// PARTNERS and ALLIES GUIDE
U.S. COMBAT TRAINING CENTERS
LESSONS and BEST PRACTICES FOR SUCCESS

Joint Readiness Training Center
-- Fort Polk --

National Training Center
-- Fort Irwin --

Joint Multinational Readiness Center
-- Hohenfels, GE --

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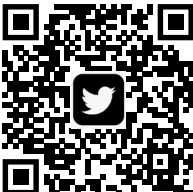
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Foreword

"There is only one thing worse than fighting with allies, and that is fighting without them."

Sir Winston Churchill, UK Prime Minister[1]

Sir Winston Churchill's famous quote reflects on the challenges and the benefits of multinational operations. History is filled with examples of the power that multinational coalitions can bring to bear, but history also teaches that there are challenges within any coalition or alliance. Interoperability with partners and allies is one such challenge facing the U.S. Army today, especially given the rapid pace of technological development and varying degrees of modernization efforts among partners and allies. However, routinely training and exercising in a multinational environment enables the multinational force to reduce barriers to achieving interoperability. U.S. Army combat training centers (CTCs) (Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany; Joint Readiness Training Center (JRTC) at Fort Polk, LA; and National Training Center (NTC) at Fort Irwin, CA) provide the best opportunity to train with partners and allies and continue to close interoperability gaps at the brigade and levels below. This handbook serves as a tactical-level guide for partners, allies, and security force assistance professionals participating in a CTC rotation. This handbook provides insights derived from other multinational experiences that Soldiers and leaders can use to navigate interoperability challenges resident in a multinational environment.

The U.S. Army routinely operates with partners and allies during competition and crisis and it is a trend that will continue into the foreseeable future. By consistently training and conducting exercises with partners and allies, the U.S. Army can identify and resolve interoperability challenges. Increasing interoperability provides a significant advantage for any coalition within which the Army may have to operate to resolve a crisis or prevail in conflict.

All tasks—from deploy through reception, staging, onward movement, and integration, to all levels of combat—bring challenges as individual standards and practices across the human, technical, and procedural dimensions come into conflict. The CTCs make every effort to identify human imbalances, technical conflicts, and procedural gaps coalitions must study and continually train on.

A rotation at a CTC provides a world-class training event by embedding partner-nation and ally units inside a U.S. brigade-size formation pitted against a highly trained and capable opposing force in a multi-domain environment that replicates conditions in combat. These rigorous and demanding training events enable participants to critically examine the effective tactics, techniques, and procedures that improve interoperability within a multinational force. These training events also provide officers, noncommissioned officers, and Soldiers the opportunity to hone their skills and attributes they bring to the formation and the coalition writ large.

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Endnote

1. Sir Winston Churchill as quoted in Lord Alanbrooke's diary, 1 April 1945.

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INTRODUCTION

This handbook is a tactical-level guide for partners, allies, and security force assistance professionals attending a U.S.-based combat training center (CTC). This guide offers insights from multinational experiences that Soldiers and leaders can use to navigate the challenges of interoperability in a multinational environment.

The Center for Army Lessons Learned (CALL) works with the CTCs to collect, analyze, and produce a wide range of products consisting of lessons and best practices from U.S. Army units rotating through the CTCs. This information is also valuable to U.S. advisors to assist partner nations and allies that participate alongside U.S. units.

CALL is also interested in the insights, lessons, and best practices from U.S. advisors and security cooperation personnel who have worked with partners and allies that have trained at a CTC.

Although each country has its own unique training requirements, the following are products consisting of key articles, lessons learned, and websites that can help partners and allies improve their tactical readiness and integrate into a U.S. Army units.

CENTER FOR ARMY LESSONS LEARNED PUBLICATIONS

- CALL 20-05, *Commander and Staff Guide to Liaison Functions*, 30 December 2019. This publication provides planning and execution guidance for the employment of liaison officers. It is available online at https://usacac.army.mil/sites/default/files/publications/20-05.pdf.

- CALL 16-18, *Multinational Interoperability Reference Guide*, 30 June 2016. This publication provides tactical-level insights and lessons from numerous multinational exercises at the Joint Multinational Readiness Center (JMRC) that military leaders can use to logically approach the complexities of interoperability in a multinational environment. It is available online at https://usacac.army.mil/sites/default/files/publications/16-18.pdf.

- Graphic Training Aid (GTA) 19-10-00, *Doctrine Smartcard*, 24 June 2020. This GTA aims to help Soldiers quickly identify and reference key doctrinal terms and steps in high operational tempo training environments. It is available online at https://usacac.army.mil/sites/default/files/publications/GTA_19_10_007_2.pdf.

- GTA 07-71-001, *Combat Skills for Small Unit Leaders*, 27 April 2018. This publication provides summarized checklists, processes, and critical data to support Soldiers and leaders conducting small-unit operations. It is available online at https://usacac.army.mil/sites/default/files/publications/GTA07-71-001_lowres.pdf.

- CALL 15-06, *The Military Decision Making Process (MDMP)*, 12 March 2015. This publication consolidates doctrine with observations from recent deployments and CTC rotations into a single source useful for junior leaders conducting the MDMP. It is available online at https://usacac.army.mil/sites/default/files/publications/15-06_0.pdf.

- CALL 21-06, *National Training Center, Operations Group: Preparing for Large-Scale Combat Operations*, 22 January 2021. This publication sets forth the how-to-fight concept and training techniques at echelon that allow units to succeed at NTC. It is available online at https://call2.army.mil/toc.aspx?document=18100.

- CTC trends bulletins identify trends across the CTCs by fiscal year and are based on observations from observer coach/trainers and collection and analysis teams from CALL with support from various Army centers of excellence. The most recent bulletin is CALL 22-03, *CTC Trends FY2021 Bulletin*, 5 April 2022. It is available online at https://call2.army.mil/toc.aspx?document=18198 (common access card login required).

ARTICLES

- CPT Jordan L. Woodburn and CPT Scott A. Drake, "Reconnaissance in the Multinational Environment: Successful Integration of Allies and Partners in the Reconnaissance Fight," *Armor Magazine*, Spring 2020. It is available online at https://www.benning.army.mil/Armor/eARMOR/content/issues/2020/Spring/2Woodburn20.pdf.

- CPT Dan Dipzinski and CPT Erik Prins, "An Opposing Force Perspective on Multinational Interoperability," *Infantry Magazine*, Summer, 2019. It is available online at https://www.benning.army.mil/infantry/magazine/issues/2019/Summer/pdf/7_PF_Dipzinski.pdf.

- CPT Brandon Shorter, "Multinational Task Force Command: Interoperability Lessons Learned," *Infantry Magazine*, Fall, 2020. It is available online at https://www.benning.army.mil/infantry/magazine/issues/2020/Fall/pdf/7_Shorter-TF.pdf.

- SSG Christopher J. Wheatley and CPT Daniel T. Harrison, "Stronger Together: Experiencing Interoperability at JRTC," *Infantry Magazine*, January-March 2017. It is available online at https://www.benning.army.mil/infantry/magazine/issues/2017/JAN-MAR/pdf/14)Harrison_Interoperability_txt.pdf.

INTEROPERABILITY CONCEPT TERMS[1]

Unified action partner (UAP) conceptual framework. Operations with joint, multinational, and other mission partners add a layer of complexity to planning, preparation, execution, and assessment of military operations. The UAP conceptual framework includes the establishment of appropriate structures (e.g., the mission partner coordination center); processes to guide the planning, coordination, and assessment of mission partner operations; and specialized tools and capabilities to address mission partner complexities. The maturing mission partner environment (MPE) concept serves as the operational framework for Army forces conducting operations with joint, multinational, and other mission partners.

Common data. Digital data drives most command and control and warfighting function (WfF) processes. To effectively share data, mission partners must translate or adhere to common data standards. External tools and processes, such as virtual data centers and the U.S. Army Intelligence and Security Command Cloud Initiative, may provide alternative approaches to achieve virtual common data and interoperability.

Common network. The U.S. Army must continue to develop the MPE and modernize the mission command network. The Army must build the capability to host multinational and inter-organizational partners and federate partner networks into the tactical network architecture. A common network with UAPs is the foundation for establishing and maintaining a common operational picture and digital collaboration capability, which are critical enablers for shared understanding and unity of effort.

Common tactics, techniques, and procedures (TTP). At echelon, mission partners and U.S. forces must develop, rehearse, and execute common TTP across warfighting functions. When the partners and allies participate in multinational operations, commanders should follow the multinational doctrine and procedures that have been ratified or evaluate and follow the multinational command's doctrine and procedures and adhere to laws, policies, and guidance. Training on enabling systems is critical. During recent multinational interoperability exercises, participants noted that training should emphasize the application of the system instead of strict system knowledge (buttonology), enabling the user to quickly learn the system and better apply it to warfighting functions.

CALL 20-12, *Commander and Staff Guide to Multinational Interoperability*, 23 March 2020
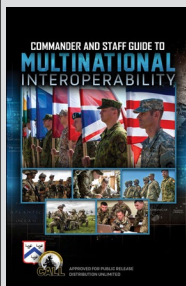
This guide addresses three key areas to improved multinational interoperability: Introducing a common understanding of interoperability; exploring a framework encompassing the human, procedural, and technical domain solutions to improved interoperability; and showing how leaders can integrate planning for interoperability within the operations process.

Common information management and knowledge management. Coordinated partner and ally information and knowledge management procedures are critical to maximizing the effectiveness of technological solutions for collaboration services and achieving a common operating environment with mission partners. Deliberate planning of information and knowledge management procedures for the Command Post Computing Environment (CPCE) can improve its performance over the network and improve command post situational awareness. Information and knowledge management procedures that support UAP interoperability must be developed collaboratively with respective partners and in conjunction with available technical and materiel solutions. American, British, Canadian, Australian, and New Zealand (ABCANZ) Armies' standards are technically aligned with North Atlantic Treaty Organization (NATO) standards and provide an excellent starting point for planning multinational operations. In recent multinational interoperability exercises, participants have expressed concern with the large number of layers that can be built in CPCE with little added value, especially when poorly organized and improperly or unclearly titled. These layers consumed significant CPCE server processing and storage space. Knowledge management officers develop non unit-specific, digital standard operating procedure (SOP) annexes for each echelon. These annexes serve as the basis for knowledge management plans in a multinational operation and can be quickly tailored for a specific MPE. These annexes are provided to partners, enabling TTP for employment of MPE and related information systems. The annexes include, at a minimum, a robust knowledge management program to exploit command and control information system (such as CPCE) capabilities, standardized artifact names, information flow by process, and file system and locations for artifacts and information stored at echelon during operations.

Mutual trust and confidence. Commanders of a multinational force maintain awareness and consideration for their mission partners in the decision-making process including political objectives, mission, patience, sensitivity to the needs of other force members, a willingness to compromise or come to a consensus when necessary, and mutual confidence. This mutual confidence stems from tangible actions and entities and intangible human factors. Mutual trust is a shared, reciprocal confidence among commanders, subordinates, and partners. Effective commanders build cohesive mission-partner teams in an environment of mutual trust and confidence.

Shared understanding. A defining challenge for commanders and staffs is creating shared understanding of their operational environment and operation's purpose, problems, and approaches to solving those problems. Shared understanding and purpose form the basis for unity of effort and trust. Commanders and staffs actively build and maintain shared understanding within the force and with UAPs by maintaining collaboration and dialogue throughout the operations process.

Unity of effort. The fundamental challenge in multinational operations is the effective integration and synchronization of available assets toward the achievement of common objectives. This goal may be achieved through unity of effort despite disparate and occasionally incompatible capabilities, rules of engagement, equipment, and procedures. Unified action synchronizes, coordinates, and integrates mission partners in an attempt to achieve unity of effort.

Coalition versus combined force. A coalition force is an ad hoc arrangement between two or more nations for common action, while a combined force is two or more forces or agencies of two or more allies operating together. A force could be coalition and combined if it contains non-allied and allied national forces in common action. Operation Desert Storm is an example of a coalition and combined operation. Consistent with the multinational planning augmentation team SOP, this publication uses the term coalition/combined task force to describe a multinational force executing a military mission at the operational level during a multinational force effort.

UAP versus mission partner. A UAP is from the Army perspective and includes joint forces, multinational partners, interagency, and nongovernmental organizations, that is, organizations and agencies outside of the U.S. Army with which the Army must coordinate. The term mission partner is from the joint perspective for any partners not in the U.S. military with which the U.S. military conducts coordination. UAP is used in this publication primarily in reference to Army doctrine or policy, while mission partner is used in context to the MPE or related joint considerations.

Command structures. Command relationships and structure for a multinational force may have significant impact on how and to what degree mission partners are able to achieve interoperability. Significant differences exist between integrated, multinational, lead nation, and parallel command structures in terms of interoperability. Interoperability requirements and ambition are presumably higher when fighting in an integrated command structure. Meanwhile, less integrated, more complex command structures, such as parallel command, introduce additional interoperability and coordination risks.[2]

Endnotes

1. CALL 20-12, *Commander and Staff Guide to Multinational Interoperability,* 23 March 2020, pages 10-12. See also Field Manual 3-16, *The Army in Multinational Operations*, 8 April 2014.

2. See Joint Publication 3-16, *Multinational Operations*, 1 March 2019, Chapter 2, for a detailed examination of likely multinational forces command structures and interoperability implications.

CHAPTER 1

Working With the U.S. Military

> "The tenets of multinational operations are respect, rapport, knowledge of partners, patience, mission focus, team-building, trust, and confidence."
>
> Joint Publication 3-16, *Multinational Operations*
> (1 March 2019), page I-2.

This chapter helps U.S. military partners and allies better understand the U.S. military. The combat training centers (CTCs) asked multinational partners for suggestions on topics that would help them develop an understanding of the U.S. Army. The following are some of these suggestions.

DOCTRINE, TRAINING, AND LEADERSHIP

Leadership as an element of combat power and coupled with information, unifies the warfighting functions (movement and maneuver, intelligence, fires, sustainment, protection, and command and control). Leadership focuses and synchronizes organizations. Leaders inspire people to become energized and motivated to achieve desired outcomes. An Army leader is anyone who by virtue of assumed role or assigned responsibility inspires and influences people by providing purpose, direction, and motivation to accomplish the mission and improve the organization."[1]

The U.S. Army trains to fight and win to preserve the peace and decisively defeat its enemies. It does this through challenging, relevant, and realistic training performed to the highest standards. The Army trains the way it operates, by replicating in training how Soldiers are expected to fight, closing the gap between operations and training.

The Army is always training for ongoing operations and preparing for other possible contingencies simultaneously. The U.S. Army is a doctrinally based force. Land combat against an armed adversary is an intense, lethal human activity. Its conditions include complexity, chaos, fear, violence, fatigue, and uncertainty. The battlefield often teems with noncombatants and is crowded with infrastructure. In any conflict, Soldiers potentially face regular, irregular, or paramilitary enemy forces that possess advanced weapons and communicate using mobile devices. Any mission can rapidly become a combination of combat, governance, and civil security. Most Army missions require combinations of lethal and nonlethal actions. This is inherent in the nature of land operations that are usually conducted in the midst of noncombatants. When called upon, Soldiers accomplish nonlethal missions such as disaster relief and humanitarian assistance quickly and effectively.

The U.S. Army defines Army doctrine as "fundamental principles, with supporting tactics, techniques, procedures, and terms and symbols, used for the conduct of operations and as a guide for actions of operating forces, and elements of the institutional force that directly support operations in support of national objectives. It is authoritative but requires judgment in application."[2]

Doctrine is neither arbitrary nor static. It is based on decades and often centuries of experience. Local procedures, best practices, and lessons learned from operations and training often gain widespread acceptance because of their applicability over time in varying circumstances. The Army incorporates the best of these ideas into doctrine. While grounded in enduring principles, doctrine is also flexible, adaptable, and changing.[3]

U.S. Army doctrine is about the conduct of operations by Army forces in the field—and to a limited extent—the guidelines for training for operations. Doctrine is the body of professional knowledge that guides how Soldiers perform tasks related to the Army's role: The employment of land power in a distinctly American context. Doctrine establishes the language of the profession. The Army approaches solutions to problems through changes to broad, general categories of doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF). Doctrine is usually the first approach taken, as it is often the easiest and quickest to change and can dramatically affect the conduct of operations. In some cases, the impact of changes on the other factors cannot be fully realized without a significant change in doctrine. Doctrine also can serve as the basis for changes in the other DOTMLPF categories.[4]

Multi-domain operations (MDO) are the Army's basic operational doctrine. They emphasize the necessity of synchronizing Army capabilities through the domains of land, air, maritime, space, and cyberspace with the other Services (joint), other government agencies (interagency), other international government partners (intergovernmental), and military forces from partner nations (multinational). Army operations conducted overseas combine offensive, defensive, and stability tasks.

Within the U.S., the Army supports civil authorities through (defense support to civil authorities) DSCA. If hostile powers threaten the homeland, the Army combines defensive and offensive tasks with DSCA. The effort accorded to each task is proportional to the mission and varies with the situation. The Army labels these combinations as decisive action because of their necessity in any campaign.[5]

Tactics include ordered arrangement and maneuver of units in relation to each other, the terrain, and the enemy involving the employment of forces in the operational area through movement in combination with fires to achieve a position of advantage in respect to the enemy. Tactics vary with terrain and other circumstances. They change frequently as the enemy reacts and friendly forces explore new approaches. Applying tactics usually entails acting under time constraints with incomplete information. Tactics always require judgment in application. They are always descriptive and not prescriptive.

A standard operating procedure (SOP) is the approved process to complete a complex, recurring task and consists of a series of detailed steps or subordinate tasks. Carrying out these steps ensures a desired result. SOPs are essential for units to achieve the desired result easily and repeatedly.[6]

THE MILITARY DECISION-MAKING PROCESS

The military decision-making process (MDMP) is an iterative planning methodology to understand the situation and mission, develop a course of action, and produce an operation plan or order.[7] The MDMP helps leaders apply thoroughness, clarity, sound judgment, logic, and professional knowledge to understand situations, develop options to solve problems, and reach decisions. This process helps commanders, staffs, and others think critically and creatively while planning.

The MDMP facilitates collaborative planning. The higher headquarters solicits input and continuously shares information concerning future operations through planning meetings, warning orders, and other means. It shares information with subordinate and adjacent units, supporting and supported units, and unified action partners. Commanders encourage active collaboration among all organizations affected by pending operations to build a shared understanding of the situation, participate in course of action development and decision making, and resolve conflicts before publishing the plan or order.

During planning, assessment focuses on developing an understanding of the current situation and determining what and how to assess progress using measures of effectiveness and performance. Developing the unit's assessment occurs during the MDMP. The MDMP also drives preparation. Since time is a factor in all operations, commanders and staffs conduct a time analysis early in the planning process. This analysis helps them determine when to begin certain actions to ensure that forces are ready and in position before execution.

Commanders initiate the MDMP upon receipt of, or in anticipation of a mission. Commanders and staffs often begin planning in the absence of a complete and approved higher headquarters operation plan or order. In these instances, the headquarters begins a new planning effort based on a warning order and other directives, such as a planning or alert order from its higher headquarters. This requires active collaboration with the higher headquarters and parallel planning among echelons as the plan or order is developed.

Commanders may alter the steps of the MDMP to fit time-constrained circumstances and produce a satisfactory plan. In time-constrained conditions, commanders assess the situation, update the commander's visualization, and direct the staff to perform the MDMP activities that support the required decisions. In extremely compressed situations, commanders rely on more intuitive decision-making techniques, such as the rapid decision-making and synchronization process.

THE AFTER ACTION REVIEW

U.S. units routinely conduct after action reviews (AARs). Any multinational unit working with U.S. Army units should understand the concept of the AAR and should expect to participate in one. The AAR has been part of the Army's training doctrine since the early 1980s. AAR procedures were developed at the National Training Center (NTC) as a means to provide feedback and guide units to identify their own strengths and weaknesses while training at the NTC. The AAR proved to be such an effective tool that it has been incorporated into all aspects of Army training and operations. To an outside observer, the discussion during an AAR can appear candid or even harsh. The objective is to explained what happened so that improvements can be made.

AARs are a professional discussion of an event that enables Soldiers and units to discover for themselves what happened and develop a strategy (e.g., retraining) for improvement. They provide candid insights into strengths and weaknesses from various perspectives and feedback, and focus directly on the commander's intent, training objectives, and task standards. Task standards are performance measures found in the respective training and evaluation outlines.

Leaders must avoid creating the environment of a critique during AARs. Because Soldiers and leaders participating in an AAR actively discover what happened and why, they learn and remember more than they would from a critique alone. A critique gives only one viewpoint and frequently provides little opportunity for discussion of events by participants. The climate of the critique, focusing only on what is wrong, prevents candid discussion of training events and stifles learning and team building.

Effective AARs are a reflection of commanders and their role in training. AARs foster an environment of trust, collaboration, initiative, and a co-creation of context necessary among Soldiers and leaders in decentralized operations. Soldiers learn and understand the commander's intent and act decisively while accepting prudent risks. AARs during training include the following same four parts as AARs during operations:

- Review what was supposed to occur.

- Establish what happened.

- Determine what was right or wrong with what happened.

- Determine if there is a more effective method to perform the task.

There are two types of AARs: formal and informal (sometimes called a hotwash). A formal AAR is resource-intensive and involves the planning, coordination, and preparation of the AAR site, supporting training aids, and support personnel. An informal AAR involves less preparation and planning, and is conducted when unit performance requires it.[8]

REHEARSALS

U.S. leaders routinely conduct rehearsals as part of their planning process. A basic understanding of the U.S. Army approach to rehearsals can be useful to partner and allied units. Multinational partners can expect to be part of some form of rehearsal.[9]

MISSION COMMAND

Mission command is the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders in the conduct of ULO. Exercised by Army commanders, it blends the art of command and the science of control while integrating the warfighting functions to conduct the tasks of decisive action. Successful mission command is enabled by the following principles:[10]

- Competence.

- Build cohesive teams through mutual trust.

- Create shared understanding.

- Provide a clear commander's intent.

- Exercise disciplined initiative.

- Use mission orders.

- Accept prudent risk.

11

WARFIGHTING FUNCTIONS

Commanders use the warfighting functions to help them exercise command and help them and their staffs exercise control. A warfighting function is a group of tasks and systems (people, organizations, information, and processes) united by a common purpose that commanders use to accomplish missions and training objectives. All warfighting functions possess scalable capabilities to mass lethal and nonlethal effects. The Army's warfighting functions link directly to the joint functions. The following are the six warfighting functions:[11]

- Command and control
- Movement and maneuver
- Fires
- Intelligence
- Protection
- Sustainment

Endnotes

1. Army Doctrine Publication (ADP) 6-22, *Army Leadership and the Profession*, 31 July 2019, page 1-13.

2. ADP 1-01, *Doctrine Primer*, 31 July 2019, page 1-2.

3. Ibid.

4. Ibid., page 1-1.

5. ADP 3-0, *Operations*, 31 July 2019, page 3-1.

6. ADP 3-90, 31 July 2019, page 1-1.

7. ADP 5-0, *The Operations Process*, 31 July 2019, pages 2-17 and 2-18.

8. Field Manual 7-0, *Training,* 14 June 2021, page K-1.

9. ADP 5-0, page 3-7.

10. ADP 6-0, *Mission Command: Command and Control of Army Forces*, 31 July 2019, page 1-6.

11. ADP 3-0, page 5-2.

CHAPTER 2

An Introduction to U.S. Army Combat Training Centers

THE JOINT MULTINATIONAL READINESS CENTER[1]

Background. The Joint Multinational Readiness Center (JMRC) is the U.S. Army's Europe-based combat training center (CTC) with a world-wide mobile training capability. JMRC trains leaders, staffs, and units up to brigade combat teams (+) and multinational partners to dominate in the conduct of unified land operations (ULO) anywhere in the world, now and in the future. The JMRC is situated in the Oberpfalz region of Bavaria and headquartered at U.S. Army Garrison Bavaria, Hohenfels Training Area, Germany (see Figure 2-1). JMRC provides several indispensable capabilities to the U.S. Army and its European allies and partners.

Figure 2-1. Regional view of JMRC

Capabilities. One of the most successful and thorough interoperability laboratories can be found at JMRC. Interoperability problem sets arise during every rotational training event, with multinational formations at the brigade level and below from across Europe and elsewhere. Most notably, the Combined Resolve and Allied Spirit rotations focus on the interoperability challenges that arise while U.S. units serve as the brigade command (Combined Resolve), and a contributing subordinate (Allied Spirit). Multinational rotations exacerbate inter-Service warfighting friction points and challenge some of the most prepared units, but also develop leaders, increase unit readiness, and strengthen the North Atlantic Treaty Organization (NATO) alliance. The lessons learned from these exercises are critical to all military land-power professionals as the Army looks to the future, where it may be tasked to build a multinational tactical formation to fight and win in a complex world.

JMRC is the only CTC outside the continental United States. The Hohenfels Training Area is over 160 square kilometers, has 1,345 buildings for training, 319 kilometers of road, numerous cross-country trails, and has one, short airfield. JMRC provides indispensable capabilities to the U.S. Army, European allies, and other partners. JMRC integrates multinational participation into every rotation. JMRC can tailor the exercise and operational environment based on the needs and requirements of the training audience. JMRC supports training for other U.S. agencies and foreign non-military organizations. JMRC regularly employs the U.S. Army's decisive action training environment (DATE) and mission rehearsal exercise concepts. JMRC regularly hosts DATE exercises to deploy and test regionally aligned forces as part of the European rapid-reaction force. JMRC hosts the Kosovo Force Mission Rehearsal Exercise.

Opposing force. JMRC offers world-class opposing force (OPFOR) (the 1st Battalion, 4th Infantry Regiment [1-4 IN]), training on all the warfighting functions; several support directorates to ensure world-class support to rotations; and 15 observer coach/trainer (OC/T) teams to provide evaluation and lessons learned for military occupational specialties for each maneuver training rotation. In a forward-deployed environment, 1-4 IN conducts combat operations throughout the full spectrum of the contemporary operational environment to provide realistic joint and combined arms training conditions focused on developing Soldiers, leaders, and units for success on current and future battlefields throughout U.S. Army Europe. The 1-4 IN deploys combat forces to conduct combat operations in support of the global war on terrorism.

JOINT READINESS TRAINING CENTER[2]

> "If you look at each geographic combatant command and how they plan to fight our future wars, you'll realize how incredibly important it is to build alliances during peacetime in order to prevail against peer threats in war. It is through multinational interoperability that we will overmatch our adversaries."
>
> GEN Michael X. Garrett, Commanding General, U.S. Army Forces Command, address at the Joint Readiness Training Center
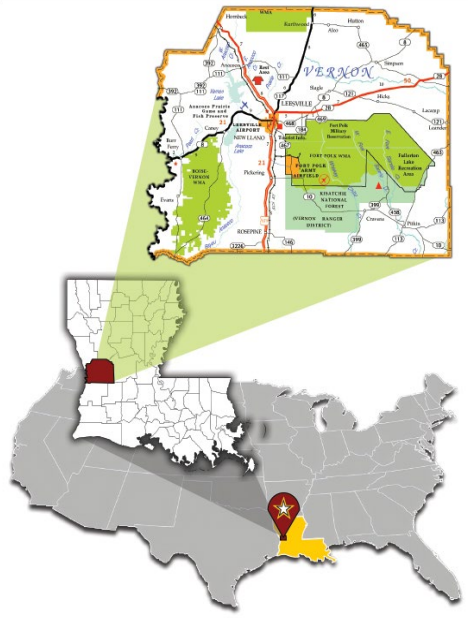

Figure 2-2. Regional view of JRTC

Background. The Joint Readiness Training Center (JRTC) at Fort Polk, LA, (see Figure 2-2) trains brigade combat teams to conduct large-scale combat operations on the decisive-action battlefield against a near-peer or peer threat with multi-domain capabilities. JRTC is the premier crucible training experience. Units are prepared to fight and win in the most complex environments. Its goal is to inspire professionals and train leaders to win on the battlefield through realistic, rigorous, and relevant training. JRTC is focused on improving unit readiness by providing highly realistic, stressful, joint, and combined arms training across the full spectrum of conflict.

Capabilities. With great emphasis on realism, the JRTC Operations Group provides brigade combat teams, division tactical command posts (forward), enablers, and special operations forces with rotational training units that have experience-based training in a complex DATE. The JRTC training scenario is based on each participating organization's mission-essential task list and many of the exercises are mission rehearsals for actual operations the organization is scheduled to conduct. Since its creation, JRTC has also tailored the training environment to meet security force assistance brigades' needs to help achieve the mission set to train, advise, assist, and enable operations with partner and allied nations. Recently, security force assistance brigades have deployed to JRTC to assist partner and allied nations participating in DATE exercises to further multinational interoperability. JRTC scenarios allow complete integration of Air Force, other military Services, host-nation security forces, civilians on the battlefield, humanitarian actors, and international and multinational partners. The exercise scenarios replicate many of the unique situations and challenges a unit may face to include host-nation officials and citizens, insurgents and terrorists, news media coverage, nongovernmental organizations, and enemy military forces.

Louisiana has a humid subtropical climate, perhaps the most classic example of a humid subtropical climate of all the south-central states, with long, hot, humid summers and short, mild winters. Visiting units should expect to train in inclement weather with 100 percent humidity. It is highly recommended that organizations from warmer climates select training dates during the summer months and organizations from cooler climates select training dates during the winter months.

OPFOR. The 1st Battalion, 509th Infantry Regiment (call sign Geronimo) is a world-class OPFOR tasked with replicating modern, capabilities-based threat forces that the U.S. and its allies could expect to encounter on the multi-domain operational environment of the 21st century. These threat forces include irregular forces and peer-threat adversaries across every area of interest during competition and armed conflict. Rotational training units at JRTC will find themselves arrayed against a relentless opponent from either an airborne or mechanized division tactical group capable of conducting combined arms operations supported with integrated air defense systems, counterfire radars, information operations, chemical munitions, electronic warfare, cyber-attack, aggressive reconnaissance, close air support, and a robust integrated fires command.

OC/T. OC/Ts observe, coach, and train elements from sections through brigades (+) during the planning, preparation, and execution phases of simulated combat operations at JRTC. These teams collect, analyze, and provide feedback to rotational units via after action reviews, and take-home packages. JRTC employs OC/Ts to provide evaluation and lessons learned for a wide variety of military occupational specialties for each maneuver training rotation. JRTC has the ability to conduct "fly away" DATE rotations at the rotational training unit's home station where JRTC deploys OC/Ts as required to support expeditionary training events. JRTC also employs a similar rotational timeline to the National Training Center (NTC).

NATIONAL TRAINING CENTER[3]

Background. As a part of the U.S. Army Forces Command (FORSCOM), NTC at Fort Irwin, CA, provides realistic joint and combined arms training focused on developing U.S. Army Soldiers, leaders, and units for success on the 21st century battlefield. Additionally, NTC provides a vital source of experience-based information and data essential to doctrine, equipment, training, and force development to improve the force.

Figure 2-3. NTC regional view and associated terrain

Capabilities. NTC trains rotational training units and joint, interagency, and multinational partners to build and sustain readiness to fight and win. NTC trains the force to win in large-scale combat operations while developing adaptive leaders and ready-combat maneuver and support units. NTC replicates complex, hybrid threats using a dedicated OPFOR and a high-fidelity training support system (peer and near-peer threats). NTC replicates the theater sustainment command and expeditionary sustainment command capabilities; command and control; reception, staging, onward movement, and integration; force regeneration; and echelons above brigade sustainment. NTC also has the capacity to integrate conventional, joint, special operations forces, and unified action partners. This environment is the premiere setting to create a near-real simulated exercise to provide a "leadership crucible" event and develop unit and leadership skills required to win, build, and sustain readiness to fight and win.

OPFOR: In a forward-deployed environment, the 11th Cavalry Regiment is capable of conducting large-scale mechanized combat operations throughout the full spectrum of the contemporary operational environment. The OPFOR provides realistic joint and combined arms training conditions focused on developing Soldiers, leaders, and units for success on current and future battlefields throughout the U.S. Army, and its partners, and allies.

OC/T. OC/Ts observe, coach, and train elements from sections through brigades (+) during the planning, preparation, and execution phases of simulated combat operations at NTC. These teams collect, analyze, and provide feedback to rotational units via after action reviews and take-home packages, similar to JRTC. NTC employs OC/Ts and personnel to provide evaluation and lessons learned on a variety of military occupational specialties for each maneuver training rotation. NTC has the ability to deploy OC/Ts as required to support expeditionary training events.

Table 2-1. Example of an NTC DATE rotation timeline

Day	Event
D-17	Torch party arrives.
D-16	Establish logistics accounts.
D-16	Opening in-process reviews.
D-14/13/12	Preparation of unit areas.
D-11	Advanced party arrives.
D-10	Unit-level orientations.
D-9/8	Prepositioned equipment draw.
D-9/8/7	Main body arrives
D-6	Logistics draw (Class II and IV).
D-5	Communications equipment draw.
D-5/4/3/2/1	Prepositioned equipment main draw.
D-2	Communications equipment validation exercise and equipment install.
D-1	Fires calibration and validation.
D+1 through 14	Training rotation execution.
REGEN 1	Vehicle, Multiple Integrated Laser Engagement System (MILES) and communications equipment turn-in. After action reviews begin.
REGEN 2/3/4	Vehicle, MILES, and communications equipment turn-in.
REGEN 5/6	Logistics return
REGEN 7	Personnel depart
D day REGEN regeneration day	

Endnotes

1. The 7th Army Training Command, JRTC, online at https://www.7atc.army.mil/JMRC/.

2. See JRTC online at https://home.army.mil/polk/index.php.

3. See NTC online at https://nationaltrainingcenter.com.

CHAPTER 3

Insights Before Deploying to a Combat Training Center

Insight. Develop a detailed home-station training plan. Partner-nation preparation for a National Training Center (NTC) rotation or any combat training center (CTC) has many components that begins with a rigorous home-station training plan. The partner-nation training plan requires a comprehensive and gated strategy that encompasses training from the individual through task force collective-task levels.

Recommendation. Collective training proficiency depends heavily on a vast number of defined, implemented, and trained systems and processes. Units must build a foundation of systems and processes early in the training cycle to maximize their impact at the beginning of the rotation.

Insight. Develop and implement a tactical standard operating procedure (SOP). Effective units develop a tactical SOP in an interactive team-building process early in their training strategy. By developing the tactical SOP in an interactive process, the staff and other key members have stakeholder agreement. An SOP is a set of instructions covering those ideas of operations that lend themselves to definite or standardized procedures without loss of effectiveness. The SOP is applicable unless ordered otherwise.[1]

> "An SOP is both standing and standard: It instructs how to perform a prescribed and accepted process established for completing a task. Features of operations that lend themselves to standardization are common and usually detailed processes performed often and requiring minimal variation each time. Well-written and properly used unit tactical SOPs enhance effective execution of tasks; the benefits of SOPs are numerous. They reduce training time, the loss of unwritten information, the commission of errors, the omission of essential steps or processes, and the time required for completion of tasks."
>
> Army Techniques Publication (ATP) 3-90.90, *Army Tactical Standard Operating Procedures* (1 November 2011)[2]

Recommendations. Consider the following:

- Invest in a unit SOP. Determine information requirements needed to facilitate timely decision making by commanders.

- Publish and implement the tactical SOP as part of the unit-training SOP. This requires rigorous enforcement and understanding by leaders and Soldiers at echelon.

- Provide the tactical SOP to the partner nation before execution to provide shared procedural understanding.

- Train tactical SOP-based battle drills to improve understanding of mission requirements.

- Six weeks before the unit's leader training program, submit the tactical SOP to the cadre for review and feedback. This program is a one-week leader development event that places emphasis on practicing unit SOPs, teaching the military decision-making process (MDMP), and developing orders.

- Incorporate the external feedback into the tactical SOP.

Insight. Successful partner nations study and train on training center exercise rules of engagement (EXROE). Units must review, practice, and implement the combat training center (CTC) EXROE during home-station training. Waiting until the rotation to share and understand the EXROE could be the cause of many unnecessary challenges and frustration.

Recommendations. Consider the following:

- Disseminate the CTC EXROE to ensure Soldiers at the lowest level understand them.

- Incorporate CTC EXROE into home-station training plans.

- Develop vignettes and scenarios to validate Soldiers' understanding of the EXROE at home station.

- Read and understand the CTC live-fire exercise SOP (Chapter 14 of the CTC exercise operating procedure).

- Incorporate the rules of Chapter 14 into home-station, live-fire exercise training.

Insight. Successful partner-nation units develop a rigorous home-station, staff-training program for their units and staffs. Staffs play an important role in shaping, executing, and sustaining operations to achieve their commander's intent. Training the staff to execute tactical operations center functions in various environments is a critical part of unit-training plans in preparation for a rotation at any of the CTCs. Live training is the most resource-intensive form of training and provides commanders and their staffs the opportunity to execute individual, leader, and collective task training using tactical systems in a field environment. However, battalion command and control during company staff training exercises or live-fire exercises alone does not create the true demand of the decisive action training environment (DATE). Partner-nation units that can leverage constructive training with realistic, challenging, injected scenarios that are externally evaluated allows commanders and their staffs to practice decision-making skills in a robust and demanding environment using minimal resources. The incorporation of both training environments will enable a staff to master the skills necessary to operation in a DATE rotation.

Recommendations. Consider the following:

- Increase the number of home-station, mission-command training opportunities for the entire staff by integrating subordinate-unit headquarters and enablers into collective training events at all echelons.

- Practice whole network and systems operations before beginning collective tactical training.

- Deploy all command posts to the field in support of subordinate-unit collective training events to validate manning, technical proficiency, and equipment status. Jump these command posts often. This practice will exponentially increase proficiency and confidence in processes and command and control enabling systems. With the right coordination, unit staffs can easily perform other second-priority, home-station-specific staff functions in a field environment.

Insight. Successful units develop and execute a collective training plan at home station. The goal of collective training is to prepare units to accomplish missions they can expect to execute at a CTC by achieving and sustaining proficiency in key collective tasks of company, battery, and troop formations.

Recommendations. Within means, resource a robust and progressive platoon and company staff training and live-fire exercise. Precede each live event with a constructive or virtual repetition to increase the proficiency during live training. This will also provide additional leader-development opportunities at each echelon.

Insight. Focus on core competencies with teaching leadership development opportunities. Establish a comprehensive leadership development program that culminates with a certification program. "Certification programs should be comprehensive in form to enable subordinate contributions as quickly as possible upon their arrival. These certification plans should be challenging, require a form of testing to measure performance and understanding, and should evolve as individuals and organizations adjust to the operating environments."[3] In doing so, unit commanders gain the initiative in their training, unleash the potential of their subordinate formations, and train all leaders in their core competencies.

Recommendations. Consider the following:

- Institute a professional leadership program ensuring all leaders in the organization remain current on core competencies. Do not assume leaders have been taught everything they need to know.

- Implement interactive leader professional development programs led by leaders within the organization.

- Execute a tactical exercise without troops as an opportunity to develop junior leaders. Examples include but are not limited to the following:

  ○ Walk and shoots.

  ○ Preparations for the execution of the deliberate attack and movement to contact.

  ○ Engagement area development.

  ○ Tactical convoy operations.

  ○ Combined arms rehearsals, fire support rehearsals, and sustainment rehearsals focusing on standards and individual, staff, and unit requirements for those rehearsals.

  ○ Battle-rhythm events such as command and staff training meetings, targeting meetings, and logistic meetings.

- Leverage proponent resources to increase the depth and breadth of Army training. Consider creating mobile training teams to teach in areas where expertise in formations is lacking.

- Utilize leadership certification events to measure core competency comprehension.

Insight. Fully understand reception, staging, onward movement, and integration (RSOI) and what it entails. Understanding and getting RSOI right will set a partner nation up for success. RSOI is an operation and it is the first critical event of any rotation or deployment. Staffs must track personnel and prioritize requirements and equipment movements during RSOI in accordance with the commander's intent. Hand-held tactical communications equipment, analog tracking tools and charts, and leaders with requisite experience are critical to unit success in this phase of the operation.

Recommendations. Consider the following:

- Visualize and sequence equipment and personnel movements to achieve effects during all phases of the operation.

- Establish a tracking system before arriving to a combat training center.

- Develop decision points to adapt contingency plans in the event that critical equipment is delayed (aircraft, command post node, sensitive items, etc.).

- Establish a sustainment system early to facilitate a common operational picture and sustainment battle rhythm.

- Take ownership of enablers and separate units. Be prepared to help them when they struggle to stand up their capability.

- Multiple Integrated Laser Engagement System (MILES) install and instrumentation is a critical node and a unit must develop a system to prioritize vehicle throughput.

- Develop a scheme of maneuver to uncoil out of the rotational-unit bivouac area (formations and order of movement). Consider requiring each formation to calculate its size, number of serials to move, and associated pass time in advance. These before-rotation calculations will expedite a necessary, but demanding task in advance of taking on the many requirements of a tactical formation in the DATE.

Insight. Liaison officers (LNO) operations are combat multipliers, so use and choose them well. Trained and integrated partner-nation LNOs help reduce the "fog of war" in a brigade combat team headquarters. LNOs serve a pivotal role in assisting task force and brigade staffs to collect and disseminate accurate information. These individuals represent their commanders in daily planning sessions, working groups, and mission execution.

Recommendations. Select LNOs who are experienced. LNOs must understand and be aggressive advocates for their commander's critical information requirements. The supported and supporting unit commanders must conduct the following:

- Provide LNOs with clearly defined expectations that include duties and responsibilities.

- Provide LNOs with their unit's battle-rhythm events that require their attendance; ensure LNOs know the inputs and outputs for each meeting.

- Provide LNOs with liaison checklists before reporting to their assigned duty.

- Ensure LNOs understand and use unit SOPs.

- Ensure the gaining unit allocates a dedicated workspace for the LNO.

- Ensure the LNO package has 24-hour coverage capability, if required.

- Ensure LNOs are fully integrated into the gaining unit's command post.

Endnotes

1. ATP 3-90.90, *Army Tactical Standard Operating Procedures*, 1 November 2011, page iii.

2. Ibid., page ii.

3. General Daniel B. Allyn, U.S. Army Forces Command, Commanding General, speaking at the Leader Development Guidance 2014 forum at Joint Base Lewis-McChord, WA, on 6 February 2014.

CHAPTER 4

Insights Upon Arrival to a Combat Training Center

Insight. Develop common risk-management procedures. Risk-management practices and procedures are widely varied throughout allied and partner-nation forces. Many countries have established regulations and most actively practice risk management to some level. Some countries are concerned with accidental and tactical risk. Others are actively concerned with tactical risk only. Compliance with existing national safety regulations varies from unit to unit. Standard safety practices such as seat-belt usage and traffic regulations vary from country to country. Several countries' militaries do not possess night-vision devices and are not well practiced operating during limited-visibility conditions. Several countries also lack heavily armored vehicles and units lack experience operating near tanks and infantry fighting vehicles.

Recommendations. Before deploying, unit leaders and safety officers should identify expected accidental and tactical risk hazards, and develop draft mitigation measures and controls. It is critical to socialize the hazards, mitigation measures, and controls with all partner forces for the training exercise. Unit safety personnel should research cultural and military aspects of safety for partner forces (seat-belt usage, speed limits, training during limited-visibility conditions, heavy/light forces integration, etc.). Units should make unit safety officers a part of the planning process, especially during course-of-action development and course-of-action analysis. Risk management should be addressed during orders briefings and rehearsals.

Insight. Ensure compatibility of tactical communications equipment. Whether allies or partners draw communication equipment during the reception, staging, onward movement, and integration (RSOI) phase of a rotation, or bring some form of tactical, squad-level radio with them from home station, a few considerations must be made. Is the equipment compatible with U.S. or other partner-nation equipment? Does it have a frequency and bandwidth that can legally be operated at the combat training center (CTC)? Will time need to be allocated during RSOI for the communications noncommissioned officer to conduct training on any U.S.-drawn equipment?

Recommendations. Identify early on the communications requirements for each echelon participating in the rotation. Identify what will be organic and shipped to the CTC, and what will be drawn upon arrival. If organic to the unit, during the planning conference phase, ensure bandwidth and frequency requirements are addressed.

Insight. Conduct command and control (C2) during the RSOI phase. For some, especially the logisticians, the RSOI phase can be just as rigorous as the training experience. A lot of frustration and physical exertion occurs trying to be in several places at the same time (e.g., the truck ramp, railhead, container yard, equipment draw, Multiple Integrated Laser Engagement System [MILES] draw, or Class IV yard). Many partner-nation units can only assume what is described to them before they first arrive, which can be challenging. Squad-level and hand-held radios tend to work best for C2 during this phase. The drawback is where they are packed and who has control of them. They are usually loaded and distributed with the "box," or during phase two.

Recommendation. Keep the preceding non-tactical RSOI phase of a CTC rotation in mind. Partners and allies should consider a distribution and implementation plan specifically for this early portion of their training experience, either by loading communications equipment last so it is unloaded first, or hand-carrying equipment on deployment. The accessibility of the unit's squad-level communications systems can set the tone for early success by having easy access to an important C2 means during this preparation phase. A redistribution of assets can be accomplished, as the unit transitions into the tactical portion of the rotation.

Insight. Partner and allied task organization for specified tasks or duties should be identified during RSOI. When possible, partner and allied units should identify key and essential tasks for the RSOI phase of a CTC rotation. Preparation time and training quality can be diminished if careful planning and preparation is not conducted.

Recommendations: Before departing from their country of origin, leaders of partner and allied units participating in a CTC rotation should allocate time for identifying tasks or duties that will require identifying specific personnel. These planning considerations for personnel should include drivers and vehicle licensing, range safety training and coaching during any live-fire exercises or qualification ranges, accountability on hand-receipt holders, wash-rack personnel at redeployment, certified fuel and ammunition handlers, and medical and food service personnel, as applicable.

Insight. Practice thorough equipment draw and preventive maintenance checks and services (PMCS). Units that conducted thorough PMCS during wheeled vehicle equipment draw, having maintenance personnel on-hand and maintenance and company-level leader present, experienced fewer mission-related impacts from maintenance failures.

Recommendations. Units should avoid rushing to the next phase of the rotation. Units should conduct a deliberate and well-executed draw and PMCS, which will pay large dividends during the rotation.

Insight. Develop a multinational logistics common operational picture. When determining the key considerations in the development of a multinational logistics common operational picture, senior logisticians must first understand the common operational picture across the operational environment and effectively synchronize the logistical support to "allow the arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time."[1]

The following are four essential elements to consider when developing a multinational logistics common operational picture:

- Enhancing interoperability among multinational forces.

- Understanding national caveats and doctrine of individual partners and allies.

- Analyzing task organization.

- Standardizing reporting.

Recommendations: Partners and allies should take into account the above four essential elements. Create logistics common operational picture products to track a ground-truth logistical status that can help provide an accurate multinational-oriented picture for the brigade commander. Make determinations of how reports will be sent and received by higher headquarters. Assign multinational liaison officers with clearly defined sets of tasks, purposes, and authorities throughout supported and supporting units to facilitate clear communications among all partner and allied elements.

Insight. Multinational vehicle and equipment recovery rehearsals improved operations. Although all units seem to be able to look past an "us" versus "them" mindset in multinational operations and truly see themselves as an integrated task force, there is still a tendency to look at stranded equipment as "ours" or "theirs." The rotational units that operated most efficiently were those that cross-leveled recovery operations.

Recommendation. As in a previous rotation that included a U.S. rotational brigade task force and the Japanese Ground Self-Defense Force (JGSDF), during the RSOI phase of the rotation, mechanics from the U.S. and Japanese forces conducted recovery rehearsals of each allied partners' equipment. This delivered high payoffs in mitigating shortfalls and time needed to identify hookup and tow points, and shortened the discussion of which method might be best for extraction.

Insight. Integrated delivery of high-priority Class IX repair parts enabled higher operational readiness rates. Although most multinational rotations may choose to execute maintenance operations independently of each other in the operational environment, but yet battle track collectively to create a unified combat power common operational picture, there can be other opportunities to integrate or cross-level maintenance operations as well.

Recommendations. When searching for an opportunity to dispatch a mission to transport essential Class IX repair parts forward, it is important to think across the entire task force. When planning to get a resupply of parts into the operational environment to repair vehicles or equipment, widen the aperture to consider what partners or allies are conducting in the way of resupply operations. An every-other-day resupply schedule to a U.S. unit can be bolstered by understanding the partner country's resupply cycle. In a case at NTC, the visiting partner nation was going to the same logistics support area on opposing days. By packaging and segregating cargo, either partner can exploit the added opportunities to execute resupply operations. The benefit of looking across the multinational task force not only increases interoperability, but also speeds resupply while reducing the number of resupply convoy operations.

Insight. Vehicle licensing is another way to build depth on the battlefield. Because of realistic scenario play at the CTCs, an opposing force engagement can leave one or more drivers as notional casualties of the battle. As these personnel are temporarily removed from play, units must cross-level drivers to operate tactical vehicles. Additionally, as was the case with a partner nation in JRTC Rotation 21-01, most of the drivers were not properly licensed to drive a commercial or tactical vehicle on Louisiana state roads, so the geographic separation between the training areas became an issue when finding replacement drivers.

Recommendations. Each partner and allied country should license as many of their drivers and operators as possible during the RSOI portion of the deployment. Additionally, they should check the validity of their international driver's license and its reciprocity in the state or country they will be training in.

Insight. Understanding the complexity of the multinational joint operations area (JOA) is key to accomplishing the mission. Because intelligence drives operations, multinational formations that do not understand the complexity of the JOA face difficulty accomplishing their missions. Understanding the operational environment (OE) is often hampered by a predominant focus on traditional adversary information and intelligence gathering. Because of this tendency, intelligence efforts tend to focus primarily on enemy groups and actions, while neglecting information about the population (ethnic and tribal identities, allegiances and behaviors, religion, culture, politics, economics, etc.), which is a prerequisite for success. This situation is exacerbated by the failure of units to meet with the local population to confirm intelligence preparation of the battlefield information, the failure to incorporate information gathered by human intelligence and civil-military cooperation (CIMIC) teams into operations, and the lack of a standardized operational environment reporting template. Some units use a matrix utilizing the eight operational variables of political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT), and others use unique frameworks. This means any non-threat OE information comes in many forms to higher echelons, making it difficult to incorporate into planning.

Recommendations. Consider the following:

- Gather and incorporate non-threat OE data into the military decision-making processes (MDMP) and intelligence preparation of the battlefield products.

- Meet with local leaders and the population to gather perceptions. Identify sources of instability. Often, what is considered a source of instability by military formations is not viewed as such by the population.

- Ensure gathering OE data and local perceptions are command priorities. Direct subordinate formations to support CIMIC elements so they can engage the population. If no CIMIC assets are available, formations should use their own assets to conduct these engagements.

- Update OE estimates throughout the exercise.

- Identify a common OE reporting template and train subordinate formations to use it.

Insight. Avoid over-classification or over-marking of information to better enable multinational collaboration. The success of a multinational operation hinges on timely and accurate information and intelligence sharing. The development of a culture of trust, rooted in an effective information-sharing environment, ensures all units within the joint command structure are able to weigh the best available intelligence when conducting MDMP against their developed courses of action. Although multinational units must protect information according to their respective laws, intelligence sections must set goals to classify products appropriately, and staffs should encourage the use of less-restricted information whenever possible. Intelligence professionals must resist the temptation to classify all information at the highest classification levels for the information system they most often use. This system or level of classification may not be releasable to multinational partners, or even to subordinate units.

Recommendations: Partners and allies units should develop intelligence products with a multinational focus from the beginning of operations. Using guidance from appropriate regulatory and reference documents, and coordinating with the unit foreign disclosure officer intelligence sections can empower multinational partners to use intelligence to drive operations.

Insight. Avoid blue-on-blue causalities and be better prepared to operate in an environment with partners and allies. One of the biggest challenges to face in a multinational operation is fratricide prevention. The importance of combat identification and identification of friendly forces on the battlefield is essential to increasing operational effectiveness and situational awareness while reducing incidents of fratricide.

Every unit that comes to a CTC for a decisive action training environment rotation experiences fratricide from direct and indirect friendly fire. These incidents are largely a result of failure to identify friend from foe. Units that fail to prepare to operate in an environment with partners and allies against an equally diverse adversary suffer increased fratricidal incidents.

Recommendations. Consider the following:

- Execute capability briefings and create a vehicle, equipment, and materials display.

- Conduct integrated training.

- Exchange liaison officer packages to enhance planning and share an integrated common operational picture.

- Plan for friendly and allied force fratricide-prevention measures using standard operating procedures (SOPs).

- ○ Define combat identification measures (visual, active, and passive information requirements).

- ○ Determine identification of friend or foe for vehicles and Soldiers, day and night (visual, passive, and active, and challenge and reply passwords).

- ○ Implement shared battle tracking and reporting.

- ○ Identify shared positive identification procedures.

- ● Execute terrain management (operational environment management).

- ○ Use the minimum number of control measures necessary (clear, easy-to-understand, and shared).

- ○ Designate fire support coordination measures.

- ○ Assign sectors of fire to subordinates to ensure complete coverage of engagement areas to prevent fratricide or friendly fire incidents.

- ● Establish effective communication using the primary, alternate, contingency, and emergency (PACE) plan with partners and allies. Eventually detach a team or section to facilitate the communication flow and terrain management.

Markings Recommendations. The resources and techniques that are likely to be used in developing and employing optimal solutions for friendly markings require pre-planning and resourcing. Success in this endeavor will only be achieved by a thorough assessment of the problems likely to be faced and preparation of the necessary SOPs and materials to address these challenges. The following are a few recommendations for commanders and planners to consider:

- ● Friendly and enemy composition: Do similar vehicles exist between us?

- ● Partner and allied capabilities: Do they have night-vision goggles (NVGs)? Do they have thermal optics?

- ● Enemy capabilities: Do they have NVGs? Do they have thermal optics?

- ● How will we disseminate marking information to the lowest level?

- ● Will one marking suffice or will there be a need to be prepared to adjust them periodically?

- ● Where are we willing to assume risk by the prevalence or absence of markings?

There are three areas to consider when marking vehicles for easy and rapid identification of friend or foe recognition: What is visible with the naked eye, what is visible with night-vision devices, and what is visible with thermal-imaging devices. These areas are aligned with the electromagnetic spectrum and associated military equipment present in some formations that permit vision using different wavelengths of light:

- **Visible**. This is what can be seen by the naked eye and consists of a series of numbers and symbols to designate each vehicle in a formation. The numbers indicate the battalion and company and the symbol indicates the platoon. These numbers and symbols are painted directly onto the vehicle or a panel that is affixed to the vehicle.

- **Night vision (near infrared)**. This is what can be seen with light-amplification equipment such as NVGs, which is a chemical light that emits visible light in the infrared spectrum when activated. A light stick is easily attached to vehicles and can be readily observed from a distance of several hundred meters through night-vision devices during periods of darkness. When determining whether to use these devices, one should consider the risk of detection by an adversary that also employs night-vision devices.

- **Thermal (mid/far infrared)**. This is what can be seen with equipment that can differentiate objects using thermal imaging and involves a technique using combat identification panels to mark vehicles for identifying friend from foe under the thermal spectrum. The combat identification panels are placed on the sides and rear of the vehicle with another panel-like device employed on the front.

For more information on multinational collaboration, see Field Manual 3-16, *The Army in Multinational Operations* (8 April 2014), Center for Army Lessons Learned (CALL) 16-18, *Multinational Interoperability Reference Guide* (30 June 2016), and CALL 17-17*, Decisive Action Training Environment at the Joint Multinational Readiness Center (JMRC)*, Volume IV (23 June 2017).

Endnote

1. Joint Publication 2-0, *Joint Intelligence*, 22 October 2013, page GL-11.

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CHAPTER 5

Insights From Partners and Allies From the Combat Training Centers

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Insight. Understand the multinational task force's limitations and unrealized capabilities. Failure to understand partner and allied capabilities and capacities can lead to missed opportunities and failure. Observer coach/trainers at the training centers have observed first-hand the dilemmas partner units encounter from not understanding their multinational partners' capabilities and limitations. This disconnect can be anywhere from doctrine to equipment to culture.

Recommendations. Discuss unit capability and capacity with all partners and allies participating in the event. Early discussion with assigned multinational partners is necessary with a focus toward equipment, capabilities, and employment considerations all aimed at creating shared understanding. This should occur at mid- and final-planning conferences and during the Joint Combined Academics Program (JCAP). Units need to address and identify liaison teams early to effectively serve as the "connective tissue" for partners and allies. Additionally, when a formation arrives at the intermediate staging base, take time to visit all partners and allies to give staff a comprehensive lay-down of their doctrinal capabilities, equipment, and employment considerations for planning efforts.

Insight. Improve the company orders process. Partner and allied unit leaders must proactively engage in the multinational orders process. At the lowest level, the company orders process is crucial to operational planning and prioritizing efforts within the unit. It also enables the commander and other leaders to use available time effectively and efficiently in the planning and execution of company operations. Because of the high tempo of decisive action training environment (DATE) rotations, companies struggle with the orders process, resulting in incomplete plans. Company orders often are given within hours of starting-point times, if at all, leaving platoon leaders without ample time to create and brief their plans. Multinational unit leaders are often left out of the planning process, decreasing their awareness and degrading the company's ability to build a team.

Recommendations. Consider the following:

- Partners and allies should adapt to use warning orders to disseminate information in a timely manner.

- Develop a planning standard operating procedure (SOP) that specifically puts certain leaders (platoon leaders, executive officers, and platoon sergeants) in charge of creating specific products for the company operation order (OPORD), cutting down on the time spent creating products and planning. A planning SOP will also give those leaders assisting in creating the company plan a better idea of what is going on.

- Have a leader (platoon leader, platoon sergeant, squad leader) from the multinational unit assist in the planning process. This will increase understanding and assist in team building.

Insight. Understand differences in operational lexicons to enhance understanding in communication. All subordinates must understand common national or North Atlantic Treaty Organization (NATO) doctrinal language in planning and execution to avoid confusion. For example, "zone reconnaissance" in U.S. doctrine is synonymous with "area search" in NATO doctrine. One nation's use of the term "neutralization" is equivalent to another nation's use of "suppression." Additionally, other nations use their own terms, such as "break-in point," "report lines," or "forming-up point." Incorrectly assuming that terms are equivalent is likely to lead to confusion, and could hinder a unit's ability to achieve the commander's intent.

Recommendations. Higher echelons must take the lead in establishing commonality of operational terms and graphics. Defining and referencing all tactical tasks or effects assigned in the text of the operation order (OPORD) provides clarity. Also, define tasks and effects during the actual OPORD briefing. Last, subordinates should describe how they intend to achieve defined tasks or effects during the backbrief and rehearsal.

Insight. Create and prepare common and consolidated graphics. Higher headquarters typically struggle with the requirement to create consolidated graphics that accurately reflect subordinate unit plans. Making the situation worse, some partners and allies tend to make limited use of operational graphics and rely heavily on intent graphics. Although this enables increased flexibility and latitude in subordinates' plans, it also reduces the higher headquarters' ability to conduct accurate battle tracking and results in reduced situational awareness by higher headquarters and adjacent units. Completed consolidated graphics allow increased situational awareness at all echelons.

Recommendations. Consider the following:

- Require subordinate units submit operational graphics.

- Prepare and distribute consolidated graphics to higher, lower, and adjacent units.

- Ensure graphics are usable by subordinates, whether by manually creating overlays or by using liaison officers and shared command and control systems.

Insight. Employ graphic control measures that facilitate tactical movement and enemy contact. The doctrinal foundation and tactics, techniques, and procedures of multinational partners regarding movement and maneuver can vary significantly. Incorporating these movement techniques in the planning process will greatly assist the multinational units in understanding when and where they need to be prepared to transition from movement to maneuver in expectation for contact with the enemy.

Tactical movement is movement in preparation for contact. Knowing when and where to transition between movement techniques during movement from the tactical assembly area to anticipated initial contact with the enemy has been a difficult process to fully conceptualize at the platoon and company levels. Commanders and platoon leaders alike have a difficult time understanding when to transition between movement techniques, which can hinder their ability to gain contact with the enemy in the most favorable manner. The problem starts during preparation for the mission as part of troop leading procedures. At the company level, leaders often fail to specifically highlight these techniques during the scheme of maneuver portion of their OPORD briefings. Additionally, the graphic control measures that should serve as visual cues before the starting point and during execution of the mission often are not annotated graphically on the leaders' maps.

It is imperative that partner and allied leaders account for these transitions in their plan because in most cases while training at a combat training center (CTC), they will be attached to one of many multinational partners in a U.S.-led task force.

Recommendations. Consider the following:

- Leaders should conduct proper intelligence preparation of the battlefield and identify where contact with the enemy is most likely to occur. This allows them to identify specific points along their axis of advance where they will have to transition between movement techniques before conducting deliberate maneuvers as part of actions on contact.

- Leaders at the platoon and company levels should create graphic control measures (phase lines, checkpoints, etc.) on their maps that are easily identifiable to serve as visual cues during rehearsals and execution.

- Leaders should incorporate movement techniques and transition points into rehearsals at every echelon to ensure leaders fully understand the overall scheme of maneuver.

Insight. It is important to have an awareness of the presence of role players. The CTCs are famous for their realism. So much so, that they adeptly integrate the use of role players. Typically, role players represent the indigenous people and government officials for a notional country. The CTCs have also been known to use role players to represent U.S. embassy officials, partner or allied office of defense cooperation officials, or even nongovernmental organization officials such as the International Red Cross, Red Crescent, etc. All of these "extras" add to the realism and experience.

Recommendations. For those partners and allies attending a rotation, it is important to become aware of these role players as they are introduced, sometimes as early as the reception, staging, onward movement, and integration (RSOI) phase. Simply having an awareness of their presence, or even their presence "in the box" enhances the experience of the rotation. Having a mindset of being in-tune with supporting role-player culturalisms is important and the fact they do not represent an enemy threat can be viewed as an asset in the scenario.

Insight. Train in the use of the Multiple Integrated Laser Engagement System (MILES) and the notional casualties it produces. Another facet of the CTCs' realism is the employment of MILES by friendly forces and the opposing force. This system can be individually mounted on Soldiers and their weapon system and onto wheeled and tracked vehicles. This integrated laser system is the fairest way to determine if a casualty has been inflicted upon from either competing side. In the case of individual Soldiers, a Soldier-worn system will alert if an enemy small arms engagement has been successful. If a Solider has been "hit," the Soldier removes a pre-distributed card in a sealed envelope from the top left uniform pocket and provide it to an observer coach/trainer (OC/T). At the CTCs, the observer coach/trainer will assess a casualty based on the situation, weapons system, and method of engagement.

The partner-nation Soldier should cooperate with the information on the casualty card. This will start a whole detailed sequence of adjacent Soldiers providing simulated lifesaving medical aid; a radio call for casualty evacuation; higher-level medical reception, triage, and treatment; and all the way through the process of the personnel officer (adjutant S-1) re-ordering a replacement Solider based specifically on military skill specialty. The quicker a Soldier is treated and processed, the quicker the Soldier returns to duty. This enables the unit to maintain its combat power and retain its effectiveness to continue operations against the enemy.

Recommendations. Although one partner or allied element may participate in a CTC rotation as an infantry or engineer unit, intelligence Soldier, or even logistician, the commonality they all have is the simulated opportunity to, at some point, become a casualty or treat one. Although most other nations may not have a system like the U.S. MILES, they can certainly ensure their future success by training at home station with their own OC/Ts and an objective means to generate casualties to initiate and exercise the processes of combat casualty care, casualty evacuation, and replacement operations. This realistic level of collective training that can be accomplished at home stations will prepare a unit not only for success at a CTC, but also in combat.

Insight. Conduct multinational tactical fire direction to hit the target every time. In a multinational field artillery task force headquarters, units routinely employ field artillery assets successfully, regardless of type or from what country, provided that all elements contribute robust liaison and fire-direction personnel centrally located at the appropriate command and control echelon. Additionally, a proven technique is to conduct tactical fire direction via voice or a shared non-digital common operational picture (typically analog).

Recommendations. Fire direction is essentially a common language that transcends most armed forces. The empirical requirements for field artillery task forces remain unchanged even if encompassing multinational firing assets. To maintain a high degree of success, collocate echelon-appropriate, fire-direction centers to maximize massing of fires while enabling subordinate firing elements to work within their national, technical fire-direction systems. If this is not possible, establish robust liaison officer capabilities that adequately detail tactical fire-direction information, movement requirements, and planning considerations to the gaining partner or allied headquarters. These liaison officer cells should contain a minimum of four personnel (one officer, one noncommissioned officer, and two radio operators) to monitor multinational force fires and the field artillery task force command frequencies.

Insight. Simplify ammunition management. When executing unified land operations with a multinational field artillery task force, the headquarters might experience some difficulties in establishing and maintaining ammunition management with two (or possibly three) differing families of munitions to plan for and maintain.

Recommendations. Approach all multinational forces as composite task forces and use the field artillery tasks to simplify ammunition management (for example, make one firing battery the primary smoke shooter, and so forth). If subordinate partner and allied units do not bring organic transportation assets, dedicate a portion of the field artillery task force's sustainment footprint to directly support that element, especially if the munitions are not compatible. Apply unique commander's guidance, attack guidance, and supply rates to account for each caliber of munitions used within the formation. Attack guidance is particularly important, as the field artillery fire direction center must differentiate how many rounds it takes to suppress targets using 105 millimeter versus 152-millimeter ammunition.

Insight. Mounted and dismounted land navigation and practice makes perfect. Different countries navigate differently. Although one country may use a global positioning system (GPS)-based system, another may do it manually. Some partners may use commercial off-the-shelf technology in their home of origin, while the U.S. military will exclusively use military-grade, GPS-based systems. Another complicating factor is not all map material is releasable for full dissemination between partners. Although all should be trained in manual land navigation, the secondary skills may have become rusty over time. The added time in recovering these skills can have a detrimental effect on movement, particularly at the rapid speeds of advance in mounted navigation.

Recommendations. During the RSOI phase of the rotation, time needs to be allocated to the electronic system of land navigation and the manual. (If a partner country is drawing U.S.-provided GPS navigation equipment at the CTC, then additional time should be allocated for Soldier training on this newly introduced system.) During the execution portion of the rotation and at whichever point the original unit task organization changes, any combined formations of integrated movements with partners and allies should include this as part of the orders process, march formation, or convoy briefing. Agreeing to a standard of equipment used, whether electronic or manual, and map versions is imperative to the greatest success.

Insight. An in-depth understanding of rules of engagement (ROE) saves lives and resources. Multinational operations are complex, particularly large-scale combat operations. Commanders are faced with conducting offensive, defensive, and stability tasks simultaneously and increasingly as part of multinational efforts. ROE specific to each operation now become more important.

Recommendations. At a minimum, ROE should cover who can be engaged, how to identify who can be engaged, and how to engage them.

ROE are defined as "directives issued by competent military authority that delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered."

Joint Publication (JP) 1-04, *Legal Support to Military Operations*, 2 August 2016, page GL-3.[1]

"[U.S.] Soldiers deployed to a combat zone overseas follow ROE established by the Secretary of Defense and adjusted for theater conditions by the joint forces commander. Within the U.S. and its territories, Soldiers adhere to rules for the use of force. Rules for the use of force consist of directives issued to guide U.S. forces during various operations. These directives may take the form of execute orders, deployment orders, memoranda of agreement, or plans.[2] ROE are permissive measures intended to allow the maximum use of destructive combat power appropriate for a mission. Rules for the use of force are restrictive measures intended to allow only the minimum force necessary to accomplish a mission. The underlying principle is a continuum of force, a carefully graduated level of response determined by the behavior of possible threats."[3]

"Successful operations require Army forces to employ lethal and nonlethal capabilities in a disciplined manner. Threats challenge the morals and ethics of Soldiers. Often, an enemy does not respect international laws or conventions and commits atrocities simply to provoke retaliation in kind. Any loss of discipline on the part of friendly forces is likely to be distorted and exploited into propaganda and magnified through the media. It is crucial that all personnel operate within applicable U.S., international, and, in some cases, host-nation laws and regulations. Ensuring friendly forces remain within legal, moral, and ethical boundaries is a leader's duty. This challenge rests heavily on small-unit and company-grade leaders charged with maintaining good order and discipline within their respective units. The Soldier's Rules in Army Regulation 350-1, *Army Training and Leader Development* (10 December 2017), distill the essence of the law of war."[4]

Insight. Understand fratricide and friendly fire. The CTCs are infamous for their fast-paced, realistic chaos of combat that forces participants to make split-second decisions. Identification of active targets and further identification of friend or foe can be difficult because of the speed of acquisition, fluid environment, limited light visibility, and literal and figurative smoke and fog of war. It is essential that Soldiers at the lowest level understand who their partners and allies are in their task force, and be well studied on the existence of the opposing force and any visually modified equipment.

Recommendations. During the RSOI portion of the CTC deployment, leaders must emphasize that not all Soldiers and equipment belong to the enemy. It is imperative for leaders to train subordinates first in friendly forces recognition because the likelihood of proximity may bring them in contact with "friendlies" first, and second in the recognition of the opposing force and enemy soldiers, vehicles, equipment, and aviation with the same emphasis. Verbally communicate to each echelon up and down, and left to right the presence of enemy or friendly forces and, when possible, an echo of a confirmed secondary sighting before engagement.

Endnotes

1. Joint Publication (JP) 1-04, *Legal Support to Military Operations*, 2 August 2016, page GL-3.

2. See JP 3-28, *Defense Support of Civil Authorities*, 29 October 2018, for discussion on rules for the use of force.

3. ADP 3-0, *Operations*, 31 July 2019, page 3-10.

4. Ibid., pages 3-10 and 3-11.

CHAPTER 6

Insights on Regeneration and Departing a Combat Training Center

Insight. Accelerated redeployments. Some or all of a partner or allied unit may be on an accelerated timeline for departure. Attached partners and allies become so integrated into the task force that they follow synchronously through all timelines, even into redeployment.

Recommendations. As soon as a unit exits the box and tactical play ends, the unit's timeline for departure should be confirmed. A quick mission analysis of tasks to be completed in the redeployment phase should be done and individual timelines should be established if different from the rest of the rotational unit. This will alleviate unnecessary stress for Soldiers, facilitate an organized redeployment, and allow Soldiers the proper reflective analysis to also participate in after action reviews.

Issue. Allow time for equipment draw and preventive maintenance checks and services (PMCS). Units that took their time during wheeled vehicle equipment draw by conducting thorough operator-level PMCSs experienced fewer mission-related impacts because of maintenance failures. Additionally, this attention to detail created a quicker turn-in process during the regeneration phase of the rotation.

Recommendations. Units inclined to rush to the next phase of the rotation and be the first out of the motor pool for equipment draw are not always the most successful. A deliberate and well-executed draw and PMCS will pay large dividends during the rotation and the regeneration phase where it is most important.

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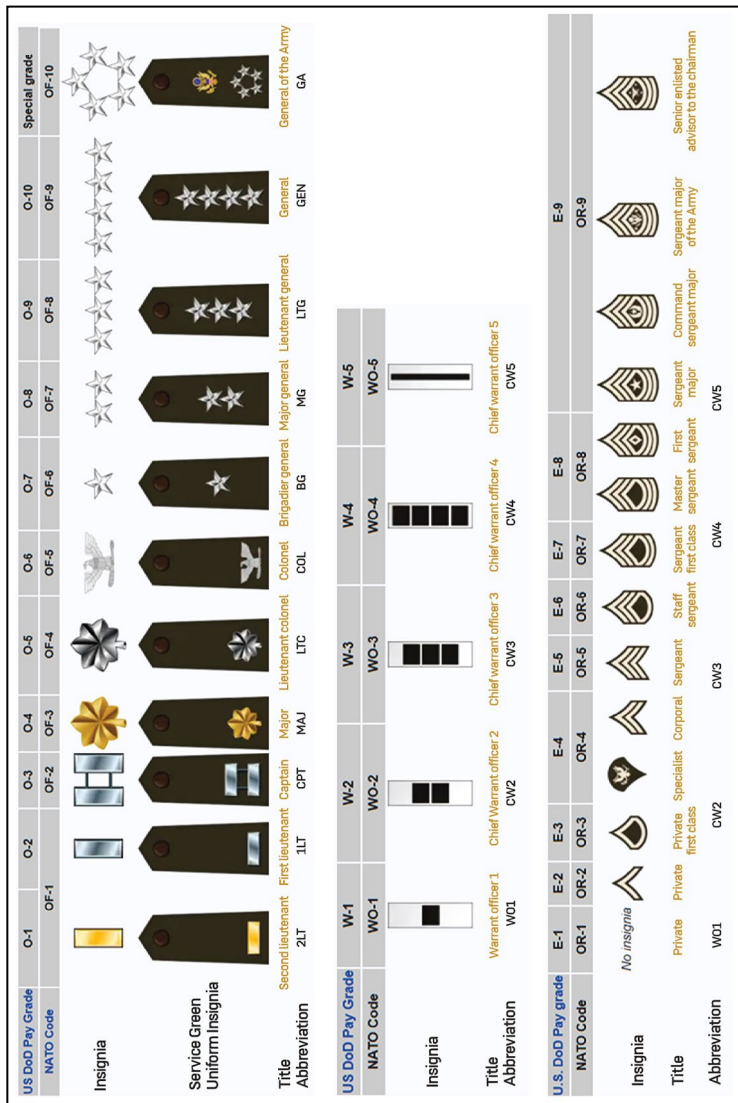
APPENDIX A

U.S. Army Rank Structure

Figure A-1. U.S. Army rank structure

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APPENDIX B

The U.S. Army Military Decision-Making Process

KEY INPUTS	STEPS	KEY OUTPUTS
• Higher headquarters' plan or order or a new mission anticipated by the commander	Step 1: Receipt of Mission	• Commander's initial guidance • Initial allocation of time
	Warning order	
• Commander's initial guidance • Higher headquarters' plan or order • Higher headquarters' knowledge and intelligence products • Knowledge products from other organizations • Army design methodology products	Step 2: Mission Analysis	• Problem statement • Mission statement • Initial commander's intent • Initial planning guidance • Initial CCIRs and EEFIs • Updated IPB and running estimates • Assumptions • Evaluation criteria for COAs
	Warning order	
• Mission statement • Initial commander's intent, planning guidance, CCIRs, and EEFIs • Updated IPB and running estimates • Assumptions • Evaluation criteria for COAs	Step 3: Course of Action (COA) Development	• COA statements and sketches - Tentative task organization - Broad concept of operations • Revised planning guidance • Updated assumptions
• Updated running estimates • Revised planning guidance • COA statements and sketches • Updated assumptions	Step 4: COA Analysis (War Game)	• Refined COAs • Potential decision points • War-game results • Initial assessment measures • Updated assumptions
• Updated running estimates • Refined COAs • Evaluation criteria • War-game results • Updated assumptions	Step 5: COA Comparison	• Evaluated COAs • Recommended COAs • Updated running estimates • Updated assumptions
• Updated running estimates • Evaluated COAs • Recommended COAs • Updated assumptions	Step 6: COA Approval	• Commander approved COA and any modifications • Refined commander's intent, CCIRs, and EEFIs • Updated assumptions
	Warning order	
• Commander approved COA and any modifications • Refined commander's intent, CCIRs, and EEFIs • Updated assumptions	Step 7: Orders Production, Dissemination, and Transition	• Approved operation plan or order • Subordinates understand the plan or order

LEGEND:

CCIR	commander's critical information requirement	EEFI	essential element of friendly information
COA	course of action	IPB	intelligence preparatio of the battlefield

Figure B-1. The U.S. Army, seven-step military decision-making process (MDMP)[1]

Endnote

1. Field Manual 6-0, *Commander and Staff Organization and Operations*, 5 May 2014, page 9-3.

APPENDIX C

After Action Reviews

An after action review (AAR) is a guided analysis conducted at appropriate times during and at the conclusion of a training event or operation with the objective of improving future performance. It includes a facilitator, event participants, and other observers. AARs are conducted at every echelon and are essential in correcting observed training deficiencies by providing feedback that is immediate, direct, and standards based. AARs require involvement from those who participated in the training. AARs enable and encourage participants to self-discover what happened and then develop a plan for improving task performance. AARs focus on the commander's intent, guidance, training objectives, and task standards. They are not a critique and leaders avoid creating an environment of pointing out failures.

The climate of the AAR must encourage candid and open discussion of task performance. This is done without stifling learning and team building by emphasizing meeting the Army standard on tasks rather than judging success or failure, using questions to encourage self-discovery and important lessons. The AAR process allows a large number of Soldiers, leaders, and opposing forces to participate so more lessons and leader responsibility is shared to improve task performance.[1]

AARs have the following fundamental characteristics:

- Conducted during or immediately after each event.
- Focus on commander's intent, guidance, training objectives, and task standards.
- Involve all participants in the discussion.
- Use open-ended questions.
- Encourage initiative and innovation.
- Determine observed strengths and weaknesses.
- Link performance to subsequent training.

AARs follow an agenda that includes the following:

- Review what was supposed to happen.

- Establish what actually happened.

- Determine what was right or wrong with what happened.

- Determine how to perform the task to standard the next time.

Endnote

1. Field Manual 7-0, *Training*, 14 June 2021, Appendix K.

APPENDIX D

Multinational Rehearsals

This appendix is a summary of the rehearsals used in U.S. Army planning and operations. It provides information about how U.S. Army units conduct rehearsals and it shows the importance of rehearsals in planning and preparation for combat. Multinational units that work with U.S. Army units also participate in rehearsals. Rehearsals allow leaders and their Soldiers to practice key aspects of the concept of operations. These actions help Soldiers orient themselves to their environment and to other units before executing an operation. They help Soldiers build a lasting mental picture of the sequence of key actions within the operation.

Rehearsals are the commander's tool for ensuring that staffs and subordinates understand the commander's intent and the concept of operations. They allow commanders and staffs to identify shortcomings in the plan not previously recognized. Additionally, they contribute to external and internal coordination as the staff identifies additional coordinating requirements.

Effective and efficient units habitually rehearse during training. Commanders at every level routinely train and practice various rehearsal types. Local standard operating procedures (SOPs) identify appropriate rehearsal types and standards for their execution. All leaders conduct periodic after action reviews to ensure their units conduct rehearsals to standard and correct substandard performances. After action reviews also enable leaders to incorporate lessons learned into existing plans and orders or into subsequent rehearsals.

Adequate time is essential when conducting rehearsals. The time required varies with the complexity of the mission, the type and technique of rehearsal, and the level of participation. Units conduct rehearsals at the lowest-possible level using the most thorough technique, given the time available. Under time-constrained conditions, leaders conduct abbreviated rehearsals that focus on critical events determined by reverse planning. Each unit will have different critical events based on the mission, unit readiness, and commander's assessment.

The rehearsal is a coordination event, not an analysis. It does not replace war-gaming. Commanders war game during the military decision-making process (MDMP) to analyze different courses of action to determine and chose which course of action is the most optimal one. Rehearsals practice that selected course of action. Commanders avoid making major changes to operation orders (OPORDs) during rehearsals. They make only those changes essential to mission success and risk mitigation.

Center for Army Lessons Learned (CALL) 19-18, *Commander and Staff Guide to Rehearsals: A No-Fail Approach*, 1 February 2021.
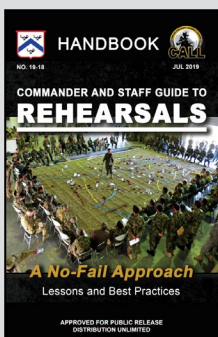
This handbook provides a cohesive instructional manual on rehearsals; it incorporates doctrine and best practices to mitigate unit challenges in executing rehearsals at all levels, while also acknowledging that the basic tenets of rehearsals have not changed. U.S. forces operate in a complex operating environment of cyber, multinational, and multi-domain players. This environment increases operational complexity, thus necessitating timely and effective rehearsals to optimize these capabilities and increase the likelihood of success.

TYPES OF REHEARSALS

The U.S. Army uses the following four types of rehearsals.

Backbrief. A backbrief is a briefing by subordinates to the commander to review how subordinates intend to accomplish their mission. Normally, subordinates perform backbriefs throughout preparation. These briefs allow commanders to clarify the commander's intent early in subordinate planning. Commanders use the backbrief to identify any problems in the concept of operations. The backbrief differs from the confirmation brief (a briefing subordinates give their higher commander immediately following receipt of an order) in that subordinate leaders are given time to complete their plan. Backbriefs require the fewest resources and are often the only option under time-constrained conditions. Subordinate leaders explain their actions from start to finish of the mission. Backbriefs are performed sequentially with all leaders reviewing their tasks. When time is available, backbriefs can be combined with other types of rehearsals. Doing this lets all subordinate leaders coordinate their plans before performing more elaborate drills.

Combined arms rehearsal. A combined arms rehearsal is an event where subordinate units synchronize their plans with each other. A maneuver unit headquarters normally executes a combined arms rehearsal after subordinate units issue their OPORD. This rehearsal type helps ensure subordinate commanders' plans achieve the higher commander's intent.

Support rehearsal (fires, sustainment, intelligence, etc.). The support rehearsal helps synchronize each warfighting function with the overall operation. This rehearsal supports the operation so units can accomplish their missions. Throughout preparation, units conduct support rehearsals within the framework of a single or limited number of warfighting functions. These rehearsals typically involve coordination and procedure drills for aviation, fires, engineer support, or casualty evacuation. Support rehearsals and combined arms rehearsals complement preparations for the operation. Units may conduct rehearsals separately and then combine them into full-dress rehearsals. Although these rehearsals differ slightly by warfighting function, they achieve the same result.

Battle drill or SOP rehearsal. A battle drill is a collective action rapidly executed without applying a deliberate decision-making process. A battle drill or SOP rehearsal ensures all participants understand a technique or a specific set of procedures. Throughout preparation, units and staffs rehearse battle drills and SOPs. These rehearsals do not need a completed order from higher headquarters. Leaders place priority on those drills or actions they anticipate occurring during the operation. Figure D-1 shows a battle drill/SOP rehearsal.
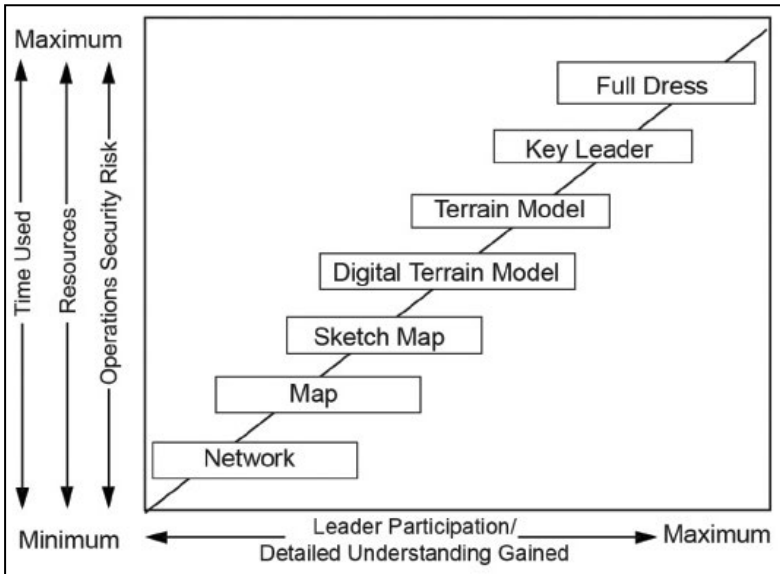

Figure D-1. The battle drill/SOP rehearsal[1]

During multinational operations, the most likely rehearsals to be conducted at the brigade combat team level will be the combined arms rehearsal and support rehearsal, but all types of rehearsals may be used during an operation.

REHEARSAL METHODS

Methods for conducting rehearsals are limited only by the commander's imagination and available resources. Resources required for each method range from broad to narrow. Each rehearsal method also imparts a different level of understanding to participants.

The most common method of a rehearsal used during multinational operations is a terrain model, map, key leader, and sketch map. Constraints such as time, terrain, lack of common operating digital systems, and lack of common networks can challenge the use of other methods. Multinational units should be prepared to participate in whatever rehearsal method is used. If partner and allied Soldiers are in doubt, they should ask questions to clarify. If a U.S. liaison officer (LNO) is present, the LNO should explain participant responsibilities and contributions to the rehearsal. If an LNO is not present, a U.S. counterpart should provide this information. All participants in a rehearsal have specified responsibilities. Leaders should use an established format during the rehearsal to effectively articulate the unit's actions and responsibilities in executing the plan. Be prepared to answer questions, make adjustments, and make decisions during the rehearsal.

All participants have responsibilities before, during, and after a rehearsal. Before a rehearsal, the rehearsal director states the commander's expectations and orients the other participants on details of the rehearsal, as necessary. During a rehearsal, all participants rehearse their roles in the operation. They make sure they understand how their actions support the overall operation and note any additional coordination required. After a rehearsal, participants ensure they understand changes to the OPORD and coordination requirements, and ensure they receive all updated staff products.

An effective rehearsal follows a prescribed agenda that everyone knows and understands. This agenda includes, but is not limited to the following:

- Roll call
- Participant orientation to the terrain
- Location of local civilians
- Enemy situation brief
- Friendly situation brief
- Description of expected enemy actions

● Discussion of friendly unit actions

● A review of notes made by the recorder

The execution matrix, decision support template, and OPORD outline the rehearsal agenda. These tools, especially the execution matrix, drive and focus the rehearsal.

Full-dress rehearsal. A full-dress rehearsal produces the most detailed understanding of the operation. It includes every participating Soldier and system. Leaders conduct the rehearsal on terrain similar to the area of operations, initially under good light conditions and then in limited visibility. Full-dress rehearsals consume more time than any other rehearsal type. All echelons involved in the operation participate in the full-dress rehearsal. Terrain management for a full-dress rehearsal is challenging.

Key leader rehearsal. Circumstances may prohibit a rehearsal with all members of the unit. A key leader rehearsal involves only key leaders of the organization and its subordinate units. It normally takes fewer resources than a full-dress rehearsal. Terrain requirements mirror those of a full-dress rehearsal, even though fewer Soldiers participate. The commander first decides the level of leader involvement. Then the selected leaders rehearse the plan while traversing the actual or similar terrain. A key leader rehearsal normally requires less time than a full-dress rehearsal.

Terrain model rehearsal. The terrain model rehearsal is the most popular rehearsal method. It takes less time and fewer resources than a full-dress or reduced-force rehearsal. An accurately constructed terrain model helps subordinate leaders visualize the commander's intent and concept of operations. When possible, commanders place the terrain model where it overlooks the actual terrain of the area of operations. The model's orientation coincides with that of the terrain. The size of the terrain model can vary from small (using markers to represent units) to large (on which the participants can walk). A large model helps reinforce the participants' perception of unit positions on the terrain.

Digital terrain model rehearsal. Digital terrain models are virtual representations of the area of operations. Units drape high-resolution imagery over elevation data, thereby creating a fly-through or walk-through. Holographic imagery produces the view in three dimensions. Often, the model hot-links graphics, detailed information, unmanned aircraft systems, and ground imagery to key points providing more insight into the plan.

Sketch map rehearsal. Commanders can use the sketch map technique almost anywhere, day or night. The procedures are the same as for a terrain model rehearsal except the commander uses a sketch map in place of a terrain model. Large sketches ensure that all participants can see as each participant walks through execution of the operation. Participants move markers on the sketch to represent unit locations and maneuvers. Sketch map rehearsals take less time than terrain model rehearsals and more time than map rehearsals.

Map rehearsal. A map rehearsal is similar to a sketch map rehearsal except the commander uses a map and operation overlay of the same scale used to plan the operation. A map rehearsal is normally the easiest technique to set up because it requires only maps and graphics for current operations. Units tailor a map rehearsal's operation overlay to the echelon conducting the rehearsal. Multi-echelon rehearsals using this technique are difficult.

Network rehearsal. Units conduct network rehearsals over wide-area networks or local-area networks. Commanders and staffs practice these rehearsals by talking through critical portions of the operation over communications networks in a sequence the commander establishes. The organization rehearses only the critical parts of the operation. These rehearsals require all information systems needed to execute that portion of the operation. All participants require working information systems, the OPORD, and graphics.

For additional information on multinational rehearsals see CALL 16-18, *Multinational Interoperability Reference Guide* (30 June 2016), Appendix E.

Endnote

1. CALL 19-18, *Commander and Staff Guide to Rehearsals: A No-Fail Approach*, 1 February 2021, page 9.

APPENDIX E

Liaison Officers

Within the human domain of interoperability, a key and essential task that is important is the selection and utilization of liaison officers (LNOs) and liaison teams. Chosen and employed wisely, these LNOs serve as the connective fabric when all else fails in a multinational environment. Although LNOs are focused on operations and movement and maneuver, empowered with the right products and skill sets, they can be critical to the success of all warfighting functions.

Center for Army Lessons Learned (CALL) 20-05, *Commander and Staff Guide to Liaison Functions*, 30 December 2019.
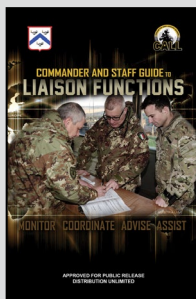
LNO functions are critical to the successful integration of diverse capabilities across military and civilian domains. Despite the importance of these functions, CALL continues to capture observations that indicate significant issues concerning the selection, training, and employment of LNOs. This handbook is designed to provide planning and execution guidance for the employment of LNOs in a single source document.

For technical interoperability, the LNO package should serve as a redundant means of communication with the primary means of communication being organic systems on Type 1 encryption or through tactical voice bridges. Because of the disruptive nature of combat training centers, it is imperative to plan for and maintain a communications architecture through LNO packages. It is considered a best practice to "trade" LNOs having a U.S. representative with the multinational unit and a multinational representative with the U.S. command post. The following is an LNO communications package postured for success and applies to the technical aspects of both LNO packages:

- The LNO equipment package mirrors the primary, alternate, contingency, and emergency (PACE) communications plan.

- LNO communications systems are fully mission capable before linkup.

- LNO Service members are trained on systems operations and basic troubleshooting.

- Requirements for system sustainment and power generation are identified and coordinated.

- Communications security fill capabilities reside with the LNO team.

- The LNO team participates in the communications exercise.

- The LNO team participates in the validation exercise.

- The LNO team conducts a communications security changeover rehearsal.

- The LNO team conducts a communications compromise rehearsal.

- The LNO team understands displacement of systems and how to reestablish operations.

The following are additional LNO planning considerations:[1]

- Liaison teams facilitate the exchange of information between organizations to cultivate mutual understanding and unity of purpose and action along shared lines of effort.

- At a minimum, liaison teams should be equipped to have reasonable life-support capabilities, communications equipment, and transportation with the manning to support their liaison mission.

- Requirements are driven by command relationships and anticipated mission support requirements, which may be modified throughout the operation.

- LNOs are not a substitute for transmitting critical information through customary staff-to-staff coordination means or via traditional command and control channels.

- LNOs are not staff augmenters, battle captains, or full-time planners for the supported unit.

- If LNOs are being granted any decision-making authority from the sending unit. If so, decision-making authorities should be discussed and outlined beforehand to ensure there is no confusion. Ensure to notify the gaining organization.

- When liaising with organizations outside the country's military, such as with various interagency elements, intergovernmental organizations, nongovernmental organizations, and multinational forces, it may require information to be shaped in a manner that the intended audience can understand (i.e., explanation of military terminology or jargon).

- Remember liaison teams have four basic functions: monitor, coordinate, advise, and assist.

The following are best practices for LNO employment:

- Incorporate LNOs in the battalion, brigade, and division battle rhythm and establish an LNO battle rhythm.

- Plan and resource the PACE communications plan—adding redundancy where feasible—that is integrated with the gaining unit's communication hierarchy.

- LNOs work to achieve mutual understanding and unity of effort between both organizations, which will be a combat multiplier.

- Send a solid, independent individual who knows the unit and will represent the command well. That individual's reassignment should "be felt," by the providing unit, but not cripple the staff section by the temporary assignment. Try not to send a new officer or noncommissioned officer.

- Bad news never gets better with time; share the not-so-good information sooner rather than later.

Endnote

1. CALL 20-05, *Commander and Staff Guide to Liaison Functions*, 30 December 2019, pages 2-3.

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APPENDIX F

North Atlantic Treaty Organization Seven-Step Planning Process

STEPS	KEY INPUTS	KEY ACTIVITIES	KEY OUTPUTS
STEP 1: Receipt of Mission	• Higher headquarters' plan or order or a new mission anticipated by the commander • Warning Order	• Alert the staff and other key participants	• Issue commander's initial planning guidance • Issue initial warning order
			Warning Order
STEP 2: Mission Analysis	• Initial guidance • Higher headquarters' plan and order • Knowledge products from other organizations • Higher headquarters' knowledge and intelligence products • Update running estimates	• Analysis of higher commander's order • Develop a restated mission statement • Formulate commander's initial intent • Develop ICP	• Issue commander's initial intent • Deliver the order analysis briefing • Deliver the mission analysis briefing • Issue additional commander's planning guidance • Deliver commander's initial back brief to higher commander
			Warning Order
STEP 3: COA Development	• Commander's initial intent • Revised commander's planning guidance: - Selection criteria for COA development - Commander's COA development guidance • Assigned and implied tasks, and essential task	• Choose a COA development method • Assess relative combat power • Develop adversary (enemy) COAs • Prepare COA briefing • Validate COAs	• Friendly COAs including sketches • Adversary (enemy) COA(s) including sketches • COA comparison products • COA briefing
STEP 4: COA Analysis	• Revised planning guidance • COA sttements and sketches • Updated assumptions • Updated running estimates • Any new information (from higher HQ, CCIRs, etc.)	Preparation for each COA • Select analysis technique • Select ACOA to compare • Select critical events and decision points to analyze Perform • Deliver COA analysis • Summerize and assess results • Refine selected COAs	• Refined COAs • Potential decision points • COA analysis results • Updated assumptions and CCIRs • Revised commander's planning guidance • COA analysis briefing
STEP 5: COA Comparison	• Updated running estimates • Refined COAs • Evaluation criteria • COA analysis results • Updated assumptions and CCIRs • Revise commander's planning guidance	• Conduct advantages and disadvantages analysis • Compare and rate COAs • Select the staff preferred COA • Prepare and deliver the COA decision brief	• Recommended COAs • COA decision brief
STEP 6: Commander's Decision	• Updated running estimates • Evaluated COAs • Recommended COAs	• Commander's decision on COA	• Commander-approved COA and any modifications • Refined commander's final intent and CCIRs • Issue final planning guidance
			Warning Order
STEP 7: Orders Production, Dissemination, and Transition	• Commander-approved COA and any modifications • Final planning guidance • Updated IPOE	• Plan and order reconciliation • Approve the plan and/or order • Prepare and issue plan and orders	• Approved operation plan and order

LEGEND:

ACOA	adversary course of action	ICP	intelligence collection plan	
CCIR	commander's critical information requirment	IPOE	intelligence preparation of the operating environment	
COA	course of action	HQ	headquarters	

Figure F-1. The North Atlantic Treaty Organization (NATO) seven-step planning process.[1]

Endnote

1. NATO Standard Allied Procedural Publication 28, *Tactical Planning for Land Forces*, Edition A, Version 1, November 2019, Page 1-7.

APPENDIX G

Sample Multinational Integration Checklist

Table G-1. Sample multinational unit checklist from the National Training Center

Multinational Unit Integration Checklist	
Key Tasks	**Suspense**
Provide a point of contact to the training center G-3 plans division.	D-360
Provide the initial task organization (personnel, vehicles, equipment, interpreters) to the brigade combat team and G-3 plans.	D-250
Attend the initial planning conference (held at the rotational training unit's designated location); submit a foreign visit request no later than 60 days before the event.	D-210
Confirm the task organization (personnel, vehicles, equipment, and interpreters).	D-210
Initiate monthly in-progress reviews via teleconference; attendees must include representatives from the brigade combat team and multinational unit.	D-180
Attend the rotational support conference; submit the foreign visit requests 60 days before the conference.	D-120
Attend the leader-training program; submit foreign visit requests 60 days before the program.	D-120
Confirm weapons systems, type, and quantity of ammunition with the installation ammunition manager.	D-120
Confirm the mode of transportation for ammunition with the installation ammunition manager. The ammunition must arrive after the brigade combat team Torch Party's arrival (D-17).	D-120
Provide the North Atlantic Treaty Organization (NATO) National Stock Number or equivalent identifier for net explosive weight to the installation ammunition manager.	D-120

| MULTINATIONAL UNIT INTEGRATION CHECKLIST ||
Key Tasks	Suspense
Review the ammunition and residue requirements (all ammunition and residue must be removed upon completion of training in accordance with the U.S. Department of Transportation standards and U.S. Customs requirements.	D-120
Submit the mission letter for off-rotational training requests (live-fire exercises conducted outside of training days 1 through 14).	D-120
Provide pictures of vehicles and vehicle power supply to determine a power source for the Multiple Integrated Laser Engagement System (MILES) (only applicable to multinational units bringing their own vehicles).	D-90
Develop a concept of support (sustainment requirements) with the rotational training unit.	D-90
Class III B: Provide type, quantity, size, and fuel consumption of vehicles and the method of delivery.	D-90
Class III P: Provide petroleum, oil, lubricants, and package requirements.	D-90
Class IX: Provide a method of shipping parts and requirements for specific parts.	D-90
Provide guest observer coach/trainers with the roster to include ranks and specialties. Determine if participating partners and allies will bring their own vehicles or get licensed on U.S. M1097 high-mobility multipurpose wheeled vehicles (M1097).	D-90
Confirm the roster and submit the foreign visit requests for rotational training.	D-60
Provide inbound and outbound movement plans (i.e., arrival and departure dates, personnel, contracted buses, baggage trucks, unit points of contact, coordinate escorts from the brigade combat team, etc.).	D-60
Provide vehicle bumper numbers.	D-30

ADDITIONAL PLANNING CONSIDERATIONS

The following are other key tasks that must be accomplished before deployment:

- National caveat review: What are the multinational units authorized and not authorized to do in a tactical environment and administratively. For example, some forces are not authorized to ride in the backs of light medium tactical vehicles, some forces cannot employ dud-producing munitions, some cannot employ anti-personnel mines/booby traps. Is there a waiver available for these caveats? Has it been submitted?

- Has the acquisition and cross-servicing agreement been clearly established? Has Class V for non-U.S. weapon systems been ordered and shipped? Have special Class I needs been considered (Halal meals, etc.)? Is U.S. Class III bulk compatible with the multinational unit's equipment? Has Class IX been sent forward to the combat training center to allow the multinational unit to repair equipment in rotation?

- Has a security review been completed to allow eligible partner units to use the U.S. Secret Internet Protocol Router Network (SIPRNET) and gain access to various controlled areas?

- Has the command relationship been clearly defined to the U.S. unit? Are there special requirements from the partner nations that requires their unit to have their own command and control structure (i.e., they cannot be in a combined joint task force command structure)?

- Standard operating procedure exchange should be accomplished before units arrive on the ground at the combat training center.

- Have communications platforms been identified to ensure compatibility or identify incompatibilities?

- If the multinational unit will have access to the main post services, how will they get around? Are there foreign license requirements?

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APPENDIX H

Technical Challenges and Techniques of Multinational Partner Digital Interoperability

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The three elements to command and control (C2) information systems digital interoperability are a shared network, a technical solution between mission command systems, and a digital interoperability standard operating procedure (SOP) to manage the human dynamic of interoperability.

Shared network. True digital interoperability can only be accomplished with a shared network. Although a unit can achieve a shared, digital common operational picture (COP) across two systems by using the "swivel chair" method, this is not digital interoperability. Locations like U.S. Army European Command (USAREUR) have two mission partner environment networks used for C2 information systems digital interoperability.

Mission command systems technical solution. Multinational partners capable of digital interoperability will use their internal C2 systems and a multilateral interoperability program (MIP) to facilitate a shared, digital COP. Partners may also use SitaWare since it has an MIP built into the system. SitaWare provides advanced C2 and battle-management capabilities out of the box including the most important interoperability that enables nations to exchange operational environment information with coalition partners. Units must use the Command Post Computing Environment or Army Command Information System to provide the technical solution to connect with multinational partners.

Digital interoperability SOP. Units must establish a digital interoperability SOP with their multinational partners. Each country that uses MIP or SitaWare determines what data they share and how they process information with other countries. Units will need to work with their multinational partners to determine the type of data and the frequency with which it is shared across C2 systems. Most countries with MIP will share position location information, graphics, enemy situation templates, and significant activities. Once data type and frequency are determined, units must decide on the process for disseminating the information to establish a shared, digital COP.

Secure Radio Communications with Multinational Partners

Before conducting operations or exercises, units must identify radio platform capabilities and communications security encryption standards. Mission requirements will dictate the primary means of communications for operations. The land component command will identify a mode of operation, waveform, and encryption standards for operations. Modes of operation and waveform may include the following, but are subject to change based on organization equipment:

- Single channel plain text

- Single channel cipher text

- Frequency hop

- Satellite communications dedicated

- Satellite communications integrated waveform

- High frequency

- High frequency automatic link establishment

APPENDIX I

The Metric Versus Imperial System

The U.S. customary measurement system is based on the British imperial system. Only three countries in the world continue to use the imperial system and the U.S. is one of them. The imperial system is used for nearly all measurements throughout the U.S. and its associated military training areas and military forces. Oftentimes, it is blended with the metric system. For example, a visiting military unit might be issued a map of the training area that will be based on the metric system in kilometers, but the installation road signs will reflect miles under the imperial system. Partner-nation and allied forces training with the U.S. may find it confusing at times as they try to calculate measures or transition between systems. The following are some helpful tips:

- Measure vehicle width and height in meters, the vehicle weight in metric tons, and convert imperial measurements before departure. Leave the measurements accessible to the vehicle and truck commander.

- Understand that different types of roads have different standardized speeds. The standards can be found at every border crossing on a large sign, or can be found with a quick internet search. Each country has its own standards, and they may not be exact from your last country.

- Although military-vehicle speedometers have a kilometers-per-hour (km/h) gauge, it is recommended that each truck commander maintain a chart to convert Km/h to miles per hour (mph).

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GLOSSARY

ACRONYMS AND ABBREVIATIONS

AAR	after action review
ABCANZ	American, British, Canadian, Australian, and New Zealand
C2	command and control
CALL	Center for Army Lessons Learned
CIMIC	civil-military cooperation
COP	common operational picture
CPCE	Command Post Computing Environment
CTC	combat training center
D	day
DATE	decisive action training environment
DOTMLPF	doctrine, organization, training, materiel, leadership and education, personnel, and facilities
DSCA	defense support of civil authorities
EXROE	exercise rules of engagement
GPS	global positioning system
IN	infantry
JCAP	Joint Combined Academics Program
JGSDF	Japanese Ground Self-Defense Force
JMRC	Joint Multinational Readiness Center
JOA	joint operations area
JRTC	Joint Readiness Training Center
kp/h	kilometers per hour
LNO	liaison officer
MDMP	military decision-making process
MILES	Multiple Integrated Laser Engagement System
MPE	mission partner environment
mph	miles per hour
NATO	North Atlantic Treaty Organization
NTC	National Training Center

NVG	night-vision goggles
OC/T	observer coach/trainer
OE	operational environment
OPFOR	opposing force
OPORD	operation order
PACE	primary, alternate, contingency, and emergency
PMCS	preventive maintenance checks and services
PMESII-PT	political, military, economic, social, information, infrastructure, physical environment, and time
REGEN	regeneration
ROE	rules of engagement
RSOI	reception, staging, onward movement, and integration
SIPRNET	SECRET Internet Protocol Router Network
SOP	standard operating procedure
TTP	tactics, techniques, and procedures
UAP	unified action partner
ULO	unified land operations
USAREUR	U.S. Army European Command

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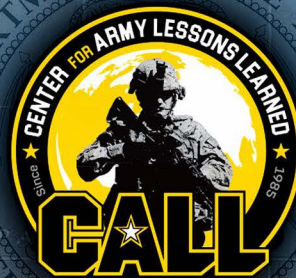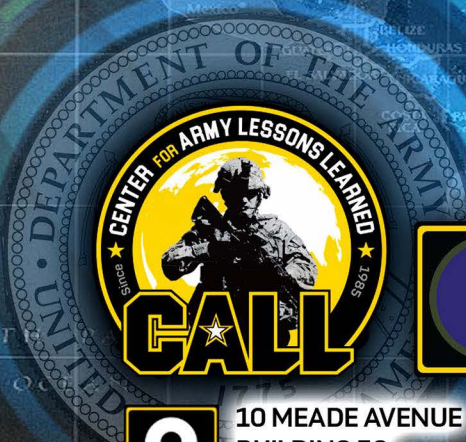
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