

**Command and Control
Joint Integrating Concept
Final Version 1.0**



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EXECUTIVE SUMMARY

This Joint Integrating Concept (JIC) promotes the development of command and control (C2) capabilities for agile, decisive, and integrated force employment in all phases of combat and supporting operations, as required by the *National Military Strategy (NMS) 04*. The JIC will enable rigorous assessment and analysis of capability gaps and redundancies through a Capabilities-Based Assessment (CBA) process.

The scope of the JIC is defined in three dimensions: functional, range of military operations (ROMO) and level of command. The central and supporting ideas, principles, capabilities, tasks, and attributes presented in Sections 3 through 5.2 address all C2 functions. They apply to all Joint Operating Concepts (JOCs) including *Major Combat Operations (MCO)*, *Stability Operations (SO)*, *Homeland Security (HLS)* and *Strategic Deterrence (SD)*. They are focused at the operational and tactical levels of command, while accommodating strategic guidance and reporting to the strategic level. The conditions, standards, and concept of operations (CONOPS), presented in Section 5.3 and Appendices C and E, are more narrowly focused to address all C2 functions at the operational (Combined Task Force [CTF]) level of command during the initial phase of an MCO.

Assumptions applicable to this JIC represent the key enablers of the concept: a, secure, trusted, global networking infrastructure (evolution of the Global Information Grid), core enterprise services (CES), and battlespace awareness information availability at all levels of command. All may be degraded in some situations.

The military problem addressed by this JIC is defined as follows:

Commanders must be able to exercise effective C2 of an interdependent joint force in rapidly changing scenarios involving complex distributed, simultaneous or sequential operations, often with other agencies and nations.

They must effectively integrate disparate capabilities from a variety of sources into a cohesive force.

They must rapidly achieve coherent, decisive effects against a variety of adversaries, exploiting information superiority and taking the offensive whenever practical.

They must be prepared to make decisions in a volatile, uncertain, complex, ambiguous environment against irregular, catastrophic, disruptive, and conventional threats.

They must be able to conduct robust collaborative planning (e.g., develop and assess multiple courses of action [COAs] and/or branches/sequels) under severe time constraints.

They will need to exercise the core functions of C2 at any time and anywhere in degraded network environments and from austere as well as robust fixed sites, from mobile sites (i.e., “on the move”) and in transition between sites.

They must communicate, collaborate, and monitor joint/combined operations in a highly decentralized environment.

They must maintain unity of command within a joint/combined force and unity of effort with mission partners.

These challenges will require significant enhancement to present C2 capabilities.

The central idea of the JIC is stated as follows:

Drawing upon global resources and considering global consequences, commanders will plan and execute complex regional operations conducted by an interdependent Joint force and typically involving non-DoD agencies and other nations.

Commanders will employ powerful, pervasive, real time horizontal and vertical information sharing and collaboration capabilities enabling operations forward, and leader-centric presentations of actionable information accessible down to the lowest tactical levels of command.

They will employ agile, robust, adaptive C2 structures and broad decentralization of decision authority whenever appropriate.

This approach will help to achieve:

- **Improved situational awareness, knowledge and understanding that is widely shared among commanders, staffs and operators**
- **More rapid and effective planning/decision making and execution, enabling the commander to control the pace and scope of operations**
- **Better synchronization of operations and integration of capabilities, resulting in enhanced unity of command within the Joint force and unity of effort with mission partners**
- **Sustained effective and coherent C2 even when faced with conditions of non-uniform degradation of systems**

Supporting ideas include:

- Parallel, distributed, collaborative planning and execution management
- Effects-based approach to operational planning

- Self-synchronization of subordinate forces
- Flexible approach to joint force and staff organization

A short vignette in the main body of the document illustrates the application of the central and supporting ideas to a hypothetical scenario circa 2015. An expanded illustrative CONOPS, applying the capabilities and tasks in a realistic scenario during the initial phases of an MCO, is presented in Appendix E (classified).

The following capabilities are defined. For each capability, subordinate, enabling tasks are identified that collectively comprise the capability.

- **Capability 1. Exercise Command Leadership**
- **Capability 2. Establish/Adapt Command Structures and Enable Both Global and Regional Collaboration**
- **Capability 3. Develop and Maintain Shared Situational Awareness and Understanding**
- **Capability 4. Communicate Commander's Intent and Guidance**
- **Capability 5. Plan Collaboratively**
- **Capability 6. Synchronize Execution Across All Domains**
- **Capability 7. Monitor Execution, Assess Effects and Adapt Operations**
- **Capability 8. Leverage Mission Partners**

The following attributes of C2 capabilities and tasks are defined in Section 5 and mapped to the corresponding capabilities and tasks in Appendix C:

- Accessibility
- Accuracy
- Agility
- Coherence
- Cohesion
- Completeness
- Flexibility
- Foresight
- Innovation
- Interoperability
- Morale

- Operational Trust
- Relevance
- Responsiveness
- Robustness
- Security
- Speed
- Suitability
- Timeliness
- Understanding

The JIC defines projected future conditions under which task performance can be assessed and identifies standards (with measures and criteria) for the level of task performance needed in 2010 and 2020 to implement the concept under the assumed conditions. Concluding sections assess the implications for other concepts and for experimentation and the risks associated with implementing the concept.

Appendix C provides a convenient summary of capabilities, attributes, tasks and standards.

Appendix D provides crosswalk matrices between the C2 JIC capabilities/tasks and the current JICs and Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF) Lessons Learned.

1. PURPOSE

This JIC promotes the development of C2 capabilities for agile, decisive, and integrated force employment in all phases of combat and supporting operations, as required by the *National Military Strategy (NMS) 04*. The JIC supports rigorous assessment and analysis of capability gaps and redundancies through a Capabilities-Based Assessment (CBA) process. The process will lead to materiel and non-materiel solutions as part of the broader Department of Defense (DoD) Joint Capabilities Integration and Development System (JCIDS) effort. As a starting point, the JIC proposes a set of capabilities and attributes and corresponding tasks, conditions and standards that will enable a future Joint Force Commander (JFC) to exercise C2 of a campaign with multinational and interagency dimensions. The capabilities and attributes presented in Section 5 of this JIC are based upon those contained in the *Joint C2 Functional Concept*, with necessary modifications to meet the needs of this JIC.

Per *Joint Publication 1-02*, C2 is defined as the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. C2 functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission.

The C2 JIC describes how leaders perform C2 functions by including time-proven capabilities and formalizing new capabilities required by the changing world environment brought about by new technology and processes. The concept of operations (CONOPS) illustrates how this concept applies to major combat operations (MCO) 10 to 20 years in the future.

The JIC fosters Joint, Service and coalition experimentation. When potential near-term solutions are identified through the CBA, the JIC will serve as a catalyst for combatant commands (COCOMs), Services, Agencies and others to improve current Joint C2 capabilities.

2. SCOPE AND ASSUMPTIONS

2.1 Scope

This document is a follow-up to the Joint Requirements Oversight Council (JROC)-approved *Joint C2 Functional Concept v1.0*, dated February 2004. The JIC expands upon the *Joint C2 Functional Concept* in the development of tasks, conditions, and standards to implement an updated set of capabilities derived from the *Joint C2 Functional Concept*. It also includes refinements to the scope, assumptions, risks, military problem statement and central idea addressed in the *Joint C2 Functional Concept*. The need for these refinements is explained in the pertinent sections of the JIC.

The JIC is narrower in scope than the *Joint C2 Functional Concept*. It does not include discussion of information networking capabilities, since these capabilities are now covered within the *Net-Centric Environment Joint Functional Concept*. The scope of the JIC is defined in three dimensions: functional; range of military operations (ROMO), represented by the Joint Operating Concepts (JOCs); and level of command. The central and supporting ideas, principles,

capabilities, tasks, and attributes presented in Sections 3 through 5.2 address all C2 functions. These sections of the JIC also generally apply to the full ROMO; however, the following approved JOCs were specifically analyzed: *Major Combat Operations (MCO)*, *Stability Operations (SO)*, *Homeland Security (HLS)* and *Strategic Deterrence (SD)*. Regarding the third dimension, these sections focus on the operational through tactical levels of command, while accommodating strategic guidance and reporting to the strategic level.

The conditions, standards, and CONOPS presented in Section 5.3 and Appendices C and E are more narrowly focused, from a ROMO standpoint, on the initial phase of an MCO and on the operational (Combined Task Force [CTF]) level of command. The CONOPS focuses on gaining operational access and seizing the initiative in an MCO 10 to 20 years in the future at the operational level of war. To ensure integration with the other JICs that have been developed, this JIC specifically analyzed the C2 capabilities identified in the *Joint Forcible Entry Operations (JFEO)*, *Joint Undersea Superiority (JUSS)*, *Seabasing, Integrated Air and Missile Defense (IAMD)*, *Joint Logistics (Distribution)* and *Global Strike JICs*.

2.2 Relation to Other Joint Concepts

2.2.1 Joint Functional Concepts

2.2.1.1 Joint C2 Functional Concept: This JIC builds upon the *Joint C2 Functional Concept* by refining the key ideas, capabilities and attributes presented in the latter and developing associated tasks, conditions and standards for the chosen vignette.

2.2.1.2 Battlespace Awareness Joint Functional Concept: Joint C2 is a consumer of Battlespace Awareness (BA) information. The C2 JIC assumes the intelligence and information sources and the analysis and dissemination capabilities addressed in the *Battlespace Awareness Joint Functional Concept* exist. In turn, the C2 JIC identifies tasks and associated conditions and standards for exercising the operational-level C2 functions associated with BA. This includes management of collection, analysis, and dissemination resources. It also includes Blue Force status and tracking, which is not discussed in detail in the *Battlespace Awareness Joint Functional Concept*.

2.2.1.3 Net-Centric Environment Joint Functional Concept: The *Net-Centric Environment Joint Functional Concept* provides the capability for collaboration, an essential tool of future commanders. The C2 JIC assumes the existence, with appropriate caveats, of information sharing, collaboration and information assurance (IA) capabilities addressed in the *Net-Centric Environment Joint Functional Concept*. In turn, the C2 JIC identifies tasks and associated conditions and standards for exercising operational-level C2 functions associated with net-centric operations in the chosen vignette. This includes network operations (NETOPS) functions to control and protect the network and manage enterprise services.

2.2.1.4 Other Joint Functional Concepts: This JIC also identifies the tasks and associated conditions and standards for exercising the C2-related functions of logistics, force application, and protection at the operational level of command.

2.2.2 JOCs

The principles, capabilities, and attributes presented in Sections 3 through 5 of this JIC are applicable to all JOCs. The conditions defined in Section 5, standards defined in Appendix C and the CONOPS address the initial phases of an MCO.

2.2.3 JICs

This JIC consolidates the C2-related tasks with associated conditions and standards in the other JICs listed in Appendix D and converts them, as needed, into a common lexicon.

2.2.4 Joint Capability Area (JCA)

This JIC uses the draft tier 1 and 2 JCA lexicon for Joint C2.

2.3 [Assumptions](#)

For the purposes of this JIC, an assumption is a statement about the availability of a future enabling capability, not within the scope of the concept, that is likely to hold true and is needed to develop this concept. The assumptions identified in this section are a refinement of those identified in the *Joint C2 Functional Concept*. Specifically, assumptions not directly relevant to the future C2 concept were removed, and assumptions more appropriate in other sections of the document (e.g., military problem or resulting requirement) were moved to that section. Assumptions applicable to this JIC address the availability of the key enablers of the concept. They are as follows:

- A secure, trusted, global networking infrastructure (evolution of the Global Information Grid [GIG] infrastructure) will be in place. Certain non-DoD agencies and allies will have the technology and permissions to be able to access the DoD network. However, some coalition forces and other non-DoD agencies may only have limited access based on technology and security constraints. There will also be times when network access for DoD and non-DoD participants is degraded by adversary action or other causes.
- Core enterprise services (CES), including data/information discovery, access and storage, security, messaging and collaboration capabilities, will be provided. These services will provide the ability to share information and collaborate across multiple security domains. However, some of these services may be degraded in some situations.
- BA information from terrestrial and space-based sources, including “fused” intelligence and geospatial information and information on friendly forces, other actors, the environment and relevant political and diplomatic developments, will be available at all levels of war, from strategic to lowest tactical level, to enable coherent decision making. However, these may be degraded in some situations.

3. THE MILITARY PROBLEM

3.1 Summary Statement

As explained in the draft *Joint Future Concepts Process, CJCSI 3010.2B*, the military problem describes the “challenges the future joint force will face.” The following problem statement addresses the challenges facing commanders in the 2010-2020 timeframe that must be addressed to exercise C2 effectively. Based on the considerations in the following sections, the military problem to be addressed by this JIC is stated as follows:

Commanders must be able to exercise effective C2 of an interdependent joint force in rapidly changing scenarios involving complex distributed, simultaneous or sequential operations, often with other agencies and nations.

They must effectively integrate disparate capabilities from a variety of sources into a cohesive force.

They must rapidly achieve coherent, decisive effects against a variety of adversaries, exploiting information superiority and taking the offensive whenever practical.

They must be prepared to make decisions in a volatile, uncertain, complex, ambiguous environment against irregular, catastrophic, disruptive, and conventional threats.

They must be able to conduct robust collaborative planning (e.g., develop and assess multiple courses of action [COAs] and/or branches/sequels) under severe time constraints.

They will need to exercise the core functions of C2 at any time and anywhere in degraded network environments and from austere as well as robust fixed sites, from mobile sites (i.e., “on the move”) and in transition between sites.

They must communicate, collaborate, and monitor joint/combined operations in a highly decentralized environment.

They must maintain unity of command within a joint/combined force and unity of effort with mission partners.

These challenges will require significant enhancement to present C2 capabilities.

3.2 Future Military Operating Environment

This section summarizes the key aspects of the future military operating environment within which future commanders will operate.

The future environment for military operations will include traditional and nontraditional adversaries, some with global presence and reach. Weapons of mass destruction (WMD) will

continue to proliferate and almost certainly will fall into the hands of terrorists and other nontraditional adversaries, necessitating more rapid response to threat warnings. Future military challenges can be characterized, in terms of threat actors, as traditional or irregular. In terms of the nature and consequences of the threat, future challenges can be characterized as disruptive or catastrophic. Future C2 capabilities must be tailored to address all four of these challenges.

The future operating environment will be characterized by greater complexity and uncertainty. While the United States is likely to have information superiority over adversary nation-states in conventional conflict, such an advantage is less likely in conflict against asymmetric threats such as terrorists and insurgent groups. Commanders will have to make decisions despite imperfect information, complex situations, and competing demands on DoD assets.

Joint forces will be trained and organized to be functionally interdependent at increasingly lower echelons in a net-enabled environment. A degree of interdependence between the service components already exists today. For example, the Army is dependent upon the other Services for strategic lift and fixed wing air support. The greater interdependencies of the future will require that joint C2 capabilities be extended to lower echelons. While interdependency may involve risk, it also presents the possibility of symbiotic benefits through collaborative planning and self-synchronization.

Force packages will be rapidly composed and tailored to the mission. Future C2 capabilities must enable commanders to rapidly integrate disparate capabilities from a variety of sources and locations to create a cohesive force.

Commanders will need to exercise command from austere as well as robust fixed sites, from mobile sites afloat, in the air, or on the ground (i.e., “on the move”), and in transition between sites.

The increased integration of diplomatic, information, military and economic (DIME) realms means that close collaboration with coalition forces and non-DoD agencies, including international and NGOs, will be required in most scenarios. Interoperability with the forces of other nations and with national and international agencies will vary widely but, in general, will be significantly less than interoperability between U.S. forces.

Future operations will focus more precisely on achieving desired military and political effects. The need to achieve prompt effects against time-sensitive threats will often require that military operations be less sequential and more simultaneous. The need to avoid collateral damage in military operations will continue to grow.

Another significant aspect of the future military environment is the impact of mass communications media and public opinion. Through mass media, tactical actions can have strategic effects. To an even greater extent than they do today, commanders will have to consider the potential impact of their actions on public opinion, manage the dissemination of information appropriately and cope with unfavorable press reports and hostile media.

The *Joint C2 Functional Concept* summarizes the implications of the future operating environment for C2. “Joint C2 must become more agile in order to continue operating with sufficient speed and quality of decision to operate within an adversary’s decision-making cycle.

Increasing the agility of Joint C2 will enable commanders to better deal with the uncertainty, complexity, and dynamism of the operating environment. Commanders need access to the information held by their colleagues in other echelons or to inform those in command of other functions. They need to collaborate on their decisions to maintain unity of effort in a rapidly changing environment. They need to be able to employ a variety of coordination and synchronization mechanisms in order to rapidly maximize the effectiveness of forces at their command. Joint C2 must enable commanders to decentralize command and control, encourage initiative in lower echelons, and quickly respond to changes in the operational environment.”

The future operating environment presents great opportunities to enhance C2 capabilities. Deployment of increasingly powerful and robust information networks will enable information sharing and collaboration capabilities that, if adequately protected, can transform C2. The availability of multi-source, multi-path information will lead to greater shared awareness and understanding as well as a higher degree of confidence and lower uncertainty in the availability and quality of information. Service cultures will evolve to accept and take advantage of a collaborative environment. An increasingly well-educated, resourceful officer and non-commissioned officer corps that can fully exploit information technology (IT) tools and resources will provide the foundation for a more collaborative, decentralized and agile approach to C2. However, in exploiting information networking and collaboration opportunities, capability developers and commanders must balance the benefits of broad information sharing with the associated security concerns.

In conclusion, the future military environment presents many challenges for commanders (summarized at the beginning of this section), and these challenges will require significant enhancement to present C2 capabilities. The remainder of this JIC provides an approach to meeting the challenges.

3.3 C2 Functions and Aspects

The C2 JIC must preserve and leverage the core functions and principles of C2 while explaining how technology and other opportunities can be exploited to enable C2 to be performed more effectively to meet the more demanding environment of the future.

The core functions of C2 are expressed in *Joint Publication 1-02* as: “...*planning, directing, coordinating, and controlling* military forces and operations.” “Controlling,” in this definition as in traditional management theory, means assessing the progress of operations against the plan and taking corrective action as necessary. Inherent to these functions is *organizing*, since establishing the operational and tactical organizational structure, command relationships and processes of a military force is well recognized as an important function of command. The *development and maintenance of SA and understanding* are implied functions that enable the other functions.

The *Joint C2 Functional Concept* lists the basic C2 functions as: Monitor and collect data on the situation; Develop an understanding of the situation; Develop a course(s) of action (COA) and select one; Develop a plan to execute the selected COA; Execute the plan, to include providing direction and leadership to subordinates; Monitor execution of the plan and adapt as necessary.

While synchronizing operations in function, time, and space is not explicitly addressed in this list, it is well established in doctrine as an important element of planning and execution. Synchronization can be accomplished through centralized management of an operation, through “self-synchronization,” or a mixture of both.

Additional functions that the JIC must address are the fundamental role of a commander to exercise leadership of his command and to leverage the support of mission partners, which we define as those organizations not under his direct authority.

C2 has a number of aspects: moral, cognitive, social, technical and legal. The moral aspect includes the commander’s ability to inspire and motivate his subordinates and to adhere to accepted norms of behavior, including respect for the law of war. The cognitive aspect refers to the ability of the commander and his subordinates to develop situational understanding and make effective decisions in a complex, uncertain environment. The social aspect refers to the relationships among commanders and their subordinates and other key actors, such as coalition and non-military partners. The technical aspect refers to the processes and equipment that enable C2. The legal aspect refers to the legal responsibilities and constraints placed on commanders. Since the technical dimension contains more easily measurable criteria and involves the greatest expenditure of funding, it tends to be the focus of capability development efforts. However, all aspects must be considered in defining the capabilities and tasks for executing C2 and when developing DOTMLPF and policy solutions.

3.4 Enduring C2 Principles

In developing future C2 capabilities, it is important to preserve the enduring principles that underpin the effectiveness of military C2 -- specifically *unity of command/unity of effort*, the *authority, responsibility, and accountability of the commander* and *the principle of the offensive*.

3.4.1 Unity of Command/Effort

Unity of command is a fundamental principle of war and, hence, a key responsibility of the commander. *Joint Publication 3-0* states: “The purpose of unity of command is to ensure unity of effort under one responsible commander for every objective. Unity of command means that all forces operate under a single commander with the requisite authority to direct all forces employed in pursuit of a common purpose. Unity of effort, however, requires coordination and cooperation among all forces toward a commonly recognized objective, although they are not necessarily part of the same command structure. In multinational and interagency operations, unity of command may not be possible, but the requirement for unity of effort becomes paramount. Unity of effort — coordination through cooperation and common interests — is an essential complement to unity of command.” This discussion illustrates that C2 is not just about commanding forces under a commander’s direct authority. It also involves working with mission partners, including interagency and multinational partners, who may not be under the commander’s authority. The principles of unity of command and unity of effort must be preserved in the development of new C2 processes that foster agility and speed of command through decentralization. Without adequate attention to these principles, decentralization could quickly lead to loss of cohesion within the force. Unity of effort is also a key consideration

in accommodating the greater involvement of coalition forces and non-DoD agencies in future operations.

3.4.2 Authority and Accountability of Commanders

The authority and accountability of commanders must be preserved in any effort to achieve greater C2 agility through decentralization or other means. While decision authority may be delegated in certain situations to promote greater agility, future C2 capabilities must enable the delegating commander to monitor the situation and intervene when necessary. Furthermore, the commander's intent, guidance, and direction are a principal means for achieving unity of effort. Future C2 capabilities must ensure timely communication of this guidance to subordinate units, especially during rapidly changing situations.

In a networked organization, the open flow of communications horizontally, vertically, and diagonally tends to "flatten" the organization from a communications standpoint. However, this effect does not change the hierarchical lines of decision authority, which can only be changed through explicit delegation by the commander or his superiors. Thus, a networked organization will typically be a "hybrid" of flat communications overlaying and complementing a traditional authoritative hierarchy. Senior commanders may flatten the authority hierarchies under their purview to fully exploit the power of networking. However, for a given hierarchy, the authority and accountability of commanders must be upheld to ensure effective C2.

3.4.3 The Principle of the Offensive

Joint Publication 3-0, Doctrine for Joint Operations lists the "Principle of the Offensive" as one of the fundamental principles of war. As this publication states, "The purpose of an offensive action is to seize, retain, and exploit the initiative." A commander exploits the initiative by making decisions and implementing them more rapidly than the adversary can (i.e., by acting within the adversary's decision cycle), thereby placing the adversary in a reactive mode. Since this principle is founded upon timely operational decision making, it is a key consideration in the development of C2 capabilities. Rapid decision-making ability is enabled by superior shared awareness and understanding as well as by rapid, collaborative, robust decision support, planning, and implementation capabilities.

The capabilities defined in this JIC can enable the commander to seize and maintain the initiative, thereby employing the Principle of the Offensive whenever possible. However, the commander will not always be able to maintain an offensive posture. Lack of information superiority or other factors, including operational, strategic and political factors, may place a commander in a fundamentally defensive or reactive posture. Therefore, the proposed capabilities enable commanders to cope with this situation through the same rapid decision-making, planning, and implementation processes that enable seizing the initiative, as well as through accurate and rapid assessment of the developing situation.

3.5 Risk Assessment

Risks that are relevant to the development of this concept include:

- Risks to future joint operations if C2 capabilities are not improved
- Risks associated with implementing the central and supporting ideas of the concept, including failure of a key assumption to hold true

This section addresses the first category of risks. Risks in the second category are addressed in Section 7.

Fundamentally, failure to develop and implement a concept that significantly improves C2 capabilities will result in lack of ability to execute future joint operations in a manner described in the *Capstone Concept for Joint Operations (CCJO)*. Specifically, continued reliance on current C2 capabilities will not provide the agility or ability to make good decisions in complex and uncertain environments. Additionally, it will not facilitate collaboration with interagency and multinational partners needed in the future operating environment. The end result would be unacceptable risk of mission failure in future joint, interagency, and multinational operations.

4. CENTRAL AND SUPPORTING IDEAS

4.1 Introduction

The central and supporting ideas of this JIC describe *how* the military problem will be solved in order to provide effective C2 for future commanders. These ideas distill and implement the vision of future C2 presented in the *Joint C2 Functional Concept*:

“Joint C2 needs to be agile in 2015. This goal can be achieved by connecting the individual commanders across the echelons and functions of a military organization through a networked infrastructure. . . . Connecting the individual commanders improves the speed and quality of their decision processes and the speed and quality of decisions throughout the military organization as a whole. The improvement in speed and quality is the result of the individual commander’s ability to collaborate during the decision-making process. Collaboration improves the decision-making process by reducing uncertainty and increasing understanding of the operational environment because commanders are able to fill gaps in their operational picture through access to a common pool of information. Commanders can then tailor their C2 assets to best ensure mission success and still maintain unity of command and unity of effort. The result is commanders and staffs will have an enhanced ability to make faster and more effective decisions and an improved ability to see to their execution. Joint C2 in 2015 will also:

- Allow people in large organizations to interact with the directness, informality and flexibility typical of small, cohesive teams or organizations;
- Allow commanders and staffs to tailor the C2 system as required by quickly assembling cohesive teams and by adopting C2 procedures suited to each situation rather than relying on ‘one size fits all’ procedures; and

- Allow the force to exploit the benefits of decentralization—initiative, adaptability and tempo—without sacrificing coordination and unity of effort.

The functional concept envisions a dynamic, decentralized, distributed, and highly adaptive form of Joint C2.”

4.2 [Summary of Central Idea](#)

The central idea presented in this JIC exploits the key elements of the foregoing summary-- *collaboration* and *decentralization* -- to solve the military problem described in Section 3. It is summarized as follows:

Drawing upon global resources and considering global consequences, commanders will plan and execute complex regional operations conducted by an interdependent Joint force, typically with mission partners from other commands, agencies, and nations.

Commanders will employ powerful, pervasive, real time horizontal and vertical information sharing and collaboration capabilities enabling operations forward, and leader-centric presentations of actionable information accessible down to the lowest tactical level of command.

They will employ agile, robust, adaptive C2 structures and broad decentralization of decision authority whenever appropriate.

This approach will help to achieve:

- **Improved situational awareness (SA), knowledge and understanding that is widely shared among commanders, staffs and operators**
- **More rapid and effective planning/decision making and execution, enabling the commander to control the pace and scope of operations**
- **Better synchronization of operations and integration of capabilities, resulting in enhanced unity of command within the Joint force and unity of effort with mission partners**
- **Sustained effective and coherent C2 even when faced with conditions of non-uniform degradation of systems**

4.3 [Supporting Rationale for the Central Idea](#)

Widespread sharing of information, intelligence, and knowledge, enabled by state-of-the-art information networking technology, lies at the heart of the central idea. Information sharing is

the key enabler of enhanced situational understanding, collaboration, decision making, planning, execution management, and adaptation to changing situations.

Collaboration goes beyond mere sharing of information and means working together on a common task, such as a situation assessment or an operational plan. Collaboration leverages the power and synergy of group effort. However, it does not imply “decision making by committee” or “decision making by consensus.”

Commanders and their staffs will achieve a refined, collective understanding of the situation through widespread information sharing and collaborative situation assessments. They will integrate information to enable the conduct of operations forward with some functions, as appropriate, conducted in sanctuary or elsewhere.

The enhanced awareness and understanding will result in faster and higher quality decisions and plans. Commanders will leverage global planning resources and consider the potential global effects of their actions. Decisions will improve due to more accurate, relevant, timely information. They will be made faster because relevant information will be more readily available, and commanders will be more comfortable with their understanding of the situation. Planning quality will be enhanced through broader information sharing and more extensive collaboration.

Subordinate commanders will be able to execute the plan faster and with better synchronization because they have been closely involved in the planning, share the senior commander’s understanding of the situation and have the authority to act on their own initiative. Robust network communications and collaboration capabilities will let them consult rapidly with each other and the senior commander when problems arise. Self-synchronization of subordinate force operations, enabled by robust communications and shared SA, will expedite operations and improve synchronization. Shared situational understanding will promote unity of effort with mission partners by enhancing mutual understanding.

Commanders will be able to integrate capabilities from various sources more rapidly and effectively because unit commanders will have a better understanding of each others’ capabilities and limitations and be able to work directly with each other on the various tasks, such as planning, training, mutual support—that facilitate integration of capabilities.

Command agility is enhanced due to more rapid decision making, planning, and execution. This results from decentralization of authority and the benefits of pervasive information sharing and collaboration described above.

A networked environment affords the option of employing centralized or decentralized C2 as the situation dictates. Appropriate decentralization of decision making, planning and execution authority will reduce the time required to respond to new threats and changing situations. Agile C2 structures will allow the commander to maintain effective and coherent C2 even when faced with conditions of non-uniform degradation of systems. Robust information sharing and collaboration capabilities will allow subordinate commanders to self-synchronize, while at the same time enabling senior commanders to monitor the situation and intervene when needed. The

authority and accountability of commanders at all levels is maintained through the ability to monitor the situation and restore or retain centralized decision authority when appropriate.

4.4 Supporting Ideas

4.4.1 Parallel, Distributed, Collaborative Planning, and Execution Management.

Operational planning will be conducted in parallel across echelons, rather than sequentially as in the past, thus facilitating the development of a more complete plan in the available time or more rapid completion of plans. Planning will be distributed between local and remote sites, including “reachback” support sites. The parallel, distributed nature of future planning and execution management will require continuous coordination and collaboration.

4.4.2 Effects-based Approach to Operational Planning.

The *CCJO* defines “effects” as “the outcomes of actions taken to change unacceptable conditions, behaviors, or freedom of action to achieve desired objectives. This may involve influencing the environment, defeating an adversary, or rebuilding after a crisis.” Creating effects depends upon acquiring knowledge and establishing reach. Knowledge of the adversary or situation as a system is required in order to identify actions that will have the greatest likelihood of creating desired effects. Reach is required to bring actions to bear. Identifying, creating, and exploiting effects to achieve assigned objectives is a continuing, iterative process across the DIME instruments of national power. Effects created by one instrument of national power may influence or change an effect created by another—it is essential that effects be considered holistically by the joint force prior to action. Effects-based planning requires a good understanding of the adversary as a “systems of systems” and of his essential political, military, economic, social, infrastructure and information (PMESII) systems. An effects-based approach is particularly applicable to an adversary system in which identified links and nodes can be influenced by various instruments of national power. Such an approach may complement or supplant other approaches.

4.4.3 Self-synchronization of Subordinate Forces.

To promote agility in response to changing situations, future C2 capabilities must enable subordinate forces to synchronize among themselves when appropriate, without detailed direction from above. Self-synchronization will require that subordinate commanders be able to act on their own initiative and collaborate effectively. They must share SA, trust in their information and in each other, and have a clear understanding of the commander’s intent.

4.4.4 Flexible Approach to Joint Force and Staff Organization.

In addition to the traditional organization of components into the physical domains of air, land and maritime, future C2 should allow for possible organization of the Joint force by warfighting functions, such as strike, maneuver, protection, logistics, and information support. The option to organize the commanders’ headquarters along similar lines should also be maintained.

4.5 Application of Concept within a Campaign Framework

The central and supporting ideas, capabilities, tasks, and attributes in this JIC apply to the conduct of C2 in all phases of a campaign. The conditions, standards, and CONOPS are focused on the “seizing the initiative” phase.

4.6 Illustrative Vignette

The following illustrative vignette describes how the central and supporting ideas would be implemented in a hypothetical scenario circa 2015. A more detailed scenario is provided in the Appendix E CONOPS.

Scenario

A shadowy, well-equipped terrorist organization supported by a renegade neighboring state has seized control of a resort island containing thousands of international tourists and a sizeable population. The resort island has both rural and urban settings; the urban areas contain several clusters of high-rise hotels along with multistoried discos and casinos, some of which are on exclusive beachfronts. The rural areas, although catering to foreign tourists, contain villages and small towns where most of the island’s population resides. A combined task force (CTF) built around a Marine Expeditionary Force (MEF) and an Army airborne force has been assigned the task of reestablishing friendly control of the island. The MEF commander will serve as the Commander CTF (CCTF). Because of a recent natural disaster, U.S. and international aid organizations are present on the island, restoring basic infrastructure and services. In addition to the elements of the multinational task force, the friendly neighboring nation that has a protectorate over the island (the “host nation”) will participate in the operation as a partner, but will not place its modest forces under CTF command. Threats to friendly forces consist of sea denial, air, ballistic missile, and surface-to-air missile (SAM) threats from the renegade state, as well as light weapons and shoulder-fired SAMs in the hands of the terrorists. Extensive intelligence has been collected and a comprehensive system of systems (SoS) analysis completed on the renegade state, but not on the terrorist organization. Intelligence on the objectives, capabilities, and vulnerabilities of the terrorists is limited. The terrorists may have rudimentary chemical and biological weapons.

CTF Standup and Organization

Upon receipt of the task, the CCTF establishes a segmented environment for CTF information sharing and collaboration on the DoD net-centric environment and obtains appropriately restricted access for the multinational partners and U.S. and international agencies that will be part of the operation. This collaborative information environment (CIE), including a knowledge portal and other tools, becomes the primary venue for accessing and sharing information throughout the operation.

In consultation with the Combatant Commander and his multinational leads, the CCTF elects to establish a hybrid command structure consisting of combined/joint component commanders for maritime, air and space, land, logistics and special operations plus multifunctional mission components for hostage rescue and humanitarian relief. The commander tailors the organization

to the mission and designs it to promote horizontal integration, considering “span of control” constraints and other factors. Within that structure, he establishes clear lines of authority and accountability for subordinate commanders. He apportions forces assigned to him by higher authority to the components and establishes both standing and temporary command relations, including the ability to reassign units quickly and smoothly between components as the need arises. Mission partners include the supporting commands (United States Strategic Command [USSTRATCOM], United States Special Operations Command [USSOCOM], United States Transportation Command [USTRANSCOM]), Defense Information Systems Agency (DISA), Defense Intelligence Agency (DIA), the national intelligence agencies, non-DoD agencies such as Department of State (DOS) and Central Intelligence Agency (CIA), the host nation, NGOs, intergovernmental organizations (IGOs), etc. The CCTF must also coordinate his operations with the international aid organizations, which are not considered mission partners.

The CTF staff organization is based on the DoD standard, modified as needed for the mission at hand. The commander implements preplanned collaborative structures and processes, such as a combined/joint planning board, to facilitate horizontal, vertical, and diagonal collaboration for planning and execution management in specific functional areas and at the CTF level. The joint fires cell, for example, includes representatives from all components plus the CTF staff, COCOM staff, USSTRATCOM, national agencies and DOS. For coordination outside DoD, the CTF staff leverages a standing interagency coordinating group on the COCOM staff via “reachback.” Ad hoc teams are established within the CTF staff and across the force to address emerging problems or new missions.

The CCTF and a portion of his staff are established afloat on a large amphibious ship. The remainder of his staff remains in garrison and is accessed throughout the operation via reachback. He maintains full connectivity with the force and participates in the planning process while flying from his garrison headquarters to the ship. Similarly, component commanders maintain the ability to access the CIE, and thus collaborate with each other and participate in the planning process while en route to their deployed headquarters.

Planning Phase

The Joint Staff planning order directs that offensive operations commence within one week, requiring a very rapid planning process. Accessing intelligence and other information from global sources via the net-centric operating environment, all commanders and planners develop a good understanding of the situation. The CCTF and his staff conduct a rapid mission analysis and develop the initial commander’s guidance and intent in consultation with the component commanders, COCOM, and mission partners. This rapid mission analysis is enabled by advanced commander-centric displays and decision support tools that present actionable information and real-time assessments of contingencies and options. The commander’s guidance is immediately promulgated throughout the CTF staff and to all echelons and supporting units with the direction to commence distributed, parallel, collaborative planning. Using the CIE, all components and echelons have access in near-real time (NRT) to each other’s plans. The commander’s guidance, continually refined and immediately shared throughout the force as the situation develops, synchronizes subordinate planning efforts. The prompt, widespread sharing of intelligence and other planning information also helps to synchronize planning as well as ensure the quality of the plans.

The CTF and component plans are designed to achieve the desired effects identified by the combined/joint planning board in support of military objectives provided by higher authority. The effects-based planning approach also considers the potential for local effects, such as the damage or destruction of a religious building, to have global impact. Powerful decision support and modeling and simulation tools are used to quickly develop and assess alternative COAs. Uncertainty regarding the capabilities and expected behavior of the adversaries and other factors, such as evolving rules of engagement (ROE), is addressed by building flexibility into the plan, such as through construction of branches and sequels and holding contingency forces in reserve. The commander's confidence in his ability to maintain SA and adapt the plan during execution in consultation with his fellow commanders is a key element of the approach to coping with uncertainty and the "fog of war."

The CCTF hosts frequently scheduled and ad hoc video conferences with his component commanders and mission partners to resolve issues and refine the integrated CTF plan. In the latter phases of planning, powerful modeling and simulation tools are used to assess the effectiveness of the integrated plan and to conduct rehearsals in preparation for execution.

In parallel with the planning effort, executing forces are moved into position and/or otherwise prepared for the pending operation. They are kept continuously apprised of the overall plan and their role through the CIE. Mission partners also share SA by virtue of their inclusion in the CIE. The CCTF can align agendas with mission partners, thereby creating the ability to leverage their capabilities.

Execution Phase

The campaign plan calls for decentralized execution of the operation. The CCTF directs action through mission-type orders. He delegates execution authority to his subordinates, and they in turn to their subordinates, while providing general guidance on what circumstances require consultation with the senior commander. Component commanders and their subordinate units keep each other and the CCTF apprised of their progress via the CIE. To minimize unnecessary communications, progress reports are made on an "as exception" basis and upon achievement of key milestones in the synchronization matrix.

Operations are synchronized initially through the matrix and through adherence to the campaign plan as much as practical. However, the emergence of a hostage situation and unexpected threats by the renegade state to a coalition-friendly neighbor necessitate modifications to the plan. The hostage situation was anticipated, and the contingency plan for this situation is automatically activated by the CTF staff, including creation of a special sub-task force to rescue the hostages. With tailorable, user-friendly information displays, the commander and his staff can readily assimilate the Battlespace information increasing SA. Using overlays, filters, and zoom-ins, they are able to monitor execution and decide on new COAs. The sub-task force is created and the operation coordinated via the CIE.

The renegade state's threat to its neighbor was not anticipated, and requires a significant reallocation of forces with subsequent restructuring of the campaign plan. Responding to this development requires extensive coordination by the CCTF with his components, the COCOM,

the interagency and multinational partners, and the military command of the threatened state. Leveraging continually updated situational understanding provided by intelligence and information resources accessed via the CIE and automated planning tools, the CCTF and his staff collaborate with the components and mission partners in real time to rapidly rework the campaign plan to address the revised mission.

The CCTF contributes to the coalition public information objectives by holding regular sessions with the media to provide factual information on the operation, subject to security concerns, and to counter false accusations by the adversaries and inaccurate or biased reporting. He coordinates his prepared remarks and responses to anticipated questions with the components, COCOM, interagency partners, and other mission partners via the CIE.

5. CAPABILITIES, TASKS, ATTRIBUTES AND CONDITIONS

5.1 C2 Capabilities and Tasks

As defined in the draft *Joint Future Concepts Process*, a capability is “the ability to achieve a desired effect under specified standards and conditions through combinations of means and ways to perform a set of tasks.” This same document defines a task as “an action or activity (derived from an analysis of the mission and concept of operations) assigned to an individual or organization to provide a capability.” In keeping with guidance in this document, the C2 JIC treats tasks as the enabling sub-elements of a capability. Each capability is decomposed into its component tasks, which collectively comprise the capability. In turn, these tasks may require further decomposition in the actual development of the Functional Capabilities Board (FCB) Functional Area Analysis (FAA) process.

The C2 JIC capabilities address all of the core C2 functions identified in Section 3. The JIC capabilities are consistent with the C2 capabilities defined in the *Joint C2 Functional Concept* with the following exceptions:

- “Collect and monitor data” is considered to be part of “Develop and Maintain Shared SA and Understanding.”
- The “collaborative C2 capabilities” defined in the *Joint C2 Functional Concept* are either addressed by the *Net-centric Environment Joint Functional Concept* or are incorporated into the core capabilities.
- New capabilities have been added to address essential C2 functions that were not addressed in the *Joint C2 Functional Concept*, and some capabilities have been combined under “Plan Collaboratively.”

C2-related information within the other JICs and inputs from Service and joint representatives provided during a series of C2 JIC workshops were also used to identify these eight specific capabilities. The capabilities are intended to cover the full range of future C2 needs and to facilitate the development of non-materiel as well as materiel solutions. The C2 JIC capabilities are defined below and their associated tasks are listed. Attributes are defined in Section 5.2 and

assigned to tasks in Appendix C. This Appendix also contains a description of each task and the standards derived from the attributes. Conditions are defined in Section 5.3.

Capability 1. Exercise Command Leadership. This is the ability to exercise authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of a mission. Command leadership is the art of motivating and directing people and organizations into action to accomplish missions. Commanders must be able to exercise effective leadership of an interdependent joint force in rapidly changing scenarios involving complex distributed, simultaneous or sequential operations, often with other agencies and nations. Unity of effort and the authority and accountability of the commander must be preserved. Associated tasks include:

- 1.1 Promote adherence to the law of war and accepted behavior norms
- 1.2 Establish and promulgate rules of engagement (ROE)
- 1.3 Take care of personnel
- 1.4 Delegate decision authority
- 1.5 Encourage subordinates to exercise initiative consistent with commander's intent
- 1.6 Develop subordinate leaders
- 1.7 Establish and cultivate relations with mission partners
- 1.8 Manage risk
- 1.9 Manage dissemination of information to the public; align public information dissemination with strategic communications objectives of higher authority
- 1.10 Assess operational readiness

Capability 2. Establish/Adapt Command Structures and Enable Both Global and Regional Collaboration. Commanders must be able to quickly establish or adapt command structures across the force and within the staff tailored to the mission, and to create the processes that will enable horizontal and vertical collaboration. They must have a menu of alternative schemes for organizing the components and defining command relations, with associated guidance on when and how to apply them. It is essential that the infrastructure be in place to enable rapid reaction to new crises. Related tasks include:

- 2.1 Organize the staff to align with the conditions of the mission environment, assign roles, and establish internal collaborative structures and processes
- 2.2 Establish/refine the joint task force component organization and integrate capabilities
- 2.3 Establish/refine command relationships to enable appropriate coordination relationships, including lines of authority and accountability
- 2.4 Identify collaboration requirements; establish the collaboration infrastructure requirements
- 2.5 Establish/refine collaboration structures and processes across the force, including standing and ad hoc functional cells and communities of interest (COIs)
- 2.6 Establish collaboration mechanisms (business rules, systems interface, etc.) with mission partners

Capability 3. Develop and Maintain Shared Situational Awareness and Understanding. This capability includes the ability to access a "common operational picture" (COP) presenting current and forecast information on adversary and friendly forces, neutral elements, the

environment and geospatial information. The “picture” is built through access to both processed and raw data from sensors, analysts and other sources, and through collaborative analysis and assessment of this data. SA, transformed into knowledge through synthesis, experience, and collaboration, enables situational understanding. The tasks included under this capability are:

- 3.1 Access and integrate intelligence information and forecasts, including information on adversary, neutral and non-combatant entities of interest; collaboratively assess and share implications
- 3.2 Employ blue force tracking capability; provide access and integrate information on location, identity, status, capabilities and limitations of friendly forces (“Blue Force SA”); collaboratively assess and share implications
- 3.3 Access and integrate geospatial and environmental information and forecasts; collaboratively assess and share implications
- 3.4 Reachback for subject matter expertise
- 3.5 Present tailored, relevant, synthesized, actionable information to promote understanding
- 3.6 Collaboratively conduct comparative, multi-discipline assessment of adversary strengths and vulnerabilities versus our own
- 3.7 Collaboratively develop and share understanding of regional/local diplomatic, political, economic, and cultural factors

Capability 4. Communicate Commander’s Intent and Guidance. Commander’s intent is a concise expression of the operational purpose and desired end state. As the impetus for the planning process, it may also include the commander’s assessment of the adversary commander’s intent and an assessment of acceptable operational risk. In the net-centric collaborative environment, the commander’s intent must be shared early and often to enable parallel planning and self-synchronized execution. Associated tasks are:

- 4.1 Receive strategic mission and guidance
- 4.2 Collaboratively conduct mission analysis
- 4.3 Create, shape, and synchronize guidance with mission partners’ concerns in mind; align agendas to the extent practical
- 4.4 Promulgate initial commander’s intent and guidance, including operational objectives, to subordinate echelons and staff and ensure it is understood
- 4.5 Periodically (as required) update commander’s intent and guidance and ensure it is understood
- 4.6 Direct action through mission-type orders to subordinate echelons
- 4.7 Delegate authority for mission planning and execution to subordinate commanders as appropriate with clear bounds

Capability 5. Plan Collaboratively. This capability involves an effects-based approach that directly ties offensive actions to campaign objectives, drawing on global resources and considering global consequences. Planning must be conducted with the collective knowledge of the decisions and plans of others to produce coherent integration. Planners must be able to focus on exploiting critical adversary vulnerabilities and must consider friendly critical capabilities and potential collateral damage. Parallel, distributed, collaborative planning capabilities and improved assessment tools are needed to compress process timelines. However, collaboration does not imply decision making by committee or consensus. The ability to assess the suitability

of a plan through wargaming and mission rehearsal prior to execution is also needed. Related tasks include:

- 5.1 Form collaborative planning teams across components, missions, functions, and geographies and with mission partners
- 5.2 Collaboratively develop, analyze, and select the COAs, branches, and sequels.
- 5.3 Collaboratively develop joint/coalition campaign plan, including the synchronization matrix
- 5.4 Collaboratively develop operational plans across the full ROMO, employing all appropriate joint capability areas:
 - Joint Air Operations
 - Joint Space Operations
 - Joint Land Operations
 - Joint Maritime/Littoral Operations
 - Joint Irregular Operations
 - Joint Information Operations
 - Joint Access and Access Denial
 - Joint Protection
 - Joint Logistics
 - Joint Net-Centric Operations
 - Joint Battlespace Awareness
 - Defense Support to U.S. Civil Authorities
 - Joint Force Generation
 - Joint Force Management
 - Joint Homeland Defense
 - Joint Global Deterrence
 - Joint Shaping
 - Joint Stability Operations
 - Joint Interagency/IGO/NGO Coordination
 - Joint Public Affairs Operations
- 5.5 Assess effectiveness of plans and prepare for execution

Capability 6. Synchronize Execution Across All Domains. Effective planning is an essential means of achieving synchronized action, provided the plan remains appropriate to the situation and is executed properly. However, in keeping with the adage that “no plan survives contact with the enemy,” the commander must be able to achieve synchronization when operations are not executed as planned. This can be done through centralized redirection, as in the past, or in a decentralized manner through self-synchronization of subordinate forces. The latter is the preferred method for future C2, but this approach may not always be feasible or appropriate. The commander must have the ability to employ whichever method of synchronization is appropriate to the situation. Self-synchronization requires subordinates to have a clear understanding of the commander’s intent, shared SA and operational trust, good communications and the ability to act without detailed direction from above. Tasks associated with this capability include:

- 6.1 Communicate and disseminate plans and orders to all echelons and to mission partners

- 6.2 Authorize and enable execution and self-synchronization of subordinate forces as appropriate
- 6.3 Synchronize/self-synchronize operations within and among physical and functional domains across the full ROMO employing all appropriate joint capability areas:
 - Joint Air Operations
 - Joint Space Operations
 - Joint Land Operations
 - Joint Maritime/Littoral Operations
 - Joint Irregular Operations
 - Joint Information Operations
 - Joint Access and Access Denial
 - Joint Protection
 - Joint Logistics
 - Joint Net-Centric Operations
 - Joint Battlespace Awareness
 - Defense Support to U.S. Civil Authorities
 - Joint Force Generation
 - Joint Force Management
 - Joint Homeland Defense
 - Joint Global Deterrence
 - Joint Shaping
 - Joint Stability Operations
 - Joint Interagency/IGO/NGO Coordination
 - Joint Public Affairs Operations
- 6.4 Synchronize operations with DoD agencies and coalition members
- 6.5 Coordinate operations with non-DoD national agencies and international organizations
- 6.6 Synchronize execution between/across phases
- 6.7 Synchronize mission handover during operation
- 6.8 Validate targets prior to attack (combat identification [CID])

Capability 7. Monitor Execution, Assess Effects, and Adapt Operations. This capability builds upon Capabilities 3 and 4 in particular. Commanders need the ability to maintain SA, assess plan execution effectiveness and rapidly update plans by identifying alternative COAs and redirect forces as circumstances change. Commanders and their staffs must have visibility over friendly unit decisions and capabilities, and the ability to monitor and react to changes in adversary status. Planners must be able to predict desirable and undesirable attack consequences, and anticipate how effects may propagate throughout an adversary's system. The ability to respond rapidly and effectively to changing circumstances will enable commanders to maintain the initiative. The tasks included under this capability are:

- 7.1 Monitor tactical operations; assimilate information; assess compliance with commander's guidance and intent, including ROE; intervene in subordinate actions as needed
- 7.2 Track, shift, reconfigure (i.e., control) forces, equipment, sustainment, and support, even en route
- 7.3 Collaboratively assess achievement of planned effects
- 7.4 Collaboratively identify and assess implications of unintended effects

- 7.5 Collaboratively, rapidly re-plan and synchronize operations to adapt to changing situation
- 7.6 Adapt operations to changing situations through initiative and self-synchronization when practical
- 7.7 Respond to emerging requests for support from subordinate commands and mission partners
- 7.8 Determine when desired objective, end-state or phase points have been reached

Capability 8. Leverage Mission Partners. The commander must be able to achieve/maintain unity of effort and to leverage the capabilities of mission partners not under his command. Mission partners may include other DoD units, non-DoD agencies, coalition, and international organizations. He does this through coordination, collaboration, influence, persuasion, negotiation, and diplomacy as appropriate. Associated tasks are:

- 8.1 Communicate mission objectives and support needs
- 8.2 Coordinate with mission partners to gain actionable commitment
- 8.3 Provide support as feasible and appropriate
- 8.4 Understand situation-specific negotiating power

5.2 Attributes of C2 Capabilities and Tasks

The *Joint Future Concepts Process* defines an “attribute” as a “quantitative or qualitative characteristic of an element or its actions.” This JIC assigns the attributes associated with each capability to the individual tasks to better enable definition of standards. The attributes are defined below and assigned to capabilities and tasks in Appendix C. Each capability has one or more of the following attributes.

Accessibility – The ability of all levels of command (strategic, operational, and tactical), at any time and from anywhere, to pull or push relevant data and information that is the basis for shared SA. Additionally, access to a standardized joint application tool set at austere and robust, fixed and mobile sites will enhance decision-making capabilities supporting rapid, efficient, effective command and control.

Accuracy – Conforming precisely to fact or truth. A system with this attribute provides error free (or within a range of acceptable error) measurements or data via credible, dependable and reliable sources. Accuracy and trust may exist due to prior performance and/or specific integrity assurance measures that have been adopted.

Agility – The ability to respond effectively and in a timely manner to changing circumstances against a thinking and adaptive enemy, from anywhere in the battlespace, at any time, even when the networks and command structure are degraded. Agility includes both “flexibility” and “responsiveness.” Agility enables organizations, systems or processes to react and adapt to changing situations and conditions, such as performing C2 during operational transition and reorganization/reconstitution; while airborne, afloat, or “on the move”; or in response to enemy actions.

Coherence – The systematic or logical integration of numerous diverse elements, relationships, and values in order to achieve clarity or a desired end. In the C2 domain, coherence is enhanced

through understanding of the mission and commander's intent and guidance and through collaboration.

Cohesion – A characteristic of an organization that means having well-defined roles and group norms, common goals, a positive identity, good working relationships, shared responsibility, respect, positive energy, trust, cooperation, unity, good communication, pride in membership and synergy. An indicator of the amount of cohesiveness is the frequency of “we” and “our” statements vice “I,” “me,” and “mine.” In a cohesive organization, everyone is striving toward the same objective. Member goals coincide with the organization's goals, and there are no hidden agendas.

Completeness – Having all components, parts, or steps critical to complete an operation. Complete information enables timely, appropriate decision making.

Flexibility – Ability to command and control operations from anywhere in the battlespace, at any time, in a variety of situations and conditions, without loss of effectiveness. Flexible and adaptive systems/processes take into account a thinking and adaptive enemy and enable course corrections with minimal disruption since they are built to respond to multiple situations or events. From a planning standpoint, commanders at all levels can quickly select a COA without being locked into it. From an organizational standpoint, this attribute enables a timely, effective response to an altered and/or unforeseen operating environment. Such operating environment changes, often caused by adversary actions, may require modifying organizational structures, workflows, and decision-making processes.

Foresight – The ability to predict probable future states in order to recognize and exploit opportunity. Foresight may be based on extrapolation from current conditions combined with an understanding of likely actions. This includes the ability of the commander to define, assess, and anticipate enemy actions and develop appropriate COAs, branches, and sequels.

Innovation – Performing tasks in new ways or by using new, advanced, or original ideas, solutions, or concepts. This attribute is characterized by a proactive approach. This attribute is often found in organizations that (1) offer abundant freedom to exchange information to gain full understanding of commander's intent, and (2) are empowered to take action. Solutions featuring this attribute may alter or even eliminate current procedures.

Interoperability – The ability of systems, units, and forces to provide services to and accept services from other systems, units, or forces. This also includes the ability to use the services to operate effectively together.

Morale – Often described as esprit de corps, morale is the enthusiasm, confidence, or loyalty of an individual or group with regard to the function or task at hand. In a group, it is a sense of common purpose. For an individual, it is the level of individual psychological well-being based on that sense of purpose and confidence in the future.

Operational Trust – The aggregate level of trust from each person and earned from each entity (person, object, system) to accomplish a mission or endeavor. Complex operations using interdependent forces require a level of operational trust in order to gain operational efficiency

and effectiveness. Operational trust refers to the sum of a variety of trust perspectives including (but not limited to) commander/subordinate, subordinate/commander, peer/peer, operator/equipment and warfighter/tactics.

Relevance – Importance or applicability to the situation at hand; the degree to which something is related to or useful to a specific system or event. The commander needs the information that will help him make the best decision without being overwhelmed with data that is not important to his gaining SA. At the same time, subordinates need a set of information that is relevant to their specific roles/missions, which may or may not come from the same set of data. The information content of an operational picture can vary across echelons to enable relevant information to be portrayed clearly and unambiguously to decision makers and actors.

Responsiveness – Readily reacting to or recovering from changing situations and conditions in real time and near real time. The effective use of responsive and resilient planning, execution and assessment enables rapid deployment or redirection of assets when various “windows of opportunity” occur. Ideally, systems with this attribute are designed to function at their normal operational standard upon recovery from or reaction to changing situations and conditions.

Robustness – Retaining near-full operational capability in a degraded environment due to great strength, durability, survivability, interdependency, resiliency, a distributed nature, or a combination thereof. Can operate in several environments and perform effectively across a range of conditions, situations, and missions. Organizations and systems with this attribute can function during a disturbance; provide surplus capability to improve service reliability and quality; recover from or adjust to malfunctions or changes; and disperse resources performing services throughout a large area.

Security – A condition that results from the establishment and maintenance of protective measures that ensure a state of inviolability from hostile acts or influences. (*Joint Publication 1-02*) Security includes preventing loss, destruction, exploitation, or denial of use of information or of a system by establishing, maintaining, and implementing protective measures and risk management.

Speed – The appropriate pace of tasks and decision making. At times, the appropriate speed is rapid. When deliberate methodical actions are required, a slower speed may be required. To obtain the appropriate speed of command, subordinate forces must be enabled to synchronize actions among themselves, without restrictive direction from above.

Suitability – The degree to which a plan, decision or action is appropriate for the task or situation. Suitability extends beyond mere feasibility to an assessment that the plan, decision or action is likely to be effective for the task or situation.

Timeliness – Occurring at a suitable or opportune moment; well-timed. Timeliness is situation dependent. It reflects the relationship between the age of an information item and the tasks or missions it must support.

Understanding -- Having the capacity for rational thought or inference, and the ability to comprehend the meaning and importance of focus areas the commander designates and the

direction of his intent. Having the ability to grasp the commander's guidance and apply it to operations. SA enables situational understanding -- knowing what the enemy is doing and knowing why he is doing it.

5.3 Conditions

The *Joint Future Concepts Process* defines a “condition” as “a variable of the operational environment including scenario that affects task performance.” For purposes of capabilities-based analysis, the tasks presented in Section 5.1 above must be performed to the standards established in Appendix C under the conditions defined below.

5.3.1 Physical/Threat Conditions

5.3.1.1 Threat has capabilities or has used nuclear weapon(s), improvised nuclear device(s), radiation dispersal device(s) (RDD) and/or toxic industrial radiologicals (TIRs) to cause immediate and/or delayed casualties, psychological disruption and/or disruption of the OPTEMPO.

5.3.1.2 Threat has capabilities to employ, or has used chemical effects to cause immediate and/or delayed casualties, psychological disruption and/or disruption of the OPTEMPO.

5.3.1.3 Threat has capabilities to employ, or has used biological effects to cause immediate and/or delayed casualties, psychological disruption and /or disruption of the OPTEMPO.

5.3.1.4 Threat has capabilities to employ, or has used electronic warfare (EW), electromagnetic pulse or directed energy to disrupt the OPTEMPO and/or to deny, disrupt, degrade or destroy net-centric C2 functions.

5.3.1.5 Threat has the capabilities to conduct cyber and physical attacks (computer network attack [CNA], EW, signals intelligence, special operations, etc.) to deny, disrupt, degrade or destroy net-centric C2 functions.

5.3.1.6 Extent to which use or exploitation of the radio frequency (RF) spectrum is inhibited or degraded due to overcrowding, unavailability or operational restrictions caused by friendly, enemy or neutral forces is “Moderate” (some limiting factors).

5.3.2 Military Conditions

5.3.2.1 The level of command directing the mission is “CTF.”

5.3.2.2 The divergence of the ROE from the *Standing Rules of Engagement, Chairman Joint Chief of Staff Instruction (CJCSI 3121.01)*, as published by the Director of Operations, The Joint Staff, is “Multinational (ROE agreed amongst several nations in a coalition operation).”

5.3.2.3 The organizational nature of the operating environment is “Interagency” and “Multinational.”

5.3.2.4 The extent to which staffs of two or more forces, or agencies of two or more nations, have integrated their senior command and staff billets, information and intelligence, doctrine and procedures, logistics and training is “Full” (broadly based and fully interactive) for Joint forces, “Limited” for multinational forces.

5.3.2.5 The extent to which a command and staff headquarters structure exists varies from “Weak” to “Strong” (existing and functioning).

5.3.2.6 The freedom with which information (e.g., intelligence and logistics data and operations plans) can be distributed or released within a staff or to operating units, to include among allies or coalition partners, is “Partially restricted.”

5.3.2.7 The complexity of command relationships required to train, organize, and generate the force prior to transfer to the COCOM for employment is “Complex” (employing commander supported by more than three commanders or agencies).

5.3.2.8 The location of JTF/CTF headquarters may be “forward – austere site,” “forward – developed site,” “garrison,” “afloat,” “airborne en route” or “on the move.”

5.3.2.9 The grounds, buildings and equipment available to provide and support sustainment of the command functions are “Limited” when operating from austere sites. “Limited” means significantly degraded from the level of support provided in garrison.

5.3.2.10 The communications network and enterprise services environment ranges from design capacity for the site in question to significantly degraded at times, including non-uniform degradation of systems, due to adversary action or other problems.

5.3.3 Civil/Cultural Conditions

5.3.3.1 Those aspects of a people that relate to their language, history, customs, economics, religion, and character are Non-Western European.

5.3.3.2 Type of government/political structure (stable-state government, failed state or rogue commander).

5.3.3.3 Extent to which distribution of news to the public is controlled (free press, government-controlled, religion-based, other).

6. **IMPLICATIONS**

6.1 **Implications for Other Joint Concepts**

6.1.1 Implications for *Joint C2 Functional Concept*

The Joint C2 capabilities and associated attributes presented in Section 5 should be considered in updating the *Joint C2 Functional Concept*.

6.1.2 Implications for Other Functional Concepts and Functional JICs

The capabilities, tasks, conditions, and standards presented in this JIC should be used as the basis for developing the C2-related tasks, conditions, and standards for other functional concepts and functional JICs. For example, a BA Joint Functional Concept must address C2 of Intelligence, Surveillance and Reconnaissance (ISR) assets and synthesis of intelligence analysis. A JIC in the Force Application area must address such C2 tasks as weapon-target pairing and de-confliction of fires. To the extent that other functional JICs are also addressing the early phases of an MCO, the tasks, conditions, and standards in Section 5 should provide a starting point for developing more functionally specific tasks with associated conditions and standards.

6.1.3 Implications for JOCs

While Section 5 and Appendices C, D and E are focused on the *MCO JOC*, the earlier sections of the JIC are equally applicable to the exercise of C2 addressed by the other JOCs: *SO*, *SD* and *HLS*. This JIC should be used as a guide, along with the *Joint C2 Functional Concept*, for developing C2 capabilities under the other JOCs.

6.1.4 Implications for Mission-Defined JICs

To the extent mission-defined JICs are also addressing the early phases of an MCO, the tasks, attributes, conditions, and standards presented in this JIC should be considered for use in the C2 section of the JIC. These elements were developed in part by drawing upon the C2 sections of the current drafts of the other JICs.

6.2 Implications for Experimentation

The strong emphasis in this JIC on broad information sharing and collaboration within the joint, interagency and multinational communities will require that such capabilities be made available for experimentation without degrading actual operations. In addition, interagency and multinational participation in joint experimentation will be essential. Finally, experimentation scenarios must present a variety of missions, threats, and conditions and vary them dynamically to test the agility of prototype C2 capabilities.

7. IMPLEMENTATION RISK ASSESSMENT

This section discusses risks associated with the loss of one or more of the key enablers assumed to be available in Section 2.3 and other risks associated with implementing the concept. The following discussion draws from and amplifies the risk discussion in the *Joint C2 Functional Concept*.

7.1 Loss of Key Enablers

The following paragraphs provide a risk assessment based on the operational impact should the enabler not be available and the probability that this enabler would be lost. Risk mitigation measures are also addressed and considered in the overall risk assessment:

7.1.1 Severe degradation or elimination of information networking capability – HIGH RISK

Severe degradation or elimination of network communications due to cyber or physical attack or organic failure would virtually preclude effective C2 due to loss of commanders' SA and the inability to direct and synchronize operations. Loss of network communications would also mean the inability to access the other two key enablers of this JIC – enterprise services and intelligence/information sources. At least temporary loss of significant communications capability is likely to occur in some scenarios, since a capable adversary can be expected to attack friendly information networks. However, loss of all communications except for very brief periods is unlikely. Loss of wideband communications connectivity would significantly degrade collaborative planning, targeting, video conferencing, and other bandwidth-intensive functions. Adequate SA and guidance/tasking and some collaboration capability could be maintained if narrowband communications were available, and this is a more likely scenario.

Commanders could mitigate this risk by arranging for backup communications channels, issuing “lost communications” guidance and ensuring that subordinate commanders have the information they would need to act in the absence of guidance from higher authority. Commanders should enforce the use of “PACE” planning, i.e., primary, alternate, contingency and emergency communications. The decentralization of decision-making authority inherent in this JIC would help to alleviate the impact of loss of network communications. Future C2 capabilities must enable effective C2 despite degraded communications.

7.1.2 Severe degradation or elimination of network enterprise services, including collaboration capability, due to cyber or physical attack or organic failure – MODERATE RISK

Network enterprise services are expected to include information discovery/access/storage, messaging, collaboration and security services. Extensive information sharing and collaboration are essential elements of this JIC. Therefore, severe degradation or elimination of these enterprise services would severely degrade implementation of the concept. The loss of enterprise messaging and collaboration tools could be partly offset by reliance on voice communications. Use of backup applications that are not standardized across the enterprise could mitigate the loss of these enterprise services, but might result in interoperability problems. The loss of enterprise information discovery, mediation, and storage would force reliance on local backup databases that may not be as current or complete as the enterprise databases.

It is unlikely that all enterprise services would be lost simultaneously, except through total loss of network communications connectivity. The most serious impact to implementing this JIC would be caused by loss of access to certain critical information such as friendly force location and loss of messaging/collaboration capabilities.

Commanders could mitigate the risk of losing enterprise services by ensuring local databases are kept current and including within operational plans the fallback procedures for loss of these services.

7.1.3 Severe degradation or elimination of information and intelligence sources – MODERATE RISK

Severe degradation or elimination of intelligence and other information sources, such as friendly force location, environmental data, and geospatial information, would severely degrade the implementation of this JIC or any other concept for future C2 due to loss of SA. However, it is unlikely that these sources would be lost simultaneously except through a total loss of network communications connectivity. It is somewhat more likely that one or more of the sources would be individually degraded through kinetic attack or system failure, and even more likely through information attack.

Commanders could mitigate the risk of losing normal intelligence and other information sources by cultivating alternative sources and incorporating backup methods into their operational plans, such as scheduling of weather reconnaissance missions to compensate for the loss of satellite observations.

7.1.4 Loss or Lack of information assurance (IA) – HIGH RISK

As the foregoing risk analysis demonstrates, implementation of this JIC is heavily dependent on information and information sharing. The fielding of robust IA capabilities and processes to provide access control and ensure the availability, integrity, authenticity, confidentiality and non-repudiation ability of C2 information, is one of the most important measures for mitigating the foregoing risks. If a robust IA capability is not achieved and maintained, the enhancements to future C2 offered by this JIC will not be realized, and C2 capability could actually be degraded through inability to operate effectively without the assumed robust information support capabilities.

7.2 Other Risks

Other risks associated with implementing this JIC are assessed as follows:

7.2.1 Over reliance by commanders on extensive information and intelligence support, resulting in difficulty reaching decisions in a timely manner – MODERATE RISK

This risk can be managed through training.

7.2.2 Over reliance by commanders on collaborative planning to aid decision making, resulting in delayed decisions or difficulty reaching a decision when there is no consensus on the right COA – MODERATE RISK

This risk can be managed through training.

7.2.3 Information overload – HIGH RISK

This risk can be managed through enterprise-wide and local information/knowledge management processes and training.

7.2.4 “Micro-management” by senior commanders due to greater access to data on lower level situations – LOW TO MODERATE RISK

This risk is highly dependent on the personality, training, and experience of the senior commander. Micro-management of tactical operations has not been cited as a significant problem in the lessons learned from recent operations. This risk can be managed through leadership, training, and doctrine.

7.2.5 “Group think” – MODERATE RISK

This risk refers to the tendency for collaborative teams to migrate to a single point of view on a particular issue, such as an intelligence estimate, especially if the issue has a forceful, articulate spokesperson. People or groups working independently may produce alternative views, which may be closer to the truth.

This risk can be mitigated by creating “Red Teams” and other means of providing independent development or critique of C2 products such as situation assessments and operational plans.

7.2.6 Compromise of commanders’ authority due to inappropriate decentralization or misperception that cross-echelon information sharing implies delegation of authority – MODERATE RISK

This risk can be managed through leadership, training, and doctrine.

7.2.7 Inability of DoD acquisition process to develop and field the enabling information technology (IT) in a timely manner – MODERATE TO HIGH RISK

To date, fielded C2 systems have generally lagged the capabilities available in the commercial market, and have often been delivered late or over budget. This risk can be mitigated through better acquisition management, continued reform of the Defense acquisition process and, to some degree, greater reliance on commercial IT.

7.2.8 Over reliance on net-centric environment to execute C2 – LOW TO MODERATE RISK

While the net-centric environment is a key enabler of this concept, it cannot replace the intellectual capacity, judgment, intuition, and leadership of commanders. For example, commanders must avoid the temptation to believe that the computer-generated display of the COP is ground truth or that the computer-based COA analysis has considered all the relevant factors. This risk can be managed through training.

7.2.9 Transition risk – MODERATE RISK

As the force transitions to new C2 capabilities, there is a danger that proven legacy capabilities will be prematurely abandoned. This can be mitigated through carefully designed transition plans and roadmaps.

7.2.10 Culture risk – MODERATE RISK

As stated in the *Joint C2 Functional Concept*, “The evolution of military culture in individuals and organizations may not occur quickly enough to allow the military to fully leverage advancements in future information technologies.” This risk can be managed through training and education.

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Appendix B -- Glossary and Acronyms

Part I -- ACRONYMS

AOR	Area of responsibility
BA	Battlespace Awareness
C2	Command and Control
CBA	Capabilities-Based Assessment
CCJO	Capstone Concept for Joint Operations
CCTF	Commander, Combined Task Force
CES	Core Enterprise Services
CIA	Central Intelligence Agency
CID	Combat Identification
CIE	Collaborative information environment
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	CJCS Instruction
CNA	Computer Network Attack
COA	Course of action
COCOM	Combatant Command
COI	Community of Interest
CONOPS	Concept of operations
COP	Common Operational Picture
CTF	Combined Task Force
DART	Defense Adaptive Red Team
DIA	Defense Intelligence Agency
DIME	Diplomatic, Information, Military and Economic
DISA	Defense Information Systems Agency
DoD	Department of Defense
DOS	Department of State
DOTMLPF	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities
EW	Electronic Warfare
FCB	Functional Capabilities Board
GIG	Global Information Grid
GUI	Graphical User Interface
HLS	Homeland Security
IA	Information Assurance
IAMD	Integrated Air and Missile Defense
IGO	Intergovernmental Organization
IO	Information Operations
ISR	Intelligence, Surveillance, and Reconnaissance
IT	Information Technology
JCA	Joint Capability Area

JCDRP	Joint Concepts Development and Revision Plan
JCIDS	Joint Capabilities Integration and Development System
JFC	Joint Force Commander
JFEO	Joint Forcible Entry Operations
JIC	Joint Integrating Concept
JOC	Joint Operating Concept
JOpsC	Joint Operations Concepts
JOPES	Joint Operation Planning and Execution System
JP	Joint Publication
JROC	Joint Requirements Oversight Council
JTF	Joint Task Force
JUSS	Joint Undersea Superiority Study
JWFC	Joint Warfighting Center
MCO	Major Combat Operation
NCA	National Command Authority
NETOPS	Network Operations
NGO	Nongovernmental Organization
NMS	National Military Strategy
NRT	Near real time
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OPTEMPO	Operating Tempo
PAO	Public Affairs Officer
PMESII	Political, Military, Economic, Social, Infrastructure, and Information
RDD	Radiological Dispersal Device
ROE	Rules of Engagement
ROMO	Range of military operations
SA	Situational Awareness
SAM	Surface-to-Air Missile
SD	Strategic Deterrence
SO	Stability Operations
TIR	Toxic Industrial Radiological
USSOCOM	United States Special Operations Command
USSTRATCOM	United States Strategic Command
USTRANSCOM	United States Transportation Command
WMD	Weapons of Mass Destruction

Part II – DEFINITIONS

Accessibility – The ability of all levels of command (strategic, operational, and tactical), at any time and from anywhere, to pull or push relevant data and information that is the basis for shared SA. Additionally, access to a standardized joint application tool set at austere and robust, fixed and mobile sites will enhance decision-making capabilities supporting rapid, efficient, effective command and control. (C2 JIC)

Accuracy -- Conforming precisely to fact or truth. A system with this attribute provides error free (or within a range of acceptable error) measurements or data via credible, dependable and reliable sources. Accuracy and trust may exist due to prior performance and/or specific integrity assurance measures that have been adopted. (C2 JIC)

Adaptive -- Capable of operating in a variety of unexpected situations or conditions. Adaptive systems differ from flexible systems in that adaptive systems can operate even when unexpected events occur. From an organizational standpoint, this attribute enables a timely, effective response to an altered and unforeseen operating environment. Such operating environment changes, often caused by adversary actions, may require modification of organizational structures, workflow, and decision-making processes. (C2 JIC)

Agility -- The ability to respond effectively and in a timely manner to changing circumstances against a thinking and adaptive enemy, from anywhere in the battlespace, at any time, even when the networks and command structure are degraded. Agility includes both “flexibility” and “responsiveness.” Agility enables organizations, systems or processes to react and adapt to changing situations and conditions, such as performing C2 during operational transition and reorganization/reconstitution; while airborne, afloat, or “on the move”; or in response to enemy actions. (C2 JIC)

Area of Responsibility (AOR) -- The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. (JP 3-0)

Attribute -- A quantitative or qualitative characteristic of an element or its actions. (CJCSI 3010.02B; CJCSI 3170.01E)

Campaign plan -- A plan for a series of related military operations aimed at accomplishing a strategic or operational objective within a given time and space. (JP 1-02)

Campaign planning -- the process whereby combatant commanders and subordinate joint force commanders translate national or theater strategic and operational concepts through the development of campaign plans. (JP 1-02)

Capability -- The ability to achieve a desired effect under specified standards and conditions through combinations of ways and means to perform a set of tasks (CJCSI 3170.1E); the ability to achieve an effect to a standard under specified conditions through multiple combinations of means and ways to perform a set of tasks. (CJCSI 3010.02B)

Cognitive Domain -- Exists in the warfighters' minds and encompasses leadership, morale, unit cohesion, experience, training, situational awareness, strategy, doctrine, tactics, techniques and procedures. (DoD Transformation Planning Guidance, April 2003)

Coherence -- The systematic or logical integration of numerous diverse elements, relationships, and values in order to achieve clarity or a desired end. In the C2 domain, coherence is enhanced through understanding of the mission and commander's intent and guidance and through collaboration. (C2 JIC)

Cohesion -- A characteristic of an organization that means having well-defined roles and group norms, common goals, a positive identity, good working relationships, shared responsibility, respect, positive energy, trust, cooperation, unity, good communication, pride in membership and synergy. An indicator of the amount of cohesiveness is the frequency of "we" and "our" statements vice "I," "me," and "mine." In a cohesive organization, everyone is striving toward the same objective. Member goals coincide with the organization's goals, and there are no hidden agendas. (C2 JIC)

Collaboration -- Joint problem solving for the purpose of achieving shared understanding, making a decision, or creating a product across the Joint Force and mission partners. (NCE Joint Functional Concept)

Collaborative information environment (CIE) -- Uses distributed collaboration tools and virtual collaboration to facilitate parallel operations among regional combatant command headquarters, joint force headquarters and staffs, the service components, and other organizations that are separated by time, organizational boundaries, and geography. The information backbone providing warfighters the ability to enhance organizational effectiveness and reduce hierarchical and serial planning timelines through information, idea sharing, and parallel planning. (Joint Forces Command Glossary)

Command and Control (C2) -- The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. (JP 1-02) Further, C2 is the ability to recognize what needs to be done in a situation and to ensure that effective actions are taken. At its core, command and control is about decision making and the individuals who make decisions. In 2015 Joint C2 will be a joint decision-making process that is dynamic, decentralized, distributed, deployable, and highly adaptive. Enabled by a collaborative information environment, skilled joint planners, and standardized SOPs, Joint C2 will provide the Joint Force Commander an ability to have a networked, dispersed, joint force that can work together in a virtual problem space, accessing any piece of information, any place and at any time, in response to any operation across the ROMO. (JP 1-02)

Commander's intent -- A concise expression of the purpose of the operation and the desired end state that serves as the initial impetus for the planning process. It may also include the commander's assessment of the adversary commander's intent and an assessment of where

and how much risk is acceptable during the operation. See also assessment; end state. (JP 5-00.1)

Common operational picture (COP) -- A single identical display of relevant information shared by more than one command. A common operational picture facilitates collaborative planning and assists all echelons to achieve situational awareness. (JP 3-0)

Communities of Interest (COIs) -- Collaborative groups of users who must exchange information in pursuit of their shared goals, interests, missions, or business processes and who therefore must have a shared vocabulary for the information they exchange. (DoD Net-Centric Data Strategy)

Completeness -- Having all components, parts, or steps critical to complete an operation. Complete information enables timely, appropriate decision making. (C2 JIC)

Concept of operations (CONOPS) -- A verbal or graphic statement, in broad outline, of a commander's assumptions or intent in regard to an operation or series of operations. The concept of operations frequently is embodied in campaign plans and operation plans; in the latter case, particularly when the plans cover a series of connected operations to be carried out simultaneously or in succession. The concept is designed to give an overall picture of the operation. It is included primarily for additional clarity of purpose. (JP 1-02; MORS Conference 2004)

Condition -- A variable of the operational environment including scenario that affects task performance. (CJCSI 3010.02B)

Course of action (COA) -- 1. Any sequence of activities that an individual or unit may follow. 2. A possible plan open to an individual or commander that would accomplish, or is related to the accomplishment of, the mission. 3. The scheme adopted to accomplish a job or mission. 4. A line of conduct in an engagement. 5. A product of the Joint Operation Planning and Execution System (JOPES) concept development phase. (JP 1-02)

Crisis action planning -- The Joint Operation Planning and Execution System process involving the time sensitive development of joint operation plans and orders in response to an imminent crisis. Crisis action planning follows prescribed crisis action procedures to formulate and implement an effective response within the time frame permitted by the crisis. (JP 1-02)

Decentralized execution -- Delegation of execution authority to subordinate commanders. (JP 3-30)

Employment -- The strategic, operational, or tactical use of forces. (JP 1-02)

Execution -- The initiation of an operation; a military response with operations being conducted. (C2 JIC)

Flexibility -- Ability to command and control operations from anywhere in the battlespace, at any time, in a variety of situations and conditions, without loss of effectiveness. Flexible and

adaptive systems/processes take into account a thinking and adaptive enemy and enable course corrections with minimal disruption since they are built to respond to multiple situations or events. From a planning standpoint, commanders at all levels can quickly select a COA without being locked into it. From an organizational standpoint, this attribute enables a timely, effective response to an altered and/or unforeseen operating environment. Such operating environment changes, often caused by adversary actions, may require modifying organizational structures, workflows, and decision-making processes. (C2 JIC)

Foresight -- The ability to predict probable future states in order to recognize and exploit opportunity. Foresight may be based on extrapolation from current conditions combined with an understanding of likely actions. This includes the ability of the commander to define, assess, and anticipate enemy actions and develop appropriate COAs, branches, and sequels. (C2 JIC)

Geospatial -- A term used to describe a class of data that has a geographic or spatial nature. (Martin County FL Geographic Information Systems [GIS] glossary <http://www.martin.fl.us/GOVT/depts/isd/gis/glossary.html>)

Global Information Grid (GIG) -- The globally interconnected, end-to-end set of information capabilities, associated processes and personnel for collecting, processing, storing, disseminating and managing information on demand to warfighters, policy makers, and support personnel. The Global Information Grid (GIG) includes all owned and leased communications and computing systems and services, software (including applications), data, security services, and other associated services necessary to achieve information superiority. It also includes National Security Systems as defined in section 5142 of the Clinger-Cohen Act of 1996. The GIG supports all Department of Defense (DoD), National Security, and related intelligence community missions and functions (strategic, operational, tactical and business), in war and in peace. The GIG provides capabilities from all operating locations (bases, posts, camps, stations, facilities, mobile platforms, and deployed sites). The GIG provides interfaces to coalition, allied, and non-DoD users and systems. Also called GIG. (JP 3-05.1)

Graphical user interface (GUI) -- An interface that uses graphical images to represent computer programs, files, and option. These images, which include icons, menus, and dialog boxes, are designed for ease of use. The user selects and activates options by pointing and clicking with a mouse or with the keyboard. GUI item (for example, a left click on a mouse) typically work the same way in all applications. (C2 JIC)

Homeland Defense (HLD) -- The protection of US sovereignty, territory, domestic population, and critical defense infrastructure against external threats and aggression, or other threats as directed by the President. DoD is responsible for Homeland Defense. (DoD Homeland Security Joint Operating Concept, Strategy for Homeland Defense and Civil Support [draft], and DPG 04)

Homeland Security (HLS) -- a concerted national effort to prevent terrorist attacks within the United States, reduce America's vulnerability to terrorism, minimize the damage, and recover from attacks that do occur. (National Strategy for Homeland Security)

Information -- Facts, data, or instructions in any medium or form. The meaning that a human assigns to data by means of the known conventions used in their representation. (JP 1-02)

Information Assurance (IA) -- Information operations that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. Also called IA. See also information; information operations; information system. (JP 3-13)

Information Domain -- Facilitates communication of data, sharing of knowledge and conveyance of commander's intent. (DoD Transformation Planning Guidance, April 2003)

Information Superiority -- That degree of dominance in the information domain that permits the conduct of operations without effective opposition. (JP 1-02)

Innovation -- Performing tasks in new ways or by using new, advanced, or original ideas, solutions, or concepts. This attribute is characterized by a proactive approach. This attribute is often found in organizations that (1) offer abundant freedom to exchange information to gain full understanding of commander's intent, and (2) are empowered to take action. Solutions featuring this attribute may alter or even eliminate current procedures. (C2 JIC)

Integration -- The arrangement of military forces and their actions to create a force that operates by engaging as a whole. (JP 1-02)

Interoperability -- The ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces. This also includes the ability to use the services to operate effectively together. (Adapted from JP 1-02)

Joint Force Commander (JFC) -- A general term applied to a combatant commander, sub-unified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. (JP 0-2)

Joint Forcible Entry Operations (JFEO) -- Joint military operations conducted against armed opposition to gain entry into the territory of an adversary as rapidly as possible in order to enable the conduct of follow-on operations or conduct a singular operation.

Joint Functional Concept -- A description of how the future joint force will perform a particular military function across the full spectrum of military operations in the mid to far term. JFCs support the CCJO and JOCs and draw operational context from them. JFCs identify required capabilities to achieve operational effects; determine capability attributes; inform JOCs; and provide functional context for JIC development and assessment. (CJCSI 3010.02B; CCJO 5 Apr 05)

Joint Integrating Concept (JIC) -- A description of how a JFC 10-20 years in the future will integrate capabilities to generate effects and achieve an objective. A JIC includes an

illustrative CONOPS for a specific scenario and a set of distinguishing principles applicable to a range of scenarios. JICs have the narrowest focus of all concepts and distill JOC and Joint Functional Concept-derived capabilities into the fundamental tasks, conditions, and standards required to conduct Capabilities-Based Assessment (CBA). (CJCSI 3010.02B)

Joint Operating Concept (JOC) -- An operational-level description of how a future Joint Force Commander (10-20 years in the future) will accomplish a strategic objective through the conduct of operations within a military campaign. This campaign links end-state, objectives, and desired effects necessary for success. The concept identifies broad principles and essential capabilities and provides operational context for Joint Functional Concept and JIC development and experimentation. (CJCSI 3010.02B)

Joint Under Sea Superiority (JUSS) -- The ability to establish battlespace dominance in the underwater environment, permitting friendly forces to accomplish the full range of potential missions and deny an opposing force the offensive use of underwater systems and weapons. (JUSS JIC)

Knowledge -- Data that has been analyzed to provide meaning and value. Knowledge is various pieces of the processed data that have been integrated and interpreted to begin building a picture of the situation. (JC2 Joint Functional Concept)

Knowledge Management (KM) -- the process through which organizations generate value from their intellectual and knowledge-based assets. (Megan Santosus and Jon Surmacz, *The ABCs of Knowledge Management*)

Leadership -- Leadership is influencing people—by providing purpose, direction, and motivation—while operating to accomplish the mission and improve the organization. (JC2 Joint Functional Concept)

Major Combat Operation (MCO) -- Large-scale operations conducted against a nation state(s) that possesses significant regional military capability, with global reach in selected capabilities, and the will to employ that capability in opposition to or in a manner threatening to U.S. national security. (MCO JOC)

Mission Partners -- Those entities not under the commander's direct authority that are participating in the mission. Some examples include, but are not limited to, supported/supporting commands, non-DoD agencies such as State or CIA, coalition partners, host nation civil authorities, international organizations, and nongovernmental organization (NGOs).

Mission Type Order -- Order to a unit to perform a mission without specifying how it is to be accomplished. (Joint Publication 1-02)

Morale -- Often described as esprit de corps, morale is the enthusiasm, confidence, or loyalty of an individual or group with regard to the function or task at hand. In a group, it is a sense of common purpose. For an individual, it is the level of individual psychological well-being based on that sense of purpose and confidence in the future. (C2 JIC)

Near Real Time (NRT) -- a. Pertaining to the timeliness of data or information that has been delayed by the time required for electronic communication and automatic data processing. This implies that there are no significant delays. (JP 1-02) b. Within 5 seconds to 5 minutes of occurrence. (OP 2.5.3, CJCSM 3500.04C) c. Data or information delayed by the time required for electronic communication and automatic data processing. Data is older than real time due to data processing, but does not impact the current planning cycle – no significant delays. (CJCSI 3151.01)

Operational Level of War -- The level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or other operational areas. Activities at this level link tactics and strategy by establishing operational objectives needed to accomplish the strategic objectives, sequencing events to achieve the operational objectives, initiating actions, and applying resources to bring about and sustain these events. These activities imply a broader dimension of time or space than do tactics; they ensure the logistic and administrative support of tactical forces, and provide the means by which tactical successes are exploited to achieve strategic objectives. See also **strategic level of war; tactical level of war**. (JP 3-0)

Operational Trust -- The aggregate level of trust from each person and earned from each entity (person, object, system) to accomplish a mission or endeavor. Complex operations using interdependent forces require a level of operational trust in order to gain operational efficiency and effectiveness. Operational trust refers to the sum of a variety of trust perspectives including (but not limited to) commander/subordinate, subordinate/commander, peer/peer, operator/equipment and warfighter/tactics. (C2 JIC)

Physical Domain -- Spans the land, sea, air, and space environments where forces execute the range of military operations. (DoD Transformation Planning Guidance, April 2003)

Range of Military Operations (ROMO) -- Operations that encompass the use of military capabilities across the range-of-military-operations, including war and those short of war. These military actions can be applied to complement any combination of the other instruments of national power and occur before, during, and after war. (Derived from Joint Pub 1-02)

Reachback -- The process of obtaining products, services, and applications, or forces, or equipment, or material from organizations that are not forward deployed. (JP 1-02)

Real Time (RT) -- a. Pertaining to the timeliness of data or information delayed only by the time required for electronic communication. This implies there are no noticeable delays. (JP 1-02) b. Timeliness of data or information delayed only by the time required for electronic communication. This implies there are no noticeable delays. Data is real time when current active tracks show current location, updates occur immediately, and the only delay is of electronic communication. (CJCSI 3151.01)

Relevance -- Importance or applicability to the situation at hand; the degree to which something is related to or useful to a specific system or event. The commander needs the

information that will help him make the best decision without being overwhelmed with data that is not important to his gaining SA. At the same time, subordinates need a set of information that is relevant to their specific roles/missions, which may or may not come from the same set of data. The information content of an operational picture can vary across echelons to enable relevant information to be portrayed clearly and unambiguously to decision makers and actors. (C2 JIC)

Resilient -- Capable of recovering quickly from or adjusting to damage, malfunction, or change. Ideally, systems with this attribute are designed to function at their normal operational standard upon recovery. Organizations or systems with few critical failure points and multiple paths have a higher a degree of this attribute than organizations and systems with several critical failure points and one path. (C2 JIC)

Responsiveness -- Readily reacting to or recovering from changing situations and conditions in real time and near real time. The effective use of responsive and resilient planning, execution and assessment enables rapid deployment or redirection of assets when various “windows of opportunity” occur. Ideally, systems with this attribute are designed to function at their normal operational standard upon recovery from or reaction to changing situations and conditions. (C2 JIC)

Robustness -- Retaining near-full operational capability in a degraded environment due to great strength, durability, survivability, interdependency, resiliency, a distributed nature, or a combination thereof. Can operate in several environments and perform effectively across a range of conditions, situations, and missions. Organizations and systems with this attribute can function during a disturbance; provide surplus capability to improve service reliability and quality; recover from or adjust to malfunctions or changes; and disperse resources performing services throughout a large area. (C2 JIC)

Security -- A condition that results from the establishment and maintenance of protective measures that ensure a state of inviolability from hostile acts or influences. (JP 1-02) Security includes preventing loss, destruction, exploitation, or denial of use of information or of a system by establishing, maintaining, and implementing protective measures and risk management. (C2 JIC)

Self-synchronization -- The ability of a well-informed force to organize and synchronize complex warfare activities from the bottom up. The organizing principles are unity of effort, clearly articulated by the commander’s intent, and carefully crafted rules of engagement. Self-synchronization is enabled by a high level of knowledge of one’s own forces, enemy forces, and all appropriate elements of the operating environment. (Vice Adm. Arthur K. Cebrowski, U.S. Navy, and John J. Garstka, “*Network-Centric Warfare: Its Origin and Future*,” *Proceedings*, January 1998)

Shared Understanding -- A shared appreciation of the situation supported by common information to enable rapid collaborative joint engagement, maneuver, and support. (JC2 Joint Functional Concept)

Situational Awareness -- Situational Awareness refers to the degree of accuracy by which one's perception of his current environment mirrors reality. It is the knowledge, cognition, and anticipation of events, factors, and variables affecting the safe, expedient, and effective conduct of the mission. It is developed through the continuous integration of new observations into recurring mental assessments. (C2 JIC)

Speed -- The appropriate pace of tasks and decision making. At times, the appropriate speed is rapid. When deliberate methodical actions are required, a slower speed may be required. To obtain the appropriate speed of command, subordinate forces must be enabled to synchronize actions among themselves, without restrictive direction from above. (C2 JIC)

Stability Operations (SO) -- Multi-agency operations that involve all instruments of national and multinational action, including the international humanitarian and reconstruction community to support major conventional combat operations if necessary; establish security; facilitate reconciliation among local or regional adversaries; establish the political, social, and economic architecture; and facilitate the transition to legitimate local governance. Stability operations establish a safe and secure environment; provide essential social services, emergency infrastructure reconstruction, and humanitarian relief in order to facilitate the transition to legitimate, local civil governance. The objective is to establish governance that enables a country or regime to provide for its own security, rule of law, social services, and economic activity and eliminate as many of the root causes of the crisis as feasible to reduce the likelihood of the reemergence of another crisis. (SO JOC)

Standard -- Quantitative or qualitative measures for [specifying] the levels of performance of a task. (CJCSI 3010.02B)

Strategic Deterrence (SD) -- The prevention of adversary aggression or coercion threatening vital interests of the United States and/or our national survival. Strategic deterrence convinces adversaries not to take grievous COAs by means of decisive influence over their decision making. (BA JFC)

Strategic Level of War -- The level of war at which a nation, often as a member of a group of nations, determines national or multinational (alliance or coalition) security objectives and guidance, and develops and uses national resources to accomplish these objectives. Activities at this level establish national and multinational military objectives; sequence initiatives; define limits and assess risks for the use of military and other instruments of national power; develop global plans or theater war plans to achieve these objectives; and provide military forces and other capabilities in accordance with strategic plans. See also **operational level of war; tactical level of war.** (JP 3-0)

Suitability -- The degree to which a plan, decision or action is appropriate for the task or situation. Suitability extends beyond mere feasibility to an assessment that the plan, decision or action is likely to be effective for the task or situation. (C2 JIC)

Synchronization -- (1) The arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time and (2) in the

intelligence context, application of intelligence sources and methods in concert with the operation plan. (JP 2-0) (JP1-02)

Systems visualization -- Systems visualization develops a shared understanding of causal relationships and provides critical tools that assist commanders and staffs to plan, execute, assess, and adapt. It also provides some insight into potential effects beyond those that are desired. This situational understanding of the essential political, military, economic, social, infrastructure and information systems within an area of interest highlights how the systems function and are interrelated. (Joint Operations Concepts)

Tactical Level of War -- The level of war at which battles and engagements are planned and executed to accomplish military objectives assigned to tactical units or task forces. Activities at this level focus on the ordered arrangement and maneuver of combat elements in relation to each other and to the enemy to achieve combat objectives. See also **operational level of war**; **strategic level of war**. (JP 1-02)

Task -- Operational -- A discrete event or action enabling a mission or function to be accomplished by individuals or organizations; an action or activity (derived from an analysis of the mission and concept of operations) assigned to an individual or organization to provide a capability. (MORS Conference 2004 and CJCSI 3010.02B)

Timeliness -- Occurring at a suitable or opportune moment; well-timed. Timeliness is situation dependent. It reflects the relationship between the age of an information item and the tasks or missions it must support. (C2 JIC)

Trustworthy -- Capable of being believed with a high level of confidence. Systems or organizations that have this attribute are readily accepted as credible, dependable, and reliable. This attribute may exist due to prior performance and/or specific integrity assurance measures that have been adopted. (C2 JIC)

Understanding -- Having the capacity for rational thought or inference, and the ability to comprehend the meaning and importance of focus areas the commander designates and the direction of his intent. Having the ability to grasp the commander's guidance and apply it to operations. SA enables situational understanding -- knowing what the enemy is doing and knowing why he is doing it. (C2 JIC)

Unity of Effort -- To focus all actions toward the desired end states and objectives in support of the strategic aim. Unity of Effort is a result of unity of purpose that leads to coherency of action, which is the integrated and complementary execution of the actions of all the partners in an operation or campaign, by means of either command or cooperation. (Joint Operations Concepts)

User-Friendly -- Capable of effective use by the average person. This attribute applies to systems that are easy to use, whether the operator is a layman or expert. This attribute is often used to describe computer systems. Menu-driven programs, GUIs, and online help systems are all examples of tools designed with this attribute in mind. Software and

procedures that can effectively be used intuitively or with minimal training have a high degree of this attribute. (C2 JIC)

Appendix C -- Table of Mission-Specific Capabilities/Attributes/Tasks/Standards for the CONOPS

This table summarizes the C2 JIC capabilities, tasks, attributes, and links them to the standards appropriate for mission success in 2010 and 2020. The chosen attributes best identified the most relevant/important aspects for each of the capabilities/tasks. There are many tasks where more than three attributes could apply; however, only the most critical two or three were chosen (approximately 25 percent of the tasks break this “rule”).

The standards in this table apply to performing the stated task under all conditions addressed in Section 5. In other words, these are task performance standards, not system performance standards. System performance standards will be based on the DOTMLPF solutions to achieve the specific task identified by the CBA. The standards in this table have been developed based on best military judgment regarding the level of capability that will be needed in the future military environment to execute the concept, tempered with consideration of what level is likely to be achievable. They are a starting point for the CBA, and are expected to be refined during the FAA.

The definition of the attribute combined with the definition of the task was used to focus the selection of the standard and the associated metrics (where applicable). Not all standards have a number associated with the standard. In these cases, the standard’s metric was defined by pass/fail or yes/no criteria. In most but not all cases, there was an improvement between 2010 and 2020 capabilities. In those cases where there was no improvement, either the 2010 standard was sufficient or there were no apparent means, within the DOTMLPF paradigm, to improve the standard.

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
<p>1. Exercise command leadership. This is the ability to exercise authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of a mission. Command leadership is the art of motivating and directing people and organizations into action to accomplish missions. Commanders must be able to exercise effective leadership of an interdependent joint force in rapidly changing scenarios involving complex distributed, simultaneous or sequential operations, often with other agencies and nations. Unity of effort and the authority and accountability of the commander must be preserved.</p>	<p>1.1 Promote adherence to the law of war and accepted behavior norms. Maintain knowledge of the law of war. Continuously communicate unit/community acceptable behavioral norms through personal example, communications, and shared knowledge mediums. Reward/promote acceptable behavior, and reeducate and correct non-acceptable behavior.</p>	<p>Understanding</p>	<p>Understanding— Personnel act in accordance with the law of war and accepted behavior norms 100% of the time.</p> <p>100% of personnel received applicable training.</p>	<p>Understanding— Personnel act in accordance with the law of war and accepted behavior norms 100% of the time.</p> <p>100% of personnel received applicable training.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	1.2 Establish and promulgate rules of engagement (ROE). Empower commands and staff sections and organizations to develop and disseminate ROE.	Suitability Understanding	Suitability – 80% of the desired effects are achieved. Understanding— Personnel act in accordance with the ROE 99% of the time. 100% of personnel received applicable training.	Suitability – 90% of the desired effects are achieved. Understanding— Personnel act in accordance with the ROE 99% of the time. 100% of personnel received applicable training.
	1.3 Take care of personnel. Maintain health, welfare, morale, and discipline.	Operational Trust Morale	Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander's expectation. Morale – 90% of personnel display high morale. (e.g., operational availability of personnel, low UCMJ violations).	Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander's expectation. Morale – 90% of personnel display high morale. (e.g., operational availability of personnel, low UCMJ violations).
	1.4 Delegate decision authority. Move appropriate, commensurate decision making and action authority to subordinate and supporting commanders to further enable decentralized execution of plans.	Operational trust Coherence	Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander's expectation. Coherence -- A group or team's products match or meet unit and individual mission goals to further the commander's intent. (use Sync matrix to measure)	Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander's expectation. Coherence -- A group or team's products match or meet unit and individual mission goals to further the commander's intent. (use Sync matrix to measure)
	1.5 Encourage subordinates to exercise initiative consistent with commander's intent. Provide a professional working climate that gives subordinates the freedom to take acceptable effects-based risks within the boundaries of the commander's intent.	Operational trust Coherence	Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander's expectation. Coherence -- A group or team's products match or meet unit and individual mission goals to further the commander's intent. (use Sync matrix to measure)	Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander's expectation. Coherence -- A group or team's products match or meet unit and individual mission goals to further the commander's intent. (use Sync matrix to measure)
	1.6 Develop subordinate leaders. Demonstrate respect for and trust in subordinates' expertise. Empower subordinates by tasking, and delegating authority. Subordinate leaders learn by doing.	Operational trust Agility	Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander's expectation. Agility—Subordinate leaders can effectively respond to direction change without detracting from the primary mission. Subordinate leaders can reconfigure assets for a changing environment	Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander's expectation. Agility—Subordinate leaders can effectively respond to direction change without detracting from the primary mission. Subordinate leaders can reconfigure assets for a changing environment

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>1.7 Establish and cultivate relations with mission partners. This includes supporting commands and agencies within and outside DoD, coalition members, and nongovernmental organizations.</p>	<p>Interoperability Understanding Operational Trust</p>	<p>Interoperability--Users can access and use resources across all partners 80% of the time.</p> <p>Understanding— Personnel act in accordance with cultural and organizational differences 99% of the time.</p> <p>Operational trust—Mission partners actions meet or exceed commander's expectation.</p>	<p>Interoperability--Users can access and use resources across all partners 90% of the time.</p> <p>Understanding— Personnel act in accordance with cultural and organizational differences 99% of the time.</p> <p>Operational trust—Mission partners actions meet or exceed commander's expectation.</p>
	<p>1.8 Manage risk. Continually reassess operational risk as situation changes. Attempt to mitigate risk, if possible (risks vs. rewards).</p>	<p>Suitability Foresight</p>	<p>Suitability – Benefits of successful effect outweigh impact of potential risks.</p> <p>Foresight – Significant risks are anticipated 70 percent of the time.</p>	<p>Suitability – Benefits of successful effect outweigh impact of potential risks.</p> <p>Foresight – Significant risks are anticipated 90 percent of the time</p>
	<p>1.9 Manage dissemination of information to the public; align public information dissemination with strategic communications objectives of higher authority. The ability to provide national and international media maximum disclosure of information with minimum delay subject to security considerations.</p>	<p>Timeliness Accuracy Coherence Security</p>	<p>Timeliness--Age of the information is congruent to the task/mission at hand.</p> <p>Accuracy—100% of released information is correct/factual/truthful as is known at the time.</p> <p>Coherence—Information released by JTF PAO is not in conflict with higher PA guidance.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>	<p>Timeliness--Age of the information is congruent to the task/mission at hand.</p> <p>Accuracy—100% of released information is correct/factual/truthful as is known at the time.</p> <p>Coherence—Information released by JTF PAO is not in conflict with higher PA guidance.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>
	<p>1.10 Assess operational readiness. Determine readiness of all subordinates and mission partners (e.g., Status reports, exercise participation, readiness ratings, etc.).</p>	<p>Suitability Understanding</p>	<p>Suitability – Methodology used is suitable for evaluating whether operational readiness can meet mission requirements.</p> <p>Understanding—All critical mission/operational requirements are reflected by appropriate readiness/operations standards.</p>	<p>Suitability – Methodology used is suitable for evaluating whether operational readiness can meet mission requirements.</p> <p>Understanding—All critical mission/operational requirements are reflected by appropriate readiness/operations standards.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
<p>2. Establish/adapt command structures and enable both global and regional collaboration. Commanders must be able to quickly establish or adapt command structures across the force and within the staff tailored to the mission, and to create the processes that will enable horizontal and vertical collaboration. They must have a menu of alternative schemes for organizing the components and defining command relations, with associated guidance on when and how to apply them. It is essential that the infrastructure be in place to enable rapid reaction to new crises.</p>	<p>2.1 Organize the staff to align with the conditions of the mission environment, assign roles, and establish internal structures and processes. Establish clear roles, accountability, and decision-making authority. Exercise the core functions of command from austere as well as robust fixed sites, from mobile sites (i.e., "on the move") and in transition between sites.</p>	<p>Cohesion Interoperability Agility</p>	<p>Cohesion—Each staff element is fully informed of the overall mission and its unique contribution to the mission (Information sharing: available and accessible).</p> <p>Interoperability--Staff can access and use resources across the DOTMLPF spectrum.</p> <p>Agility—Reorganize/create staff elements/processes in purpose and membership, within an appropriate timeframe.</p>	<p>Cohesion—Each staff element is fully informed of the overall mission and its unique contribution to the mission (Information sharing: available and accessible).</p> <p>Interoperability--Staff can access and use resources across the DOTMLPF spectrum.</p> <p>Agility—Reorganize/create staff elements/processes in purpose and membership, within an appropriate timeframe.</p>
	<p>2.2 Establish/refine the joint task force component organization and integrate capabilities. Develop organizations and links between organizations to provide the agility to allow units to create self-synchronizing joint forces.</p>	<p>Coherence Suitability Responsiveness</p>	<p>Coherence—Functional Components' products match or meet JTF mission goals to further the commander's intent. (use Sync matrix to measure).</p> <p>Suitability – 90% of the desired effects are achieved.</p> <p>Responsiveness--Ability to reconfigure for a changing environment and ability to return to a steady state condition after reconfiguration.</p>	<p>Coherence—Functional Components' products match or meet JTF mission goals to further the commander's intent. (use Sync matrix to measure).</p> <p>Suitability – 95% of the desired effects are achieved.</p> <p>Responsiveness--Ability to reconfigure for a changing environment and ability to return to a steady state condition after reconfiguration.</p>
	<p>2.3 Establish/refine command relationships to enable appropriate coordination relationships, including lines of authority and accountability. Effectively establish command relationships between commanders, staffs, units and associated organizations, to include multinational military, non-DoD agencies and, as appropriate, NGOs.</p>	<p>Coherence Interoperability Operational trust</p>	<p>Coherence—Mission partner products match or meet JTF mission goals to further the commander's intent. (e.g., use Sync matrix to measure).</p> <p>Interoperability--Mission partners can access and use resources across the DOTMLPF spectrum.</p> <p>Operational trust – 75% of mission partners coordinated contributions meet or exceed expectations and are favorable to the commander's mission</p>	<p>Coherence—Mission partner products match or meet JTF mission goals to further the commander's intent. (e.g., use Sync matrix to measure).</p> <p>Interoperability--Mission partners can access and use resources across the DOTMLPF spectrum.</p> <p>Operational trust – 75% of mission partners coordinated contributions meet or exceed expectations and are favorable to the commander's mission</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>2.4 Identify collaboration requirements; establish the collaboration infrastructure requirements. Set the infrastructure requirements to enable knowledge sharing, implement information/ knowledge management within the staff, across the force, and with mission partners.</p>	<p>Interoperability Robustness Accessibility Security</p>	<p>Interoperability--Users can access and use resources across the DOTMLPF spectrum.</p> <p>Robustness -- System availability is maintained at 95% following any internal or external disturbances.</p> <p>Accessibility – 80% of mission partners able to access unclassified information on a standard collaboration tool. 60% of authorized mission partners with access to classified information on a standard collaboration tool.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>	<p>Interoperability--Users can access and use resources across the DOTMLPF spectrum.</p> <p>Robustness -- System availability is maintained at 99% following any internal or external disturbances.</p> <p>Accessibility – 90% of mission partners able to access unclassified information on a standard collaboration tool. 99% of authorized mission partners with access to classified information on a standard collaboration tool.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>
	<p>2.5 Establish/refine collaboration structures and processes across the force, including standing and ad hoc functional cells and communities of interest. Use existing, historical, and available staff collaboration structures and processes to develop tailored interagency and multinational partner collaboration structures and processes.</p>	<p>Interoperability Responsiveness Accessibility</p>	<p>Interoperability--Users can access and use resources across the DOTMLPF spectrum.</p> <p>Responsiveness--Ability to reconfigure for a changing environment and ability to return to a steady state condition after reconfiguration.</p> <p>Accessibility – 80% of mission partners able to access unclassified information on a standard collaboration tool. 60% of authorized mission partners with access to classified information on a standard collaboration tool.</p>	<p>Interoperability--Users can access and use resources across the DOTMLPF spectrum.</p> <p>Responsiveness--Ability to reconfigure for a changing environment and ability to return to a steady state condition after reconfiguration.</p> <p>Accessibility – 90% of mission partners able to access unclassified information on a standard collaboration tool. 99% of authorized mission partners with access to classified information on a standard collaboration tool.</p>
	<p>2.6 Establish collaboration mechanisms (business rules, systems interface, etc.) with mission partners. Direct effective management, integration, configuration, and use of legacy and net-centric C2 systems to ensure interoperability. Continuously investigate and develop sources and repositories to enable identification of collaboration requirements.</p>	<p>Interoperability Responsiveness Security</p>	<p>Interoperability--Mission partners can access and use resources across the DOTMLPF spectrum.</p> <p>Responsiveness--Ability to reconfigure for a changing environment and ability to return to a steady state condition after reconfiguration.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>	<p>Interoperability--Mission partners can access and use resources across the DOTMLPF spectrum.</p> <p>Responsiveness--Ability to reconfigure for a changing environment and ability to return to a steady state condition after reconfiguration.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
<p>3. Develop and maintain shared situational awareness and understanding.</p> <p>This capability includes the ability to access a "common operational picture" (COP) presenting current and forecast information on adversary and friendly forces, neutral elements, the environment and geospatial information. The "picture" is built through "user pull" and "smart push" access to both processed and raw data from sensors, analysts and other sources, and through collaborative analysis and assessment of this data. SA, transformed into knowledge through synthesis, experience, and collaboration, enables situational understanding.</p>	<p>3.1 Access and integrate intelligence information and forecasts, including information on adversary, neutral, and non-combatant entities of interest, and collaboratively assess and share implications.</p> <p>Use intelligence, policies, structures and tools to collaboratively assess adversary/neutral/unknown location, identity, status, capabilities, limitations, and intentions. Make assessment with respect to the progress of the operations and achievement of objectives. Share implications to all levels of command to promote shared understanding.</p>	<p>Accuracy Relevance Timeliness Completeness Foresight Accessibility Security</p>	<p>Accuracy-- The integrated information produces correct assessments (conforms to truth) 95% of the time</p> <p>Relevance— 90% of all information is applicable to a given system or event.</p> <p>Timeliness--The assessment is available in time to conduct the task/mission at hand 90% of the instances.</p> <p>Completeness—The assessed information available matches the information required 80% of the time.</p> <p>Foresight – Future conditions are accurately predicted and planned for, 70% of the time.</p> <p>Accessibility—Tactical through operational level forces can access and use relevant intelligence information</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>	<p>Accuracy-- The integrated information produces correct assessments (conforms to truth) 98% of the time</p> <p>Relevance— 95% of all information is applicable to a given system or event.</p> <p>Timeliness--The assessment is available in time to conduct the task/mission at hand 95% of the instances.</p> <p>Completeness—The assessed information available matches the information required 90% of the time.</p> <p>Foresight – Future conditions are accurately predicted and planned for, 80% of the time.</p> <p>Accessibility—Tactical through operational level forces and authorized mission partners can access and use relevant intelligence information</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>3.2 Employ blue force tracking capability, provide access and integrate information on location, identity, status, capabilities, and limitations of friendly forces (“Blue Force Situational Awareness”); collaboratively assess and share implications.</p> <p>Use command structures and systems to collect and share information on location and status of friendly forces.</p>	<p>Accuracy Timeliness Completeness Accessibility Security</p>	<p>Accuracy—Blue forces location conforms to truth, within the acceptable error required by the operational to tactical warfighter (Blue Force SA criteria).</p> <p>Timeliness--The mission and mission capability information is available in time to conduct the task/mission at hand 90% of the instances.</p> <p>Completeness— Mission and mission capability information is available on 90% of the forces.</p> <p>Accessibility—Tactical through operational level forces can access and use blue force situational awareness.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>	<p>Accuracy— Blue forces location conforms to truth, within the acceptable error required by the operational to tactical warfighter (Blue Force SA criteria).</p> <p>Timeliness--The mission and mission capability information is available in time to conduct the task/mission at hand 95% of the instances.</p> <p>Completeness— Mission and mission capability information is available on 99.9% of the forces.</p> <p>Accessibility — Tactical through operational level forces and authorized mission partners can access and use blue force situational awareness.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>3.3 Access and integrate geospatial and environmental information and forecasts; collaboratively assess and share implications.</p> <p>Use net-centric communication links, ISR feeds, and related data to collect and share environmental and geospatial information.</p>	<p>Accuracy Timeliness Completeness Accessibility Foresight</p>	<p>Accuracy— Geospatial information conforms to truth (within acceptable error). 95% of the time, the integrated information produces an awareness that is at least as truthful/factual/correct as the individual reports.</p> <p>Timeliness--The information is available in time to conduct the task/mission at hand 95% of the instances.</p> <p>Completeness—The assessed information available matches the information required 90% of the time.</p> <p>Accessibility—Tactical through operational level forces can access and use geospatial and environmental assessments and forecasts.</p> <p>Foresight – Future conditions are accurately predicted 80 percent of the time.</p>	<p>Accuracy— Geospatial information conforms to truth (within acceptable error). 99% of the time, the integrated information produces an awareness that is at least as truthful/factual/correct as the individual reports.</p> <p>Timeliness--The information is available in time to conduct the task/mission at hand 99% of the instances.</p> <p>Completeness—The assessed information available matches the information required 95% of the time.</p> <p>Accessibility— Authorized Mission partners can access and use geospatial and environmental assessments and forecasts.</p> <p>Foresight – Future conditions are accurately predicted 90 percent of the time.</p>
	<p>3.4 Reachback for subject matter expertise.</p> <p>Able to find and access SMEs as necessary/required.</p>	<p>Accessibility Timeliness</p>	<p>Accessibility –SMEs are available for query and solution, in 90% of the cases.</p> <p>Timeliness—An SME is available to respond to query in time to support the mission 90% of the time.</p>	<p>Accessibility –SMEs are available for query and solution, in 90% of the cases.</p> <p>Timeliness—An SME is available to respond to query in time to support the mission 90% of the time.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>3.5 Present tailored, relevant, synthesized, actionable information to promote understanding.</p> <p>Develop and display tailored, relevant situational information (e.g., provide overlays and filters to transition rapidly between views) with timely input from available sources. Share SA to the strategic level and supporting commands for monitoring purposes so they can better anticipate what will be required of them.</p>	<p>Timeliness Relevance Accuracy Accessibility</p>	<p>Timeliness--Age of the information is NRT tactically and approach NRT operationally.</p> <p>Relevance— The synthesized information presented is actionable.</p> <p>Accuracy—The information presented correlates with the accuracy of the information provided.</p> <p>Accessibility— Relevant information is accessible to the tactical through strategic levels of command, including supporting commands and authorized mission partners, 90 percent of the time.</p>	<p>Timeliness--Age of the information is RT tactically and NRT operationally.</p> <p>Relevance— The synthesized information presented is actionable.</p> <p>Accuracy—The information presented correlates with the accuracy of the information provided.</p> <p>Accessibility— Relevant information is accessible to the tactical through strategic levels of command, including supporting commands and authorized mission partners, 95 percent of the time.</p>
	<p>3.6 Collaboratively conduct comparative, multi-discipline assessment of adversary strengths and vulnerabilities versus our own.</p> <p>Use existing command and net-centric available information to collaboratively assess adversary capabilities and intentions. Develop shared understanding of adversary's current capabilities and weaknesses by revealing critical nodes and vulnerabilities, and recognizing the adversary's goals, intentions, strengths, weaknesses, and behavior.</p>	<p>Timeliness Completeness Foresight</p>	<p>Timeliness-- The assessment is available in time to conduct the task/mission at hand 90% of the instances.</p> <p>Completeness—Analyzed all PMESII areas and identified all critical nodes.</p> <p>Foresight – Assessment is substantially accurate 70 percent of the time.</p>	<p>Timeliness-- The assessment is available in time to conduct the task/mission at hand 95% of the instances.</p> <p>Completeness—Analyzed all PMESII areas and identified all critical nodes.</p> <p>Foresight – Assessment is substantially accurate 80 percent of the time.</p>
	<p>3.7 Collaboratively develop and share understanding of regional/local diplomatic, political, economic, and cultural factors.</p> <p>Monitor treaties and agreements to plan the best mix of capabilities to achieve the desired effects that include the full range of diplomatic, information, and economic interagency activities.</p>	<p>Understanding</p>	<p>Understanding—The key personnel integrate regional/local diplomatic, political, economic, and cultural factors in their plans and operations.</p>	<p>Understanding—The key personnel integrate regional/local diplomatic, political, economic, and cultural factors in their plans and operations.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
<p>4. Communicate commander's intent and guidance. Commander's intent is a concise expression of the operational purpose and desired end state. As the impetus for the planning process, it may also include the commander's assessment of the adversary commander's intent and an assessment of acceptable operational risk. In the net-centric collaborative environment, the commander's intent must be shared early and often to enable parallel planning and self-synchronized execution.</p>	<p>4.1 Receive strategic mission and guidance. The strategic mission and guidance is an expression of the strategic purpose and desired end state. It is the impetus for the commander's intent and guidance.</p>	<p>Understanding</p>	<p>Understanding—99% of appropriate personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p>	<p>Understanding—99.9% of appropriate personnel receive necessary guidance and act in accordance with that guidance 99.9% of the time.</p>
	<p>4.2 Collaboratively conduct mission analysis. Implement and empower commands and staff sections and organizations to conduct collaborative mission analysis to develop commander's intent, warning order, deployment order, etc.</p>	<p>Understanding Completeness Interoperability Speed</p>	<p>Understanding—99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Completeness—Addresses all of the specified and implied tasks within the commander's guidance.</p> <p>Interoperability-- Appropriate users can access and use resources across all partners 99% of the time.</p> <p>Speed -- Speed of collaborative mission analysis must match operational requirements.</p>	<p>Understanding—99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Completeness—Addresses all of the specified and implied tasks within the commander's guidance.</p> <p>Interoperability-- Appropriate users can access and use resources across all partners 99% of the time.</p> <p>Speed -- Speed of collaborative mission analysis must match operational requirements.</p>
	<p>4.3 Create, shape and synchronize guidance with mission partners' concerns in mind; align agendas to the extent practical Commander's must be aware of mission partners concerns and attempt to create win-win scenarios when practical.</p>	<p>Operational trust</p>	<p>Operational trust—75% of mission partners concur with the commander's guidance.</p>	<p>Operational trust—75% of mission partners concur with the commander's guidance.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>4.4 Promulgate initial commander's intent and guidance, including operational objectives, to subordinate echelons, and staff and ensure it is understood.</p> <p>Use personal meetings, briefings, paper and electronic media and available COA tools and applications to promulgate commander's initial guidance to staff and subordinate commands.</p>	<p>Understanding Speed</p>	<p>Understanding— 99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Speed -- Speed of promulgation must match operational requirements.</p>	<p>Understanding— 99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Speed -- Speed of promulgation must match operational requirements.</p>
	<p>4.5 Periodically (as required) update commander's intent and guidance and ensure it is understood.</p> <p>Future C2 capabilities must ensure timely communication of this guidance to subordinate units, especially during rapidly changing situations.</p>	<p>Responsiveness Timeliness Understanding</p>	<p>Responsiveness—When the operational situation dictates, the commander's guidance and intent are reviewed and updated, as necessary.</p> <p>Timeliness-- The updated intent/guidance is completed in time to address the changing operational situation 95% of the time.</p> <p>Understanding— 99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p>	<p>Responsiveness—When the operational situation dictates, the commander's guidance and intent are reviewed and updated, as necessary.</p> <p>Timeliness-- The updated intent/guidance is completed in time to address the changing operational situation 99% of the time.</p> <p>Understanding— 99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p>
	<p>4.6 Direct action through mission-type orders to subordinate echelons.</p> <p>Use appropriate tools to provide mission-type orders to subordinate commanders with minimal delay and confusion.</p>	<p>Timeliness Understanding Robustness</p>	<p>Timeliness-- Orders are received in time to conduct the task/mission in accordance with higher commander's intent 95% of the time.</p> <p>Understanding--99% of subordinates receive orders and act in accordance with the orders, guidance, and intent 99% of the time.</p> <p>Robustness -- Task can still be successfully accomplished during degraded conditions. System availability is maintained at 95% following any internal or external disturbances.</p>	<p>Timeliness-- Orders are received in time to conduct the task/mission in accordance with higher commander's intent 99% of the time.</p> <p>Understanding--99% of subordinates receive orders and act in accordance with the orders, guidance, and intent 99% of the time.</p> <p>Robustness -- Task can still be successfully accomplished during degraded conditions. System availability is maintained at 99% following any internal or external disturbances.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>4.7 Delegate authority for mission planning and execution to subordinate commanders as appropriate with clear bounds. Allocate appropriate and commensurate decision making and action authority to subordinate commanders to further enable decentralized execution of plans.</p>	<p>Operational trust Flexibility Understanding</p>	<p>Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander’s expectation.</p> <p>Flexibility – 75% of mission critical decisions can accommodate effective responses that facilitate direction change without detracting from the primary mission.</p> <p>Understanding— 99% of personnel receive necessary guidance and act accordance with that guidance 99% of the time.</p>	<p>Operational trust—Subordinate accomplishment of critical taskings meet or exceed commander’s expectation.</p> <p>Flexibility – 80% of mission critical decisions can accommodate effective responses that facilitate direction change without detracting from the primary mission.</p> <p>Understanding— 99% of personnel receive necessary guidance and act accordance with that guidance 99% of the time.</p>
<p>5. Plan collaboratively. This capability involves an effects-based approach that directly ties offensive actions to campaign objectives, drawing on global resources and considering global consequences. Planning must be conducted with the collective knowledge of the decisions and plans of others to produce coherent integration. Planners must be able to focus on exploiting critical adversary vulnerabilities and must consider friendly critical capabilities and potential collateral damage. Parallel, distributed, collaborative planning capabilities and improved assessment tools are needed compress process timelines. However, collaboration does not imply decision making by committee or consensus. The ability to assess the suitability of a plan through wargaming and mission rehearsal prior to execution is also needed.</p>	<p>5.1 Form collaborative planning teams across components, missions, functions and geographies, and with mission partners. Develop, coordinate, and build effective collaborative teams for specific missions and tasks. Use existing, historical, and available staff collaboration structures and processes to develop tailored structures and processes.</p>	<p>Coherence Interoperability Accessibility Relevance</p>	<p>Coherence-- Mission partner products match or meet JTF mission goals to further the commander’s intent.</p> <p>Interoperability--Mission partners can access and use resources across the DOTMLPF spectrum.</p> <p>Accessibility – 80% of mission partners able to access unclassified information on a standard collaboration tool. 60% of authorized mission partners with access to classified information on a standard collaboration tool.</p> <p>Relevance—Team membership is congruent for the given mission/task/event.</p>	<p>Coherence-- Mission partner products match or meet JTF mission goals to further the commander’s intent.</p> <p>Interoperability--Mission partners can access and use resources across the DOTMLPF spectrum.</p> <p>Accessibility – 90% of mission partners able to access unclassified information on a standard collaboration tool. 75% of authorized mission partners with access to classified information on a standard collaboration tool.</p> <p>Relevance—Team membership is congruent for the given mission/task/event.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>5.2 Collaboratively develop, analyze, and select the COA, branches, and sequels.</p>	<p>Interoperability Flexibility Completeness Foresight</p>	<p>Interoperability--Mission partners can access and use resources across the DOTMLPF spectrum.</p> <p>Flexibility -- Staff COA/branches/sequels accommodate commander's intent/guidance and facilitate direction change.</p> <p>Completeness—The aggregate of all the collaborative teams' products address all of the specified and implied tasks of the NCA guidance.</p> <p>Foresight – Plans provide needed branches 70 percent of the time.</p>	<p>Interoperability--Mission partners can access and use resources across the DOTMLPF spectrum.</p> <p>Flexibility -- Staff COA/branches/sequels accommodate commander's intent/guidance and facilitate direction change.</p> <p>Completeness—The aggregate of all the collaborative teams' products address all of the specified and implied tasks of the NCA guidance.</p> <p>Foresight – Plans provide needed branches 80 percent of the time.</p>
	<p>5.3 Collaboratively develop joint/coalition campaign plan, including the synchronization matrix.</p> <p>Develop the joint campaign plan and synchronization plan by simultaneously and collaboratively engaging all relevant staff and related organizations.</p>	<p>Coherence Completeness</p>	<p>Coherence –90% of the collaborative teams' products are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Completeness—The aggregate of all the collaborative teams' products address all of the specified and implied tasks of the joint/coalition campaign/synchronization plan.</p>	<p>Coherence –95% of the collaborative teams' products are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Completeness—The aggregate of all the collaborative teams' products address all of the specified and implied tasks of the joint/coalition campaign/synchronization plan.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>5.4 Collaboratively develop operational plans across the full ROMO, employing all appropriate joint capability areas: Conduct planning activities that collaboratively include the appropriate staffs and expertise in the following listed area examples:</p> <ul style="list-style-type: none"> • Joint Air Operations • Joint Space Operations • Joint Land Operations • Joint Maritime/Littoral Operations • Joint Irregular Operations • Joint Information Operations • Joint Access and Access Denial • Joint Protection • Joint Logistics • Joint Net-Centric Operations • Joint Battlespace Awareness • Defense Support to US Civil Authorities • Joint Force Generation • Joint Force Management • Joint Homeland Defense • Joint Global Deterrence • Joint Shaping • Joint Stability Operations • Joint Interagency/IGO/NGO Coordination • Joint Public Affairs Operations 	<p>Coherence Completeness Interoperability Relevance Robustness Timeliness Innovation</p>	<p>Coherence –90% of the operational plans are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Completeness—The aggregate of all the operational plans address all of the specified and implied tasks of the joint/coalition campaign/synchronization plan.</p> <p>Interoperability--Users can access and use resources across the DOTMLPF spectrum.</p> <p>Relevance— The operational plans meet the commander's intent/guidance.</p> <p>Robustness— Operational plans include branches and sequels necessary to address 75% of changing conditions.</p> <p>Frequency of operational plans changes/additions/amendments occur less than one per day.</p> <p>Timeliness—Operational plans are completed in time to conduct the task/mission in accordance with higher commander's intent .</p> <p>Innovation—10% of actions planned include/use new/atypical procedures, yet meet commander's intent.</p>	<p>Coherence –95% of the operational plans are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Completeness—The aggregate of all the operational plans address all of the specified and implied tasks of the joint/coalition campaign/synchronization plan.</p> <p>Interoperability--Users can access and use resources across the DOTMLPF spectrum.</p> <p>Relevance— The operational plans meet the commander's intent/guidance.</p> <p>Robustness— Operational plans include branches and sequels necessary to address 80% of changing conditions.</p> <p>Frequency of operational plans changes/additions/amendments occur less than one per day.</p> <p>Timeliness—Operational plans are completed in time to conduct the task/mission in accordance with higher commander's intent .</p> <p>Innovation—10% of actions planned include/use new/atypical procedures, yet meet commander's intent.</p>
	<p>5.5 Assess effectiveness of plans and prepare for execution. Use wargaming and rehearsal activities to gain collaborative feedback and assessment on the effectiveness of existing plans.</p>	<p>Suitability Completeness</p>	<p>Suitability – Assessment methodology used is suitable for evaluating whether the desired effects can achieve the commander's intent and it matches the actual outcome 90% of the time.</p> <p>Completeness – The chosen assessment methodology (e.g., rock drill, modeling & simulation, wargame, etc.) provides adequate assessment of the plan.</p>	<p>Suitability – Assessment methodology used is suitable for evaluating whether the desired effects can achieve the commander's intent and it matches the actual outcome 95% of the time.</p> <p>Completeness – The chosen assessment methodology (e.g., rock drill, modeling & simulation, wargame, etc.) provides adequate assessment of the plan</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
<p>6. Synchronize execution across all domains. Effective planning is an essential means of achieving synchronized action, provided the plan remains appropriate to the situation and is executed properly. However, in keeping with the adage that “no plan survives contact with the enemy,” the commander must be able to achieve synchronization when operations are not executed as planned. This can be done through centralized redirection, as in the past, or in a decentralized manner through self-synchronization of subordinate forces. The latter is the preferred method for future C2, but this approach may not always be feasible or appropriate. The commander must have the ability to employ whichever method of synchronization is appropriate to the situation. Self-synchronization requires subordinates to have a clear understanding the commander’s intent, shared SA and operational trust, good communications and the ability to act without detailed direction from above.</p>	<p>6.1 Communicate and disseminate plans and orders to all echelons and to mission partners. Future C2 capabilities must ensure timely communication of these plans, especially during rapidly changing situations. Use meetings, briefings, paper and electronic media and available tools and applications to promulgate plans to all echelons and mission partners.</p>	<p>Understanding Speed Robustness</p>	<p>Understanding— 99% of personnel receive necessary guidance and act accordance with that guidance 99% of the time.</p> <p>Speed--Speed of promulgation must match operational requirements.</p> <p>Robustness -- Task can still be successfully accomplished during degraded conditions. System availability is maintained at 95% following any internal or external disturbances.</p>	<p>Understanding— 99% of personnel receive necessary guidance and act accordance with that guidance 99% of the time.</p> <p>Speed--Speed of promulgation must match operational requirements.</p> <p>Robustness -- Task can still be successfully accomplished during degraded conditions. System availability is maintained at 99% following any internal or external disturbances.</p>
	<p>6.2 Authorize and enable execution and self-synchronization of subordinate forces as appropriate. Provide subordinates with the authority and trust to enable them to self-synchronize their forces when appropriate for the operation.</p>	<p>Operational trust Understanding Flexibility Agility</p>	<p>Operational Trust -- Subordinate delegated operations meet or exceed expectations without direct JTF commander/staff involvement.</p> <p>Understanding—99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Flexibility-- Mission critical decisions can accommodate effective responses that facilitate direction change without detracting from the primary mission.</p> <p>Agility—Subordinate leaders can effectively respond to direction change without detracting from the primary mission. Subordinate leaders can reconfigure assets for a changing environment</p>	<p>Operational Trust -- Subordinate delegated operations meet or exceed expectations without direct JTF commander/staff involvement.</p> <p>Understanding—99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Flexibility-- Mission critical decisions can accommodate effective responses that facilitate direction change without detracting from the primary mission.</p> <p>Agility—Subordinate leaders can effectively respond to direction change without detracting from the primary mission. Subordinate leaders can reconfigure assets for a changing environment</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>6.3 Synchronize/self-synchronize operations within and among physical and functional domains across the full ROMO employing all appropriate joint capability areas:</p> <p>Collaboratively synchronize operations among staff and subordinate commanders.</p> <ul style="list-style-type: none"> • Joint Air Operations • Joint Space Operations • Joint Land Operations • Joint Maritime/Littoral Operations • Joint Irregular Operations • Joint Information Operations • Joint Access and Access Denial • Joint Protection • Joint Logistics • Joint Net-Centric Operations • Joint Battlespace Awareness • Defense Support to US Civil Authorities • Joint Force Generation • Joint Force Management • Joint Homeland Defense • Joint Global Deterrence • Joint Shaping • Joint Stability Operations • Joint Interagency/IGO/NGO Coordination • Joint Public Affairs Operations 	<p>Operational trust Understanding Flexibility Coherence Robustness</p>	<p>Operational Trust -- Subordinate delegated operations meet or exceed expectations without direct JTF commander/staff involvement.</p> <p>Understanding—99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Coherence –90% of the subordinate operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Flexibility-- Mission critical decisions can accommodate effective responses that facilitate direction change without detracting from the primary mission.</p> <p>Robustness -- Task can still be successfully accomplished during degraded conditions. System availability is maintained at 95% following any internal or external disturbances.</p>	<p>Operational Trust -- Subordinate delegated operations meet or exceed expectations without direct JTF commander/staff involvement.</p> <p>Understanding—99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Coherence –95% of the subordinate operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Flexibility-- Mission critical decisions can accommodate effective responses that facilitate direction change without detracting from the primary mission.</p> <p>Robustness -- Task can still be successfully accomplished during degraded conditions. System availability is maintained at 99% following any internal or external disturbances.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>6.4 Synchronize operations with DoD agencies and coalition members. Establish appropriate operational personal, liaison, electronic and network linkages with coalition partners to ensure synchronization of operations.</p>	<p>Operational trust Interoperability Understanding Accessibility Coherence</p>	<p>Operational Trust – DoD agencies and coalition forces meet or exceed JTF commander’s expectations.</p> <p>Interoperability--Users can access and use resources across the DOTMLPF spectrum.</p> <p>Understanding— 99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Accessibility – 80% of mission partners able to access unclassified information on a standard collaboration tool. 60% of authorized mission partners with access to classified information on a standard collaboration tool.</p> <p>Coherence –90% of the mission partners operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p>	<p>Operational Trust – DoD agencies and coalition forces meet or exceed JTF commander’s expectations.</p> <p>Interoperability--Users can access and use resources across the DOTMLPF spectrum.</p> <p>Understanding— 99% of personnel receive necessary guidance and act in accordance with that guidance 99% of the time.</p> <p>Accessibility – 90% of mission partners able to access unclassified information on a standard collaboration tool. 75% of authorized mission partners with access to classified information on a standard collaboration tool.</p> <p>Coherence –95% of the mission partners operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p>
	<p>6.5 Coordinate operations with non-DoD national agencies and international organizations. Effectively establish relationships with non-DoD agencies and, as appropriate, NGOs. Establish appropriate operational, personal, liaison, electronic and network linkages with agencies and international organizations to ensure coordination of operations.</p>	<p>Understanding Coherence Security</p>	<p>Understanding— 90% of personnel receive necessary guidance and act in accordance with that guidance 75% of the time.</p> <p>Coherence –75% of the mission partners operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>	<p>Understanding— 95% of personnel receive necessary guidance and act in accordance with that guidance 90% of the time.</p> <p>Coherence –80% of the mission partners operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>6.6 Synchronize execution between/across phases. Effectively establish communications and ensure synchronization of activities and that procedures exist to support the effective transition of phases</p>	<p>Agility Coherence</p>	<p>Agility—CTF forces can accommodate multiple phases and effectively respond to direction change without detracting from the primary mission. CTF can reconfigure for a changing environment.</p> <p>Coherence –75% of the mission partners operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p>	<p>Agility— -CTF forces can accommodate multiple phases and effectively respond to direction change without detracting from the primary mission. CTF can reconfigure for a changing environment.</p> <p>Coherence –80% of the mission partners operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p>
	<p>6.7 Synchronize mission handover during operation. Effectively establish communications and ensure synchronization activities and procedures exist to support the effective handover of missions or tasks during operations.</p>	<p>Flexibility Speed Responsiveness</p>	<p>Flexibility -- Mission critical decisions can accommodate effective responses that facilitate direction change without detracting from the primary mission.</p> <p>Speed -- Speed of handover must match operational requirements.</p> <p>Responsiveness -- Ability to reconfigure for a changing environment and ability to return to a steady state condition after reconfiguration.</p>	<p>Flexibility -- Mission critical decisions can accommodate effective responses that facilitate direction change without detracting from the primary mission.</p> <p>Speed -- Speed of handover must match operational requirements.</p> <p>Responsiveness -- Ability to reconfigure for a changing environment and ability to return to a steady state condition after reconfiguration.</p>
	<p>6.8 Validate targets prior to attack (combat identification). Provide accurate, NRT, targeting capability to ensure minimization of fratricide, collateral damage, and unintended effects.</p>	<p>Accuracy Timeliness</p>	<p>Accuracy—Target conforms to truth, within acceptable error (99.5% accurate).</p> <p>Timeliness--The information is available in time to conduct the target engagement 99% of the time.</p>	<p>Accuracy—Target conforms to truth, within acceptable error (99.5% accurate).</p> <p>Timeliness--The information is available in time to conduct the target engagement.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
<p>7. Monitor execution, assess effects and adapt operations. This capability builds upon Capabilities 3 and 4 in particular. Commanders need the ability to maintain SA, assess plan execution effectiveness and rapidly re-plan operations by identifying alternative COAs and redirecting forces as circumstances change. Commanders and their staffs must have visibility over friendly unit decisions and capabilities, and the ability to monitor and react to changes in adversary status. Planners must be able to predict desirable and undesirable attack consequences and anticipate how effects may propagate throughout an adversary's system. The ability to respond rapidly and effectively to changing circumstances will enable commanders to maintain the initiative.</p>	<p>7.1 Monitor tactical operations; assimilate information; assess compliance with commander's guidance and intent, including ROE; intervene in subordinate actions as needed. Continually examine combined blue and red information, inputs, and reports of ongoing actions to assess compliance with the implementing commander's objectives, guidance, and intent. Provide guidance and corrective measures as needed.</p>	<p>Understanding Foresight Suitability Agility</p>	<p>Understanding—The commander / controller understands combined assimilated information well enough to be able to determine when actions are complying or not complying with the plan, guidance, intent, and ROE.</p> <p>Foresight -- Deviations from the plan or noncompliance are accurately predicted, 70 percent of the time.</p> <p>Suitability -- Commander correctly assessed the need to intervene (did when he shouldn't have, didn't when he should have, did when he should have, didn't when he shouldn't have).</p> <p>Agility—Forces and assets quickly modify operations to facilitate direction change without detracting from the primary mission.</p>	<p>Understanding—The commander / controller understands combined assimilated information well enough to be able to determine when actions are complying or not complying with the plan, guidance, intent, and ROE.</p> <p>Foresight -- Deviations from the plan or noncompliance are accurately predicted, 80 percent of the time.</p> <p>Suitability -- Commander correctly assessed the need to intervene (did when he shouldn't have, didn't when he should have, did when he should have, didn't when he shouldn't have).</p> <p>Agility—Forces and assets quickly modify operations to facilitate direction change without detracting from the primary mission.</p>
	<p>7.2 Track, shift, reconfigure (i.e. control) forces, equipment, sustainment and support, even en route Monitor forces, equipment, sustainment and support while deploying to and returning from theater and intra-theater travel, and adapt for changing situations</p>	<p>Accuracy Agility Completeness Security</p>	<p>Accuracy—Asset location conforms to truth, within the acceptable error, 90% of the time.</p> <p>Agility—CTF assets can accommodate multiple phases and effectively respond to direction change without detracting from the primary mission. CTF can reconfigure assets for a changing environment.</p> <p>Completeness— Mission and mission capability information is available on 90% of the assets</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>	<p>Accuracy—Asset location conforms to truth, within the acceptable error, 95% of the time.</p> <p>Agility—CTF assets can accommodate multiple phases and effectively respond to direction change without detracting from the primary mission. CTF can reconfigure assets for a changing environment.</p> <p>Completeness— Mission and mission capability information is available on 95% of the assets</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>7.3 Collaboratively assess achievement of planned effects. Assess achievement of planned effects through the use of net-centric collaborative tools and enterprise service applications.</p>	<p>Completeness Accuracy Timeliness Suitability</p>	<p>Completeness--All available information is considered in conducting the assessment.</p> <p>Accuracy—Assessed effects conform to truth, within acceptable error.</p> <p>Timeliness—The assessment occurs as soon as the information becomes available.</p> <p>Suitability – Assessment methodology used is suitable for evaluating whether the planned effects achieve the commander's objectives and intent.</p>	<p>Accuracy—Assessed effects conform to truth, within acceptable error.</p> <p>Timeliness—The assessment occurs as soon as the information becomes available.</p> <p>Completeness--All available information is considered in conducting the assessment.</p> <p>Suitability – Assessment methodology used is suitable for evaluating whether the planned effects achieve the commander's objectives and intent.</p>
	<p>7.4 Collaboratively identify and assess implications of unintended effects. Use existing or situational means to collaboratively identify and assess implications of unintended effects and respond with corrections based on the best command, staff and expert advice and counsel.</p>	<p>Completeness Accuracy Timeliness</p>	<p>Completeness--All available information is considered in conducting the assessment.</p> <p>Accuracy—Assessed effects conform to truth, within acceptable error.</p> <p>Timeliness—The assessment occurs as soon as the information becomes available.</p>	<p>Completeness--All available information is considered in conducting the assessment.</p> <p>Accuracy—Assessed effects conform to truth, within acceptable error.</p> <p>Timeliness—The assessment occurs as soon as the information becomes available.</p>
	<p>7.5 Collaboratively, rapidly re-plan and synchronize operations to adapt to changing situation. Use appropriate existing commanders, staffs and associated support tools to collaboratively update and adjust plans to meet changing operational priorities.</p>	<p>Speed Agility</p>	<p>Speed -- Speed of re-planning must match operational requirements.</p> <p>Agility—The staff quickly and correctly modifies the plan to accommodate effective responses that facilitate direction change without detracting from the primary mission.</p>	<p>Speed -- Speed of re-planning must match operational requirements.</p> <p>Agility—The staff quickly and correctly modifies the plan to accommodate effective responses that facilitate direction change without detracting from the primary mission.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>7.6 Adapt operations to changing situations through initiative and self-synchronization when practical. Commanders and staffs, using associated support tools, collaboratively execute plans to meet the changing operational priorities.</p>	<p>Understanding Agility Coherence Innovation</p>	<p>Understanding— 99% of personnel receive updated guidance and act in accordance with that guidance 99% of the time.</p> <p>Agility— JTF forces accommodate multiple phases and effectively respond to direction change without detracting from the primary mission.</p> <p>Ability to reconfigure for a changing environment.</p> <p>Coherence –90% of the subordinate elements' operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Innovation—10% of actions taken include/use new/atypical procedures, yet meet commander's intent.</p>	<p>Understanding— 99% of personnel receive updated guidance and act in accordance with that guidance 99% of the time.</p> <p>Agility— JTF forces accommodate multiple phases and effectively respond to direction change without detracting from the primary mission.</p> <p>Ability to reconfigure for a changing environment.</p> <p>Coherence –95% of the subordinate elements' operations are integrated/synchronized/mutually supportive and result in the success of the campaign plan.</p> <p>Innovation—10% of actions taken include/use new/atypical procedures, yet meet commander's intent.</p>
	<p>7.7 Respond to emerging requests for support from subordinate commands and mission partners. Reallocate forces and resources to effectively counter and respond to emerging situations.</p>	<p>Speed Agility</p>	<p>Speed -- Speed of response must match operational requirements.</p> <p>Agility—The staff quickly and correctly responds to the requests for support, without detracting from the primary mission, when feasible.</p>	<p>Speed -- Speed of response must match operational requirements.</p> <p>Agility—The staff quickly and correctly responds to the requests for support, without detracting from the primary mission, when feasible.</p>
	<p>7.8 Determine when desired objective, end-state or phase points have been reached. Collaboratively integrate commanders' feedback, staff and organization inputs and overall operational knowledge to determine the appropriate action when desired objective (military end-state) is reached.</p>	<p>Understanding Completeness</p>	<p>Understanding—Commander's defined end state and current battlefield conditions are congruent.</p> <p>Completeness--All available information is used in determining if desired end state has been achieved.</p>	<p>Understanding—Commander's defined end state and current battlefield conditions are congruent.</p> <p>Completeness--All available information is used in determining if desired end state has been achieved.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
<p>8. Leverage Mission Partners. The commander must be able to achieve/maintain unity of effort and to leverage the capabilities of mission partners not under his command. Mission partners may include other DoD units, non-DoD agencies, coalition, and international organizations. He does this through coordination, collaboration, influence, persuasion, negotiation, and diplomacy as appropriate.</p>	<p>8.1 Communicate mission objectives and support needs. Use every acceptable and mission-relevant medium fitting the task for communication of the needed mission objectives, rationale, intentions and desired support/action from mission partners to associated staffs/units/organizations and communities. Communication media will vary depending on the audience and available and applicable means of communication.</p>	<p>Understanding Interoperability Security</p>	<p>Understanding— 90% of personnel receive necessary guidance and act in accordance with that guidance 75% of the time.</p> <p>Interoperability -- Users can access and use resources across the DOTMLPF spectrum.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>	<p>Understanding— 95% of personnel receive necessary guidance and act in accordance with that guidance 90% of the time.</p> <p>Interoperability -- Users can access and use resources across the DOTMLPF spectrum.</p> <p>Security-- No compromise of information that impairs current operational effectiveness. No compromise of classified information.</p>
	<p>8.2 Coordinate with mission partners to gain actionable commitment. The commander must be able to win the support of people and organizations over which he does not exercise command. He does this by including them in the decision-making process, and through diplomacy, persuasion, negotiation, collaboration and coordination</p>	<p>Understanding Coherence Operational Trust Completeness</p>	<p>Understanding— 90% of personnel receive necessary guidance and act in accordance with that guidance 70% of the time.</p> <p>Coherence—70% of the mission partners' activities are mutually supportive and result in the success of the campaign plan.</p> <p>Operational Trust – 70% of partners' activities meet or exceed expectations and are favorable to the commander's mission.</p> <p>Completeness—The aggregate of the mission partners' activities support the specified and implied tasks of the joint/coalition campaign/synchronization plan.</p>	<p>Understanding— 95% of personnel receive necessary guidance and act in accordance with that guidance 85% of the time.</p> <p>Coherence—85% of the mission partners' activities are mutually supportive and result in the success of the campaign plan.</p> <p>Operational Trust – 85% of partners' activities meet or exceed expectations and are favorable to the commander's mission.</p> <p>Completeness—The aggregate of the mission partners' activities support the specified and implied tasks of the joint/coalition campaign/synchronization plan.</p>
	<p>8.3 Provide support as feasible and appropriate. Give regular and requested follow-ups with necessary details and explanations and the status on all tasks, missions and requested actions to further cement collaboration and positively influence mission partners. Strive to always follow through on any commitments and always deliver updates and results on any mission.</p>	<p>Flexibility Relevance</p>	<p>Flexibility – 75% of the support requests can be accommodated without detracting from the primary mission.</p> <p>Relevance— The support rendered meets the mission partners' request/need.</p>	<p>Flexibility – 75% of the support requests can be accommodated without detracting from the primary mission.</p> <p>Relevance— The support rendered meets the mission partners' request/need.</p>

Capability	Operational Task	Attributes	Standard (2010)	Standard (2020)
	<p>8.4 Understand situation-specific negotiating power Acquire the necessary knowledge and insight via personal contacts, research and staff input to know which smaller, less significant concessions can be made to improve and generate opportunities for larger, more important reciprocal concessions.</p>	<p>Understanding</p>	<p>Understanding—</p> <p>Commander recognizes his degree of influence with mission partners. This influence is based upon culture, relative power, relative need, language, etc.</p> <p>Commander is successful in exercising influence with mission partners 75% of the time.</p>	<p>Understanding—</p> <p>Commander recognizes his degree of influence with mission partners. This influence is based upon culture, relative power, relative need, language, etc.</p> <p>Commander is successful in exercising influence with mission partners 85% of the time.</p>

[Appendix D – Crosswalks](#)

The crosswalk comparison was performed using the following assumptions and methods. This was a task-to-task level comparison with each JIC’s individual task compared to the full spectrum of C2 JIC tasks. If there was a task overlap, the JIC was considered for crosswalk and marked. To keep the analysis at a high level of association, relationship specifics were not detailed. Consequently, a marginal overlap is treated the same as a complete overlap.

No set standards existed when some of the published JICs were written. The following comparison standards were used: (1) the highest-level statement of effort was labeled a “Capability,” and (2) lower-level statements grouped under this “Capability” were the JIC’s “Tasks.” This arbitrary norming of data labels allowed for an accurate crosswalk comparison and analysis.

Click on this icon for access to the Lessons Learned Crosswalk spreadsheet.



Microsoft Office
Excel Worksheet

Click on this icon for access to the Seabasing JIC Crosswalk spreadsheet.



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Click on this icon for access to the Joint Forcible Entry Operations JIC Crosswalk spreadsheet.



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Click on this icon for access to the Global Strike JIC Crosswalk spreadsheet.



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Click on this icon for access to the Integrated Air and Missile Defense JIC Crosswalk spreadsheet.



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Click on this icon for access to the Joint Distribution JIC Crosswalk spreadsheet.



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Excel Worksheet

Appendix E -- Illustrative Concept of Operations (Classified Supplement)