COMMANDER AND STAFF GUIDE TO THE MISSION PARTNER ENVIRONMENT

Approved for Public Release
Distribution Unlimited

ATZL-MCM   06 MAR 25

This handbook is designed to provide Commanders at Corps and below headquarters with the essential knowledge, skills, and best practices necessary to plan and execute successful multinational operations and exercises. The handbook offers valuable insights, definitions, valuable lessons learned, and key concepts related to the establishment and employment of Mission Partner Environments (MPE) and Mission Partner Networks (MPN).

To achieve mission success, it is crucial to plan and employ an MPE that enables seamless collaboration and coordination with mission partners. A well-designed MPE is essential for effective mission partner operations, whether leading or participating in joint efforts. By establishing an MPE, commanders can transition from merely working with mission partners to truly operating as a unified team.

A Mission Partner Environment is a structured framework that supports the planning, training, and execution of operations between mission partners across all five Joint operational phases, the full range of military operations, and all domains. An MPE integrates three key components:

1. Human domain solutions: fostering relationships, building trust, and promoting cultural understanding
2. Procedural domain solutions: establishing common processes, protocols, and standards
3. Technical domain solutions: enabling secure, interoperable, and timely information sharing

While a successful MPE is not a guarantee of mission success, it is a critical factor in achieving shared understanding, mutual trust, and unity of effort among partners. This handbook aims to provide Commanders with a comprehensive guide to enhance their ability to operate effectively with mission partners, ultimately contributing to successful multinational operations and exercises.

Bryan L. Babich
Brigadier General, U.S Army
Director
Mission Command Center of Excellence

Commander and Staff Guide to the Mission Partner Environment

Table of Contents

Chapter 1

1 Mission Partner Environment

This chapter defines and describes mission partner environments and guides Army leaders to frame their unique mission partner environments which are shaped by roles, objectives, organization, and mission partners. It also includes insights and recommendations to plan and set conditions for effective operations in mission partner environments.

1.1 Unique Environmental Considerations

> *Mission Partner environment provides a worldwide information sharing capability to facilitate unified actions between the Department of Defense and Mission Partners across the full range of military operations.*[1]

1.1.1 Mission Partners versus Unified Action Partners

The term "mission partners" is a U.S. Department of Defense term for any partner not in the United States military or Department of Defense. Mission partners include members of other departments and agencies of the U.S. Government, state and local governments, allies, coalition partners, host nations, other nations, multinational organizations, nongovernmental organizations, academia, and the private sector. While extremely similar in composition, the Army-only term Unified Action Partner (UAP) includes joint forces and components, multinational (MN) forces and US Government agencies and departments. UAP is not interchangeable with the term 'mission partner'. In purely Joint operations and activities, Joint forces establish a Joint Information Environment, commonly called JIE, rather than a Mission Partner Environment (MPE).

1.1.2 Mission Partner Environment

A mission partner environment (MPE) is a capability framework in which unified action partners plan, prepare and execute operations at an appropriate, single security classification level, with a common language [lexicon]. MPE is about shaping already existing capabilities to address the commander's need for unity of effort and speed of command. An MPE provides strategic, operational, and tactical flexibility for all commanders to execute command and control by providing the means to clearly communicate the commander's intent to maximized operational effects with all mission partners.[2] Each instance of MPE establishes a circle of trust where all partners share information within one security level for planning, situational awareness, and execution

that adheres to each mission partner's organizational or national disclosure policies. This represents a significant paradigm shift from a restrictive "need to know" policy for sharing of information to a more risk accepting "need to share" environment where commanders are willing to accept risk to share operationally significant information with mission partners.

Insights/Recommendations:
Planning to operate in an MPE must be executed early and integrate mission partners as soon as possible to develop trust and a shared understanding of the information requirements. Each environment is unique to the location, task, resources and partners involved. Commanders must identify the level of interoperability necessary and align the resources to achieve it.

- When planning or establishing an MPE, consider these pre-operational factors:
    - Desired partners – With whom are you partnering?
    - Involvement level – At what echelon are you participating?
    - Long-term goal of partnering – Purpose or objective of partnering?
    - Latest partnership date – When must you be interoperable?

1.1.3 Framing the Environment

Multinational operations are conducted by forces of two or more nations, usually undertaken in the structure of a coalition or alliance. The primary goal of the MPE capability framework is U.S. forces operating with mission partners in a common releasability environment.[3] While there are some cases where an Army headquarters may establish an MPE to support operations not involving multinational forces, the intent is that the U.S. Army will operate with allies and partners across the competition continuum, from cooperation to competition below armed conflict, and armed conflict.

Insight:
Mission success in joint U.S. and coalition partner operations hinges upon the capability to ensure the right information gets to authorized personnel in a timely manner, and in the proper format, enabling decision-making and mission execution at the speed of relevance. An MPE enables these conditions across a broad spectrum of missions.[4]

Commanders may employ MPE capabilities for any operation, regardless of the participating forces, mission, or task organization requirements. Mission and operational variables impact how commander's plan and execute operations and activities to achieve national goals. Therefore, commanders and leaders must understand how MPE capabilities and solutions are institutionalized within the U.S. Army and should act to optimize their relationships with mission partners in competition, crisis, and conflict.

Commanders should plan for multinational operations "as a partner" as opposed to "with a partner" to enable flexibility for all commanders to conduct command and control and simplify information sharing regardless of the duration or uniqueness of the partnership.

Mission partner environments may be augmented by mission partner networks; however, the network is only a tool and not the mission partner environment itself. An effective MPE includes a combination of **technical**, **procedural**, and **human** dimension solutions to enable timely, complete, and accurate information sharing, process execution, and unity of effort between mission partners. Figure 1-1 portrays information sharing processes resident in each of the dimensions of interoperability within an MPE.
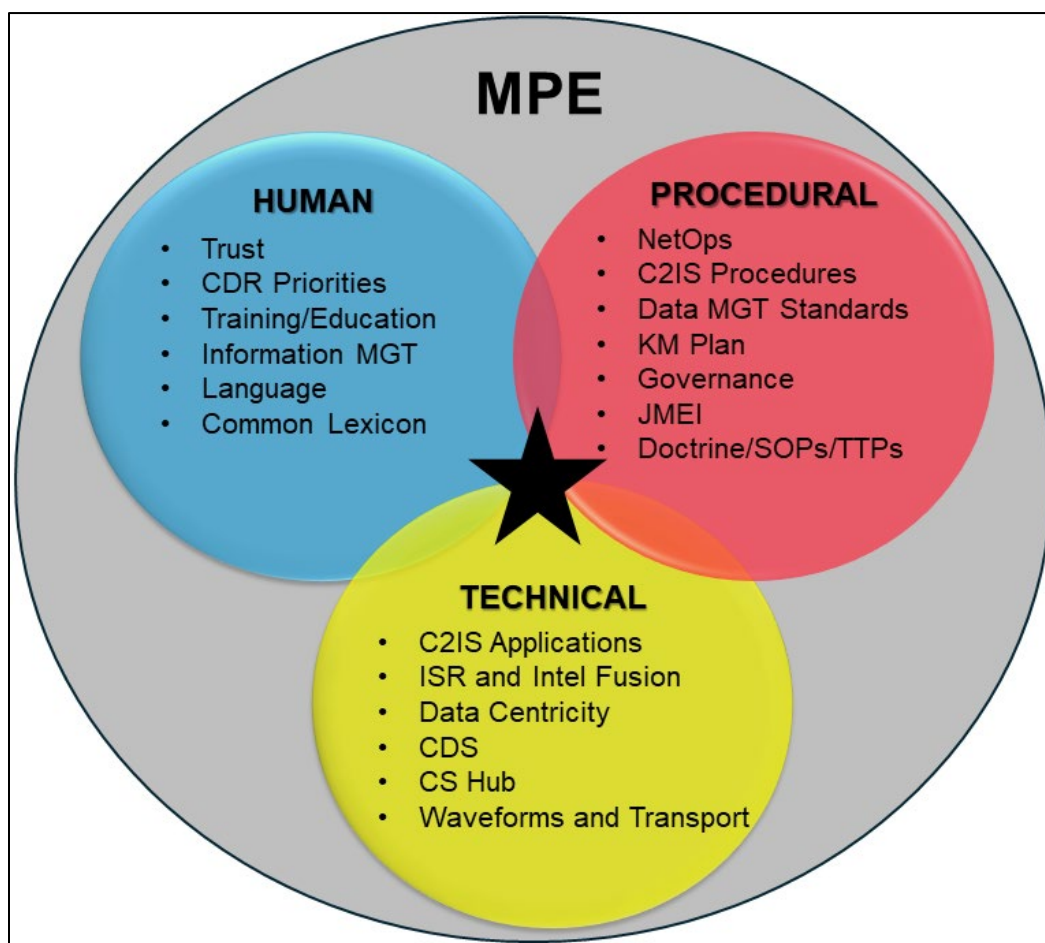
Figure 1-1. Interoperability Dimensions. Source: Rachel Caylor

1.1.4 The MPE Enterprise and Expeditionary Environments:

The Joint Mission Partner Environment Capability Definition Package defines the environment in two categories: Expeditionary and Enterprise. The terms Enterprise MPE and Expeditionary MPE distinguish the environment between the "persistent, strategic" and "temporary, operational" Mission Partner Environments respectively, based on their likely scope and function. See Figure 1-2 for the Army MPE.
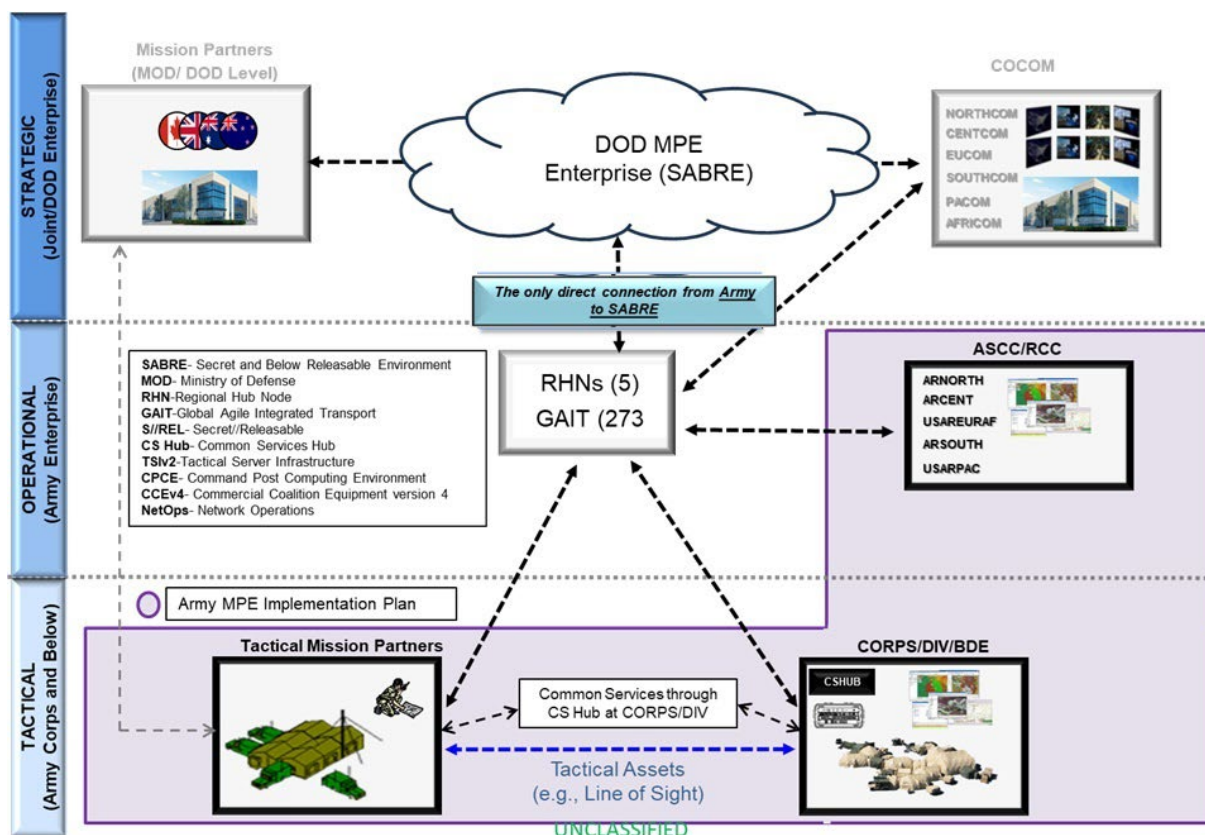
Figure 1-2. Army Mission Partner Environment[1]. (Source: US Army MPE Proponent Office)

The enterprise MPE connects the U.S. national level, Department of Defense, combatant commands (CCMD), and our mission partners to unify access to global information and enable command and control (C2) information sharing capability at the policy, strategic and operational levels.

The expeditionary MPE interfaces with enterprise MPE at the CCMDs and is the focus of C2 collaboration between the Service Component MPE capabilities and Mission Partners at the operational and tactical levels either as embedded parts of the U.S. Army formations or as fellow members of coalitions, CJTFs, or other multinational force, across all warfighting domains.

Enterprise	Expeditionary
• Strategic to operational level	• Operational to tactical level
• U.S. owned and operated under U.S. policy and	• Mission Commander governed; operated and aligned with

---

[1] The MPE Community of Interest uses the terms Enterprise MPE and Expeditionary MPE to identify the "persistent, strategic" and "temporary, operational" Mission Partner Environments respectively, based on their likely scope and function.

regulations; aligned with approved standards and protocols	agreed to standards and protocols
• Globally integrated	• Regionally and mission focused
• Day-to-day operations with most trusted partners and allies	• Operations with most trusted partners and allies, including unanticipated mission partners
• Typically non-perishable data	• Typically perishable data
• Risk averse: tighter cybersecurity	• Risk tolerant: collective management of cybersecurity
• Data centric design	• Data centric design

Figure 1-2: Enterprise and Expeditionary MPE Attributes (Source: Mission Partner Environment Capability Definition Package, 16JAN23)

1.2 Mission Partner Network

A Mission Partner Network is the technical capability that enables the mission partner environment by using a specific partnership/coalition wide area network with general operational requirements, planned and implemented using common standards and protocols, enabling data/information exchange. Digitally enabled network-participating mission partners agree with the general operational requirements to enable a robust network transport capability, execution of tactical network operations, the display and sharing of relevant information,[5] and collaboration between mission partners. Commanders must establish a robust MPN, as the network increases friendly force combat power overmatch by establishing an information advantage that supports rapidly deciding and delivering effects on the adversary.

An MPN must be:

- Comprised of intuitive, secure, standards-based information sharing capabilities.
- Adapted to the commander's information exchange requirements.
- Integrated to deliver a coalition common operating environment and uninterrupted mission command services.

---

[1] *Joint Mission Partner Environment Concept of Operations*, June 2020. 5.
[2] AR 34-1, *Interoperability,* 9 April 2020.
[3] FM 3-16, *The Army in Multinational Operations,* 8 April 2014.
[4] Joint Staff J6, *Joint Mission Partner Environment Capability Definition Package*, 16 January 2023
[5] The display of shared relevant information is commonly seen as the Common Operating Picture or the Common Intelligence Picture.

Chapter 2

2 Command and Control in a Mission Partner Environment

This chapter describes command and control considerations, and potential organizational structures used in a mission partner environment.

2.1 Command and Control Considerations

The focal point of command and control is the commander.
Commanders assess situations, make decisions, and direct action.
They provide purpose, direction, and motivation to instill the will to win.
(ADP 6-0 Mission Command

Command and Control (C2) is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. It is not a one-way, top-down process. Rather, it is multidirectional, with feedback from lower echelons, from higher echelons, laterally, and from sources outside the chain of command.[1] MPE is the operating framework enabling C2 and information sharing for planning and execution across the full range of military operations. MPE supports commanders' execution of critical warfighting functions: C2, information, intelligence, fires, movement and maneuver protection and sustainment.

Multinational operations are expeditionary "military actions conducted by forces of two or more nations, usually undertaken within the structure of an alliance or coalition".[2] These operations may include unique partnerships formed to accomplish broad, long-term objectives that further the common interest of members; or ad hoc partnerships generated for limited purposes and for defined duration. Commanders leading forces in an MPE can shape partner's ability to focus assets, capabilities, and forces to accomplish common goals.

The elements of command and levels of control are impacted in different ways in an MPE. Commanders and staff build consensus of interest among partners through collaboration and coordination. This consensus enables mission partners to exercise command and control. Successful operations establish unity of effort if not unity of command.[3] The multinational force (MNF) commander directs the military effort to reach a common objective and each national commander within a MNF is responsible to the MNF and their national chain of command. Troop contributing nations maintain a direct

line of communications to their national headquarters and their own national governments. See FM 3-16 *The Army in Multinational Operations* for more information.

This handbook will focus primarily on multinational operations; however, the same planning and considerations can be used during interorganizational cooperation activities and defense support of civil authorities under control of a lead agency. **All commanders and staff are required to coordinate, integrate, and synchronize their support with other government and nongovernment agencies and organizations.[4]**

Observed Best Practices[5]:
- Deliberately build and maintain trust.
- Time is finite, so carefully consider where to invest in critical relationships. Identify the organizations the commander and staff will be most dependent on or work with as the target for early engagement and team building.
- Actively build trust through words and actions; continue reinforcing it.
- Commanders rely on human interpersonal relationships, not the more impersonal transactional activities to build teams.
- Be inclusive with mission partners. Understand that over-classification can damage trust.
- Be sensitive to how you share information. Avoid overuse of NOFORN networks and US-only meetings.
- Leverage opportunities for frank discussions in private meetings, and public engagements with mission partners to fully share perspectives.
- Include mission partners in commander circulation and battle rhythm events.

2.1.1 Unity of Command

Unity of command is the preferred method of achieving unity of effort.[6] Under unity of command two commanders may not exercise the same command relationship over the same force at any one time. In an MPE, unity of command may not be achievable, yet commanders still hold responsibility for mission outcomes. Therefore, achieving unity of effort is paramount.

2.1.2 Unity of Effort

Unity of effort is realized when mission partners not necessarily part of the same command or organization coordinate and cooperate toward achieving common objectives of a unified action.[7] Commanders seek to align actions collaboratively with mission partners. Failure to achieve unified action can jeopardize mission accomplishment. Commanders must take steps to develop an MPE that supports mutual trust and confidence among partners. See ADP 6-0 *Mission Command* for more information.

Observed Best Practice:[8]
- Identify and work with the key relevant interorganizational decision makers…. Find common ground that can be exploited, non-negotiable areas, and middle ground that can be worked to achieve unity of effort. This will take significant commander time and must be prioritized and managed to be effective.
- Identify supported commanders to ensure common direction of effort. Ensure supported commanders fully understand both their authority and their responsibility to provide general direction to the supporting commanders. They often require additional liaison and planning assistance from supporting commanders to understand their capabilities and incorporate their assistance. Likewise, ensure supporting commanders are proactive in ascertaining supported commander requirements.
- Direct exchange of liaison officers – at a minimum from supporting to supported commanders. This assists in shared understanding and leveraging capabilities.
- Identify and track authorities and responsibilities of each partner and share your understanding of them with mission partners.

2.2 Organizing for Command and Control

2.2.1 Command Structures

Alliances and coalition command structures meet the needs, diplomatic realities, constraints, and objectives of the participating nations or organizations. Since no single command structure fits the needs of all MPE several different command structures evolved. The four command structures are lead nation or lead agency, parallel, integrated, and combination. Some situations exist when these structures do not apply.[9] See FM 3-16 *The Army in Multinational Operations* for more on multinational operations and command structures.

Command Structure	Description
Lead Nation or Agency	One nation or agency has the lead role and its C2 authority has primacy during the conduct of operations.
Parallel	No single coalition commander exists under this structure. The multinational leaders coordinate among the participants to attain unity of effort.
Integrated	Entire staff comprised of members from multiple nations integrated to the lowest echelon necessary to accomplish the mission.
Combination	Lead nation and parallel command structures exist simultaneously where two or more nations are the controlling elements for a mix of international forces.

Table 2-1. Command Structures. **Source: Derived from FM 3-16 *The Army in Multinational Operations.***

2.2.2 Interagency Cooperation

Unity of effort is extremely important in an MPE with Joint Forces and non-military agencies focused on a whole-of-government approach. During Interagency Cooperation or in support of civil authorities the commander focuses on cooperation and coordination rather than command and control. Civilian agencies will have their own missions and goals, and Army commanders have limited influence on their actions. To ensure the commander can accomplish the mission, while allowing their mission partners to do the same, requires the commander to cooperate and coordinate efforts. Doing so will prevent interference among mission partners helping accomplish the mission. See JP 3-08 for interorganizational cooperation.

The centralized customary command and control arrangement when both Title 10 federal and Title 32 state military forces respond during U.S. emergencies and major disasters is a dual-status commander-led task force.[10] When a decentralized approach is needed, developing a civil-military operation center (CMOC) is another way of achieving cooperation and coordination with mission partners. A CMOC provides a single point for integration of partner agencies, organizations, forces and Army forces. Commanders tailor CMOC to the mission and augment them as needed to facilitate coordination among key participants.[11] See JP 3-28 *Defense Support of Civil Authorities* and JP 3-57 *Civil Military Operations* for more on establishing a Civil-Military Operation Center.

An expeditionary MPE implemented for domestic operations present unique challenges based on the history of the country and the multi-layered interaction and mutually reinforcing structures of the federal, state, local, territorial, and tribal governments and private and nonprofit organizations, and composition of forces.[12] Commander and staff interaction and activities are based on the U.S. Constitution, congressional legislation, and established policy and agreements. Commanders must take deliberate steps to establish C2 with mission partners using unity of command (such as with a dual status commander) or through a decentralized approach and unity of effort to achieve common goals. See JP 3-08 *Interorganizational Cooperation*, JP 3-28 *Defense Support of Civil Authorities*, and JP 3-57 *Civil-Military Operations* for additional information.

> **Insight:**[13]
> - There is no "one size fits all"; every commander is different. C2 decisions, command relationships, and HQ organization and processes will be based on the mission, sourcing constraints, and the instincts, experience, strengths, and personalities of individual commanders and key leaders.
> - Nest with the combatant commander's intent and processes. Be a team member by preparing now by focusing training on the most likely scenarios to increase readiness. Plan to operate as a coalition joint headquarters together with interagency mission partners.
> - Understand and respect the sovereignty of the host nation, state, tribal and local governments and their leadership prerogatives.

- Leverage the authorities and capabilities of mission partners to increase effectiveness (such as the Title 22 and 50 authorities within the USG and those of the individual coalition countries).

2.3 Guides to Effective Command and Control

The U.S. Army's approach to command and control is mission command. Using mission command, commanders empower their subordinate commanders with decentralized decision making and execution appropriate to the situation. In an MPE achieving trust, shared understanding, and clearly communicating the commander's intent is essential to maximize operational effects. Commanders in MPE not structured for unity of command must still attain unity of effort.

2.3.1 Guides to Effective Command

After World War II, General Dwight D. Eisenhower said, "mutual confidence" is the "one basic thing that will make allied commands work. This is true for all multinational operations. This mutual confidence stems from a combination of tangible actions and entities, and intangible human factors. Although they do not guarantee success, ignoring them can usually guarantee failure of the coalition in accomplishing its mission.[14]

Leaders cannot overestimate the effects of complex variables on mission partner interaction. In an MPE, deliberate effort is required to regulate forces and warfighting functions to accomplish missions within the commander's intent. Commanders accomplish their missions through coordination, communication and consensus or leadership rather than by traditional command and control. A positive command climate sets the tone for building the team and developing mutual confidence. In turn, mission partners collaborate and develop trust resulting in shared understanding and unity of effort.

2.3.2 Guides to Effective Control

Commanders use elements of control – direction, feedback, information, and communication – to adapt to changes and accomplish missions. Effective control allows commanders to adapt activities based on horizontal, vertical, and external feedback and the reciprocal flow of information creating shared understanding. Shared understanding permits leaders to adjust operations to achieve objectives even while enemy forces seek to disrupt friendly forces.[15]

How commanders and staffs shape an MPE directly impacts the types, formats, and methods (and indirectly the speed) by which information is shared. Successful commanders and staffs consider interoperability throughout the operations process beginning with planning. Army capabilities inherently integrate information sharing and processes to ensure shared understanding, mutual trust and confidence, and unity of effort between U.S. Army units and joint forces. Units conducting multinational operations must explicitly identify barriers to information sharing and address solutions that enable effective information sharing and task execution.

Insights /Recommendations

- Collaborate early and routinely with mission partners when developing, implementing or joining, and assessing interoperability solutions including[16] –

    o A mission partner network

    o Common processes to be used

    o A knowledge management plan

- Early coordination with mission partners is essential for developing and assigning COP Coordination Cell (CCC) requirements for partner command and control information systems (C2IS) and personnel, as late identification of these needs after deployment can disrupt partner operations.

- LNOs specifically improve the human domain of interoperability. Commanders employ LNOs and Digital Liaison Detachments (DLD) to perform a critical function within the C2 system.

- DLDs must also train and rehearse with the partner to integrate their capabilities to best effect within the partner's CP and supported processes. DLDs specifically provide access to US-lead nation headquarters C2IS in the event mission partners do not have interoperable C2IS.

Leaders organize critical components of the headquarters staff to support the elements of control with an effective network and accurate common operational picture (COP). ASCC, U.S. corps, or division-level multinational force headquarters commanders support network operations (NETOPS) for a mission partner network (MPN) by creating a Coalition Network Operations Security Center (CNOSC). NETOPs includes the organization, tools, procedures, and coordination necessary to plan, establish, operate, maintain, join and exit the MPN. A CNOSC is staffed by network contributing partners with their national command and control information systems (C2IS) to:

- Aid in establishing, operating, and troubleshooting the MPN.

- Monitor national networks to identify any impacts on the MPN.

- Help mission partners in meeting JMEI requirements.

- Assist the COP Coordination Cell (CCC).

The composition of the CNOSC will vary and is influenced by the operational environment, lead nation Network Operations Center (NOC) doctrine, and manning constraints inherent in all operations. To avoid unnecessary duplication of effort in a unified action, the CNOSC may be integrated with the Joint Network Operations Control Center (JNCC), echelon appropriate, network or C2 organization. Similarly, mission partners working within the CNOSC require access to the network and data for effective network management, information sharing, and collaboration.

Insights / Recommendations (organization and function)

- Form follows function. Consider how the HQ will organize to apply the joint functions of C2, intelligence, fires, movement and maneuver, protection, and sustainment.[17]
- Create and man interoperability-enhancing organizational capabilities early in the operation s process. These may include a COP Coordination Cell, Intel Fusion Center, and Coalition Network and Security Operations Center (CNOSC) as key enablers for planning, implementation, assessment, and integration of specific information sharing and tasks between mission partners.

- Plan and implement the CNOSC for mission partner collaboration and shared understanding. Identify and agree to staffing and equipment requirements early in the planning process. This enables Mission Partners to bring trained personnel and CIS for the CNSOC, CCC, and any other additional requirements in addition to their internal network operation requirements.

- The CNOSC must be formed early in the planning process to support JMEI development, network planning, and common services and application planning and selection.

- Mission analysis should consider CNOSC and CCC location, and if they are not at the commander's primary command and control node, identify the liaison between them and the commander.

- Units must evaluate the realism and preparedness of their primary, alternate, contingency, and emergency (PACE) communication plan for executing the CNOSC/CCC functions, including whether the designated personnel are trained and equipped.

> • Shared graphic control measures, terminology, and frequent synchronization of digital and analog common operational pictures (COPs) are crucial for multilateral forces to effectively visualize and understand the operational area.[18]

Effective control is a process of dynamic, interactive cooperation. Control begins in planning and continues throughout the operations process. The amount of control that can be exercised among mission partners may vary significantly from control exercised with purely Army forces. Commanders and staff should consider partners' capabilities or levels of integration required, constraints, risks, legal or ethical ambiguity, unit cohesion, training, trust, and shared understanding when determining the appropriate level of control. (See Figure 2-2 for considerations for the level of control) Within mission command, control relies on:[19]

- Allowing subordinates maximum freedom of decision and action.

- Creating, maintaining, and disseminating the common operational picture.

- Using common doctrinal procedures, graphics, and terms.

- Encouraging flexibility and adaptability.

More control ←	Considerations	Less control →
• Predictable • Known	Situation	• Unpredictable • Unknown
• Inexperienced • New team	Unit Cohesion	• Experienced • Mature Team
• Untrained or needs practice	Level of Training	• Trained in tasks to be performed
• Being developed	Level of Trust	• Established
• Top down • Explicit communications • Vertical communications	Shared Understanding	• Reciprocal information • Implicit communications • Vertical and horizonal communications
• Restrictive	Rules of Engagement	• Permissive
• Optimal decisions later	Required Decision	• Acceptable decisions sooner
• Science of War • Synchronization	Appropriate To	• Art of war • Orchestration

Figure 2-2. Considerations for determining the level of control in an MPE. (Source: ADP 6-0 *Mission Command*)

[1] ADP 6-0 *Mission Command*, 31 July 2019. 1-16.

[2] JP 3-16, *Multinational Operations,* 1 March 2019.

[3] FM 3-16, *The Army in Multinational Operations,* 15 July 2024.

[4] JP 3-28, *Defense Support of Civil Authorities*, 29 October 2018. I-3.

[5] Joint Staff J7, *Insights and Best Practices Focus Paper: Mission Command, January 2020.* 2. https://www.jcs.mil/Portals/36/Documents/Doctrine/fp/missioncommand_fp_2nd_ed.pdf. Accessed 25 October 2024.

[6] ADP 6-0, *Mission Command,* 31 July 2019.

[7] JP 1, Volume 2, *The Joint Force,* 29 June 2020.

[8] Joint Staff J7, Insights and Best Practices Focus Paper: Mission Command, January 2020. 9-10. https://www.jcs.mil/Portals/36/Documents/Doctrine/fp/missioncommand_fp_2nd_ed.pdf. Accessed 25 October 2024.

[9] FM 3-16, *The Army in Multinational Operations*, 15 July 2024.

[10] JP 3-28, *Defense Support of Civil Authorities,* 29 October 2018.

[11] JP 3-57, *Civil-Military Operations,* 9 July 2018.

[12] JP 3-28, *Defense Support of Civil Authorities,* 29 October 2018.

[13] Joint Staff J7, *Insights and Best Practices Focus Paper: Forming a JTF HQ.* September 2015. https://www.jcs.mil/Portals/36/Documents/Doctrine/fp/forming_jtf_hq_fp.pdf accessed 25 October 2024.

[14] FM 100-8, *The Army in Multinational Operations*, 24 November 1997. https://safe.menlosecurity.com/doc/docview/viewer/docN109D084174B7260add676d5876f36356eddec5e2b703b1ea8674a651c9af8306874f92688fdf accessed 2 April 2025.

[15] ADP 6-0, *Mission Command*, 31 July 2019.

[16] FM 3-16, *The Army in Multinational Operations*, 15 July 2024.

[17] Joint Staff J7, Insights and Best Practices Focus Paper: *Forming a JTF HQ.* September 2015. 10. https://www.jcs.mil/Portals/36/Documents/Doctrine/fp/forming_jtf_hq_fp.pdf accessed 25 October 2024.

[18] Joint Multinational Readiness Center, *Multinational Interoperability Guidebook*, September 2021, 7.

[19] ADP 6-0, *Mission Command*, 31 July 2019.

Chapter 3

3 Information Sharing in a Mission Partner Environment

This chapter describes the value of sharing information with mission partners and considerations for the commander's information sharing requirements.

When working alongside allies and partners, the communications challenge is relentless and multifaceted. One thing to consider is how to decide what information to share, and how to share it in a way that does not implicate its source. In most military to military relationships, each partner wrestles with this problem. The imperative is to communicate well enough to achieve unity of effort, while respecting our partner's preference to avoid unity of command. (Center for Army Lessons Learned, 24-812 Balikatan 23 Report)[1]

3.1 Information Sharing Considerations

Information Sharing is the sum of the related policy, processes, procedures, and means required to balance the protection and the exchange of mission relevant facts, products, data, or instructions. It applies to and involves the community of unified action partners.

Observed Best Practice

Lead nation headquarters commanders should build and maintain a quality coalition COP by establishing a Common Operational Picture (COP) Coordination Cell (CCC), commonly called a "COP shop." The CCC is commonly collocated in the CNOSC of the main command post.

- The CCC supports commander decision-making and enables rapid collaboration and coordination.

- The cell continuously monitors the COP to ensure it reflects an accurate, timely, and complete picture in relation to the various mission partner inputs which increases overall trust and confidence during execution and thus effective control.

NOTE: If the CCC is not located at the main command post, then the unit should place a liaison at the main CP to relay RFIs and report COP or other information sharing issues and receive guidance regarding information development, visualization, or other issues.

An MPE provides the framework for UAP information sharing. Sharing information with partners improves their overall coordination and communication. It benefits the total force by generating trust, shared understanding, and increases speed and adaptability, which is critical to mission success. Staff integration and synchronization, battle rhythm development, delineation of command post roles and responsibilities, and assessments all feed the ability to create shared understanding and make decisions. Commanders and staff think beyond the physical act of information dissemination and explore the desired effect of sharing. It is best for commanders to understand and develop solutions to build an effective fighting force with the ability to share critical information to minimize the foreign disclosure officer review process.

Insights/Recommendations (Battle Rhythm and Meetings)

- Commanders create shared understanding and provide clear commander's intent, acceptable risk, and priorities.

- Leaders provide up front guidance on:
    - How the commander wants to receive information to make decisions.
    - Critical paths of information flow within the battle rhythm.[2]

- Leaders develop a battle rhythm which facilitates the operations process and allows time to address differences in doctrine, organization, training, equipment, and language that create interoperability friction.

- Develop a clear battle rhythm that provides the opportunity for synergy and shared understanding, both within the staff and with affected organizations.

- Battle rhythm and C2B2WG events must drive and support commanders' decision making. In an MPE, additional multilateral events to plan and synchronize operations may be required.

- The battle rhythm must change to accommodate the needs of a particular phase of the operation. Staff leadership must assess the battle rhythm to determine if leaders and staff members have sufficient time to perform duties. Different portions of the staff may need to execute different battle rhythms simultaneously to support ongoing or emerging events.

- Leaders articulate clear requirements so that outputs from one meeting support the inputs for the next meeting and that they lead to effective orders production and commanders' decisions. Refining and agreeing on meeting input and outputs improves efficiency of meetings.

- The staff should eliminate unnecessary events. A battle rhythm with too much structure and frequent meetings does not allow the staff and mission partners to execute staff tasks or respond to battlefield events as they develop.

> - The key to improving the efficiency and time required for multilateral battle rhythm events is frequent staff collaboration to exchange information, coordinate action, and solve problems.[3]

Every operation with mission partners differs, as do the methods for collecting and sharing information. Classification and dissemination controls may present problems in releasing information. Therefore, it is important for commanders and staffs to avoid overclassifying information and to work with the foreign disclosure officer to ensure leaders can share relevant information with mission partners. Sharing is only possible if adequately managed; this involves top-down management policy, design, and training reinforced by bottom-up implementation. (See Executive Order 13526 and AR 380-10 *Foreign Disclosure and Contacts with Foreign Representatives* for foreign disclosure guidance).

U.S. Army doctrine notes that multinational operations require foreign disclosure coordination and security classification policy guidance to drive write for release at the lowest levels. Staff at all levels must follow foreign disclosure guidelines and regulations when sharing information and intelligence with mission partners. To aid sharing, staffs establish and adhere to procedures, specific guidelines, and policies. These guidelines and policies improve interoperability, trust, and operational effectiveness in a multinational force.[4]

> **Insights/Recommendations:**
>
> - Establish operations centers to support planning and information sharing, continually assessing and adapting interoperability-dependent functions and publishing changes.
>
> - Mandate effective sharing through a top-down information/knowledge management policy (including "write for release" processes) reinforced by bottom-up training and implementation.

3.1.1 Write for Release

Write for release is an organizational process used to create, write, produce and disseminate information within an MPE. The Write for Release process is predicated by the understanding that information is subject to use of all partners, specific to the mission, in consultation with all contributing nations. To accomplish a need-to-share culture in preference to need to protect, information must be written with the intent and knowledge that Soldiers may disclose the final product to mission partners at the appropriate security classification and releasability. This is achieved through proactive sanitization when drafting information or intelligence products by redacting sensitive information where required. (See ATP 3-16.02 *Write for Release* for more information)

> **Insight:**
> - Provide clear guidance on the role of the CAG, LNOs, and staff communication practices including expectations for briefings, papers, and reports to share information and knowledge effectively and efficiently within a mission command construct.[5]
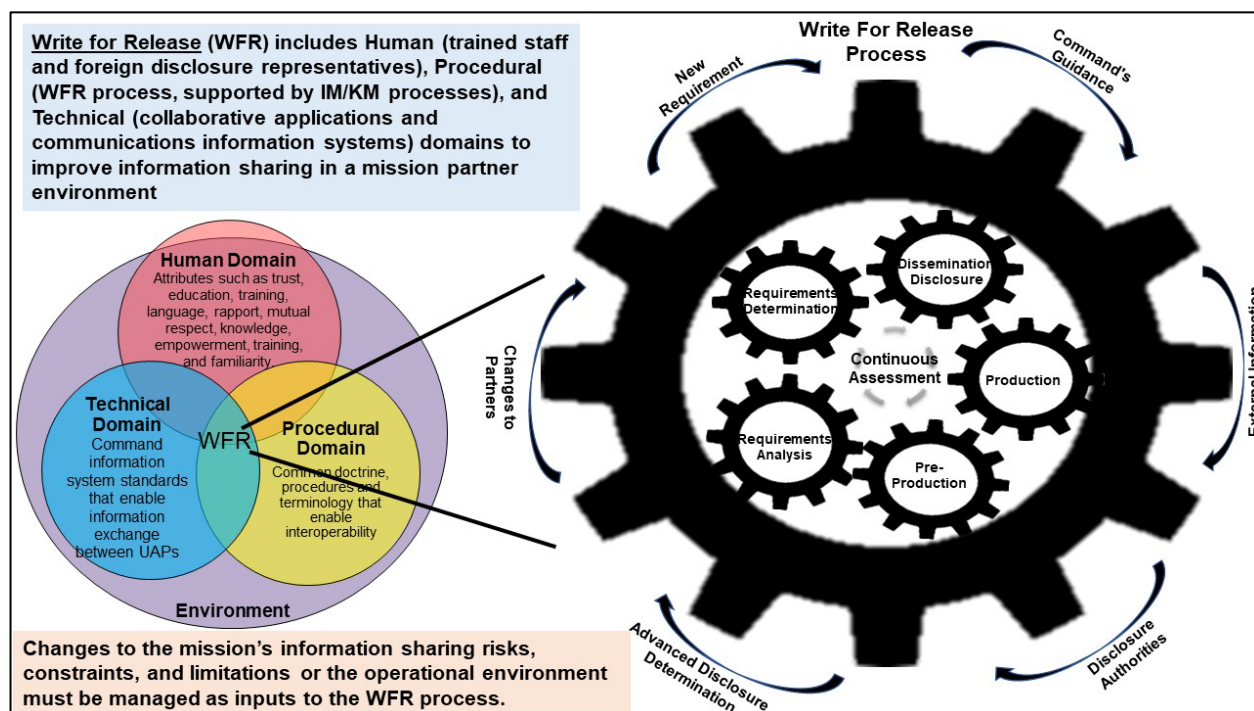
Table 3-1. Five-step write for release. (Source: ATP 3-16.02 *Write for Release*)

3.1.2 Data Sharing Agreements

Data sharing agreements are a critical component of information sharing in a Mission Partner Environment (MPE). These agreements outline the terms and conditions for sharing data between partners, including the type of data to be shared, the format for sharing, and the security measures to be taken to protect the data.[6] Effective data sharing agreements require careful planning and consideration of the needs and requirements of all partners involved.

When planning data sharing agreements, commanders and staff should consider the following factors:
- The type and sensitivity of the data to be shared
- The level of access required by each partner
- The security measures to be taken to protect the data
- The format and protocol for sharing the data
- The procedures for monitoring and reporting on data sharing activities

The Department of Defense (DoD) has established guidelines for developing data sharing agreements, including the use of standardized frameworks and collective security capabilities.[7] Commanders and staff should familiarize themselves with these guidelines and work with their mission partners to develop data sharing agreements that meet the needs of all parties involved.
Recommendations include:
- Develop clear guidelines for planning and implementing data sharing agreements
- Examine recommended connection processes
- Establish standardized templates and protocols for data sharing agreements
- Use/extension of common reference frameworks and architectures
- Ensure that data sharing activities are aligned with DoD and UAP policies and procedures
- Provide training and education on data sharing agreements and planning for commanders and staff

3.1.3 Appropriate Security Classification Level

A significant planning challenge for MPE implementation involves adjudicating existing policy with desired MPE capabilities and functions. Multilateral and bilateral security sharing agreements fall under the purview of a combatant command but are the result of policy agreements between the United States and one or more partners. The foreign disclosure officer is the approval authority for the release of military information to foreign government representatives. Commanders and staffs should educate themselves on existing policies and foreign disclosure officers must be involved early in the planning stages to determine appropriate levels of classification. During planning, early information sharing ensures that forces receive requirements that are clearly stated with guidance that supports the commander's intent.

Insights (Marking and Classification Caveats)[8]

Staffs use the write for release process for all markings and dissemination caveats, such as CUI, foreign government information, limited distribution, and law enforcement sensitive.
For the purposes of security and control, markings and dissemination caveats reflect decisions made by an information proponent. Staffs mark aggregated information with the highest classification contained in a document or collection of information. Paragraph or portion markings represent the highest classification contained in the segment. Dissemination caveats provide formal notice and articulate a warning or proviso of specific stipulations, conditions, or limitations.

Common markings and dissemination caveats include the following:
- Not releasable to foreign nationals.
- Releasable by information disclosure official.
- Releasable to.

Not Releasable to Foreign Nationals
Not releasable to foreign nationals (NOFORN) prohibits release of information to foreign nationals. The U.S. Government has determined that certain select topics and information are so sensitive, or central to internal to the U.S. Government only, that staffs need to readily identify documents as such to ensure their continued protection. Staffs ensure readers know the U.S. Government's deliberate decision to exclude foreign national access to these select topics and information sets with clear markings of NOFORN. This caveat is extremely restrictive, and staffs should only apply it when justified by specific policy. NOFORN is typically reserved for intelligence information and other sensitive topics such as the *National DisclosurePolicy*-1. (Refer to Annex A of *National Disclosure Policy*-1 for a discussion of justified and necessary application of the NOFORN caveat.)

Releasable To
The releasable to (known as REL TO) marking indicates that an affirmative disclosure determination has already been made. In this case, the information has already been disclosed or may be disclosed in the future to the country or international organization further delineated in the marking string.

DISTRIBUTION STATEMENTS
Distribution statements denote the extent of the information's availability for secondary distribution, release, and disclosure without need for additional approvals or authorizations from the controlling DOD office. Refer to DODI 5230.24 *Distribution Statements on DOD Technical Information* for a complete list of all distribution statements.

A multinational force maximizes potential contributions of each partner through coordination. Although the MPN or other communications architecture is an essential element in this area, there are specific intelligence areas requiring extensive coordination including the use of the electromagnetic spectrum, space assets, and national strategic intelligence efforts.

Commanders and staffs find answers by coordinating at all levels. Commander's may establish a multinational coordination center (MNCC) to facilitate improved collaboration and information sharing with multinational mission partners or tailored CMOC to interface with indigenous populations and institutions, humanitarian organizations, international organizations, nongovernmental organization, multinational forces, host nation government agencies, and other United States government departments and agencies.[9] Within these operations centers, commanders and staff enable collection and promote intelligence and information sharing across multiple sources, forces, organizations, or nations.

Insights:

- Establishing separate networks for dispersed headquarters requires a significant increase in liaison personnel and equipment. MPN architecture should include all mission partners to facilitate shared understanding and unity of effort in a seamless and timely manner.[10]
- Early and consistent collaboration with mission partners is crucial for developing, implementing, and evaluating interoperability solutions, including shared processes and knowledge management plans.

---

[1] Center for Army Lessons Learned, Balikatan 23 (No 24-812), February 2024. 14. (CAC login required).

[2] Joint Staff J7, *Insights and Best Practices Focus Paper: Knowledge and Information Management,* May 2018. 1. https://www.jcs.mil/Portals/36/Documents/Doctrine/fp/knowledge_and_info_fp.pdf?ver=2018-05-17-102808-507 accessed 25 October 2024.

[3] Center for Army Lessons Learned, Yama Sakura (No 24-880), June 2024. 2-3.; Center for Army Lessons Learned, WFX 24-2 Post Exercise Report December 2023, (NO 24-868), October 2024. 2-3. (CAC login required).

[4] FM 3-16, *The Army in Multinational Operations*, 15 July 2024.

[5] Joint Staff J7, *Insights and Best Practices Focus Paper: Knowledge and Information Management,* May 2018. 1. https://www.jcs.mil/Portals/36/Documents/Doctrine/fp/knowledge_and_info_fp.pdf?ver=2018-05-17-102808-507 accessed 25 October 2024.

[6] DoD Instruction 8500.01, 2020

[7] DoD Data Strategy, 2020. 5. Additional guidance and frameworks are distributed throughout doctrine including but not limited to: ATP 6-02.62 *Expeditionary Mission Partner Network Techniques for Joining, Membership, and Exiting Instructions,* December 2023 and FM 3-16.02 *Write for Release*, September 2023.

[8] ATP 3-16.02 , *Write for Release,* 26 September 2023

[9] JP 3-16, *Multinational Operations,* 01 March 2019; FM 3-16, *The Army in Multinational Operations*, 15 July 2024.

[10] JP 3-0, *Joint Campaigns and Operations,* 18 June 2022. (CAC is required) Separate networks hinder interoperability. The concept of network-centric warfare emphasizes the importance of networked communication and information sharing to achieve information superiority. Effective mission command relies on shared understanding and decentralized execution and economy of force.

Chapter 4

4 Interoperability in a Mission Partner Environment

This chapter guides commanders and staff to approach interoperability using a combination of human, procedural, and technical dimensions to support both information sharing among partners and command and control.

4.1 Fundamentals for Interoperability Success

"When people talk interoperability, they often think immediately about the technical interoperability, but personally I think the technical interoperability is actually the easy part … It's the human side of interoperability which is the most important." Air Commodore Chris Westwood, Royal Australian Air Force, RIMPAC

Interoperability is the "The ability to act together coherently, effectively and efficiently to achieve tactical, operational, and strategic objectives".[1] It is best understood as a means to some other end, not as an end in and of itself. Leaders create effective MPE by implementing multiple aspects of human, procedural, and technical interoperability dimensions across all Army warfighting functions. Reducing differences through human interactions, standardized and common procedures, and shared or compatible information, technology, and equipment improves the ability of the multinational force to operate cohesively.

The U.S. Army works closely with mission partners to shape the environment, close capability gaps, and reduce resource demands in a multidomain environment against innovative and adaptive adversaries. The U.S. Army and mission partners struggle to efficiently establish and maximize interoperability due to a lack of understanding of each other's procedures, language (barriers) and capabilities. The guides in this chapter support commanders and staffs with prompts that support achieving interoperability success throughout the operations process. The guides, prompts, best practices and recommendations are gathered from trends and observations from multinational warfighter exercise reports, combat training center trends, and experimentation.

The Joint Multinational Readiness Center identified five trends that contribute to successful interoperability with mission partners. They are:

- Send and receive liaison officer or team packages.

- Understand mission partner capabilities.

- Prepare in detail.

- Establish Critical SOPs.

- Establish the COP.

Commanders and staffs realize these trends by planning and executing necessary human, procedural, and technical dimensions of interoperability to establish command and control and share information with mission partners to achieve strategic and operational success. They do this by shaping human, procedural, and technical dimensions of Interoperability to best meet the needs of the MPE.

4.2 Effective Liaison Packages.

Regardless of the command structure, effective liaison is vital in any multinational force. Using a liaison proves invaluable to build confidence between the multinational force and subordinate commands. Units should provide only the best officers and noncommissioned officers as liaison officers because their quality directly affects operations and perceptions about Army forces. They also[2]—

- Foster a better understanding of mission and tactics.

- Facilitate the transfer of vital information.

- Enhance mutual trust.

- Develop an increased level of teamwork.

During the operations process commanders and staffs identify, coordinate, and establish liaison with partners. Units train and deploy the right personnel and equipment to speak on behalf of the sending unit. Liaisons and embedded staff integrate with the receiving unit command post, advise on unit capabilities, gaps, and procedures, and build report.

Effective liaison packages may be achieved with a liaison officer or liaison team, a Digital Liaison Detachment, or with embedded staff. Liaisons should be able to conduct 24-hour operations and maintain and provide a running estimate about their parent unit. It is vital that liaisons have organic communications capabilities.[3]

Insights/Recommendations
- Trained and trusted LNOs understand how the commander thinks and can interpret the commander's message, intent, guidance, and concept. LNOs must be supported with communications to their commander and staff to support effective shared understanding; LNOs providing staff liaison require their respective national C2IS system for effective shared understanding.   - Conduct agreed-to-staff exchanges with selected partners and functional cells. Embedded staff focused on monitoring, coordinating, advising, and assisting

> within a specific single functional area. Embeds equipped and trained on the relevant partner's C2IS (i.e., AFATDS for a partner Fires LNO embedded in a U.S. CP) improve shared understanding of partner capabilities, limitations, and processes that enhance warfighting function effectiveness.

4.2.1 Understand Capabilities.

Mutual trust results from honest efforts to learn about and understand capabilities each member brings to the multinational force.[4] Leaders can identify gaps and opportunities more readily when they understand both organic and mission partner capabilities. Liaisons should provide detailed capabilities briefs as part of mission analysis and update running estimates throughout the planning process (i.e. MDMP or ADM). Commanders and staffs should validate their understanding of mission partners rules of engagement standards, multilateral or bilateral agreements, nation policy and law (means, methods, targeting, and detention) which may affect how capabilities can be used.

Insights/Recommendations:

- Liaisons should provide staff running estimates and updates that look closely at the commander's intent and specific requirements for critical events, phases, and activities and ensure they provide input to the feasibility of actions during those events.[5]

See the Center for Army Lessons Learned document *Staff Processes in LSCO Pt. 2: Running Estimates* for suggested running estimate formats.

Fundamentals of Successful Multinational Interoperability

1. Send and receive liaison officer or team packages.

Send the right personnel and equipment to speak on behalf of the sending unit, integrate with the receiving unit command post, advise on unit capabilities, gaps, and procedures (fires and logistics), build report, and conduct 24-hour operations. Liaisons maintain and provide a running estimate about their parent unit. Packages must support effective communications across the PACE plan.

2. Understand Capabilities.

Conduct detailed capabilities briefs immediately upon liaison receipt, and update running estimates throughout the planning process (i.e. MDMP or ADM). Validate and understand mission partners rules of engagement standards, standards and agreements for the multinational force (e.g. NATO STANAGS, multilateral or bilateral agreements), nation policy and law (means, methods, targeting, and detention).

3. Prepare in detail.

Integrate mission partner attachments and liaisons into all planning, order briefs, and rehearsals. Over-articulate transitions and technical synchronization.

4. Establish Critical SOPs.

Develop and rehearse critical SOPs including reporting procedures; vehicle marking (day/night); fire control measures; passage of lines; call for fire; and casualty evacuation. Share common terminology, document templates, reporting formats, and processes.

5. Establish the COP.

Develop, disseminate, and update the complete COP on a deliberate battle rhythm that integrates LNO packages at higher, lower, adjacent units.

Table 4-3. Fundamentals of interoperability success. (Source: derived from *JMRC Multinational Interoperability Guidebook*, September 2021, and CALL 24-1 (779) *Win in Europe*)

4.3 Interoperability Dimensions

All commanders should strive to achieve integrated interoperability; however, effective interoperability among mission partners which is sufficient for achieving specific objectives is more important than attaining the highest level of interoperability in every priority focus area at a great sacrifice of resources and time. See Table 4-1 for levels of interoperability and AR 34-1 *Interoperability* for approach to assessing interoperability[6].

Table 4-1. Levels of interoperability (Source: Derived from FM 3-16, *Multinational Interoperability* 15 July 2024)

Level	*Operability*	*Description*
Level 3	Integrated	U.S. Army and mission partners can integrate upon arrival in theater. Interoperability is network-enabled to provide capability across the competition continuum.
Level 2	Compatible	U.S. Army and mission partners can interact with each other in the same geographic area in pursuit of a common goal. U.S. Army and mission partners have similar or complementary processes and procedures and can operate effectively with each other.
Level 1	Deconflicted	U.S. Army and mission partners can coexist but do not interact. Requires alignment of capabilities and procedures to establish operational norms, enabling mission partners and the U.S. Army forces.
Level 0	Not Interoperable	Mission partners have no demonstrated interoperability. Command and control interface with the Army is only at the next higher echelon. Mission partner formations must operate independently from U.S. Army formations and operations.

Leaders recognize the constraints, limitations, and capability gaps between partners within an MPE to effectively tailor mission partner interoperability requirements and solutions and to mitigate operational risks. Similarly, mission partner capabilities and desires, time available, and national objectives can strain establishing some solutions. Higher levels of interoperability can reduce risks to mission and loss of personnel; however, they may be untenable, impractical, or unnecessary. In a dynamic MPE commanders and staff must continuously assess their compliment of human, procedural, and technical dimension solutions when establishing or joining an MNF and throughout operational planning and execution. See Table 4-2 for levels of interoperability in relation to human, procedural, and technical interoperability.

	Human	*Procedural*	*Technical*
Integrated	Unified levels of training, education, terminology, tools, technology, doctrine, and regular combined exercises. - Liaisons fully integrated into unit's operations to facilitate command decisions. - Liaisons function as members of gaining unit staff in current and future operations roles. - Communication through fluent use of common language and lexicon. Interpreters not required. - Mission command possible through direct and indirect action enabling autonomy and initiative.	Policies, caveats, and authorities enable a common set of optimal processes that drive data/information/intelligence collection, production and dissemination - Common SOPs shared across formations. - Common doctrinal frameworks support combined arms approach to training and operations. - Institutionalized common training facilitate rapid integration of dissimilar formations. - Forces that are the same by default apply common doctrine and procedures	Fully automated exchange of critical data/information/intelligence. Automated all-partner-CIP updated in real-time based on agreed to standards. Materially interchangeable. - Direct compatibility of systems and communications architecture. - Permanent and common cross-domain solution. - Liaison equipment package is not needed to support a complete continuity of operations (i.e. PACE) plan. - Interchangeable material capabilities.
Compatible	Similar but non-standardized levels of training, education, terminology, tools, technology, doctrine, and occasional combined exercises. - Liaisons push and pull common orders information. - Liaisons incorporated into command post/warfighting functions as parallel chain to organic staff. - Communications facilitated through common language and lexicon. - Mission command through face-to-face interaction only.	Differences in policies, caveats, and authorities diminish effective conduct of combined data/information/intelligence collection, production, and dissemination. - Common SOP established to support unique mission purpose. - Common doctrinal framework facilitates information sharing and shared understanding for combined arms training and operations.	Partially automated exchange of critical data/information/intelligence. Multiple intelligence pictures with a totality of the information across nations. - Indirect compatibility of equipment. - Network communications facilitated by a temporary common cross-domain solution. - Liaison equipment package is required to support a complete continuity of operations (i.e. PACE) plan.

Deconflicted	Significant difference in the levels of training, education, terminology, tools, technology, doctrine, and inadequate combined exercises.	Significant differences in policies, caveats, and authorities prevent effective conduct of combined data/information/intelligence collection, production, and dissemination.	Limited automated exchange of data/information/intelligence. Reliant upon the lead-nation's CIP and network gateways.
	- Communications through liaisons and interpreters only.	- No formalized common doctrine or procedures.	- No direct compatibility of equipment.
	- Liaison required to relay information from gaining unit to sending unit.	- SOPs exchanged.	- Liaison series as a "technical" bridge between separate and discrete technical capabilities.
	- Command functions through tight control of subordinate unit limiting autonomy and initiative.	- No common doctrine for combined arms training or operations.	- Communications between parent and receiving unit supported only through liaison package equipment.
		- Liaisons serve as the swivel chair bridge between dissimilar procedures.	

Table 4-2. Human, Procedural, and Technical Interoperability framework (Source: Derived from Unified Action Partner – Interoperability Proponent and CALL 24-1(779) *Win in Europe*.)

4.3.1 Human Dimension

The human dimension relates to the mutual understanding of culture, values, language, and perspectives. Understanding is gained through shared experiences, education, and training as partners. Commander's "develop "general interoperability" widely by maximizing opportunities for soldiers to experience working with foreign partners…" and "deliberately build "targeted interoperability" by integrating partner units into military plans…"[7]Such a force is better attuned to operate within a dynamic environment and provides a base from which stems mutual understanding and respect fundamental to unity of effort and the operational success. Leaders use shared experiences, education, and training to build relationships with partners.

"Human interoperability addresses human based activities (behaviors, actions, pursuits) which develop and support shared understanding and mutual trust among UAPs. Human interoperability is fundamental to developing purpose, unity of effort, and reducing friction in the LSCO OE of Europe. Common challenges faced within human interoperability include language barriers, cultural differences, different graphical control measures, poor communications with parent unit, poor integration of liaison officers (LNO) by gaining unit, over-tasking LNO, and foreign disclosure limitations." Center for Army Lessons Learned, Win in Europe, Mustang OC Team, Joint Multinational Readiness Center.

Relationships are the foundation for developing mutual trust, confidence, shared understanding, and cultural respect among partners. Human interaction is critical because gaps in the procedural and technical dimensions are mitigated by effective trust relationships. The human dimension includes exchanged liaisons, education, training with partners, and military engagement. See FM 3-22 *Army Support to Security Cooperation* and ATP 3-94.1 *Digital Liaison Detachment* for and liaison functions, and ATP 3-57.80 *Civil Affairs Planning* for more on civil-miliary engagement.

Insights/Recommendations

- Differences in doctrine, organization, training, equipment, and national law could demand a robust liaison structure to facilitate operations. Liaison training should include areas of doctrine, organization, culture, and language. Not only is the use of liaison an invaluable human and procedural dimension tool, but it is also a significant source of information for the coalition staff and commander.[8]
- In a multinational task force, human interoperability is achievable through effective integration of LNOs. Leaders must identify specific tasks, purposes, critical skills, location(s), access requirements, information exchange requirements, equipment and signal support requirements for each LNO during mission analysis.
- Leaders should foster LNO integration as early as possible to facilitate better planning, preparation, and shared understanding of the COP.[9] Assign coordinating responsibilities for LNOs in the coordinating instructions during orders production.
- Use LNOs to overcome language barriers and prevent miscommunication. It is imperative that leaders implement regular feedback mechanisms for the LNOs and their respective units to identify areas of improvement and potential adjustments to the exchange program.[10]

4.3.2 Procedural Dimension

The procedural dimension relates to the simplicity and standardization of concepts, doctrine, organizations, policies and procedures. Simplicity and standardization increase the coalition's ability to C2 and harness the full resources of the organization. To achieve INTEGRATED level, forces that are the same by default apply common doctrine and procedures.

Procedures support organizing activities among and between mission partners by minimizing confusion, misunderstandings, and hesitation. Standardization supports common understanding, building trust, and organizing activities to achieve unity of effort.[11] Included in the procedural dimension are formal agreements, common doctrine, techniques, procedures, and reporting.

Commanders and staff develop and refine critical procedures throughout the operations process. Wherever possible, multinational division computer information systems (CIS), data, information and knowledge management procedures must be the same. The U.S. Army can rapidly establish an MPE by including common multinational standards, doctrine, formats, and requirements into its doctrine. U.S. Army organizations (at the

strategic, operational, and tactical levels) should include procedural solutions in their plans, training, policies, and standard operating procedures. See ATP 6-02.62 for the Army standardized Mission Partner Network (MPN) Joining, Membership, and Exiting Instructions (JMEI).

Insights/Recommendations[12]

- (Leaders) All units should be familiar with and use multinational standardized agreements to aid in the ability to integrate in multinational interoperability.[13] Also, leaders should ensure that units integrate information not covered in agreements, share unit SOPs, and create a common SOP if possible. It is important to leverage planning efforts to establish shared procedures for fratricide prevention, combat identification, and friend or foe identification.
- (Operations) Deconflict multinational operations using combined arms rehearsal to fine tune task-specific procedures (e.g., command and control, validation exercises, and fire support exercises) to enhance understanding of battle space management and coordination measures.
- (Logistics) Include mission partner information in the combat power tracker, LOGCOP, and other running estimate products.

4.3.3 Technical Dimension

The technical dimension relates to the interoperability of hardware, software, and systems. It includes all the networks, applications, services, and data systems with which Army forces and partners conduct command and control, coordination, collaboration, and information sharing. This dimension includes Mission Partner Networks (i.e., wide area, local, and radio networks), common services, interoperable applications, information and knowledge management systems, common data standards, exchange mechanisms, and message headers. Forces aggregate and apply power more effectively when supported by technical elements for C2, collaboration, and information sharing.

Insight/Recommendation (Signal)

Maintain the unit's CS Hub in a "warm" status and apply current software patches and updates to reduce the time to go operational from months to weeks, increase stability, and collaboration with mission partners.

The technical dimension includes materiel interoperability. This is often described as the interchangeability of materiel such as trailers, repair parts, fuel, and ammunition. This is a form of standardization which is necessary to achieve interoperability. Leaders gain flexibility with compatibility and commonality of capabilities in addition to C2 systems interoperability. Likewise, using mutual substitution of tactics, techniques, or

procedures can influence, and be influenced by, equipment decisions, ensuring a more holistic approach to interoperability.

---

[1] AR 34-1, *Interoperability*, 9 April 2020.

[2] FM 3-16, *The Army in Multinational Operations,* 15 July 2024. 22.

[3] Center for Army Lessons Learned, *Win in Europe,* (NO 24-1(779), June 2024. 27.

[4] FM 3-16, The Army in Multinational Operations, 15 July 2024. 5.

[5] Center for Army Lessons Learned, *Staff Processes in LSCO Pt. 2: Running Estimates* (NO. 24-894), August 2024.

[6] AR 34-1 establishes the Army interoperability policy which states, "The Army will simultaneously address human, technical, and procedural aspects [dimensions] across all warfighting functions (WfF) as it shapes capabilities for interoperability. Army components will use the Army's priority focus areas (PFAs) and interoperability levels to define realistic and prioritized objectives for achieving interoperability within the Army and with UAP. The Army level of ambition for achieving interoperability with a particular partner will depend on the Army-partner relationship; combatant command and Army service component command (ASCC) interoperability objectives; the type of operations the United States is likely to conduct with the partner; and the partner's capability, willingness, and ambition for interoperability with the Army.

[7] Christopher G. Pernin, Jakub P. Hlavka, Matthew E. Boyer, John Gordon IV, Michael Lerario, Jan Osburg, Michael Shurkin, and Daniel C. Gibson, *Targeted Interoperability: A New Imperative for Multinational Operations.* Accessed 23 August 2024, https://www.rand.org/pubs/research_reports/RR2075.html

[8] FM 3-16, *The Army in Multinational Operations*, 15 July 2024. 23.

[9] Center for Army Lessons Learned, *Combat Training Center (CTCs) Trends for Fiscal Year 2023.* (NO. 24-03), March 2024. 112-113.

[10] Ibid.

[11] Center for Army Lessons Learned, FY22-0670, *Joint Multinational Readiness Center Multinational Interoperability Guidebook,* September 2021.

[12] Center for Army Lessons Learned, Combat Training Center (CTCs) Trends for Fiscal Year 2023. (NO. 24-03), March 2024. 115.

[13] AR 34-1, *Interoperability,* 9 May 2020.

Appendix A

5 The Operations Process

This chapter addresses the operations process as it applies to establishing a mission partner environment

5.1 The Operations Process

The operations process is initiated at the onset of any operation to drive the conceptual and detailed planning necessary for commanders to understand, visualize and describe the operational environment, direct action, and lead forces. For most land operations it is a cycle through which commanders exercise command and control and create unity of effort to accomplish objectives. The steps of the operations process overlap and recur as circumstances demand. Commanders and staffs actively create shared understanding by collaborating with subordinate commanders, staffs, and partners throughout the operations process when they are enabled by an MPE.

In a mission partner environment (MPE), units conduct a parallel and integrated operations process to plan, prepare, execute, and assess interoperability to ensure mutual trust and confidence, shared understanding, and unity of effort with all mission partners to enable to success.

Plan

The unit determines interoperability requirements, establishes structures, and invites mission partners to develop plans and orders to meet requirements. This enables mutual trust, understanding, and unity of effort with all mission partners.

Prepare

The unit collaborates and develops the MPE tools. It trains, certifies, and rehearses the tools, common processes, and plans. It then identifies gaps and takes corrective action to ensure shared understanding and unity of effort.

Assess

The unit continuously evaluates the MPE and progress towards mutual trust and confidence, shared understanding, and unity of effort among mission partners. It also reviews corrective actions taken to bridge or mitigate gaps and shortcomings.

Execute

The unit puts the operation plan into action—supported by the MPE (tools, processes, orders, and people)—to accomplish the mission through trust, confidence, shared understanding, and unity of effort with all mission partners.

Plan / Prepare / Execute / Assess

The unit operations process

In multinational operations, commanders, supported by their staff, use a parallel interoperational process to drive concepts and detailed planning necessary to understand, collaborate, and coordinate the development and execution of the tools, common processes, and orders necessary to ensure mission partner trust and confidence, shared understanding, and unity of effort.

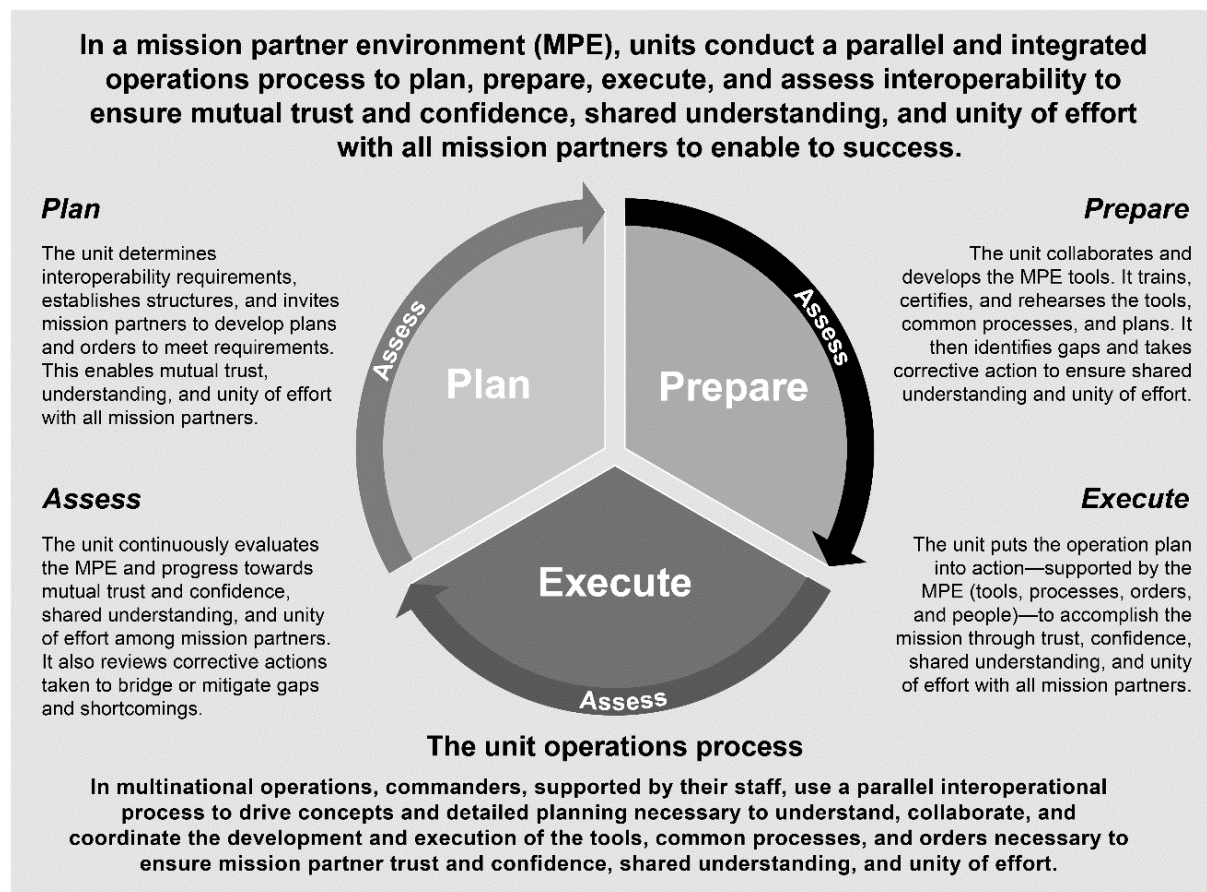**Figure A-1. The Operations Process in a Mission Partner Environment. (Source: FM 3-16 *The Army in Multinational Operations*)**

5.1.1 Plan

---

*Planning is the art and science of understanding a situation, envisioning
a desired future, and determining effective ways to bring that future
about – ADP 5-0 The Operations Process*

Commanders initiate planning for anticipated or directed unified action. Effective planning reduces the time between decisions and action during execution, especially at higher echelons. Commanders and staff identify potential mission partners, and analyze their interoperability agreements, capabilities, and gaps. They seek a clear understanding of the relationships among operational and mission variables and their effects on an MPE. Additionally, leaders identify interoperability requirements and responsible action officers, identify risks, time required, and time available to establish an MPE.

Planning Recommendation:

Leaders should codify the common methods, processes, formats and products in a standard operating procedure (SOP) or discuss them during planning or early in exercises or operations. This recommendation is applicable for synchronizing with adjacent units, higher headquarters, and subordinate units operating outside of habitual relationships.[1]

Two methods of planning are the Army design methodology (see Appendix B) and the military decision-making process (MDMP). Multinational operations are complex due to culture, language, procedure, and technology not found in pure U.S. Army operations. Commanders assess the situation and select the appropriate planning method. See Appendix C for commander and staff considerations during MDMP.

Every echelon can plan in anticipation of unified action and along various planning horizons ranging from years to months, weeks, days, and hours depending on the situation.[2] Higher echelons often have longer to plan and may undertake conceptual planning to understand, visualize, and describe operations. The Army Design Methodology supports framing the operational environment and problems and developing operational approaches to overcoming them. Commanders and staff consider their requirements to implement the components of their C2 system – people, processes, networks, and command posts -- using human, procedural, and technical dimensions. Commanders can then give training guidance and direct actions which improve the Army's potential to rapidly exchange information with mission partners enabled by an MPE. Some interoperability solutions require long lead-times to resource,

gain proficiently, or curate adequate solutions.[3] Examples of interoperability solutions that require time to achieve are –

- Establishing relationships and building rapport and trust with potential multinational partners using military engagement with partners, exercises, and other interactions. (See JP 3-0 for military engagement)

- Developing understanding of agendas, agreements, objectives, and standards that effect multinational interoperability.

- Training staff to use procedures for information sharing, knowledge management, and dissemination; Or initially developing those procedures. (See *ATP 3-90.90 Army Tactical Standard Operating Procedures* for more information.)

- Scheduling and funding training required for liaison officers, a mission partner coordinator, knowledge managers, and technicians. (See ATP 3-94.1 *Digital Liaison Detachment*)

Insight/Recommendation:

Maintain up-to-date documentation and publish any changes to plans related to Mission Partner Environment (MPE) and interoperability, including:

- Joining Membership Entry and Exit Instructions
- Mission Partner Network plan and architecture
- KM plan that includes Foreign Disclosure requirements
- PACE plans
- Training and rehearsal plans

Leaders use the seven-step MDMP planning methodology to translate commanders' concepts and broad plans into complete, practical, detailed plans. Planning for an MPE begins with the receipt of mission directing a corps or division headquarters to conduct an operation (or exercise) with one or more mission partners as a multinational force headquarters. (See FM 5-0 *Planning and Orders Production*) To establish an MPE the staff must address, align, and refine interoperability considerations with the commander's guidance within each step of the MDMP. (See Appendix C for MPE considerations during the MDMP) Regardless of mission type or mission partners involved, commanders and staff should consider these key planning considerations:[4]

- Commander and staff of U.S. units collaborate with designated mission partners after receipt of mission for a multinational operation or exercise.

- U.S. and mission partner staff collaborate to develop a shared understanding of interoperable processes and the associated information sharing requirements based on the commander's intent and guidance.

- Staff and liaison officers develop, implement, and exchange plans to support development of effective technical and procedural interoperability solutions.

- Staffs plan for effective preparation, execution, and assessment of interoperability considerations.

Planning for multinational operations sets conditions for and overlaps with preparation. During planning, multinational force commanders ensure equity of exposure regardless of national background. They ensure that perceived missions are appropriate, achievable, and the burden is equitable. Mission partners share risk equally within the constraints of legal agreements, policies, and national caveats.

5.1.2 Prepare

Preparation consists of those activities performed by units and Soldiers to improve their ability to execute an operation. (ADP 5-0 The Operations Process)

During preparation commanders, staff, and unit activities set the conditions and establish an MPE based on the plan or order developed during planning. Preparations activities may overlap with planning and are critical to successful multinational operations. Preparation may include[5]:

- Coordinating and establishing liaison with mission partners.
- Completing task organization and establish relationships with partner units.
- Integrating new units and Soldiers emphasizing team building and processes that create shared understanding.
- Training to build individual, collective proficient human, procedural, and technical dimensions that support an effective C2 system.
- Performing pre-operations checks, inspections and rehearsals at the desired interoperability and proficiency levels, and with shared understanding.
- Initiating network preparation and implementation of the Mission Partner Network.
- Revising and refining the plan and interoperability solutions to address interoperability gaps and shortcomings identified in checks, inspections, and rehearsals.

Army commanders implement a C2 system during preparation and employ it using a mission command approach. The C2 system consists of people, processes, networks, and command posts.[6] It supports empowered subordinate decision making and decentralized execution based on the situation. In multinational operations this remains unchanged. Multinational force commanders implement their C2 system by first setting the conditions for interoperability in planning and preparation. Next, with staff assistance, commanders implement, assess, and refine human, procedural, and technical solutions throughout preparation and all other iterations of the operations process. See ADP 6-0 *Mission Command* for the Army command and control system and mission command.

Commanders and staffs can improve their ability to rapidly establish an MPE by including interoperability focused on human, procedural, and technical aspects of interoperability in training guidance. Many multinational interoperability tasks can be rehearsed to a lesser degree in combined arms training such as:

- Exchanging liaisons.

- Identifying information sharing requirements.

- Establishing write for release processes to ensure information is shareable.

- Reviewing, developing, or refining standard operating procedures (SOPs) to included how human, procedural, and technical aspects that may be used in an MPE.

- Establishing a secret/releasable network and common services to develop plans and orders to support command posts; and practicing exchanging information in a degraded environment.

Insight/Recommendation:

- Establish a multinational operational SOP that facilitates unity of effort in parallel, integrated, or combined command structures. It must be easy to understand, sharable, and prioritize multinational interoperability over a single-nation's procedures. All documents should be written to be released to the widest possible audience or facilitated through tear lines when applicable.[7]
- Areas to emphasize in SOPs include[8]:
  o Command and Control relationships, graphics, terminology, and friendly unit identification.
  o Operations procedures including maintaining a common operational picture (COP), establishing coordination cells (e.g. COP Coordination Cell), shared battle rhythm with clearly defined inputs and outputs.
  o Fires structure, planning and coordination.
  o Intelligence actions and information sharing.
  o Sustainment tracking of combat power and integrating the recognized logistics picture.
  o Communications procedures establishing, rehearsing, and using primary, alternate, contingency, and emergency methods of communication.
- In the absence of an SOP, dedicate planning and preparation time for units to create, practice, and refine communication procedures and formats for quick and efficient information sharing.[9]
- Reduce friction by exchanging liaison teams to develop shared understanding and mutual trust, support unity of effort, and reduce of friction.[10]

Leaders and staffs conduct long-range planning to prioritize and align interoperability tasks with resources over time. As with training on any individual or collective task, the interoperability dimensions require training to gain proficient skills, develop tacit leader

knowledge, and employ. Grounding units in addressing MPE interoperability solutions during training brings agility to rapidly form multinational teams in dynamic and complex operational environments and more rapidly reduces the risks inherent to integrating with partners for unified action. See FM 7-0 *Training* for additional information.

Some areas of interoperability easily addressed in training prior to potential multinational operations include—

- Training and rehearsing the write for release process. See ATP 3-16.02 *Write for Release*.

- Training key personnel including potential mission partner coordinators, liaisons, and staff.

- Planning and rehearsing primary, alternate, contingency, and emergency (PACE) procedures to gain awareness of impacts on interoperability and mitigate impacts on sharing information in a degraded environment.

- Building relationships with potential and known mission partners through professional development events (staff exchanges, site visits, team building events and social gatherings) and other activities that increase contact time between the Army leaders and partners.

- Participating in shaping activities including security cooperations, military engagements, exchanges, and with multinational military forces, governmental and nongovernmental organizations, and elements of the private sector.

- Exercising elements of interoperability contained in unit tactical standard operating procedures. See ATP 3-90.90 *Army Tactical Standard Operating Procedures* for additional information. These may include—

  o Employing a mission partner coordinator, exercising staff officer integration responsibilities in multinational headquarters, and or conducting liaison using a liaison officer and integrating liaison officers.

  o Developing and sharing information using writing for release guidelines.

  o Establishing a secret releasable mission partner network, common services, and security enclave.

  o Conducting the military decision-making process and disseminating orders and critical information with subordinate, higher, and adjacent headquarters.

  o Rehearsing staff procedures to sustain interoperability in the primary focus areas (communications and information systems, intelligence, fires, and sustainment) in a degraded environment.

5.1.3 Execute

Execution involves a concerted effort to seize and retain the initiative, maintain momentum, and exploit success.[11] Effective interoperability supports effective execution. Staffs and subordinate units maintain their common operational picture thru battle rhythm events and subordinate unit reporting. A suitable MPE, established by commanders and staff during planning and preparation, enables rapid decision making and synchronization during execution when the tactical situation deviates from the planned situation. See FM 5-0 *Planning and Orders Production* for the rapid decision-making process.

5.1.4 Assess

Commanders and staff continuously assess interoperability throughout the operations process. Assessment is the determination of the progress toward accomplishing a task, creating a condition, or achieving an objective (JP 3-0 *Joint Campaigns and Operations*). A MPE must be assessed to determine the status of progress towards implementing interoperability dimensions at the desired levels and identify gaps and allow commanders to direct action and staffs to refine interoperability solutions. An assessment is not complete, and all effort spent on it is wasted, if it is not used to change and refine MPE interoperability solutions to most effectively enable the commander's ability to execute mission command in unified action.

The staff develops an assessment plan that is approved by the commander during the planning process. It should include key measures and assessment criteria for an MPE to inform the commander and staff of the status and progress of interoperability against desired levels. The plan guides assessment using activities to monitor, evaluate, recommend, and direct continuously through the operations process. The staff may assess an MPE with activities to –

- Monitor the implementation and status of current mission partner interoperability in the five priority focus areas. See AR 34-1 *Interoperability* for more on priority focus areas.

- Evaluate progress or lack of progress toward achieving the desired level of interoperability,

- Analyze the effects of mission and operational variables on interoperability and of interoperability on the operation.

- Recommend changes based on identified gaps or changes to the operating environment.

Commanders continuously visualize, describe, decide and direct action supported by the staff's assessment and as part of the decision cycle. See ATP 5-0.3 *Operation Assessment* for assessing operations.

Insights/Best Practices:[12]
- Interagency and multinational partner (i.e., interorganizational) involvement adds value to the assessment process; their diverse perspectives enrich (and can influence) the process.
- HN security forces can also assist the assessment process. They can help validate findings and assist in transition planning, e.g., transfer of responsibility to HN forces.

[1] *Federated Mission Networking Spiral Specification Roadmap* (2024 Update), 21 May 2024. 17. Joint Multinational Readiness Center, *Multinational Interoperability Guidebook,* September 2021.

[2] ADP 5-0, *The Operations Process,* July 2019. 1-7 and 2-24.

[3] FM 7-0, *Training,* 14 June 2021. 3-4

[4] FM 3-16, *The Army in Multinational Operations,* 15 July 2024. 3.

[5] FM 3-16, The Army in Multinational Operations, 15 July 2024. 14.

[6] ADP 6-0, *Mission Command*, 31 July 2019. 4-1.

[7] Joint Multinational Readiness Center, *Multinational Interoperability Guidebook*, September 2021.

[8] Joint Multinational Readiness Center, Multinational Interoperability Guidebook, September 2021.

[9] Center for Army Lessons Learned, Yama Sakura 85 Post Exercise Report, (NO 24-880) June 2024, 7 (CAC login required)

[10] Joint Multinational Readiness Center, Multinational Interoperability Guidebook, September 2021.

[11] Center for Army Lessons Learned, *Commander and Staff Guide to Multinational Interoperability,* (NO. 20-12). 69.

[12] Joint Staff J7, *Insights and Best Practices Focus Paper: Assessment and Risk*. March 2020. 8. https://www.jcs.mil/Portals/36/Documents/Doctrine/fp/assessment_risk2020.pdf?ver=2020-03-31-150705-920 accessed 25 October 2024.

Appendix B

6 Army Design Methodology

This chapter provides commanders and staff with MPE considerations for conceptual planning using the Army design methodology (ADM) to understand operational environments and problems, determine end states, and visualize approaches with partners.

6.1 Army Design Methodology and a Mission Partner Environment

The ADM is a method for applying critical and creative thinking to understand, visualize, and describe problems and approaches to solving them.[1] Conceptual planning results from ADM help commanders and staffs understand operational environments and problems, determining the operations end state, and visualize an operational approach to attain it. Commanders gain flexibility, enhanced command and control, and synchronized effects during combined arms operations by considering the challenges of the operational environment when assembling a mission partner environment. ADM is an iterative methodology, thus understanding gained within one activity may require revisiting another activity.[2] Commanders and staff can use ADM results to inform the MDMP.

There are four major overlapping and recurring activities in ADM. They are framing the operational environment, framing the problem, framing solutions, and reframing. Commanders and staffs consider mission partners and interoperability dimensions to help –

- Understand the environment and problem.
- Determine tools, resources, and capabilities available.
- Identify interoperability requirements and solutions necessary to enable flexible command and control and information sharing.
- Assess and reframe guidance to address changes in the OE.

6.2 Planning Team Considerations

Commanders are an integral to any ADM effort. Working with their staffs, other commanders, and mission partners they employ ADM to understand, visualize, describe, direct, lead, and assess operations. However, commanders' responsibilities and demands prevent continuous involvement during ADM.[3] Therefore, staffs assemble planning teams to conduct conceptual planning. A planning team is sometimes referred to as a design team, joint planning group (JPG), operational planning team or group (OPT/OPG), or cross-functional team. It consists of a lead planner, functional planners, and other subject matter experts. Normally the leader is the J-5, G-5, S-5, or S-3 plans, or J-5, G-3, or S-3 operations officer. Regular staff members of a planning team include

intelligence, logistics or sustainment, communications, information or knowledge management, medical planners, and public affairs.

Subject matter experts or cross-functional team members such as the staff judge advocate, chaplains, cyberspace operations planners, space operations planners, public affairs officers, fires, the commander's Women, Peace and Security (WPS) or gender adviser, and other joint or multinational enablers should also be considered based on the mission or nature of the operation. Additional team members may include red team members, note takers, and a graphic artist. See JP 5-0 *Joint Planning* and ATP 5-0.1 *Army Design Methodology* for roles, skills, and characteristics of potential team members. Commanders should consider adding liaison or exchange officers to planning teams to add depth and prospective about potential mission partners if they are available.

6.3 Army Design Methodology Considerations

See ATP 5-0.1 *Army Design Methodology* for tools and techniques to aid in framing the operational environment, problems, solutions and reframing.

6.3.1 Framing an Operational Environment

- Identify higher interoperability guidance and direction for:
  - Task organization, command and support relationships, and dictated by law or agreed to relationships. – **J-5, G-5, S-5, or S-3 plans**
  - Assets, capabilities, limitations, national caveats of partners that impact interoperability processes and associated information sharing requirements. – **J-5, G-5, S-5, or S-3 plans, liaisons or exchange officers**
  - Tasks and purpose nested withing the multinational operational construct and higher commander's intent, and appropriately tasked. – **J-5, G-5, S-5, or S-3 plans**
  - Mission critical interoperability guidance, KM plans, theater ROE, network architecture guidance, common operating picture guidance, and liaison requirements. – **Commander, J-5, G-5, S-5, or S-3 plans, J-6, G-6, S-6, KM, IM, SJA, design team**

  - United Nations and other international or national mandates, terms of the alliance, caveats, higher authorities, and guidance. – **J-5, G-5, S-5, or S-3 plans, SJA, design team, liaisons or exchange officers**

- Develop an understanding of the current state of the OE conditions, circumstances, and influences effects on the MPE.
  - Build a diagram illustrating partner and relevant actor functions, relationships, and tensions. – **Team leader, graphic artist**

  - Draft a supporting narrative conveying the main ideas of the within the MPE to individuals outside of the planning team. – **Team leader, J-5, G-5, S-5, or**

> **S-3 plans, note taker, design team members, liaisons or exchange officers**

- Project how an operational environment may trend and impact an MPE in the future. – **Design team, graphic artist**
- Discern desired future state of the MPE including the conditions of partners in relationship to desired conditions of other actors, terrain, and civilian considerations within the multinational headquarters orders, directives, guidance, and available time. – **Commander, Team Leader, design team**.

6.3.2 Framing Problems

- Review the environmental frame's current state, projected trends, desired state, and desired future state including the MPE, partners, and other actors to:

  o Identify the differences between the current MPE and the desired MPE including friction or resistance among or between partners. – **J-5, G-5, S-5, or S-3 plans, J-2, G-2, S-2, design team, liaisons or exchange officers**

  o Identify what prevents the force from reaching the desired end state. – **Design team**

- Review problems identified during previous design sessions. – **J-5, G-5, S-5, or S-3 plans, and note taker**
- Capture the problem frame in text and graphics displaying the system of problems including the identified problem and contributors to the problems in establishing an MPE. – **Design team, graphic artist, and note taker**

6.3.3 Framing Solutions

- Formulate the operational approach with partners and the MPE required to support it. – **Commander, J-5, G-5, S-5, or S-3 plans**
- Determine the human, procedural, and technical means supporting the commander's ability to execute C2 over the friendly center of gravity. – **Design Team**
- Identify the critical factors of the center of gravity. (See JP 5-0 and JP 2-01.3 for more on center of gravity analysis). – **J-2, G-2, S-2, J-3, G-3, S-3, S-3 plans**
- Establish objectives and devise lines of operation or effort to establish, maintain, and enhance an MPE. – **J-5, G-5, S-5, or S-3 plans**

6.3.4 Reframing

- Assess how refined operational reach, basing, culmination, tempo, phasing, and transitions will affect or be affected within the MPE. – **Operations, communications, sustainment, and medical planners, SMEs**
- Identify and communicate risks associated with the MPE, resource shortfalls, and shifting priorities during transitions during execution. – **J-3, J-5, J-6, G-3, G-5, G-6, S-3 plans, S-6, sustainment plans**

- Document the results of reframing including risks to the MPE. – **Team leader, graphic artist, note taker**
- Continue assessment throughout operations to identify: – **Commander, Design Team**
  - Differences in forecasted outcomes versus actual progress toward establishing an effective MPE
  - Invalid assumptions underpinning the MPE
  - Unanticipated success or failure in the MPE
  - Catastrophic changes in the OE that impact developing shared understanding or C2 in an MPE.
  - Identify and address changes in higher authority guidance, national policies, or information sharing directives or agreements.

---

[1] ADP 5-0, *The Operations Process,* 31 July 2019, 2-16.
[2] ATP 5-0.1, *Army Design Methodology,* 1 July 2015, 1-3.
[3] ATP 5-0.1, Army Design Methodology, 1 July 2015, 2-3.

Appendix C

7 Military Decision Making Process in a Mission Partner Environment

This Appendix provides guides for commanders and staffs to consider during the Military Decision Making Process. The guides support each step of operational planning in a mission partner environment. They further suggest commanders or interested staff officers or leaders that may be aligned with each guide.

7.1 Mission Partner Environment Integration During the Military Decision-Making Process

This appendix provides commanders and staffs with areas to consider when establishing an MPE. First, it describes the importance of an effective MPE when considering the MDMP. Second, commanders and staffs are provided with points to consider, tasks to complete, and areas to check when establishing an effective MPE. Each step of the MDMP process must be looked at individually to ensure the MPE is established in the most effective and efficient manner possible during regular mission planning.

7.2 Military Decision-Making Process in a Mission Partner Environment

The MDMP is an iterative planning methodology to understand the situation and mission, develop a course of action, and produce an operation plan or order (ADP 5-0). Planning tactical operations with partners begins when the staff receives the mission and continues through orders production, dissemination, and transition. Regardless of the mission type or partners involved, commander and staff planning should include the dimensions of interoperability (technical, procedural, and human) that enable timely, complete, and accurate information sharing, process execution, and unity of effort between partners.

7.3 Guides to MDMP

The remainder of this appendix contains suggested guides and recommended actions that commander, staff, and staff sections should address during MDMP. Likewise, each guide does not always fit neatly into a particular step, coordinating staff responsibility, or warfighting function. It is meant to stimulate critical and creative thinking necessary to establish an effective MPE.

7.3.1 Receipt of Mission

- Alert and establish communication with partners as required. – **COS, XO, G-5, G-3, or S-3 per SOP**

- Identify, assemble, and exchange liaison officers (LNO). – **COS, XO, G-5, G-3, or S-3 per SOP**
- Identify outside agencies and organizations to contact and incorporate into the planning process. – **commander, COS, XO, G-5, G-3, or S-3 per SOP**
- Identify and invite partners to participate in MPE planning. – **commander**
- Gather documents including: – **all staff**
  - Estimates and products of other military and civilian agencies and organizations
  - SOPs
  - Updated running estimates
  - Army design methodology products
  - ABCANZ standards, NATO STANAGS, and associated doctrinal publications and standards ratified by the United States, and national laws, and or specific agreements, standards, and authorities
  - National response frameworks
  - Security classification guides
- Update each running estimate to include status of friendly units and resources that affect each functional area, related information from partner organizations, and activities or capabilities that impact each functional area, and cultural considerations, language, procedures, and technology of partners. – **all staff**
- Issue/receive multinational commander's initial planning guidance. – **commander**
- Assess the time required to position critical elements, including command and control nodes, liaisons, and other interoperability solutions for upcoming operations. – **commander, COS, XO, G-5, G-3, or S-3**
- Issue the initial warning order, to partners, to include the initial operational timeline, additional LNO exchange requirements, collaborative planning sessions, information sharing requirements and CCIR. – **G-5, G-3, or S-3**
- Consider creating a multinational or coalition coordination center (see FM 6-0 *Commander and Staff Organization and Operations*) – **commander**
- When initially planning for a multinational, coalition, or other operations, or exercises with partners where MDMP is used in the final months prior to execution commanders and staff may also:
  - Identify partners, and coordinate task organization, command structures, and relationships between partners. – **G-5, G-3, or S-3**
  - Initiate movement for task organization prior to moving into the operational area. – G-4, S-4 (administrative movement), G-3, S-3 (tactical movement)
  - Submit waiver, accreditation, authority to connect, and authority to operate requirements for the MPN. – **G-6, S-6**
  - Establish mission partner network for planning, preparation, and execution of all operations. – **G-6, S-6**

- Conduct initial staff coordination with partners. – **coordinating staff** (see FM 6-0 *Commander and Staff Organization and Operations* for coordinating staff responsibilities)

7.3.2 Mission Analysis

- Analyze relevant agreed-to standards and agreements specific to the OE. – **commander, coordinating staff**
- Analyze laws, policies, regulations, or guidance that impacts MPE establishment. – **coordinating staff and SJA**
- Analyze higher HQ plan or order for—
  - Task organization, command and support relationships, and relationships dictated by law or interagency agreed to relationships – **commander, coordinating staff, SJA**
  - Appropriateness of partners' tasks' that work in the operational area. – **coordinating staff**
  - Tasks and purposes nested within the multinational operational construct and higher commander's intent. – **coordinating staff**
  - Guidance including interoperability requirements for mission essential tasks, KM plans, theater ROE, network architecture, data standards, liaison requirements. – **coordinating staff, KMO, LNO, digital master gunner, information manager**
  - Capabilities, limitations, and national caveats of partners to enable shared understanding. – **coordinating staff**
  - If in a maritime environment, commanders and staffs for maritime, air, and land elements are identified. – **G-5, S-3**
  - Review assets from national military contingents and partners. – **coordinating staff**
- Define the OE and its effects on the MPE, threat capabilities and effects on aspects of the MPE and MPN throughout Intelligence Preparation of the Operational Environment process. – **coordinating staff**
- Refine interoperability requirements for mission critical interoperability in support of tactical tasks, associated information exchange requirements, and KM and network plans required to support them. –**coordinating staff, G-6, IMO, KMO**
- Review available assets and identify shortfall such as theater liaison detachment, unit liaisons, translators, MPN hardware and refine requests. – **coordinating staff**
- Determine force capabilities, limitations, and national caveats for partners and their effects on enabling shared understanding and unity of effort. – **coordinating staff**
- Identify potential changes in task organization or relationships, command structure, or authorities that would improve interoperability. –**planning team, coordinating staff**

- Refine information sharing requirements necessary to support CCIR. – **commander, planning team, coordinating staff, S-3 plans cell**
- Draft a plan of actions and milestones (POAM) to synchronize planning and implementation of interoperability solutions. – **COS, G-5, planning team, or operations coordinating staff**
- Consider including COA evaluation criteria for ensured interoperability with partners. – **commander, planning team, coordinating staff**
- Conduct initial interoperability estimate – **multinational or coalition coordinating center staff or coordinating staff**

7.3.3 Course of Action Development

- Assess relative combat power with consideration of—
  - Intangible factors that impact forces such as trust, levels of training, and levels of interoperability, cultural and language issues, and national caveats. – **commanders, planning team, or coordinating staff, liaisons**
  - Unprotected friendly weaknesses from aspects of interoperability (e.g. networks, command posts, sustainment compatibility, isolation units, language). – **planning team or coordinating staff**
  - Additional resources not previously identified that may be required to execute the mission. – **planning team or coordinating staff**
  - How to recommend the allocation of existing resources. – **planning team or coordinating staff**
- Generate Options that—
  - Account for potential changes in the MPE (e.g. communication challenges, changes to ROE, KM, or sustainment procedures) – **planning team or coordinating staff, liaisons**
  - Consider possibilities created by partners and ways to increase the operational reach across all domains. – **planning team or coordinating staff, liaisons**
- Prepare statements and sketches that (COA statement & sketches)—
  - Array of forces & control measures adhering to established standards. – **planning team or coordinating staff**
  - Ensure all units are treated and exposed to risk equally regardless of national background, in accordance with national constraints and limitations. – **commander**
  - All forces and partner missions and tasks are appropriate, achievable, and equitable in burden and risk sharing. – **planning team, coordinating staff, liaisons**
  - Adhere to national, bilateral, and multi-lateral agreements. – **planning staff, SJA, commander**
- Develop training and rehearsal plans – **COS, planning team, coordinating staff, leaders, liaisons**
- Conduct initial liaison training. – **coordinating staff**

- Refine COA evaluation criteria effective interoperability across the three interoperability dimensions. -- **planning team or coordinating staff**
- Develop interoperability assessment criteria to determine progress toward attaining the desired interoperability level for an effective MPE. – **planning team or coordinating staff**
- Update staff running estimates for each COA, partner, and interoperability requirements. – **all staff**

7.3.4 Course of Action Analysis and War Gaming

- Issue guidance to the staff for war gaming to address planned interoperability (e.g. liaison, sustainment, C2 considerations) and unique requirements for or with partners for each mission or tasks. – **COS or XO**
- Analyze the operational COA for interoperability strengths, weaknesses, opportunities, and threats. – **coordinating staff, battalion and brigade staff, cyber electromagnetic warfare officer, planning team, COS, XO, liaisons, red team section, SJA, KMO, space operations officer**
- Identify any special funding or support to the procurement process required by partners. – **G-8**
- Mitigate risk and friction among partners. – **all leaders**
- Seek partner feedback on operational COAs. – **planning team, coordinating staff, all leaders**
- Refine common plans such as ROE, KM, interoperability assessment, and liaison locations to reduce friction. – **commander, planning team, coordinating staff**
- LNOs should attend and participate in war gaming and provide updates to their HQs. LNOs support parallel planning in a time-constrained environment or when planners between HQs and different echelons cannot frequently communicate. – **liaisons**

7.3.5 Course of Action Comparison

- Address and include partner feedback in COA comparison. – **planning team or coordinating staff**
- Use effective interoperability as an evaluation criterion to evaluate interoperability in comparison of operational COA. **– planning team or coordinating staff.**
- Revise common plans, liaison exchange plans, training, and rehearsal plans based on the COA comparison results. – **planning team, coordinating staff, liaison, XO, COS**
- Revise interoperability estimates and plans based on COA comparison results. —**planning team, coordinating staff**

7.3.6 Course of Action Approval

- Refine commanders' guidance including the commander's intent, information requirements, information sharing guidance necessary to maintain or build

shared understanding and support distributed command and control. – **G-5, G-3, or S-3**

- Ensure interoperability requirements are consistent with current planning guidance and nested within the commander's intent. – **G-3, COS, XO, leaders**
- Confirm guidance issued is provided to and understood by partners, either in person or by electronic means. – **commander**
- Ensure WARNORD includes updated interoperability requirements and guidance. – **planning team or coordinating staff**
- Update interoperability and partner information in staff estimates. – **coordinating staff.**
- Update primary, alternate, contingency, and emergency plans for each warfighting function to ensure redundancy partner units in each phase of the operation. – **coordinating staff and warfighting function**

7.3.7 Orders Production, Dissemination, and Transition

- Include or attach applicable documents (e.g. SOPs, TTPs, ROEs, KM plan, liaison procedures, JMEI, etc.) in the Operations Order or Plan and annexes. – **COS, XO, G-3, S-3, planning team or coordinating staff**
- Determine resourcing status of external interoperability resources or requirements. – **G-4, S-4, coordinating staff, G-8, G-9, S-9**
- Receive partner confirmation briefings immediately following the orders brief. (Translators on hand, if required). – **commander, partners leaders**
- Conduct plans-to-transition briefs. – **commanders, G-3, G-5, S-3, partners leaders**
- Conduct preparation activities including (see FM 6-0 *Commander and Staff Organization and Operations*) —
  o Initiate and optimize sustainment preparation including required partner support. – **G-4, SPO, S-4**
  o Communications and information sharing plans rehearsal (including testing of reporting processes over all levels of PACE). – **commanders, G-6, S-6, KMO, all staff, partners**
  o Combined arms rehearsal (translators on hand, if necessary). – **commander, partners representative, G-3, G-5, S-3**
  o Support rehearsal. – **warfighting functions as directed, partners or per SOP**
  o Sustainment rehearsal. – **G-4, SPO, S-4**
  o Battle drill or SOP rehearsal. – **command post personnel, functional area staff, leaders**

Commander and Staff Guide to the Mission Partner Environment
Appendix D – Command and Control (C2) Fix/Next Generation Command and Control
(NGC2)

Appendix D

8 Command and Control (C2) Fix / Next Generation Command and Control (NGC2)

This appendix addresses C2 Fix and NGC2 considerations that may impact U.S. interoperability with mission partners at brigade and below echelons in an expeditionary MPE.

8.1 C2 Fix Background

A comprehensive C2 assessment conducted in April - May 2023 found that the fielded C2 system is complex, lacks flexibility to adapt to changing mission requirements, and does not provide commanders with an effective or survivable capability for large scale combat operations. Essential work is needed to reduce complexity and provide the minimum essential data transport and skill sets that commanders require at echelon. Improvements are needed to data dissemination to enable the exchange of information requirements that commanders need to make decisions at echelon.[1]

In June of 2023, the Under Secretary of the Army and Vice Chief of Staff of the Army established an Operational Planning Team to address near term "fixes" to the Army's current C2 system, which includes implementing recommendations now through 2027, focused on a single course of action (COA). This COA assessment effort is to confirm the single COA enables division operations, both operationally and technically. This effort has been named "C2 Fix".

8.2 C2 Fix Overview

The C2 Fix COA is an operational and technical approach to large scale combat operations, to assist the Army in its efforts to achieve Army 2030. It is outlined in detail within the C2 CONOPS *How the Division Fights*, dated 23 September 2024. Key attributes include:

- A Change in How We Fight – a focus on Large Scale Combat Operations
- 'Division as a Formation' with BCTs, enabling Brigades, and refined TTP
- A simplified tactical C2 system focused on the Brigade and below, emphasizing a shareable COP, commander collaboration, and immediate synchronization leveraging perishable information at the unclassified level
- A Division architecture which moves C2 complexity to Division & above
- Improved access to data with refined hardware and software
- Select new capabilities, while old capabilities are divested, replaced, displaced

8.3 C2 Fix Design Principles

The Under Secretary and Vice Chief of Staff of the Army directed COA features the following design principles:

- Provide commander information requirements and supporting data products.
- Utilize platform-based and dismounted Soldier communication, computing, user devices, and assured voice capability. (e.g. laptops, end-user devices).
- The Division and higher echelon provide (1) high-capacity communications, (2) high-capacity computing, and (3) network operations (including cybersecurity).
- C2 on the move (C2 OTM) as the default method. Formations have the capability to establish a 'Hasty CP' (i.e., at the quick halt) when necessary, featuring minimum setup and teardown times, and with a limited signature.

8.4 C2 Fix Key Technical Recommendations

- Hosting of key C2 information systems (e.g. CPCE) at Division
- Computing resources and high-capacity transport capability shift to Division
- Select C2 information systems at Brigade and below shift to Sensitive but Unclassified- Encrypted (SBU-E) network classification
- Brigade and below networks are primarily SBU-E, with limited SECRET communications to Brigade and Battalion

8.5 C2 Fix, Next Generation Command and Control (NGC2) and MPE

With the C2 Fix primary COA, responsibility for implementation and maintenance of expeditionary MPE and MPNs are focused on the Corps and Division level.[2] This centralization aims to streamline interoperability efforts and ensure effective integration with mission partners. While C2 Fix addresses immediate needs, Next Generation Command and Control (NGC2) provides a longer-term vision for MPE evolution. NGC2 leverages emerging technologies like cloud computing, artificial intelligence, and robust cybersecurity, coupled with stronger industry partnerships, to create a more agile and responsive MPE. This forward-looking approach will bridge current capability gaps and future requirements for seamless information sharing and collaboration with mission partners.[3]

---

[1] Mission Command Center of Excellence, Memorandum Subject: Report and Recommendations on the Fielded Command and Control System, 31 May 2023.

[2] Michelle K. Donahue, "The C2 Fix Initiative: What It Means for Sustainment Forces," www.army.mil, January 22, 2025, https://www.army.mil/article/282485/the_c2_fix_initiative_what_it_means_for_sustainment_forces. Accessed 2 April 2025.

[3] "Key Points about NGC2," PEO C3T, accessed August 24, 2024, peoc3n.army.mil/organizations/PL-Next_Generation-Command-and-Control.

Appendix E

Acronym List

C2	command and control
C2IS	command, control, and information systems
CCC	Common Operational Picture Coordination Cell
CDS	cross-domain solution
COP	common operational picture
HN	host nation
ISR	intelligence, surveillance, and reconnaissance
FEMA	Federal Emergency Management Agency
JEMI	joining membership and exit instructions
KM	Knowledge Management
LSCO	Large scale combat operations
MNF	multinational Force
MPE	mission partner environment
MPN	mission partner network
NETOPS	network operations
NGC2	next generation command and control
NGO	nongovernmental organization
SBU	Sensitive but Unclassified
SBU-E	Sensitive but Unclassified- encrypted
SOP	standard operating procedure
TTP	tactics, techniques, and procedures
UAP	Unified Action Partner
UN	United Nations

Appendix F

Glossary

C2 Fix	A strategy by the US Army to simplify its network operations and improve the ability to communicate and fight on the battlefield "fight tonight"
Command and control	The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. (DOD Dictionary)
Command and control system	The arrangement of people, processes, networks, and command posts that enable commanders to conduct operations (ADP 6-0 *Mission Command*)
Coordinating staff	Coordinating staff consists of the following positions: G-1 or S-1, G-2 or S-2, G-3 or S-3, G-4 or S-4, G-5, G-6 or S-6, G-8, G-9 or S-9, chief of fires or deputy fire support coordinator, chief of protection, and the SPO. (extrapolated from ATP 3-91 *Division Operations*, FM 5-0 *Planning and Orders Production*, and FM 6-0 *Commander and Staff Organization and Operations*)
Design team	See planning team.
Information sharing	The sum of the related policy, processes, procedures, and means required to balance the protection and the exchange of mission relevant facts, products, data, or instructions.
Interagency	Of or pertaining to United States Government agencies and departments, including the Department of Defense. (DOD Dictionary)
Interoperability	The ability to act together coherently, effectively, and efficiently to achieve tactical, operational, and strategic objectives. (DOD Dictionary)
Interoperability dimension	Human, procedural, and technical dimension solutions which enhance cooperation and multinational operations.
Interorganizational cooperation	The interaction that occurs among elements of the Department of Defense; participating United States Government departments and agencies; state, territorial, local, and tribal agencies; foreign military forces and government agencies; international organizations; nongovernmental organizations; and the private sector. (DOD Dictionary)
Joint Forces	A force composed of significant elements, assigned or attached, of two or more Military Departments that operate under a single joint force commander. (DOD Dictionary)

lead agency	The United States Government agency designated to coordinate the interagency oversight of the day-to-day conduct of an ongoing operation. (DOD Dictionary)
Mission Command	1. (Army) The Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation. (ADP 6-0 *Mission Command*) 2. (DOD) The conduct of military operations through decentralized execution based upon mission-type orders. (DOD Dictionary)
Mission Partner Environment	Capability framework in which combatant command partners plan, prepare and execute operations at an appropriate, single security classification level, with a common language. (AR 34-1, Interoperability, 9 April 2020)
Multinational force	A force composed of military elements of nations who have formed an alliance or coalition for a specific purpose. (DOD Dictionary)
Next Generation Command and Control	US Army vision for a fundamentally different way to rapidly identify requirements and fill gaps using persistent experimentation with rapidly evolving and maturing technologies such as cloud, artificial intelligence, and cybersecurity along with stronger industry partnerships that enable integration of dual use capabilities
Nongovernmental organization	A private, self-governing, not-for-profit organization dedicated to alleviating human suffering; and/or promoting education, health care, economic development, environmental protection, human rights, and conflict resolution; and/or encouraging the establishment of democratic institutions and civil society. (DOD Dictionary)
Planning team	A team that conducts planning consisting of a lead planner, normally from the assistant chief of staff, plans (G-5) or assistant chief of staff, operations (G-3) or battalion or brigade operations staff officer (S-3) operations section, or battalion or brigade plans staff officer (S-5), plans section, functional planners (for example, fires, protection, or sustainment), and other subject matter experts as required. In the ADM this is also referred to as a design team. (FM 5-0)
Sensitive but Unclassified	Sensitive but Unclassified (SBU) information is information that is not classified for national security reasons, but that warrants/requires administrative control and protection from public or other unauthorized disclosure for other reasons. SBU should meet one or more of the criteria for exemption from public disclosure under the Freedom of Information Act (FOIA) (which also exempts information protected under other

	statutes), 5 U.S.C. 552, or should be protected by the Privacy Act, 5 U.S.C. 552a.
Sensitive but Unclassified-Encrypted	Sensitive but unclassified-encrypted (SBU-E) refers to information that is considered "Sensitive But Unclassified" (SBU) but is additionally protected by encryption, meaning it requires special handling even though it's not classified as national security information, and access to it is controlled through encryption methods to prevent unauthorized disclosure.
Unified Action	The synchronization, coordination, or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort. (DOD Dictionary)
Unified Action Partners	(Army) Those military forces, governmental and nongovernmental organizations, and elements of the private sector with whom Army forces plan, coordinate, synchronization, and integrate during the conduct of operations. (ADP 3-0)
Unity of command	The direction of all forces under a single, responsible commander who has the requisite authority to direct and employ those forces. (DOD Dictionary)
Unity of effort	Coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization that is the product of successful unified action. (DOD Dictionary)