendencies to add battle rhythm events, preferring to incorporate activities that integrate/synchronize in the agendas of critical path events. Each of these critical paths has the necessary working groups and steering groups to develop necessary staff recommendations. There may also be a synchronizing decision board (e.g., joint synchronization board) that approves near term synchronization of joint fires.

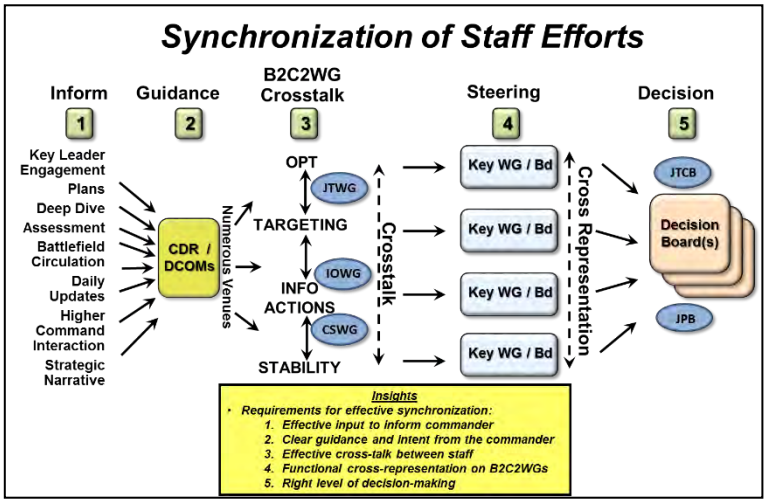
Targeting critical path. The TDWG, CSWG, and IOWG provide input to the JTWG, which enables staffs to select and prioritize target system and targets, and match actions to the appropriate lethal and nonlethal desired effect. The following are key joint fires battle rhythm events that inform the JTCB for decision:



- **TDWG** (Target Development Working Group). Normally J2T-led. This working group is often responsible for identification of necessary target system analysis efforts based on commander guidance, and orchestration of target development.
- **CSWG** (Communication Synchronization Working Group) These working groups synchronize communication efforts by development of a communication strategy with themes and messages supporting a strategic narrative nested with the operational concept.
- **IOWG** (Information Operations Working Group). The integration of IRCs to achieve the commander's objectives is managed through an IO staff or IO cell. JFCs may establish an IO staff to provide command-level oversight and collaborate with all staff directorates and supporting organizations on all aspects of IO. Most CCMDs include an IO staff to serve as the focal point for IO and manage the IOWG. The IOWG can include personnel from the electronic warfare (EW), MISO, civil-military operations (CMO), military deception (MILDEC), intelligence, and Public Affairs (PA) communities. The IOWG provides key inputs to the JTWG to adequately integrate IRCs into the targeting process.
- **JTWG** (Joint Targeting Working Group). The JTWG is a key working group normally led by the JFE that coordinates the targeting cycle actions: disseminating revised or new targeting guidance; overseeing target development; coordinating capabilities analysis; developing recommended prioritization and fire support coordination measures; reviewing and refining ISR collection requirements; refinement of measures of performance and effectiveness; submitting the draft Joint Integrated Prioritized Target List for JTCB review; and maintaining and updating the Joint Target List, Restricted target List, and No Strike List for a steering board or decision board.

- **JTCB** (Joint Targeting Coordination Board). The JTCB is the primary decision forum in targeting as noted on the previous targeting critical path figure. At the CCMD, it is often comprised of representatives from the CCMD staff, components, and other interorganizational and multinational partners. Component and JFC staff representation on the JTCB should possess the necessary rank, experience, and knowledge to speak authoritatively for their respective components and staff elements. If the JFC delegates authority for joint target planning, coordination, and deconfliction to a subordinate commander, that commander should possess or have access to a sufficient C2 infrastructure, adequate facilities, and joint planning expertise to effectively manage and lead the JFC's joint targeting operations. The JTCB should be flexible to consider all types of capabilities in order to produce viable, effective options for the commander to approve.

Synchronization of staff efforts. Targeting is a staff and mission partner effort to integrate and synchronize joint fires. The adjacent figure depicts key staff integration insights to ensure coherent recommendations to the commander.



We find that the working groups involved in this integration of actions are interdependent. Kinetic and non-kinetic fires complement each other; therefore, their planning is inseparable. Crosstalk between the planning efforts within the many B2C2WGs is important; so is the need for an *integration* process and venue to occur before the numerous efforts are presented to the commander.

These efforts may be synchronized at the individual OPT level; however, we have continually seen the importance of senior leadership driving the integration and synchronization of joint fires. We often see that due to the complexity, sensitivity, and scope of these actions, integration and synchronization of these actions occur in steering group venues in which deputy commanders, the COS, and staff principals ensure integration prior to presentation to the commander. Possible venues for these steering groups include the joint targeting steering group, communication strategy steering group, and plans management board (discussed later).

Insights:

- Integrate actions to achieve lethal and nonlethal effects up front as an integral part of the overall planning process supporting the future plans and future operations event horizons.
- Integrate non-kinetic information related capabilities early in crisis to discern necessary

Vignette

NORTHCOM Non-Kinetic Effects Working Group (NKEWG).

"Targets feed into our TDWG first - get kicked to a Counter-Terrorism Working Group (CTWG), NKEWG and kept in the TDWG all at the same time prior to coming back to the TDWG, and then again upstream to a JTWG and JTCB for validation. This feeds the long lead times required for certain means of effects (such as cyber) to see what is in the means of possible for each and every target while simultaneously taking it through the Basic and Intermediate Target Development process."

- NORTHCOM JFE

authorities and permissions and provide time for planning, preparation, and execution.

- Review and adjust naming conventions of B2C2WGs to ensure focus on both lethal and nonlethal effects, and use of kinetic and nonkinetic fires (see vignette on non-kinetic effects working group - last page).
- Enforce crosstalk between the OPTs and among the various working groups to improve shared understanding and staff synchronization. No stovepipes.
- Empower and continually enforce the authority of the JFE or J34 to lead the targeting effort. We often observe that many stakeholders do not recognize and comply with the JFE/J34 direction resulting in inadequate recommendations at steering groups and decision boards.
- Account for the different time requirements across the kinetic and non-kinetic activities; they often proceed at different frequencies, some weekly, and others biweekly, or even monthly. Some cyber or MISO activities may take months to prepare and achieve effects.
- Retain the JTWG as a working group performing its assigned tasks. Too often this working group becomes a pre-JTCB rehearsal venue resulting in suboptimal recommendations and incomplete integration of fires.
- Clarify in process where target validation occurs.
- Include operators in the ISR collection management process to ensure collection management is balanced between *effective* and efficient use of resources. The requirement for ISR effectiveness and predictability may override a collection manager's orientation on efficiency.
- Leverage all "INTs" to support targeting including IMINT, SIGINT, and HUMINT to increase fidelity, efficiency, and effectiveness.
- Based on the complexity and need for additional oversight, consider J3, COS, or Deputy Commander-led steering groups for refinement prior to Commander-hosted decision boards. Otherwise, the commander may receive multiple target lists/actions which, though individually commendable are not fully nested together within a comprehensive targeting strategy. Recognize, however the additional associated workloads incurred by these added steering groups and guard against over-engineering the process.
- More than one decision board may be required due to the scope of activities and different planning and targeting cycle frequency/speeds.

7**.0 GLOBAL INTEGRATION INSIGHTS.** Integration and synchronization of fires is increasingly a challenge at the global level due to the transregional, multifunctional, and the all-domain nature of threats. There are cross-Combatant Command implications in terms of target development, capabilities analysis, force assignment, decisions, mission planning, control measures, and execution.

Many of the insights noted in this paper apply at the global level. However, up front – this is a developing focus area.

Some challenges include:

- JIPOE and determination of COGs and target systems/networks that cross CCMD boundaries.
- Targeting guidance (on global priorities, objectives, and target systems).
- Determination across the Combatant Commands of the appropriate fires means, fire support coordination measures, and apportionment decisions.
- Mission planning and execution responsibilities, particularly for assets based in one CCMD that may be used against a target in another AOR.

Vignette

A Functional (some use the term Global) CCMD with a Global mission set may require a space-related ground target destroyed that is located in a GCC's AOR. Considerations:

- Who performs JIPOE? And does the GCC understand significance of the target?
- How is risk appraised, managed, and communicated? Who does it? Who is responsible?
- Target nomination process (Global or Geographic CCMD)?
- Approval of target on a Target List?
- Capability analysis (what can produce the required effect? - Who does this, the Geographic or Global CCMD?
- Prioritization of target against other ground targets within the GCC AOR?
- Integration of kinetic and non-kinetic fires capabilities (who does this?)
- Synchronization of fires with other ongoing AOR missions?

Insights:

- Consider which organization within JS J3 does the targeting function (in addition to the J2T providing target development support).
- Codify the Global CCMD responsibilities.
- Codify target nomination and approval processes for cross-CCMD targeting.
- Clarify capability analysis responsibilities on the CCMD in whose AOR the target exists. Leverage Supported/ing COMRELs should that GCC require external support.
- Ensure open coordination during prioritization of targets. Be prepared to raise any conflicts to the Establishing Authority (through the JS targeting OPR – recommend in the J3).
- Codify responsibility for integration and responsibility of kinetic and non-kinetic fires with the CCMD owning the AOR where the target exists. Clarify this at the onset of a crisis.

8.0 SENIOR LEADER CHECKLIST.

Up front: This is a start to a guide/memory check.

Design:

1. Engage IC to support JIPOE, COG, TSA, and Target Development.
2. Reach out for non-kinetic support (e.g., CYBER, WEBOPS, MISO, STO)
3. Participate in and approve/guide COG analysis. Essential part of guidance.
4. Specify/approve Target System Analysis requirements for HHQ and IC support.
5. Develop and share operational approach in terms of problem, objectives, named operations, protection, visualization of desired effects, and sustainment requirements.
6. Determine/develop narrative in alignment with HHQ, problem, and operational approach.

Authorities:

1. Determine delegation/empowerment for both kinetic and non-kinetic fires. Fight for delegation in the non-kinetic area to compete in the information domain.
2. Codify DCDR, COS, J3, DJ3 oversight authorities and responsibilities for targeting.
3. Empower J34/JFE with coordinating authority for targeting.

HQ Organization:

1. Specify J3 lead.
2. Clarify J34/JFE lead role for targeting. Articulate JFACC role.
3. Determine relationship between JFE and J39, and need for J34 (and authorities).
4. Determine relationship of PA with joint fires (through J39?). Retain special staff status.
5. Codify DCDR or OPR role for narrative development and refinement.

HQ Processes:

1. Linkage of planning with targeting, and role of OPT for coordination.
2. Linkage of targeting with intelligence support (JIPOE, ISR CM, and assessment).
3. Clarify how targeting guidance is produced and provided.
4. Codify target development process internal and external to HQ.
5. Articulate requirement and process for capability analysis in working groups.
6. Codify cross-talk and coordination between kinetic and non-kinetic working groups to ensure integration.
7. Codify process to determine prioritization/apportionment and FSCMs.
8. Codify how authorities are delegated for both kinetic and non-kinetic actions.

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Glossary
Abbreviations and Acronyms

AO – Area of Operations
B2C2WG – Boards, Bureaus, Centers, Cells, and Working Groups
C2 – Command and Control
CMO – Civil-Military Operations
COA – Course of Action
COG – Center of Gravity
COIN – Counterinsurgency
COS – Chief of Staff
CSWG – Communication Synchronization Working Group
CUOPS – Current operations
DIME – Diplomatic, Information, Military, Economic
DIMEFIL – Diplomatic, Information, Military, Economic, Financial, Intelligence, Law Enforcement
DTD – Deployable Training Division
ECC – Effects Coordination Center
EW – Electronic Warfare
FUOPS – Future operations
FUPLANS – Future plans
HQ – Headquarters
IO – Information Operations
IOWG – Information Operations Working Group
IRC – Information-Related Capability
J3 – Operations Directorate of a Joint Staff
J33 – Current Operations Section of J3
J35 – Future Operations Section of J3
J39 – Information Operations Directorate of J3
J5 – Strategic Plans and Policy Directorate of a Joint Staff
JFE – Joint Fires Element
JIOC – Joint Intelligence Operations Center
JIPOE – Joint Intelligence Preparation of the Operating Environment
JOC – Joint Operations Center
JPP – Joint Planning Process
JTC – Joint Targeting Cycle
JTCB – Joint Targeting Coordination Board
JTWG – Joint Targeting Working Group
KLE – Key Leader Engagement
LOO – Line of Operation
MIDB – Modernized Integrated Database
MILDEC – Military Deception
MISO – Military Information Support to Operations
OE – Operational Environment
OPT – Operational Planning Team
PA – Public Affairs
ROE – Rules of Engagement
SME – Subject-Matter Expert
TDWG – Target Development Working Group
TSA – Target Systems Analysis
WOG – Whole-of-Government

Information-Related Capabilities (IRCs) are the tools, techniques, or activities that affect any of the three dimensions of the information environment. The joint force (means) employs IRCs (ways) to affect the information provided to or disseminated from the target audience (TA) in the physical and informational dimensions of the information environment to affect decision making.

Some IRCs are (not all inclusive):

- Public Affairs (PA)
- Civil-Military Operations (CMO)
- Cyberspace Operations (CO)
- Information Assurance (IA)
- Space Operations
- Military Information Support Operations (MISO)
- Intelligence (INTEL)
- Military Deception (MILDEC)
- Operations Security (OPSEC)
- Special Technical Operations (STO)
- Joint Electromagnetic Spectrum Operations (JEMSO)
- Key Leader Engagement (KLE)

The Joint Staff J7
116 Lake View Parkway
Suffolk, VA 23435-2697