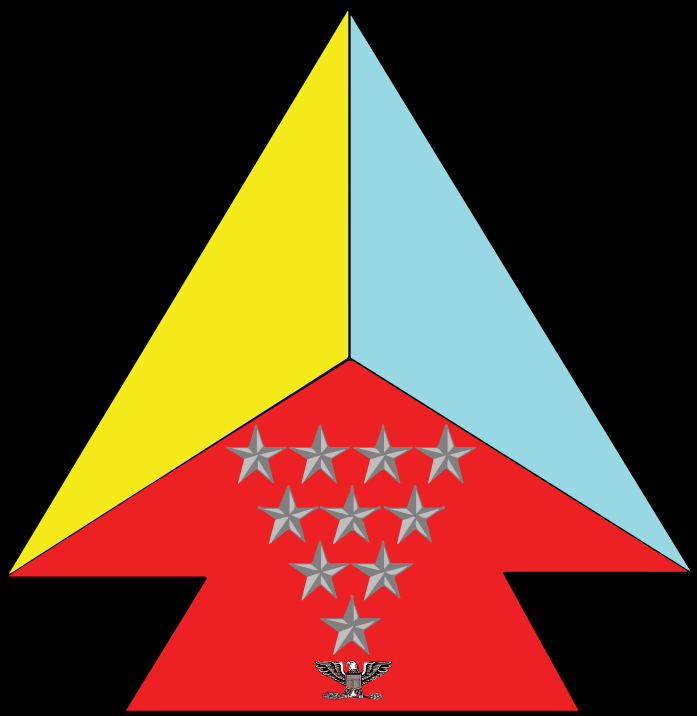
BULLETIN

NO. 19-13

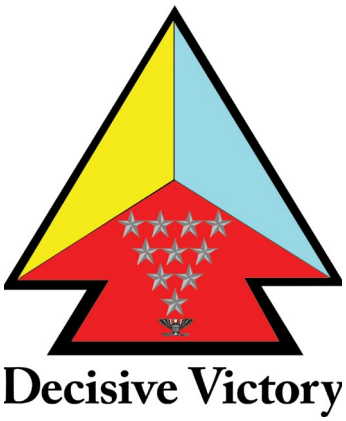
MAR 2019

Mission Command Training in Unified Land Operations



FY18 Key Observations

MISSION COMMAND TRAINING PROGRAM (MCTP)
COL Guy M. Jones
Commander, MCTP



Mission Command Training in Unified Land Operations: Mission Command Training Program (MCTP) FY18 Key Observations

DIGITAL VERSION AVAILABLE

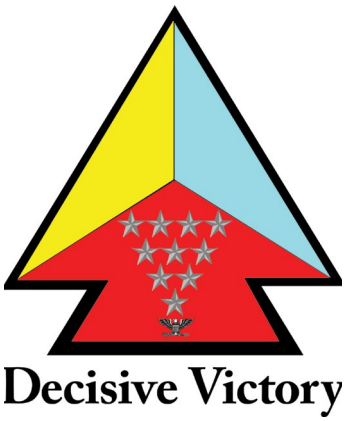
A digital version of this CALL publication is available to view or download from the CALL website:

https://call.army.mil

FOLLOW CALL ON SOCIAL MEDIA

https://twitter.com/USArmy_CALL
https://www.facebook.com/CenterforArmyLessonsLearned

THIS PAGE INTENTIONALLY LEFT BLANK



Foreword

Mission Command Training Program (MCTP) trains Army functional/multi-functional/maneuver brigades, divisions, expeditionary sustainment commands (ESCs), corps, special operations units, and U.S. Air Force personnel in mission command and unified land operations. In accordance with the U.S. Army's combat training center programs and the Chief of Staff of the Army's training guidance, MCTP conducted five multi-echelon warfighter exercises (WFXs) and six brigade-level WFXs during fiscal year 2018 (FY18). Together, these exercises met the training objectives of more than 60 units. Additionally, MCTP worked closely with the Joint Staff J-7 and other training partners to infuse joint context within a WFX to properly stimulate a corps training audience in preparation for its future role as a joint task force (JTF).

MCTP's key observations express the impressions collected by MCTP observer-coach/trainers (OC/Ts) during training exercises throughout FY18. The information in this bulletin comprises the most recent and salient points distilled from multi-echelon, multi-component mission command training (MCT) exercises conducted in the decisive action training environment (DATE). The authors, a collaborative group of noncommissioned officers (NCOs), warrant officers, and officer OC/Ts working in conjunction with qualified experts/senior mentors consisting of retired general officers, wrote their observations not only for the future training audiences, but for all brigade through corps level commands and staffs and special operations forces (SOF) units. Our 13 senior mentors who helped author this publication by sharing their unique insights and wealth of experience include: GEN (R) David McKiernan, LTG (R) David Hogg, LTG (R) Michael Tucker, MG (R) Walley Golden, MG (R) Rich Longo, MG (R) Bryan Watson, MG (R) Tom Richardson, MG (R) Gregg Couch, BG (R) Bill Wolf, BG (R) Louis Weber, BG (R) Kelly Thomas, BG (R) Robin Akin, and BG (R) John Seward.

We organized this publication with an executive summary up front to provide an overview of the top five collective trends. The rest of the publication is organized by different echelons of command, and then along with the six warfighting functions (WfFs) with added emphasis areas, focused on integration of U.S. Air Force assets and cyber-electromagnetic activities (CEMA) into unified land operations within a DATE scenario. Therefore, this bulletin seeks to increase readiness of units by serving as a resource for commands and staffs to use in home station training, whether in preparation for an MCTP exercise or an operational mission.

While recognizing that one FY is a limited period, we believe this timeframe provides a sufficient sample of units, scenarios, staffs, and commanders to consider these observations representative of our Army's efforts of continual focus on large-scale combat operations (LSCO). MCTP publishes this bulletin with the desire to enhance commands and staffs performance of mission command and to promote the continued development of our Army's most senior leaders.

Combined Arms… Warfighters!

Guy M. Jones
COL, IN
Commanding

MCTP FY18 Key Observations were recorded, analyzed, and refined by a collaborative group of more than 60 field grade OC/Ts spread among eight MCTP operations groups, the MCTP qualified experts – senior mentors, the 505th Command and Control Wing Detachment 1, and the Army Joint Support Team. The primary authors of this bulletin led this collection and analysis effort, co-authored their individual sections by echelon and WfF or area of emphasis, and organized the chapters within this bulletin. The primary authors of the MCTP FY18 Key Observations are:

LTC Adam Cecil and LTC Jason Posey (Corps/Division)

LTC Sean Dublin (Military Police)

MAJ Jonathan Howard and CW3 Stephen Barber (MEB)

LTC Fred McLeod (Engineer)

MAJ Tara Bradley and CW4 Adam Milliken (CAB/TAB)

MAJ Brian Dieffenbach (FAB/DIVARTY)

LTC Wesley Hiraoka and LTC Adam Collins (National Guard BCT)

MAJ (P) David Peters (ESC/TSC/Sustainment Brigades)

LTC Richard Hilden and LTC Mike Pearce (Special Operations Forces Integration)

MAJ Justin Hawker and MAJ John Livingston (CEMA)

USAF Capt. Jeremy Granow (Air Component)

MAJ Brett Maginness (FY18 Key Observations collection and editing)

Mission Command Training Program FY18 Key Observations

Table of Contents

Center for Army Lessons Learned	
CALL Director	**COL Michael J. Lawson**
MCTP Commander	**COL Guy M. Jones**
CALL Analyst	**Kurt Ebaugh**

The Secretary of the Army has determined that the publication of this periodical is necessary in the transition of the public business as required by law of the Department.

Unless otherwise stated, whenever the masculine or feminine gender is used, both are intended.

Note: Any publications (other than CALL publications) referenced in this product, such as JPs, ARs, ADRPs, ADPs, ATPs, ATTPs, FMs, TMs, etc., must be obtained through your pinpoint distribution system.

Cross-Reference Guide to Observations by Unit Type

Chapter 1. Recurring Trends											
Observations	**Corps**	**DIV**	**ESC/TSC**	**SOF**	**CAB/TAB**	**FAB/DIVARTY**	**MP BDE**	**EN BDE**	**SB**	**BCT**	**MEB**
Section 1.1. Lack of Understanding of Roles and Responsibilities	X	X	X	X	X	X	X	X	X	X	X
Section 1.2. Lack of Refinement of NAIs and TAIs	X	X	X	X	X	X	X	X	X	X	X
Section 1.3. Human Resources Operations Branch (HROB) Operations	X	X	X	X					X	X	

Chapter 2. Fiscal Year 2018 (FY18) Trends by Echelon											
Section 2.1. Division and Corps Trends											
Observations	**Corps**	**DIV**	**ESC/TSC**	**SOF**	**CAB/TAB**	**FAB/DIVARTY**	**MP BDE**	**EN BDE**	**SB**	**BCT**	**MEB**
Section 2.1.1. Division Targeting		X		X	X	X					
Section 2.1.2. Current Operations (CUOPS) Synchronization	X	X	X	X							
Section 2.1.3. Distributed Mission Command	X	X		X		X					
Section 2.1.4. Information Collection with Operations and Targeting	X	X		X		X					

Cross-Reference Guide to Observations by Unit Type (continued)

Observations	Corps	DIV	ESC/TSC	SOF	CAB/TAB	FAB/DIVARTY	MP BDE	EN BDE	SB	BCT	MEB
Section 2.1.5. Commander's Decisionmaking Process	X	X	X	X		X					
Section 2.1.6. Synchronizing Information-Related Capabilities (IRCs)	X	X		X		X					
Section 2.1.7. Planning Horizon Management	X	X		X		X					
Section 2.1.8. QA/QC of Order/Version Control of Products	X	X	X	X	X	X	X	X	X	X	X
Section 2.1.9. Planning While Simultaneously Executing Operations	X	X	X	X	X	X	X	X	X	X	X
Section 2.1.10. Tracking Classes of Supply	X	X	X	X	X	X	X	X	X	X	X
Section 2.1.11. CBRN Battle Drills and Consequence Management	X	X		X	X	X					
Section 2.1.12. Division Operations, Gap Crossing	X	X				X					
Section 2.1.13. Division Movement Matrix	X	X	X				X	X	X	X	X
Section 2.1.14. Division Transportation Working Groups (WGs)		X	X		X	X	X	X	X	X	X
Section 2.1.15. G-2 and HROB Integration	X	X	X						X		
Section 2.1.16. Casualty Operations	X	X	X						X		
Section 2.1.17. PERSTAT/MEDSTAT Reporting	X	X	X		X	X	X	X	X	X	X
Section 2.1.18. Logistics SME Placement		X			X	X	X	X	X	X	X
Section 2.1.19. Running Estimates		X							X		

Cross-Reference Guide to Observations by Unit Type (continued)

Chapter 3. Brigade-Level Trends											
Section 3.1. Military Police (MP)											
Observations	**Corps**	**DIV**	**ESC/TSC**	**SOF**	**CAB/TAB**	**FAB/DIVARTY**	**MP BDE**	**EN BDE**	**SB**	**BCT**	**MEB**
Section 3.1.1. Detainee Operations Planning During MDMP							X				
Section 3.1.2. The Knowledge Management Process and Standardization							X				
Section 3.1.3. S-2 Analysis and Police Intelligence Operations Integration							X			X	X
Section 3.2. Maneuver Enhancement Brigade (MEB)											
Section 3.2.1. MEB Roles and Authorities											X
Section 3.3. Combat Aviation Brigade/Tactical Aviation Brigade (CAB/TAB)											
Section 3.3.1. Inefficiencies in Collection	X	X			X					X	
Section 3.3.2. Knowing the Operational Environment	X	X			X	X				X	
Section 3.3.3. Planning in the Decisive Action Fight	X	X			X	X				X	
Section 3.3.4. Deliberate Targeting	X	X			X	X				X	
Section 3.3.5. Protecting the CAB	X	X			X	X				X	
Section 3.3.6. Sustaining the CAB		X	X		X				X		
Section 3.3.7. Managing the Battle	X	X			X					X	

Cross-Reference Guide to Observations by Unit Type (continued)

Observations	Corps	DIV	ESC/TSC	SOF	CAB/TAB	FAB/DIVARTY	MP BDE	EN BDE	SB	BCT	MEB
Section 3.4. Field Artillery Brigade/Division Artillery (FAB/DIVARTY)											
Section 3.4.1. Proactive Targeting	X	X			X	X				X	
Section 3.4.2. Unit Airspace Plan	X	X			X	X				X	
Section 3.4.3. Desynchronized Fires Plan	X	X			X	X				X	
Section 3.4.4. Collection Plan	X	X		X		X				X	
Section 3.4.5. BDA Analysis				X	X	X				X	
Section 3.4.6. Employment and Protection of Assigned Protection Assets				X		X					
Section 3.4.7. Synchronization for Sustainment Logistical Resupply Triggers						X					
Section 3.5. Engineer (EN)											
Section 3.5.1. Establishment and use of Knowledge Management (KM) and Knowledge Management Officers (KMOs)				X				X			
Section 3.5.2. Operational-Level Engineer Planning in Decisive Actions (Mobility/Counter-mobility)								X		X	X
Section 3.5.3. Intelligence WfF Integration	X	X						X		X	X
Section 3.5.4. Sustainment Operations			X					X	X		

Cross-Reference Guide to Observations by Unit Type (continued)

Observations	Corps	DIV	ESC/TSC	SOF	CAB/TAB	FAB/DIVARTY	MP BDE	EN BDE	SB	BCT	MEB
Section 3.6. National Guard Brigade Combat Teams (NGBCTs)											
Section 3.6.1-1. Synchronizing Operations in Time and Space	X	X			X	X				X	
Section 3.6.1-2. Mission Rehearsals	X	X			X	X				X	
Section 3.6.1-3. Current Operations Integration Cell (COIC) COP	X	X								X	
Section 3.6.1-4. Digital and Analog Transitioning										X	
Section 3.6.2-1. Split Brigade Intelligence Support Element (BISE) Operations		X								X	
Section 3.6.2-2. Intelligence Personnel Roles and Responsibilities										X	
Section 3.6.2-3. Staff-Integrated Intelligence Preparation of the Battlefield (IPB)	X	X			X	X				X	
Section 3.6.3-1. Attack Aviation Employment					X					X	
Section 3.6.3-2. Airspace Planning	X	X			X					X	
Section 3.6.3-3. Air Assault Planning		X			X					X	
Section 3.6.3-4. Noncommissioned Officer Integration and Utilization										X	
Section 3.6.4-1. Massing Fires at the Decisive Point	X	X			X	X				X	
Section 3.6.4-2. Fires Integration and Synchronization during MDMP	X	X			X	X				X	
Section 3.6.4-3. Plans to CUOPS Transition	X	X	X	X	X	X	X	X	X	X	X
Section 3.6.4-4. Improper use of Coordinated Fire Line and Fire Support Coordination Line	X	X			X	X				X	

Cross-Reference Guide to Observations by Unit Type (continued)

Observations	Corps	DIV	ESC/TSC	SOF	CAB/TAB	FAB/DIVARTY	MP BDE	EN BDE	SB	BCT	MEB
Section 3.6.5-1. Protection Working Groups	X	X						X		X	X
Section 3.6.5-2. Seven Steps of Engagement Area Development during MDMP	X	X			X	X		X		X	
Section 3.6.6-1. Collocation of the BCT Sustainment Cell with the BSB SPO Section									X	X	X
Section 3.6.6-2. Inaccurate Running Estimates after Initial Mission Analysis	X	X	X	X	X	X	X	X	X	X	X
Section 3.6.6-3. Integration of Staff Sections into a Functional Sustainment Cell									X	X	
Section 3.6.7-1. Battle Tracking Products and Shared Understanding	X	X	X	X	X	X	X	X	X	X	X
Section 3.6.7-2. Transition of C2 between the Main Command Post and the Tactical Command Post	X	X	X	X	X	X	X	X	X	X	X
Section 3.6.7-3. Tactical Command Post Versus Command Group	X	X	X	X	X	X	X	X	X	X	X

Chapter 4. Sustainment											
Observations	**Corps**	**DIV**	**ESC/TSC**	**SOF**	**CAB/TAB**	**FAB/DIVARTY**	**MP BDE**	**EN BDE**	**SB**	**BCT**	**MEB**
Section 4.1. Integrating/Synchronizing All Warfighting Functions	X	X	X	X	X	X	X	X	X	X	X
Section 4.2. Battle Rhythm	X	X	X	X	X	X	X	X	X	X	X
Section 4.3. Staff Synchronization	X	X	X	X	X	X	X	X	X	X	X
Section 4.4. Planning for Future Sustainment Requirements/Operations									X		
Section 4.5. Logistics COP									X		

Cross-Reference Guide to Observations by Unit Type (continued)

Chapter 5. Special Operations/Specialty Functions											
Section 5.1. Special Forces Integration											
Observations	**Corps**	**DIV**	**ESC/TSC**	**SOF**	**CAB/TAB**	**FAB/DIVARTY**	**MP BDE**	**EN BDE**	**SB**	**BCT**	**MEB**
Section 5.1.1. SOF Organization	X	X		X							
Section 5.1.2. Integrated Fires				X	X	X					
Section 5.1.3. C4I Interoperability	X	X		X							
Section 5.1.4. SOF LNO Teams	X	X		X							
Section 5.1.5. Understanding SOF Capabilities	X	X		X						X	
Section 5.1.6. Intelligence WfF and SOF Requirements	X	X		X						X	X
Section 5.1.7. Comprehensive Information-Related Capabilities (IRC)	X	X	X	X	X	X	X	X	X	X	X
Section 5.1.8. Integration of the Sustainment WfF			X	X					X		
Section 5.2. Cyber-Electromagnetic Activities (CEMA)											
Section 5.2.1. Integration of Cyberspace Operations into the Unified Land Operations Fight	X	X	X	X	X	X	X	X	X	X	X
Section 5.2.2. Integration of Electronic Warfare into the Unified Land Operations Fight	X	X	X	X	X	X	X	X	X	X	X
Section 5.2.3. Integration of Space Operations into the Unified Land Operations Fight	X	X	X	X	X	X	X	X	X	X	X

Chapter 6. Air Component											
Observations	**Corps**	**DIV**	**ESC/TSC**	**SOF**	**CAB/TAB**	**FAB/DIVARTY**	**MP BDE**	**EN BDE**	**SB**	**BCT**	**MEB**
Section 6.1.1. Airspace Planning	X	X		X	X	X				X	
Section 6.1.2. Air Interdiction Mission Planning	X	X		X	X	X				X	
Section 6.1.3. Strike Coordination and Reconnaissance Mission Planning	X	X		X	X	X				X	

THIS PAGE INTENTIONALLY LEFT BLANK

EXECUTIVE SUMMARY

Mission Command Training Program (MCTP) Fiscal Year 2018 (FY18) Key Observations

During FY18, MCTP conducted five warfighter exercises (WFXs) supporting the readiness for two corps and eight division-level headquarters and their associated functional/multi-functional brigades. FY18 began with the last iteration of the Atropian Scenario, shifting to a new Pacific Region decisive action training environment (DATE) scenario for the remainder of the year; the training challenge remained consistent throughout. U.S. Army Forces Command (FORSCOM) training guidance drove the requirement to displace division-level mission command nodes, which added new stress to each training audience; however, divisions managed these new demands through proper pre-exercise planning and training and through sound leadership.

FY18's key observations bulletin starts slightly differently than in past years. Before delving into specific observations by echelon and topic, FY18's publication starts with a brief synopsis of common trends that were identified through FY18's WFX program and frame the specific observations found later in the publication. Trends for FY18 are:

- Intelligence Preparation of the Battlefield – Terrain and threat capability
- Defining the Fight at Echelon – Capturing commander's (CDR's) visualization
- Targeting Process – Defining what will kill you 72 hours out
- Sensor to Shooter Linkage – Aligning all available assets to reduce threat capability
- Planning Horizons – Keeping visibility and synchronization beyond 24 hours

With each of these trends, the depth of staff planning frequently was not sufficient to get beyond conceptual planning.

Starting with intelligence preparation of the battlefield, intelligence staff estimates focusing on terrain analysis and enemy situation templates did not typically drive to a low enough granularity to generate specific collection locations leading toward more detailed information requirements. As a result, large named area of interests (NAIs) were templated on the map, which alone did not support the depth of targeting necessary to get after high-payoff targets – focusing on specific enemy capabilities. Related to this trend, there was the tendency to fight off of initial staff estimates/enemy templates, which was indicative of units fighting the plan versus adjusting staff estimates to account for a smart and adaptive enemy.

In many cases, enemy tactics, techniques, and procedures (TTPs) were not well understood. For example, displacement times and displacement of enemy fires formations were not understood well enough to drive predictive targeting within the current operations (CUOPS) integration cell (COIC). Other examples include enemy intentions for the use of underground facilities, electronic warfare (EW) jammer TTPs, etc. Lastly, intelligence preparation tends to myopically focus almost solely on the division area of operations (AO), largely ignoring the area of interest across adjacent boundaries. This tended to result in poorly integrated cross-boundary targeting options.

Commanders often would describe what they see as their "fight" during the operation order (OPORD) or combined arms rehearsal. Oftentimes, this would include a clear visualization of what the key tasks were for subordinate units as well as what the higher level command was going to do in support of their operations. However, this guidance was rarely captured and used as a framing tool to help delineate responsibilities between echelons or delineate the roles of the various mission command nodes.

Defining the fight at echelon requires establishing roles and responsibilities for each division mission command node: the main (MAIN), tactical (TAC), and support area command posts (SACP). Four key questions need to be asked: What do we need to control? What do we shape? What terrain do we manage? What formation do we need to synchronize? Based upon answers to those questions, the roles and responsibilities within each division mission command node can be better focused.

With regards to the division TAC command post (CP), a relatively mobile CP with the purpose of controlling division operations within the close fight, what is their role in a forward passage of lines (FPOL) or other critical events such as a wet gap crossing, air assault missions, or aviation attacks out of contact? These are not simply subordinate maneuver brigade operations; they all involve the coordination and carefully sequenced execution of multiple division capabilities to accomplish those operations/missions appropriately. If the brigades and enabling formations are not clear on their role or "fight," gaps will emerge that stem back to not clearly defining the fights at each echelon.

Lastly, looking higher, are divisions adequately communicating to corps what they need in terms of support or coordination as well as gaining a common vision of the integrated fight through commander dialogue? How engaged is the division in signaling their respective needs with the corps targeting process, sustainment working groups (WGs), or seeking portions of corps capabilities not organic to the division? Defining the fight at echelon has impact across all of the warfighting functions (WfFs) and across the depth and breadth of the division AO.

Looking at the targeting process, we observe units executing a process without the detail and in-depth understanding required to enable the synchronized engagement of threat capabilities at 72 hours. The most prominent issue with division deliberate targeting is that WG members do not show up to targeting battle rhythm events with their analysis completed. This tends to alter a targeting WG or board into a wargaming session involving the commander or other key leaders.

When correctly done, the targeting WG brings recommendations with sufficient intellectual rigor and depth to facilitate an informed discussion with the commander that results in decisions being made. This starts with intelligence preparation of the battlefield where changes to the enemy situation, real and predictive, are addressed for each air tasking order (ATO) cycle.

An assessments regimen, which is more than just battle damage assessments (BDAs), is also crucial to inform re-attack recommendations for subsequent ATO refinements. Additionally, assessments need to have a blue focus based upon friendly progress and capability compared to the actual plan. Next, is the division making recommended NAI or high-payoff target list (HPTL) changes? If so, has the intelligence, surveillance, and reconnaissance (ISR) plan been modified to account for these changes? Have enemy decision points changed and what does that mean to collections and targeting? This level of planning and coordination needs to be intentional and deliberate.

With regards to targeting the enemy, the trends show units are targeting on a whole enemy formation versus a specific capability within a formation. As we target critical enemy capabilities, are we integrating other organic lethal (attack aviation) and non-lethal effects (EW) and enablers (special operations forces [SOF], Space) to develop more complete and effective targeting solutions? Lastly, who is synchronizing targeting and validating target nominations against commander's guidance and the HPTL? How are changes to the plan being captured and rapidly integrated into a division fragmentary order (FRAGORD)? The above listed questions point to observed deficiencies with recent WFX division audiences. Although they do not all happen simultaneously, most training audiences exhibit most of these problems.

Transitioning to the execution of fires or the sensor-to-shooter linkage, units miss critical targets as the synchronization between observer and engagement asset is either not done or units do not enable a streamlined process to be timely. Sensor-to-shooter linkage is not just a physical or virtual connection between a collection asset and a weapons launcher; there is an intellectual investment that makes for sound sensor-to-shooter linkages as well.

Currently, the logic trail connecting priority intelligence requirements (PIRs) to a collections plan, and a collections plan to a target with a shooting capability is not clear. Are divisions looking at what they say is important for them to look at, or are "bright shining objects" diverting attentions such that targeting resembles "whack-a-mole" more than a deliberate and focused process that addresses high-payoff targets? The critical path that links PIR (commander's critical information requirement [CCIR]) to a collection plan to an ISR plan, per the HPTL, which then matches target selection standards to a target via the attack guidance matrix (AGM) is not always adhered to in a disciplined process.

Additionally, the CUOPS target execution team or joint air-ground integration center (JAGIC) are often handed the targeting plan without critical parts of the plan being completed. Who is doing the airspace control plan after the targeting decision board (TDB) to enable the deliberate targets to be engaged? Who is establishing the gun target lines between projected position areas for artillery (PAAs) and the targets that have been approved? The planning is required prior to handing the daily target engagement set off to the JAGIC for execution.

JAGIC cross-boundary fires is not timely nor responsive. Part of this problem is similar to our shortfalls in intelligence preparation of the battlespace (IPB); are we looking at what can influence our fight from areas outside our assigned AO? The tendency to focus only on threats within the division AO creates a seam in the fires process. Adding complexity to cross-boundary fires is the lack of a well-rehearsed process between adjacent units that address de-confliction of maneuver formations, clearance of air, and approval of fires — all within a short timeframe. This process is part automation and part human. Are those processes clearly understood and rehearsed before the WFX begins?

Planning horizons continue to challenge even the most veteran of division staffs. There remains a tendency for staffs to get drawn into the previous and next 24 hours. The optimum planning horizon, however, is 72-96 hours out. It takes discipline to achieve this futures focus, but the rewards of assuming this type of planning horizon results in generating options that place the enemy in multiple dilemmas. Conversely, continuing a 24-hour planning horizon almost assures that we will be perpetually reacting to enemy intentions and actions; and not vice versa. Looking deeper in time better affords setting conditions for key actions such as fire support coordination line (FSCL) shifts, intelligence handovers, jumping mission command nodes, and shifting boundaries, just to mention a few.

Many lament that 72 hours is too far out in large-scale combat operations (LSCO) to predict the conditions of the threat and friendly formation. This is true, but also why our doctrine created assumptions and instructs us to use and then validate assumptions. The staff has to provide assessments and the commander has to use his experience to provide a visualization of the fight 72-96 hours in the future. These assessments are validated or adjusted as the time horizons approach execution (24 hours). Taking a proactive view of sustainment challenges 72 hours out enables the identification of logistics options along with alternatives when sustainment operations experience friction due to disrupted routes, congested port offloads, or other unforeseen enemy actions. It is clear from observing the five FY18 WFXs that assuming a 24-48 hour planning horizon will result in reacting to the enemy and not taking advantage of fleeting opportunities that a long-planning horizon avails.

The following chapters have been categorized to more effectively bin the key observations from FY18. Many of these observations serve as data points, reinforcing what has been described above. Units that include a review of these observations prior to starting the preparations for participation in a warfighter tend to perform better in the exercise. MCTP has already noted significant improvement from early indications in the FY19 WFXs.

CHAPTER 1

Recurring Trends

SECTION 1.1. LACK OF UNDERSTANDING OF ROLES AND RESPONSIBILITIES

(MODIFIED FROM MISSION COMMAND TRAINING PROGRAM [MCTP] FY17 KEY OBSERVATIONS)

Observation. Lack of understanding of roles and responsibilities of the counterfire headquarters (CF HQ), force field artillery headquarters (FFA HQ), and division artillery (DIVARTY) headquarters leads to inefficient use of resources.

Discussion. Emerging doctrine supporting large-scale combat operations (LSCO) designates field artillery brigades (FABs) to corps and not divisions. Most plans provide corps two FABs, one for the FFA HQ and one for the role of the CF HQs. Some of the rocket battalions of these units are then allocated (general support [GS] or general support-reinforcing [GS-R]) to DIVARTYs to enable the division deep fight. When a FAB and a DIVARTY operate under the same higher headquarters, the synchronization of fires diminishes due to undefined roles and responsibilities.

Recommendation. Army Techniques Publication (ATP) 3-09.90 clearly defines the roles between the FFA HQ and the CF HQ, ensuring staffs are better able to coordinate, synchronize, and operate as a total fire support system. This allows the FAB and DIVARTY staffs to provide their commanders with the appropriate analysis and allow for clear guidance for synchronization of fires. This will create a more efficient and effective process, allowing units to manage asset allocation.

Reference. *Organizational training on Mission Command Information Systems (MCIS) and how we fight*; Doctrine change to ATP 3-09.90, *Division Artillery Operations and Fire Support for the Division*, 12 OCT 2017.

SECTION 1.2. LACK OF REFINEMENT OF NAMED AREA OF INTERESTS (NAI) AND TARGETED AREAS OF INTEREST (TAI)

(MODIFIED FROM MCTP FY17 KEY OBSERVATIONS)

Observation. Refinement of NAIs and TAIs is not occurring to allow effective targeting.

Discussion. Units tend to generate an excessive amount of NAIs and TAIs within the applicable graphic control measures, without proper analysis. The absence of proper analysis yielded a duplication of efforts, which degraded flexibility in the use of competing resources. During the initial intelligence preparation of the battlespace (IPB), products such as the high-value target list (HVTL), situation template (SITTEMP), and event template (EVENTTEMP) shape NAIs, which eventually will or will not become TAIs. Successful units link NAIs and TAIs to priority intelligence requirements (PIRs) and institute a mechanism to achieve an appropriate battle damage assessment (BDA), in accordance with the commander's guidance.

Recommendation. Conduct thorough target value analysis (TVA) and target development. The intelligence warfighting function (WfF) owes continued refinement of the SITTEMP and related products to focus on the necessary NAIs. Deliberate TVA and target development enables the commander to visualize the fight beyond the immediate time period (24 hours) and plan and provide guidance against longer planning horizons (96-120 hours).

References. ATP 3-60 (Field Manual [FM] 3-60), *Targeting*, 07 MAY 2015; Marine Corps Reference Publication (MCRP) 2-10B.1, *Intelligence Preparation of the Battlefield/Battlespace*, November 2014, dual-designated with ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 01 MAR 2019.

SECTION 1.3. HUMAN RESOURCES OPERATIONS BRANCH (HROB) OPERATIONS *(MODIFIED FROM FY17 MCTP KEY OBSERVATIONS)*

Observation. Sustainment commands do not effectively plan for HROB operations.

Discussion. Because theater support commands (TSCs) and their human resources support companies (HRSCs) do not play a significant role in warfighter exercises (WFXs), sustainment units regularly fail to emphasize HROB operations and planning. Many units do not have a functioning HROB because their S-1/G-1 absorbed the HROB personnel without also absorbing the HROB roles and responsibilities. Many sustainment units that have an operational HROB do not understand how to integrate postal, casualty liaison teams, and personnel accountability teams into their concept of support. Units struggle to plan HROB as they transition from static operations (counterinsurgency [COIN] and stability) to LSCO against a near-peer competitor. Sustainment units generally do not know how to incorporate their HROB assets into the overall theater sustainment plan.

Recommendation. Units should train as they fight. The HROB needs to be incorporated into all training events, such as low-density satellite transportable terminal (STT) and command post (CP), field training, and WFXs. Considering that units are likely to keep their HR or 42-series personnel in the S-1/G-1 while in garrison, training and developing HROB systems should occur to ensure a seamless transition from garrison operations to warfighting contingencies.

References. ATP 4-93, *Sustainment Brigade*, 11 APR 2016, pp. 1-12, 5-8, and 5-13; ATP 4-94, *Theater Sustainment Command*, 28 JUN 2013, pp. 2-27, 3-18–3-19.

CHAPTER 2

Fiscal Year 2018 (FY18) Trends by Echelon

SECTION 2.1. DIVISION AND CORPS TRENDS

2.1.1. Division Targeting

Observation. Target system analysis (TSA) and target value analysis (TVA) do not support holistic targeting efforts.

Discussion. TSA and TVA are conducted during planning and result in the formulation of multiple targeting products, specifically the attack guidance matrix (AGM). The AGM is the guiding tool to determine effects on not only enemy systems, but the critical components of those systems. Units routinely do not conduct the requisite planning needed to target enemy systems effectively, which results in an incomplete AGM, hindering overall targeting efforts. The AGM is one of the principal documents the joint air-ground integration center (JAGIC) uses for dynamic target prosecution (current fight). If the AGM is not created from the requisite planning, the dynamic and deliberate targeting efforts are desynched from the division's maneuver plan. Units gravitate toward targeting high-value targets (HVTs) as they appear, as opposed to planning for high-payoff targets (HPTs). Proper TSA and TVA, overlaid on the enemy's order of battle, provides targeteers the knowledge needed to ensure they are leveraging the correct munitions against targets on the high-payoff target list (HPTL). Lack of TSA and TVA often results in an incomplete enemy picture, mismanagement of munitions, and misdirected shaping efforts focused on targets that will not help the unit gain an advantage over the enemy in time and space.

Recommendation. TSA and TVA should occur in planning, and continue during the targeting cycle to ensure synergy of targeting efforts is sufficient to achieve the commander's desired effects during shaping efforts. Ensure the process for updating the AGM includes establishing decision authority, to include munition management as a key factor.

References. Army Techniques Publication (ATP) 3-60, *Targeting*, 07 MAY 2015; Army Doctrine Reference Publication (ADRP) 3-09, *Fires*, 31 AUG 2012; Joint Publication (JP) 3-60, *Joint Targeting*, 31 JAN 2013.

2.1.2. Current Operations (CUOPS) Synchronization

Observation. CUOPS are not synchronized and have difficulty creating shared understanding, especially during transitions.

Discussion. CUOPS have the doctrinal responsibility to synchronize operations within the short-term planning horizons (usually within 24 hours of execution) in time and space. Planning efforts are often not adequately transitioned from the plans sections to the CUOPS. Additionally, the staff sections that contribute to the CUOPS do not provide adequate assessments or running estimates that allow for the creation of shared understanding. Division-level transitions, such as repositioning division command posts (CPs), exacerbates the issues associated with not adequately transitioning planning efforts from plans to CUOPS. Planning efforts not properly transitioned from plans to CUOPS coupled with inadequate staff running estimates and division-level transitions detract from the commander's ability to create shared understanding across the division.

Recommendation. Consider involving CUOPS in the division planning process and establishing formal plans hand-off forums. A way to make certain the chief of operations (CHOPS) is incorporated into the planning effort is to have CHOPS narrate division rehearsals or backbrief the division leadership; thus, the division rehearsal or the backbrief serves as the transition from plans to CUOPS. Additionally, consider reviewing division CP responsibilities as they apply to division-level transitions, specifically when mission command is transitioned between the division main (MAIN) and tactical (TAC) CPs. A technique to consider is placing the CUOPS cell into a coordinating role as compared to a directive role while the division TAC operation post is active.

Reference. Field Manual (FM) 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014.

2.1.3. Distributed Mission Command

Observation. Division information architecture does not create distributed mission command.

Discussion. A division's information architecture is the different processes of knowledge management (KM) procedures that are designed to deliver data and process information efficiently from the unit reporting to the relevant staff section. This principle is complicated by the separation of the command nodes through time, distance, and space. The division should strive to have information transmitted across all of their command nodes in near real time. When designing their information architecture, divisions often use generic reporting requirements that do not parse out the specified information required to maintain shared understanding. The design also does not allow for the volume of traffic that they receive. When dividing up the responsibilities, the different command nodes often do not work together to share responsibilities; rather, they duplicate their effort, which further compounds information latency. When in contact, the amount of data and information becomes overwhelming and the infrastructure cannot keep up. Thus, the receiving command node often prioritizes the data, usually prioritizing troops in contact, and delays other items like enemy high-priority target locations that decay because of time.

Recommendation. When designing the information architecture for a division, the first area to address is the unit's reporting requirements. These requirements should focus on information needed to answer the commander's critical information requirement (CCIR) immediately, and general information separately. Second, each information requirement should be assigned to the different command nodes with processes that allow the information to tie back into the other nodes. The command nodes should build their reporting architecture to handle a large amount of traffic simultaneously, and not sequentially. Additionally, when leveraging their digital technologies, this design should simultaneously broadcast the information to all other command nodes.

Reference. FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014.

2.1.4. Information Collection with Operations and Targeting

Observation. Divisions/corps/special operations forces (SOFs) units do not effectively synchronize information collection with operations and targeting.

Discussion. Collection management and targeting sections conduct planning in relative isolation. Named area of interests (NAIs) and target areas of interest (TAIs) are developed by the collection manager with minimal input from targeting or the G-2 analysis control element. The targeting teams do not have a clear understanding of duration of target decay and the collection plan is generally not approved by the G-3 nor promulgated through operation orders (OPORDs) or fragmentary orders (FRAGORDs). Doctrine notes that the information collection plan is an execution order, emphasizing the vital role of tasking and directing information collection to control limited collection assets. The intelligence staff identifies requirements appropriate to task to unit collection assets and recommends tasking those assets. The G-3 includes these recommendations in the "tasks to subordinate units" subparagraph from an OPORD, FRAGORD, or Annex L (information collection).

Recommendation. Develop an information collection annex to direct division collection efforts determined between the G-2 and G-3. The G-2 analysis control element develops NAIs and identifies enemy displacement techniques and tactics, while the targeting team uses this intelligence to identify target decay times and development of TAIs.

References. ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 01 MAR 2019; FM 3-55, *Information Collection*, 03 MAY 2013; FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014; ATP 2-19.3, *Corps and Division Intelligence Techniques*, 26 MAR 2015; Army Doctrine Publication (ADP) 2-0, *Intelligence*, 04 SEP 2018.

2.1.5. Commander's Decisionmaking Process

Observation. Information collection in support of the commander's decisionmaking process does not always follow a disciplined process.

Discussion. Units struggle to use collection assets to collect against information requirements in support of the commander's decisionmaking process. Collection assets are repeatedly re-tasked, either dynamically or ad hoc, by the G-3 CHOPS rather than collecting against priority intelligence requirements (PIRs). Units focus collection in support of the next objective, rather than determining the course of action (COA) the enemy adopted.

Recommendation. Create a full range of enemy courses of action (ECOAs), an event template (EVENTTEMP), and event matrix to distinguish between ECOAs to better develop PIRs that support the commander's decisionmaking process. Create PIRs that determine which COA the enemy has adopted while using intelligence handover lines to determine which echelon of assets collect on the next objective (close versus deep fight).

References. FM 3-55, *Information Collection*, 03 MAY 2013; FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014; ATP 2-19.3, *Corps and Division Intelligence Techniques*, 26 MAR 2015; ADP 2-0, *Intelligence*, 04 SEP 2018.

2.1.6. Synchronizing Information-Related Capabilities (IRCs)

Observation. Staffs are challenged in the synchronization of IRCs.

Discussion. The distribution of IRCs across the staff and the tendency to treat lethal and non-lethal capabilities as separate and distinct activities prevents the effective integration of IRCs. IRC planners are challenged by the difference in garrison versus deployed settings with modified reporting relationships and geographic locations within the CPs. Additionally, lethal fires employment and coordination is the primary focus of discussion during the targeting working group (TWG). Non-lethal capabilities are discussed at the end of the meeting and seldom cover the same enemy systems or locations as the lethal fires. The targeting effort must expand its consideration of available assets beyond lethal methods. Targeting discussions should include the IRC planners to ensure the consideration of the cognitive, as well as the physical impact, to facilitate the layering of lethal and non-lethal capabilities on designated targets.

Recommendation. Review the placement of IRC planners within the staff to determine the optimal alignment in garrison and deployed settings. Incorporate a daily IRC synchronization meeting, chaired by the G-3 information operations (IO) officer, into the battle rhythm to coordinate the efforts and activities of the IRC planners and update the unit planning standard operation procedures (PSOP) to define the agenda, inputs, outputs, participants, and product templates. Participants in the IRC synchronization meeting should include staff from the G-2, G-33 (CUOPS), G-35 (future operations [FUOPS]), fire support element (FSE), and SOF liaison officer (LNO) to ensure the IRC activities are synchronized into the larger scheme of maneuver and that outputs feed into the targeting WG. To facilitate integrated targeting, IRC planners should employ similar templates and products, where appropriate, as those used by fires and air planners with the goal of creating a single target list.

Doctrinal References. ATP 3-60, *Targeting*, 07 MAY 2015; FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014; FM 3-13, *Information Operations*, 06 DEC 2016.

2.1.7. Planning Horizon Management

Observation. Failure to enforce planning horizons and prioritization of efforts leads to de-synchronization among the staff.

Discussion. The transition of responsibilities and efforts between integrating cells (plans, FUOPS, and CUOPS) is essential to focus the organization's planning efforts and to shape future events. Due to a lack of planners in CUOPS, FUOPS and plans are charged with planning operations within 24 hours of execution. This leads to a lack of planning focus and effort on the mid-and long-term planning horizons, de-synchronizing staff efforts to effectively conduct predictive analysis, support the targeting process, and assessments of ongoing operations against the operational framework. Furthermore, transition briefs rarely occur, preventing the handover of critical information and responsibility to the appropriate staff section. The transition brief enables the integrating cell staff members to understand the future operation and identify friction points prior to execution.

Recommendation. Manage planning horizons through a disciplined process codified in the unit standard operating procedure (SOP), battle rhythm, transition briefs, and enforced by senior leaders to set the conditions for an effective handover between integrating staff cells. Augment the CUOPS integration cell (COIC) with additional planners to prevent FUOPS and plans from planning short-term horizon events. Establish on-call operational planning teams (OPTs) for anticipated events, opportunities, or threats which require additional short-term planning. Transition briefs between integrating cells should be an established battle rhythm event which follows deliberate transition points and the five-paragraph OPORD format.

References. ADRP 5-0, *The Operations Process*, 17 MAY 2012; ADRP 6-0, *Mission Command*, 17 MAY 2012; FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014.

2.1.8. Quality Assurance/Quality Control (QA/QC) of Orders/Version Control of Products

Observation. Units do not routinely conduct proper QA/QC of orders or maintain version control of key products.

Discussion. Divisions and corps produced multiple FRAGORDs with incorrect dates, incorrect order numbers, different times in the order (local and Zulu), as well as different standards for adds, deletes, and changes. This results in confusion and version control issues. Products that are used for decision support tools such as the decision support matrix, synchronization matrix, and execution checklists are not published, but are distributed through file sharing, e-mail, or a dashboard. These products can often be found in various folders on the unit's file sharing systems. These products often lack dates and a version number and result in multiple versions used by staff and subordinate units.

Recommendation. Standardize order production requirements and conduct QA/QC for the order. Adhere to the guidance in FM 6-0 and, if required, codify variations in the SOP. Require version control of products with date, version number, and individual responsible. These products should be published via the orders process and distributed on a file sharing system in a singular location.

Reference. FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014.

2.1.9. Planning While Simultaneously Executing Operations

Observation. Staffs struggle to simultaneously plan and execute operations in a decisive action environment.

Discussion. Headquarters at all echelons are designed to simultaneously conduct operations and plan follow-on operations to maintain operational tempo. Division staffs are challenged in manning and providing the necessary mission command systems for the MAIN, TAC, and support area command posts (SACP) to ensure operations and planning are conducted in a non-permissive decisive action environment. During disruptions to CP operations, such as indirect fires; chemical, biological, radiological, nuclear (CBRN) or cyber-electromagnetic activities (CEMA) attacks; or survivability moves, the CPs not in contact or not moving are designed and resourced to assume the CUOPS fight. The ability for the TAC and SACP to assume planning functions from the MAIN is limited. Poor KM procedures prevent the transfer of planning products between CPs. Divisions need to ensure that the TAC and SACP are able to assume limited planning functions and a primary, alternate, contingency, and emergency (PACE) plan is established if mission command systems are disrupted.

Recommendation. Develop a PACE plan for planning efforts on multiple mission command systems to provide redundancy in a CEMA-denied environment. Conduct movement of planning personnel to the division TAC or SACP prior to the MAIN conducting a survivability move. Ensure KM SOPs are established to ensure planning products are not restricted to one CP.

References. ADRP 5-0, *The Operations Process*, 17 MAY 2012; ADRP 6-0, *Mission Command*, 17 MAY 2012; FM 3-0, *Operations*, 06 DEC 2017; FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014.

2.1.10. Tracking Classes of Supply

Observation. Inaccurate tracking of critical commodities between the division G-4, SACP, sustainment brigade, and subordinate units hinders shared understanding and decision making.

Discussion. Timely and accurate reporting of on-hand quantities of classes of supply and authorized stockage levels is critical for the prioritization of resources in support of operations. Subordinate units struggle to report logistics status (LOGSTAT) in accordance with the division SOP. At the division level, staff members from the G-4, SACP, and the sustainment brigade often use data that is inaccurate or inconsistent across the staff. Accurate authorized stockage objectives and on-hand quantities drive an assessment of the days of supply (DOS) available and any necessary changes to the prioritization of resources. Inaccurate reporting and inconsistent data across the separate staff results in a loss of shared understanding and impacts sustainment of the force.

Recommendation. Publish and enforce LOGSTAT reporting standards. Review LOGSTAT for accuracy. Provide the division sustainment common operational picture (S-COP) on a mission command system that can mirror the information at all CPs and staff should update their running estimates based on the COP. Validate information across the CPs prior to the sustainment WG.

References. ADRP 4-0, *Sustainment*, 31 JUL 2012; Army Regulation (AR) 735-5, *Property Accountability Policies*, 09 NOV 2016.

2.1.11. CBRN Battle Drills and Consequence Management

Observation. Units are challenged with integrating CBRN battle drills and consequence management into operations.

Discussion. The enemy uses specific delivery systems to employ chemical weapons; however, units do not respond adequately when indicators demonstrate that a chemical attack is imminent. Units lack comprehensive battle drills to protect the force by assuming proper mission-oriented protective posture (MOPP) for affected units and ceasing movement along affected routes. Employment of chemical detection assets is not well understood outside of CBRN support personnel.

Units often fail to employ their CBRN monitoring equipment or integrate exposure rate monitoring into their operations. Often, CBRN staffs recommend task-organizing chemical assets evenly across brigade combat teams (BCTs) without regard for which unit is most likely to be attacked or the priority of support (POS). When a persistent attack occurs, CBRN staffs struggle to brief the commander in terms of the attack's effect on tempo and operational reach. Chemical reconnaissance assets are not given tactical tasks to restore tempo or operational reach by finding

a bypass route or limits of contamination along a route. Instead they are often given the task to "conduct CBRN reconnaissance," thus limiting the specific feedback required for adequate assessments in support of the commander's decision making. Finally, CBRN staffs struggle to provide realistic timelines for decontamination operations. Without accurate time projections, units often fail to comprehend the risk to follow-on missions.

Recommendation. Divisions should develop and rehearse CBRN battle drills. Divisions should task-organize chemical assets based on mission requirements and assign tactical tasks to rapidly restore tempo and operational reach. Units should employ CBRN monitoring equipment to practice and understand early warnings and incorporate exposure rate monitoring into their operations.

References. ADRP 5-0, *The Operations Process*, 17 MAY 2012; ADRP 6-0, *Mission Command*, 17 MAY 2012; FM 3-0, *Operations*, 06 DEC 2017; FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014.

2.1.12. Division Operations, Gap Crossing

Observation. Units struggle with the synchronization of gap crossing events.

Discussion. The division role in the gap crossing is not clearly defined in doctrine. Additionally, institutional knowledge of gap crossing has atrophied. Division staff planning tends to focus at the BCT level, rather than synchronizing division assets for the crossing. Divisions struggle to produce synchronization tools (e.g., crossing synchronization matrix, execution matrix, decision support matrix) that control divisional assets, conduct terrain management, or capture shaping operations that lead to setting conditions for the gap crossing. The result is often three de-conflicted BCT crossings, focusing on near-and far-side objectives, crossing site reconnaissance, and bridgehead establishment. However, the plan often lacks condition-setting for BCT success, with collection driving fires and incorporation of these findings into the target decision briefing. Sustainment should focus on supporting BCT supply replenishment as well as casualty evacuation (CASEVAC). Divisions must carefully allocate protection assets to achieve the division's desired end state for the gap crossing. This includes location and allocation of air defense assets, CBRN reconnaissance and decontamination assets, and survivability assets.

Recommendation. The battle rhythm is a deliberate daily cycle of command, staff, and unit activities intended to synchronize CUOPS and FUOPS. Each meeting on the calendar should be analyzed and the outputs need to lead to a decision made by the commander. Battle rhythm events should be nested to facilitate a critical path within the decisive action framework that enables understanding of the enemy situation, current and projected capacity of self, and environmental aspects to the operation. By reducing meetings or workgroups throughout the 24-hour cycle, the staff will have more time to exchange information, solve problems, coordinate action, and make decisions.

References. ADRP 5-0, *The Operations Process*, 17 MAY 2012; ADRP 6-0, *Mission Command*, 17 MAY 2012; FM 3-0, *Operations*, 06 DEC 2017; FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014.

2.1.13. Division Movement Matrix

Observation. The division movement matrix (DMM) did not capture essential unit movements (uncoiling movements from tactical assembly areas [TAAs] to forward line of troops [FLOTs] and unit-level convoy resupply movements, including daily re-supply return convoys, etc.).

Discussion. Movement control provides commanders a mechanism to synchronize movement for deployment, redeployment, and distribution operations to support unified land operations and provides them situational understanding to effectively influence the movement in their area of responsibility (AOR). Division transportation officers (DTOs) struggled to properly synchronize, plan, and supervise essential unit movements throughout the duration of warfighter exercises (WFXs). At the start of the exercise, synchronized unit movements provide the commander with assurance that units will be able to execute planned missions accordingly. As the exercise progresses, visibility of movements within the division area of operations (AO) is the responsibility of the DTO. Unit movement within the AO increases congestion on main supply routes (MSRs) and alternate supply routes (ASRs) in the division AO and thus requires proper coordination and synchronization.

Recommendation. Integrate DTOs into division sustainment rehearsals with emphasis on the implementation and use of the DMM. The outputs of rehearsals include de-confliction of movement of units out of TAAs to FLOTs, coordination and timing (schedule) of scheduled and unscheduled sustainment re-supply convoys, proper protection support to re-supply convoys, and proper accountability of unit status throughout the move.

References. FM 3-0, *Operations*, 06 DEC 2017; FM 4-01, *Army Transportation Operations*, 03 APR 2014.

2.1.14. Division Transportation WGs

Observation. Division G-4 transportation WGs struggled to synchronize with subordinate units.

Discussion. Division G-4 transportation WGs struggled to enable the synchronization and de-confliction of movements with supporting and subordinate commands within the division. Movement boards struggled to ensure proper information inputs from all key sections/units to capture critical logistics package (LOGPAC) convoys, security/clearance patrols, and unit-sized movement.

Recommendation. Follow the seven-minute drill for the daily transportation WG, ensuring a detailed account of required attendance, inputs, and desired outcome of the event. Develop and use a detailed movement board format.

References. FM 3-0, *Operations*, 06 DEC 2017; FM 4-01, *Army Transportation Operations*, 03 APR 2014.

2.1.15. G-1 and HROB Integration

Observation. G-1 integration and coordination with the sustainment brigade's Human Resources Operations Branch (HROB) was key to personnel replacement operations.

Discussion. The division G-1s found success when they established a close working relationship with the HROB; this relationship helped to expedite the personnel replacement flow process. By prioritizing the personnel requirements report (PRR), G-1s were able to identify critical military occupational specialty (MOS) key authorizations by conducting an in-depth casualty estimate for each phase of operations.

Recommendation. Sustain and continue to refine the working relationship between the division G-1 staff and HROB personnel.

Reference. FM 1-0, *Human Resources Support*, 01 APR 2014.

2.1.16. Casualty Operations

Observation. The division surgeon (DIVSURG) and G-1 sections struggled to synchronize casualty operations.

Discussion. The reconciliation between the DIVSURG and G-1 did not identify wounded in action (WIA) who were returned to duty (RTD), thus significantly impacting the accuracy of personnel combat power. Additionally, the definition of the term "casualty" was often ambiguous. In some instances, both the surgeon and G-1 had different definitions, classifications, and methods of accountability for casualties, resulting in conflicting personnel estimates.

Recommendation. Formalize a methodology to reconcile RTDs from patient tracking information. Include medical patient assessment teams (PATs) to aid in the reconciliation process to accurately reflect patient tracking.

References. FM 4-02, *Army Health System*, 26 AUG 2013; JP 4-02, *Joint Health Services*, 11 DEC 2017.

2.1.17. Personnel Status/Medical Status (PERSTAT/MEDSTAT) Reporting

Observation. PERSTAT/MEDSTAT reporting often was inaccurate.

Discussion. The PERSTAT/MEDSTAT reports often were not submitted to the division G-1 and surgeon cells from subordinate units in accordance with published guidance. This impacted the division G-1 and surgeon's ability to coordinate priorities of resources within the division and corps.

Recommendation. Enforce reporting standards with subordinate echelons through the following: division FRAGORD, synchronization meetings, tactical e-mail, or established PACE plans.

References. FM 1-0, *Human Resources Support*, 01 APR 2014; FM 4-02, *Army Health System*, 26 AUG 2013; ATP 4-02.55, *Army Health System Support Planning*, 16 SEP 2015.

2.1.18. Logistics Subject Matter Expert (SME) Placement

Observation. Placement of key logisticians within the three CPs (division MAIN, TAC, and SACP) are critical to ensuring the division's success.

Discussion. Proper planning and discussion is required to ensure the sustainment warfighting function (WfF) is fully represented in each command node. Different command nodes could be responsible for the current fight at any point in time. Making sure the right logisticians are present could have a significant effect on CUOPS and FUOPS. Although there is no specific guidance in doctrine on the composition of the SACP, the role and responsibilities of the sustainers should be clearly delineated within all CPs, and therefore reduce the level of risk of collocating key leadership. Concentrating experienced logisticians in the MAIN and SACP at the expense of the TAC can pose risk to mission, especially when the TAC is managing a key transition such as culmination.

Recommendation. Distribute experienced and competent logisticians in all CPs to facilitate coordination for the current fight in all parts of operational framework (deep, close, and support areas). This will also allow for a higher level of autonomy for sustainment primaries (G-4, G-1, and DIVSURG) to support at all levels.

References. FM 3-0, *Operations*, 06 DEC 2017; Center for Army Lessons Learned Handbook 18-04, *Mission Command in the Division and Corps Support Area*, 21 DEC 2017.

2.1.19. Running Estimates

Observation. The division sustainment staff struggled to maintain staff running estimates, which resulted in a gap in understanding and visualization of the operation.

Discussion. A running staff estimate summarizes the problems and helps the staff to track and record pertinent information and provide recommendations to commanders. Running staff estimates represent the analysis and expert opinion of each staff element by functional area. Stale running estimates hamper the ability of the staff to generate new options and facilitate commander decision making.

Recommendation. Retrain the staff leads to maintain their staff estimates. Give them time to produce the required outputs and then re-execute staff estimates to standard, ensuring the estimates produce the required outputs and the information is shared across the staff.

References. FM 6-0, *Commander and Staff Organization and Operations*, chapter 8, 05 MAY 2014; ADRP 5-0, *The Operations Process*, chapter 5, 17 MAY 2012.

CHAPTER 3

Brigade-Level Trends

SECTION 3.1. MILITARY POLICE (MP)

3.1.1. Detainee Operations Planning During Military Decisionmaking Process (MDMP)

Observation. Units lack adequate staff integration during MDMP, degrading synchronized operation and transportation of detainees to and from a detainee collection point (DCP), detainee holding area (DHA), international transport point (ITP), or theater detention facility (TDF).

Discussion. Routinely, mission analysis for the task to construct and operate a DHA or TDF does not include integration of all warfighting functions (WfFs). Typically, the construction plan for the facility does not consider a troop-to-task analysis (guard force, medical support, legal support, and intelligence and interrogation operations), comprehensive sustainment requirements, or a construction timeline estimate. Planning efforts lack fidelity on how to transport detainees to the next higher detention facility or to a host-nation facility. MP units struggle to balance transportation needs with organic assets. However, units request transportation too late during execution, resulting in a backlog of detainees at multiple echelons. During commanders' updates and shift-change briefs, the unit provost marshal routinely briefs only the current number of detainees within detention facilities with no analysis or projections on future detainee numbers or impacts to detention facility capacity.

Recommendation. Inclusion of all WfFs into the planning of detention operations, at all command levels (theater, corps, division, brigade) ensures a comprehensive analysis for effective considerations of potential issues in the planning, construction, and operations of a detention facility. The chief of protection or provost marshal officer, with input from the commander of detainee operations, should brief the construction status of the DHA, TDF, current detainee capacity within U.S. and host-nation-controlled facilities, projected detainee capacity, detainee transfers, and forecasted capture rates of detainees to provide commanders with a clear assessment of detainee system capabilities. Planning for detention facility construction and operations should start quickly to provide for the timely notification of engineers, support personnel, transportation planning, the selection and development of specific facility sites, the procurement of construction materials, and the actual construction.

References. Field Manual (FM) 3-63, *Detainee Operations*, page 1-17 and chapter 7, 28 APR 2014; FM 3-39, *Military Police Operations*, pages 6-5 – 6-7, 26 AUG 2013.

Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, and Policy (DOTMLPF-P). The solution set lies with leadership and education. The establishment of the TDF resides primarily with the MP brigade; the MP brigade commander may be designated the commander of detainee operations if the brigade commander is the senior MP in theater. With these factors in mind, the corps/theater provost marshal's office (PMO) needs to incorporate the MP brigade into the planning and development of detainee operations. The command leadership within the higher headquarters and the MP brigade must ensure they integrate input from the collective staff and incorporate it into all aspects of planning and operation for detention operations.

3.1.2. The Knowledge Management (KM) Process and Standardization

Observation. MP brigades are challenged in the establishment of an effective KM process and lack standardization within the headquarters for KM.

Discussion. MP brigades are not authorized a knowledge management officer (KMO)/ noncommissioned officer (NCO) by modified table of organization and equipment (MTOE). With a lack of a designated KMO, the brigade did not implement processes needed to support operational requirements of managing the brigade's knowledge. As a result, the common operational picture (COP) lacks relevant and timely information, preventing the brigade's staff from seeing themselves, the enemy, and their environment. This leads to a lack of situational understanding across the staff and hinders the ability of the deputy commanding officer and commander to make informed and rapid decisions.

Recommendation. Build depth across the brigade staff in school-trained knowledge managers and appoint a brigade KMO and section representative who are able to focus efforts on managing the process for the brigade. Create a training plan that maximizes usage of the KM processes and ensures all brigade staff and subordinate units are trained on relevant tactics, techniques, and procedures (TTPs).

References. FM 6-0, *Mission Command*, page 2-1, paragraphs 2-2 – 2-3, page 2-21, paragraph 2-91, and chapter 3 (with Change 2), 05 MAY 2014; Army Techniques Publication (ATP) 6-01.1, *Techniques for Effective Knowledge Management*, 06 MAR 2015.

DOTMLPF-P. The solution set resides with leadership and education. Added focus by leadership to optimize the capabilities within the MP brigade and refine roles will improve knowledge management.

3.1.3. S-2 Analysis and Police Intelligence Operations (PIOs) Integration

Observation. Brigade S-2s struggle to provide detailed intelligence analysis relevant to the brigade's operation and neglects to include PIOs.

Discussion. The initial intelligence preparation of the battlespace (IPB) developed during mission analysis relies heavily on the higher headquarters' products, which do not include relevant information regarding police intelligence. It is an MP-specific integrated function. This reliance on products results in an inability to clearly define the brigade's area of responsibility (AOR) within the higher headquarters' support area. This limits the brigade S-2 section's ability to provide generalized verbal assessments of all threats, ranging from special purpose forces (SPFs) to the criminal threat, which hinders the staff's ability to produce a detailed modified combined obstacle overlay, enemy situational template, and course of actions, hindering the commander's decision making. A lack of detailed analysis, starting during mission analysis, is carried over into the warfighter exercise (WFX), further limiting the ability of the staff to properly evaluate the enemy effects on current and future operations (CUOPS and FUOPS).

Recommendations. Use training opportunities to develop analytical skills and processes that integrate PIOs. Ensure the S-2 section emphasizes the importance of networking with all intelligence sources within the operational environment and the necessity to pull all relevant data from higher, lower, and adjacent units; and host-nation police.

References. FM 3-39, *Military Police Operations*, pages 3-24 – 3-32, 26 AUG 2013; ATP 3-39.20, *Police Intelligence Operations*, chapter 2, 06 APR 2015; FM 2-0, *Intelligence*, pages 1-13 – 1-17 and pages 2-13 – 2-15, 06 JUL 2018.

DOTMLPF-P. The solution set resides with education and training. With added focus from leadership, offering training opportunities to incorporate PIOs outside of a WFX will provide a deeper understanding of their use and application. During WFXs, Mission Command Training Program (MCTP) can stimulate PIOs through the creation of scenarios, with host-nation police role players, and provide criminal intelligence products.

SECTION 3.2. MANEUVER ENHANCEMENT BRIGADE (MEB)

3.2.1. MEB Roles and Authorities

Observation. The MEB commonly lacks the authority to execute doctrinally assigned tasks in the support area.

Discussion. In every of fiscal year 2018 (FY18) WFX, whether the MEB took part as a primary training audience or served as a response cell, there was a lack of consistency within the higher headquarters about how to employ/use the MEB in the support area, or leverage its capabilities in conjunction with the support area command post (SACP). Although the MEB maintains the requisite manning and equipment to conduct the majority of the support area activities (providing area security, terrain management, movement control, mobility support, and clearance of fires, with the exception of sustainment coordination), higher headquarters do not empower the MEB to execute mission command of the support area.

Doctrine clearly identifies the necessity of the MEB's alignment with the division/corps, its relation to the SACP, and its activities within the support area (FM 3-0; FM 3-94), but the MEB's roles and authorities in relation to the other brigades in the support area are not clearly understood, nor articulated in the orders process. Doctrine has not yet articulated the roles and authorities the MEB retains when the division or corps activates the SACP. As a result of that lack of clarity, other brigades and enablers in the support area fail to report unit locations and movement, and do not share intelligence, which desynchronizes the COP and planning efforts within the support area. Coordination with tenant and transient units lacks a solidified process under the MEB's authority to synchronize security, movement control, and other supporting efforts that allow the division/corps to sustain operations, build combat power, and focus on the deep area.

Recommendation. Higher headquarters should empower the MEB as the support area authority and enforce cooperation between the MEB and other brigades in the support area. This is part of the commander's role of clearly delinating the fights at each command node.

References. FM 3-81, *Maneuver Enhancement Brigade*, pages 1-2, 1-8 – 1-12, 2-1, chapter 3, 21 APR 2014; FM 3-0, *Operations* (with Change 1), pages 1-34, 2-11, 2-13, 2-17, 2-37, 06 DEC 2017; FM 3-94, *Theater Army, Corps, and Division Operations*, pages 5-5, 5-28, 6-8 – 6-9, 21 APR 2014; ATP 3-91, *Division Operations*, pages 1-2, 1-13 – 1-14, 1-28, 17 OCT 2014.

DOTMLPF-P. This is a doctrine gap. Update FM 3-81, FM 3-94, and ATP 3-91 to clarify the roles and responsibilities of the MEB and its higher headquarters when the SACP is established and bring them in line with support area doctrine introduced in FM 3-0.

SECTION 3.3. COMBAT AVIATION BRIGADE/TACTICAL AVIATION BRIGADE (CAB/TAB)

3.3.1. Inefficiencies in Collection

Observation. CAB S-2 sections often struggle to manage information collection activities, both internal and external, and to provide relevant assessments to the commander and staff.

Discussion. CAB collection managers rarely develop priority intelligence requirements (PIRs) with the potential to provide information critical to the CAB's mission set and facilitate decision making at the CAB leadership level. PIR generally duplicates that of the higher headquarters as opposed to nesting them within the framework of higher headquarters' priorities. This leads to a duplication of effort in which multiple assets with the same collection capability are collecting on the same named area of interest (NAI). The CAB is often unaware of external intelligence, surveillance, and reconnaissance (ISR) activities, which deprives it of the opportunity to leverage those assets to augment its understanding of the operational environment.

Further exacerbating the CAB's difficulties in collecting information is the reluctance to use all available assets organic to the CAB. Although most of the CAB's rotary-wing assets are not appropriate for conducting deliberate ISR activities, the amount of battlespace covered by lift, reconnaissance, and attack platforms provides many opportunities for passive collection.

CAB collection managers rarely create the necessary information collection planning tools to facilitate understanding of collection activities conducted by subordinate units, or provide adjacent units with a means to satisfy collection requirements in the rare instance that horizontal coordination may occur. The lack of tools such as an event matrix or collection overlay make it difficult for the CAB to predict enemy activity and collect information to confirm or deny enemy courses of action (ECOAs).

Lastly, collected information rarely leads to assessments that provide the commander and staff the ability to make timely decisions. Products such as running estimates are not consistently updated and fail to capture assessments relevant to the CAB's operations.

Recommendations.

- Information requirements development should integrate all WfFs and the commander's priorities in order to remain focused on information critical to the CAB's success, as well as mitigate the loss of combat power and the resources necessary to sustain that combat power.
- The CAB should develop specific ISR tasks for subordinates to execute, as well as a means to track ISR activities for completeness and effectiveness.
- To better synchronize collection activities and expand intelligence reach, CAB intelligence WfF personnel should attend IC working groups (WGs) at the corps and division levels.
- CABs should develop and execute a mission debriefing/reporting program to take advantage of passive collection opportunities performed by its vast amount of rotary-wing platforms.

References. FM 2-0, *Intelligence*, 06 JUL 2018; Army Doctrine Reference Publication (ADRP) 3-09, *Fires* (with Change 1), 08 FEB 2013; ADRP 5-0, *The Operations Process*, 17 MAY 2012; ADRP 6-0, *Mission Command* (with Change 2), 28 MAR 2014; ATP 2-01, *Plan Requirements and Assess Collection*, 19 AUG 2014; ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 01 MAR 2019; FM 3-55, *Information Collection*, 03 MAY 2013; FM 6-0, *Commander and Staff Organization and Operations* (with Change 1), 11 MAY 2015; Air Force Doctrine Document (AFDD) 2-0, *Global Integrated Intelligence Surveillance, and Reconnaissance Operations*, 06 JAN 2012; Joint Warfighting Center (JWFC), *Commander's Handbook for Persistent Surveillance*, 20 JUN 2011.

DOTMLPF-P. Leadership training during mission command training (MCT) should be followed by small-group training at home station during command post exercises (CPXs). Provide templates of successful information collection products during MCT for units to incorporate into standard operating procedures (SOPs). Work with the staff on how to cultivate effective collection requirements and ensure collection managers can develop ISR tasks to answer those requirements satisfactorily.

3.3.2. Knowing the Operational Environment

Observation. CABs struggle to understand the operational environment.

Discussion. The integration of all WfFs does not occur during the IPB process. This results in a lack of common situational understanding across the staff concerning the effects of terrain and weather in addition to the enemy threat. This adversely affects the later steps of the MDMP as well as decisions during execution. Additionally, there is little to no refinement of higher headquarters' IPB products to the CAB's mission sets.

Recommendation. IPB products produced by higher headquarters should be refined and tailored to the CAB's mission to provide the commander and staff a more accurate visualization of the battlefield as it applies to their mission sets.

- CABs should conduct a thorough and complete staff-integrated IPB process that includes analysis of the impacts of natural and man-made terrain, weather, and enemy enablers.
- CABs should develop and publish all of their IPB products, to include their modified combined obstacle overlay (MCOO), to enable friendly ground movement and enemy targeting.
- CABs should update and publish analysis and products throughout the fight as the situation changes and new information is learned.

References. ADRP 5-0, *The Operations Process*, 17 MAY 2012; ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 01 MAR 2019; ATP 2-33.4, *Intelligence Analysts*, 18 AUG 2014; ATP 3-34.80, *Geospatial Engineering*, 22 FEB 2017.

DOTMLPF-P. Leadership training during MCT should be focused on the importance of integrating all WfFs into the IPB process. Staff section IPB requirements should be codified in SOPs.

3.3.3. Planning in the Decisive Action Fight

Observation. CABs struggle to effectively and efficiently plan for the decisive action operations.

Discussion. Nearly two decades of fighting in a counterinsurgency (COIN) environment has changed the planning mentality among CAB staffs. There is a tendency to push the preponderance of planning duties and responsibilities to the subordinate battalions with little analysis and refinement from the brigade staff. Although this may have worked previously, the scale of a decisive action fight forces planning and collaboration using resources (personnel, equipment, and procedures) that the subordinate units do not possess. Once the CAB staff assumes the planning role, they struggle to properly collaborate and include all WfFs in their planning efforts. This is compounded by COIN-centric SOPs that do not support the complex planning across all WfFs needed to succeed in large-scale combat operations (LSCO).

The struggles at the brigade level translate to insufficient guidance and support to subordinate battalions. CABs neglect to publish and/or update the fighting documents (decision support matrix [DSM], synchronization matrix, enemy situation template [SITTEMP], intelligence collection plan, and orders) to ensure battalions are nested and supported in planning efforts. This, coupled with infrequent and often inadequate rehearsals, leads to a lack of common understanding between echelons. Often, this results in the mission being executed in a manner inconsistent with the commander's intent.

Inadequate staff work at the brigade level also manifests itself in a struggle to properly influence higher and adjacent units. In LSCO, the CAB operates throughout the entire division area of operations (AO) and requires coordination with all division assets. The battle rhythm events where this coordination would take place are often poorly attended or prepared. The inputs for these WGs are not produced at the brigade level as brigade WG outputs. This results in the CAB not being able to articulate the exact support needed.

Recommendation. CABs should review SOPs to ensure planning venues and tools include all WfFs and expertise across the brigade staff. The CAB should clearly define and publish the needed documents and support to empower subordinate planning. CABs should nest battle rhythm events with higher meetings to allow the CAB to come prepared to coordinate externally.

References. ATP 6.0-5, *Command Post Organization and Operations*, 01 MAR 2017; Army Doctrine Publication (ADP) 3-0, *Operations*, 06 OCT 2017; ADP 5-0, *The Operations Process*, 17 MAY 2012; ADRP 6-0, *Mission Command* (with Change 2), 28 MAR 2014; FM 3-52, *Airspace Control*, 20 OCT 2016; FM 6-0, *Commander and Staff Organization and Operations* (with Change 2), 22 APR 2016.

DOTMLPF-P. MCTP must continue to provide successful planning tools and SOP feedback to units.

3.3.4. Deliberate Targeting

Observation. CABs are habitually behind the air tasking order (ATO) cycle, resulting in an over-reliance on dynamic targeting.

Discussion. CABs struggle to nest their battle rhythm with the targeting process early in the WFX because they do not realize the staff work that goes into nominating targets. Most often, divisions require target nominations 72 hours prior to execution in order to get inside the ATO cycle. This means brigades, specifically the CAB, must have internal WGs prior to that in order to define these targets.

If targets are not nominated ahead of time, CABs get behind the ATO cycle and are overly reliant on dynamic targeting. This results in a high percentage of fires missions being denied for a variety of reasons including target decay, fire support coordination measure (FSCM) violations, assets out of position, and high-payoff target list (HPTL) violations. When these call-for-fire missions are denied, attack aircraft service targets directly. This can lead to a Hellfire missile shortage during FUOPS, resulting in an inability to shape the division fight effectively.

Recommendations.

- Establish a deliberate battle rhythm ahead of the WFX and implement 24-hour operations on W-4. This will enable a full iteration of targeting meetings, such as the targeting working group (TWG) and targeting decision board (TDB), prior to the 72-hour target nomination cutoff. This enables the possibility of effects on the enemy from joint targeting platforms on the first ATO day of the WFX.
- Ensure that the staff understands the linkages between inputs and outputs from other battle rhythm events and how they affect the CAB targeting meetings. Understanding these linkages of internal and external WGs allows the staff to develop the appropriate inputs for the targeting WG. With the proper inputs, the staff is able to generate the outputs necessary to feed the division TWG.

References. ADRP 3-09, *Fires*, 31 AUG 2012; ATP 3-60, *Targeting*, 07 MAY 2015; Joint Publication (JP) 3-60, *Joint Targeting*, 31 JAN 2013; FM 3-0, *Operations*, 06 DEC 2017; JP 3-0, *Joint Operations*, 17 JAN 2017.

DOTMLPF-P. Conduct leadership training during MCT on the value of publishing and implementing a well-thought-out battle rhythm early in the exercise.

3.3.5. Protecting the CAB

Observation. CABs encounter challenges when attempting to integrate protection into planning, which results in the destruction and loss of aviation assets.

Discussion. CABs often assign the role of the protection officer to an inexperienced and junior officer as a byproduct of personnel shortages coupled with an increase of duties levied toward protection officers on staff such as a battle captain/NCO, etc. This individual lacks the knowledge of all facets of protection tasks, how to employ protection assets, and implement risk mitigation. Without additional WfF inputs, the individual conducts planning that is not integrated with the plan.

Additionally, this individual rarely conducts coordination with higher, lower, and adjacent units to ensure the layering of protection assets. This results in a significant loss of platforms, support assets, and personnel as the enemy targets forward arming and refueling points (FARPs), assembly areas (AAs), and support/flight routes. It is only after catastrophic losses that senior CAB personnel understand the implications of lapses in protection planning.

Recommendation. Designate the plans officer as the individual responsible for ensuring protection inputs from all WfFs are integrated into future plans.

- Running estimates are the key to keeping the concept of protection relevant as a WFX plays out. Running estimates have to be current and incorporate protection planning considerations across all WfFs.
- It is important that risks are identified and mitigated across all WfFs. This will enable the commander to make an informed decision and feel comfortable accepting risks.

DOTMLPF-P. Provide leadership training on the importance of protection during MCTs. Codify protection cell manning and responsibilities in the SOP.

3.3.6. Sustaining the CAB

Observation. Sustainment is not involved in the IPB process and is not integrated into the current operations (CUOPS) section.

Discussion. The sustainment section should create key planning inputs during IPB, war gaming, and during the creation of the critical asset list (CAL)/defended asset list (DAL). This is further compounded by the sustainment cell's requirement to have the proper people, connectivity, and systems to accomplish mission analysis and COA development (COA DEV). Unfortunately, the sustainment cell is often physically disconnected from the rest of the staff and confined to an Army logistics operations center (ALOC), with no representation in CUOPS.

Recommendation. Necessary sustainment-related IPB outputs should be codified in an SOP and command post (CP) layout should be refined to include all WfFs.

- Ensure that there is sustainment representation on the CUOPS floor, and that there is time for the representative and staff section to exchange information and priorities for their section.
- All staff sections should ensure that their running estimates and pertinent analysis are included during mission analysis and COA DEV to allow commanders to make informed decisions. This information should also be tied to decision points with supported commander's critical information requirements (CCIRs), which allows the staff to anticipate key decisions for the commander.

References. FM 6-0, *Commander and Staff Organization and Operations* (with Change 2), 22 APR 2016; ADRP 4-0, *Sustainment*, 31 JUL 2012; ADRP 6-0, *Mission Command* (with Change 2), 28 MAR 2014; ADRP 3-0, *Operations*, 06 OCT 2017; ADRP 5-0, *The Operations Process*, 17 MAY 2012.

DOTMLPF-P. Provide leadership training on the importance of staff-integrated IPB and CP layout during MCTs. Provide templates of successful CP layouts during MCTs for units to incorporate into SOPs.

3.3.7. Managing the Battle

Observation. CABs struggle to effectively manage the CUOPS fight and are unable to rapidly make informed decisions.

Discussion. CAB staffs lack synchronization during the current fight due to ill-defined roles and responsibilities, deficiencies in mission command information systems (MCISs), and unidentified processes and procedures. Lack of unit SOPs leads to unclear roles and responsibilities, underdeveloped products (DSM, synchronization matrix, enemy SITTEMP, intelligence collection plan, and orders), and ill-defined processes and procedures to control and direct CUOPS. Staffs struggle to integrate and use assigned MCISs effectively due to a lack of training. Deficiencies in training range across upper and lower tactical internet (TI) systems. Lack of defined processes and procedures contribute to the staff's inability to conduct continuous assessments and recommend adjustments. Decision support tools (DSM, decision support template [DST], and synchronization matrix) are not updated and used during execution. When unanticipated variances occur, staffs often lack the products, processes, and identified teams to conduct the rapid decisionmaking and synchronization process (RDSP) and quickly generate options for the commander.

Recommendation. Include MCIS training and tactical standard operating procedures (TACSOP) development into the unit training plan. Use TACSOP during CPXs and pre-WFX training opportunities to refine and update products and processes. Include roles and responsibilities, key product templates, and standard battle rhythm events within the TACSOP. During execution, continue to update and use decision support tools during execution and identify rapid decision-making products, processes, and teams to respond to unanticipated adjustments to the plan.

References. ADP 3-0, *Operations*, 06 OCT 2017; ADRP 5-0, *The Operations Process*, 17 MAY 2012; ADRP 6-0, *Mission Command* (with Change 2), 28 MAR 2014; FM 6-0, *Commander and Staff Organization and Operations* (with Change 2), 22 APR 2016.

DOTMLPF-P. Provide organizational training on MCIS and SOP development during MCT and CPXs.

SECTION 3.4. FIELD ARTILLERY BRIGADE/DIVISION ARTILLERY (FAB/DIVARTY)

3.4.1. Proactive Targeting

Observation. Units struggle with emphasis on detailed proactive targeting and target refinement for the division's operational span of influence.

Discussion. Units struggle to plan proactively in anticipation of division/corps efforts in terms of supportive targeting. As a result, the focus of effort is in the AO instead of shaping fires and counterfires in the area of influence, and is often reactive instead of proactive. As a result, the division targeting boards often turn into an operations update to the commander instead of a venue for the commander to make decisions 72-96 hours out.

Units also struggle with target refinement by focusing on quantitative metrics (number of systems destroyed) versus qualitative metrics (types of systems destroyed). The latter enables the S-2 to provide a better estimate on enemy combat effectiveness, which overall provides a more accurate enemy picture to the commander. The S-2, by focusing on enemy order of battle and specific systems, can then cross-reference and attribute specific systems to specific units.

Recommendation. Plan limited targets in detail based on the commander's approved HPTL. Dedicate shooters-to-sensors to find and destroy those critical targets with preplanned airspace. Emphasize S-2 battle damage assessment (BDA) in terms of percentages of units destroyed and attribution of enemy system to enemy formations to refine ECOAs.

DOTMLPF-P. Organizational training on MCIS and leadership training should be conducted at the unit's MCT, focusing on integrating processes and continuing activities.

3.4.2. Unit Airspace Plan

Observation. Units are unable to create a unit airspace plan that facilitates rapid execution of artillery fires.

Discussion. Units lack a deliberate and integrated airspace coordination plan for fires, which contributes to significant delays in counterfires times by creating an increase in the time required to conduct dynamic airspace coordination and deconfliction. The end result is ineffective counterfires missions due to airspace clearance issues. This lack of deliberate and integrated planning extends to analog and digital products.

Recommendations. Plan limited targets in detail based on the commander's approved HPTL. Dedicate shooters-to-sensors to find and destroy those critical targets with preplanned airspace.

DOTMLPF-P. Organizational training on MCIS and leadership training should be conducted at the unit's MCT, focusing on integrating processes and continuing activities.

3.4.3. Desynchronized Fires Plan

Observation. Fires plan is desynchronized from the maneuver plan due to a lack of continued collaboration between the G-5 plans and targeting team.

Discussion. Changes to the scheme of maneuver within 24 hours of execution desynchronizes the ATO-driven fires plan as division often does not revisit the synchronization plan agreed upon per the ATO cycle at the division TWG and finalized during the division targeting board.

Recommendation. G-5 and targeting team battle rhythms should be synchronized to ensure clear understanding across multiple WfFs, and also develop mechanisms to revisit the synchronization plan due to dynamic changes to the scheme of maneuver.

DOTMLPF-P. Leadership training should be conducted at the unit's MCT and training during CPXs 1 through 3, focusing on the joint targeting cycle and maneuver planning during the operations process.

3.4.4. Collection Plan

Observation. Improperly developed collection plan does not answer PIRs, leading to the targeting of the higher headquarters' commanders' approved HPTL.

Discussion. The division G-3 often relies solely on the G-2 to develop the intelligence collection plan and to ensure it is synchronized with the fires plan, even though the G-3 is overall responsible for it. As a result, the sensor-to-shooter planning required to link information collection to fires does not effectively occur, and opportunities to capitalize on effective information collection planning are squandered.

Additionally, the G-2 information collection plan often struggles to answer PIR by being too broad or outdated, and lagging behind the current schemes of maneuver.

Recommendation. The information collection plan cannot remain an intelligence WfF-driven product and should be synchronized with the maneuver and fires plans. IPB and targeting are two of the three integrating processes.

DOTMLPF-P. Provide doctrine training on how divisions execute deep operations through integrating processes to synchronize specific functions during the operations process; conduct leadership training at the unit's MCT, focusing on characteristics for effective deep operations.

3.4.5. BDA Analysis

Observation. Lack of understanding and communicating BDA provides false analysis of enemy strength and disposition.

Discussion. Units tend to focus on percentages and raw aggregate numbers as opposed to the three doctrinal aspects of BDA: physical damage, functional damage, and targeting system assessment. By not doing so, units cannot effectively estimate enemy combat effectiveness or even attribution of destroyed/degraded systems.

Additionally, units do not collaborate and share BDA with adjacent units towards a shared COP; when units do, there are compatibility issues with the shared information because there is no codified or cohesive methodology with regards to BDA.

Recommendation. BDA methodology needs to be standardized and codified to support assessments in support of target refinement.

3.4.6. Employment and Protection of Assigned Protection Assets

Observation. Inadequate employment and protection of assigned protection assets.

Discussion. Units do not assign the roles and responsibilities for the protection WfF until the WFX begins. Typically, that task falls upon the air defense airspace management/brigade aviation element (ADAM/BAE) cell; the result is an inadequate scheme of protection. Units then struggle to conduct criticality and vulnerability assessments in order to develop a CAL and subsequently, a DAL. Finally, there is little to no refinement to the CAL/DAL or use/prioritization of protection assets, such as engineers, air defense artillery (ADA), and security forces. This affects the commander's anticipated force ratio, targeting cycle, placement of artillery assets, and fire-finder radar placement.

Recommendation. Identify the protection officer in charge (OIC) at least 90 days before execution of the WFX or prior to the MCT. Codify roles and responsibilities for the protection WfF in the base order and add protection WGs to the battle rhythm event. Train protection personnel on the capabilities and limitations of potential protection assets to be resourced during the WFX. This will enable the staff to employ protection assets properly and provide task and purpose accordingly.

DOTMLPF-P. Organizational change is necessary from COIN mentality to spreading assets equally across the battlefield, rather than weighting main efforts and decisive operations.

3.4.7. Synchronization for Sustainment Logistical Resupply Triggers

Observation. There is a lack of synchronization for sustainment logistical resupply triggers.

Discussion. When assigned firing battalions, DIVARTYs struggle with the resupply of subordinate Multiple Launch Rocket System (MLRS)/High Mobility Artillery Rocket System (HIMARS) battalions. The typical S-4 section consists of one officer and one NCO. Due to a lack of sustainment staff and with the introduction of firing units, the shortfall in structure increases the complexity of requirements for an internal S-4 section to manage classes (CLs) IIIB, V, and VII. FABs have a habitual relationship with an organic brigade support battalion (BSB) and do not have this disadvantage. Their support operations (SPO) sections maintain commodity management in order to conduct predictive sustainment analysis that supports operations 24-72 hours and beyond.

Recommendation. DIVARTY S-4 sections should conduct detailed parallel planning with the combat sustainment support battalion (CSSB) assigned to support the division headquarters and headquarters battalion to maintain the volume of forecasted mission requirements. The SPO then assumes the role as advocate for the DIVARTY at sustainment brigade SPO synchronizations and division movement boards.

DOTMLPF-P. The fire control officer and S-4 must plan in detail during the TWG to ensure there is a shared understanding of resupply triggers and munitions limitations.

SECTION 3.5. ENGINEER (EN)

3.5.1. Establishment and use of KM and KMOs

Observation. Units do not have a trained KMO and did not use KM or KM tools during their WFX.

Discussion. Engineer brigades do not assign a KMO to oversee people, processes, and tools. This significantly hinders shared understanding throughout the organization. This is partly because KM is not completely understood and is often thought of as the “SharePoint.” Microsoft SharePoint is just one of the many tools that can enable shared understanding throughout an organization. When KM is not fully understood, tools and processes are not used to their full potential. This is where the formally trained KMO is critical to maximizing KM within an organization. Because of the lack of KM personnel, the tools are not managed to maximize KM within the organization. This hinders operations because the tools, enablers, and processes are not used to their maximum potential.

Recommendations. Many organizations are not authorized a KMO on their MTOE, but that does not prohibit them from having a KMO or even sending a Soldier to the school. Units should identify the appropriate personnel to attend the KM course. This should be done at the brigade and battalion level. Also, the brigade should develop and manage a program to ensure that once established, it remains current and minimizes gaps in KMO because of typical personnel turnover.

References. FM 6-0, *Mission Command*, page 2-1, paragraph 2-2 – 2-3; page 2-21, paragraph 2-91; and chapter 3 (with Change 2), 22 APR 2016; ATP 6-01.1, *Techniques for Effective Knowledge Management,* 06 MAR 2015.

DOTMLPF-P. Leadership, training, and personnel are the solutions to this problem. Educating the leadership on the benefits of trained KMOs and how they enable shared understanding throughout the brigade will enable the process to be successful. Programs such as KM often struggle because the right people are not involved.

3.5.2. Operational-Level Engineer Planning in Decisive Actions (Mobility/Counter-mobility)

Observation. Engineer brigades are often focused on general engineering and survivability and do not spend much time planning or addressing mobility or counter-mobility.

Discussion. Engineer brigades spend little to no time planning or managing mobility or counter-mobility requirements for their AO aside from route clearance and its associated tasks. This becomes problematic in a decisive action environment for several reasons. There are not enough engineer assets or enablers to task-organize to subordinate echelons and sustain the requirements at the corps level. Engineer-associated tasks are resource-intensive, and not everyone, to include other engineer elements, necessarily understand the capabilities of all engineer formations. The engineer brigade is not leveraged for wet gap crossings; the vast majority of multi-role bridge companies reside with the engineer brigade at the start of the exercise. Wet gap crossings are a division operation and the engineer brigade normally belongs to corps, which does not mean the engineer brigade cannot provide the necessary expertise. Most divisions struggle with the wet gap crossing during WFXs due to the less-than-optimal use of engineer assets.

Finally, the engineer brigade must assist the corps engineer cell in these operations to maximize the potential and use of some of the most requested enablers on the battlefield.

Recommendations. Corps should integrate engineer brigades into the overall corps engineer planning and then allocate assets (to include command nodes) to subordinate divisions as required for wet gap crossing operations. Additionally, divisions should request engineer assets, along with required command nodes, to SPOs when gaps are identified. All elements should recognize that the corps engineer brigade is responsible for replacing multi-role bridge companies (MRBCs) with line of communications bridge (LOC-B) systems, so if allocated to employ and manage the MRBCs, they often fail the follow-on mission of creating long-term mobility with LOC-B on main supply routes (MSRs)/alternate supply routes (ASRs).

References. FM 3-34, *Engineer Operations*, pages 3-1 and 3-2, paragraphs 3-1 to 3-4, 02 APR 2014.

DOTMLPF-P. This highlights the organizational shortfall or gap with respect to engineer assets required to conduct LSCO. Specifically, maneuver brigades require full engineer battalions or divisions require engineer brigades to conduct multiple mobility and counter-mobility tasks.

3.5.3. Intelligence WfF Integration

Observation. S-2 sections limit their usefulness by not fully integrating into operations.

Discussion. S-2 sections often fail to integrate the intelligence WfF into operations. Three key areas are information collection, SITTEMP development, and synchronization. Information collection does not have to be conducted by the engineer brigade, but tracking corps/division/brigade combat team (BCT) NAIs assists the commander's visualization, and thus, the required maneuver forces. Integrating with other echelons enables the engineer brigades' formations through shared understanding and increased situational awareness in AOs.

A developed SITTEMP can further elaborate on what the enemy is doing so the commander can further anticipate requirements. Again, this is something that the S-2 section does not necessarily need to develop by themselves because the landowning formation will have done that analysis. The S-2 just needs to contact the appropriate organization to receive the relevant information the commander needs.

Even though the engineer brigade S-2 section is limited in size, synchronization is paramount to ensuring the commander receives the right information at the right time to make informed decisions and take appropriate COAs. This can be further enhanced by establishing and developing relationships with the S-2/G-2 sections that share an AO with the engineer brigade.

Recommendations. Leverage G-2 sections at echelon as well as network and establish relationships with other brigades and formations that own the terrain where the engineer brigade operates. This can be mutually beneficial to both organizations.

References. FM 3-34, *Engineer Operations*, pages 3-10 – 3-12, 02 APR 2014; FM 2-0, *Intelligence*, pages 1-10 – 1-17, 06 JUL 2018.

DOTMLPF-P. This solution resides within training. Staffs should understand the capabilities, limitations, and constraints of their organizations. What is quite often a capacity issue can be overcome by leveraging other resources and organizations. This, combined with example tools and SOPs provided during MCTs and interaction prior to the WFX, can significantly reduce these challenges.

3.5.4. Sustainment Operations

Observation. Sustainment operations need to better support engineer brigade operations.

Discussion. Sustainment operations are limited and become burdensome in engineer brigades because of the limited manning within the sustainment WfF. The quantity of classes of supply, specifically classes (CL) IV and V require more than three service members coded for supply (one sergeant major, one staff sergeant, one specialist). The S-4 position is coded O1A. This clearly creates a challenge for the brigade because the limited formally trained personnel causes procedural problems when planning, especially forecasting requirements for operations. There is not so much competition for the resources themselves, but the equipment capable of transporting sufficient quantities is often limited in supply and in high demand.

The current MTOE construct promotes engineer equipment maintenance and facilitates construction management, but limits 92-series (supply) representation. Maintenance is important to engineer formations, but managing the classes of supply becomes problematic at this echelon.

Recommendations. This can be improved at a minimum by only leveraging sustainment field grade officers (FGOs) in the brigade S-1/4 positions as well as adding a sustainment company grade officer (CGO) to each section. This would enable the brigade to function more effectively by providing sustainment personnel with a better understanding of sustainment on the macro level.

References. FM 3-34, *Engineer Operations*, pages 3-13 – 3-14, 02 APR 2014.

DOTMLPF-P. This observation resides in organization. The S-1 and S-4 have small sections and may not have the necessary expertise, which limits planning and hinders synchronization and capability.

SECTION 3.6. NATIONAL GUARD BRIGADE COMBAT TEAMS (NGBCT)

3.6.1. NGBCT Operations

3.6.1-1. Synchronizing Operations in Time and Space

Observation. BCTs do not synchronize operations in time and space.

Discussion. BCT planning processes routinely failed to synchronize operations between WfFs, subordinate units, and enablers. Although there were numerous causes for this issue, the most common contributing factors were a lack of BCT-level WfF integration, failure to transition from conceptual to detailed planning, and inadequate planning horizon management. The resulting lack of synchronization created time-management challenges, confusion among subordinate units, and severe friction during execution.

Recommendations.

- **Standing Plans Cell.** Establish a plans cell manning structure that includes representatives from all WfFs and critical functions within WfFs (e.g., air defense, civil affairs, psychological operations, legal, etc.). These personnel need to be identified, informed, and should be primarily responsible for plans cell operations to prevent the loss of integration and shared understanding that occurs when WfF representatives separate from planning to conduct other CUOPS or functional cell tasks.
- **Planning Timelines.** Use the "1/3-2/3" rule as a general guide, but be realistic when developing and refining planning timelines to ensure feasibility. A plan published at the 1/3 mark that is unclear and/or has severe synchronization deficiencies is of little value to subordinate units, and will often result in additional confusion and wasted time. When developing the planning timeline, take the time to assess the actions that will need to be completed within each step and between steps. When feasible, increase collaboration and communication between the BCT and subordinate units, starting with mission analysis, whether done directly or through battalion liaison officers (LNOs). Doing this will allow subordinate units to begin their planning process sooner and will assist with mitigation of risk if the BCT should significantly exceed the 1/3 time period.
- **Planning Horizon Management.** The BCT should iteratively assess current planning horizons against future planning horizons. This will ensure that transitions from the plans cell to the CUOPS integration cell (COIC) are conducted at an appropriate time

that allows the COIC to receive a synchronized plan with enough time to prepare for execution, while also allowing the plans cell to transition to the next plan without taking on immediate time constraints. Although a common practice is to use the combined arms rehearsal as the transition to the COIC, a better method may be to conduct this transition following the operation order (OPORD) brief. Although this may not be necessary given the amount of time until the execution phase of the subsequent planning cycle, the critical piece is that the BCT maintains continuous awareness of planning horizons and schedules transitions appropriately.

3.6.1-2. Mission Rehearsals

Observation. Mission rehearsals are not used as the final synchronization event.

Introduction. MCTP, over the course of FY18 brigade WFXs, observed several key data points – all related to a lack of synchronization between brigade planners and executors. Regardless of the amount of time expended in the planning process, or how robust and all-encompassing a brigade OPORD may be, without effective, productive, and collaborative rehearsals between WfFs and across echelons, brigades failed to achieve shared understanding. This presented problems small and large, and of varying degrees of magnitude on the overall success or failure of an operation. What became abundantly clear over the course of FY18 was that a lack of synchronization between planners, subordinate formations, and WfFs led to compounding problem sets that created a series of cascading degenerative effects, which negatively impacted the brigade's mission.

Vignette. In most cases observed by MCTP, the breakdown occurred in the transition from planning to execution and could have been identified and remedied by executing brigade-directed mission rehearsals.

There are four overarching types of rehearsals: backbriefs, combined arms rehearsals (CAR), support rehearsals (intelligence collection, fires, sustainment, etc.), and battle drill or SOP rehearsals (FM 6-0, *Commander and Staff Organization and Operations* (with Changes 1 and 2), Chapter 12, 05 MAY 2014). It has been MCTP's observation that the CAR, along with the intelligence collection, fires, and sustainment rehearsals are imperative to synchronizing the plan prior to its execution. Furthermore, although not specified in doctrine, it has been MCTP's observation that the CAR, being the culminating rehearsal of the brigade operations process, is best conducted following the execution of the support rehearsals for one key reason – the CAR is the rehearsal "in which subordinate units synchronize their plans with each other… . This rehearsal type helps ensure that subordinate commander's plans achieve the higher commander's intent." (Ibid., paragraph 12-9). Although the intent of all rehearsals is not just to ensure common understanding, but moreover, identify gaps and shortfalls, it then follows logically that the CAR be executed only after the support rehearsals have identified their own WfF-specific gaps and acted actively to fill them.

However, in four of the six National Guard brigade WFXs observed by MCTP in FY18, the CAR was executed first, with supporting rehearsals following, which resulted in a number of unforeseen and negative second-order effects. The CAR was executed without the benefit gained through the execution of the fires, intelligence collection, and sustainment rehearsals. The CAR also became less of the rehearsal and more of a large-scale WG as commanders and staffs

struggled to adjust the plan, and lastly, the support rehearsals were not well-attended because the CAR, being viewed as the terminus of the operations process, had already concluded. This type of breakdown between the brigade headquarters and the subordinate formations, and more broadly, between what was planned and what was being executed, affected the entire brigade, and not just during planning and rehearsals, but in the execution of the operation itself.

To better understand how this breakdown occurs, and more importantly how to avoid such a breakdown in the future, MCTP will examine how the concept of fires was briefed during a brigade CAR, the subsequent actions taken at the fire support rehearsal, and how that affected mission execution.

Following MDMP and the publishing of a brigade OPORD, Brigade X moved directly into a CAR eight hours after distribution of the OPORD. The CAR was conducted indoors and a large and well-apportioned sand-table map was constructed to aid in the rehearsal. The CAR was attended by the entire brigade staff as well as the subordinate battalions and squadron, with their associated staffs and company, troop, and battery commanders. While executing the CAR, the brigade fire support officer (FSO) briefed the brigade scheme of fires. The FSO announced priority of fires, reiterated the brigade HPTL for that phase, and briefed the two brigade fire support tasks (FSTs) in support of the operation. Immediately following the FSO, the brigade fire support coordinator (FSCOORD) briefed the actions of the direct-support field artillery battalion and how they would support the overall concept of fires.

What became abundantly clear to the brigade commander, staff, and the MCTP team was that the FSCOORD and FSO had not synchronized their actions before the CAR. The artillery movement and maneuver plan was not suitable to support the range requirements for targets pre-planned by the FSO. Triggers associated with brigade targets were not synchronized with the observer plans of the maneuver battalions. The fires plan had not taken into account resupply rates and locations of key logistical nodes, and most importantly, there was not a shared understanding of what exactly fires would do to support the overall mission and commander's intent. Although this obviously affected the fires WfF, it further affected all of the other WfFs as the staff attempted to adjust the plan in real time to account for their lack of coordination. As a result, the brigade commander ended the CAR on the spot and directed that the fire support and sustainment rehearsals be executed immediately, and the CAR be re-executed only after the support rehearsals were complete.

Although this was a painful lesson for the brigade staff to learn, the end result was positive. Following the support rehearsals, the CAR was re-executed in a far more coherent and concise manner, and although it took considerably longer than what was originally planned, the brigade staff, along with the subordinate formations, walked away from the CAR with real shared understanding of not just their individual missions, but of the commander's overall intent for the operation. Moreover, because the CAR was executed properly, commanders left the CAR understanding how they fit into the brigade's and division's overall concept, and how they and their sister battalions aided in the accomplishment of that mission. Without a common understanding of intent, understood by commanders and staffs across echelons, disciplined initiative cannot be executed to adjust to changing conditions during mission execution.

> Decision making is tied to disciplined initiative and inherent in executing operations. Commanders observe the progress of operations and intervene when necessary to ensure success. Because operations never unfold exactly as envisioned and because understanding of the situation changes, a commander's decisions made during execution are critical to an operation's success. During execution, commanders direct their units forcefully and promptly to overcome any difficulties of enemy action, friendly errors, and other changes in their operational environment (ADP 5-0, *The Operations Process*, page 12, paragraph 52, 17 MAY 2012).

Recommendations:

How exactly then should a brigade approach and conduct rehearsals? The following are recommendations derived from doctrine and observations of best practices seen by MCTP in FY18.

- **Rehearsal Planning.** Commanders should provide certain information as part of commander's guidance during the initial mission analysis. This can include rehearsal types, techniques, locations, and attendees. (FM 6-0, *Mission Command*, page 12-6, paragraph 12-54, 05 MAY 2014). The brigade executive officer (XO), as the chief of staff, ensures all rehearsals are included in the brigade's timeline and OPORD or warning orders (WARNORDs) (Ibid., paragraph 12-55). Ultimately, rehearsals should be a priority expressed by the commander, and as such, they should be directed in the form of a written order, and coordinated and resourced accordingly.
- **Rehearsal Execution.** The brigade XO synchronizes the timing and contribution of each WfF and defines conditions required for key events decisive to each of them. Furthermore, it is during rehearsal execution that subordinate unit leaders, using an established format, articulate their unit's actions and responsibilities.
- **Execute the CAR only after the support rehearsals have been executed and assessed.** By making the CAR the culminating event of the operations process, it ensures that only the most refined information is being brought to the CAR, which prevents loss of focus and a general derailing of the CAR.
- **Combine the fires and intelligence collection rehearsals.** The brigade targeting process is one of the most inherently challenging processes a staff will execute during a brigade WFX, specifically, the synchronization of target acquisition assets with fires delivery platforms. Given the time constraints of a rapid planning process, executing the fire support and intelligence collection rehearsals as a combined effort has shown to significantly decrease the friction of the deliberate and dynamic targeting process during mission execution.

Although these recommendations are in no way a guarantee of success, based on the observations of MCTP, they are key factors in preventing failure. FM 6-0 outlines the purpose of directed rehearsals as a way to "validate each leaders' role and how each unit contributes to the overall operation – what each unit does, when each unit does it relative to times and events, and where each unit does it to achieve desired effects." It further states that an effective rehearsal "ensures commanders have a common vision of the enemy, their own forces, the terrain, and the relationships among them." (FM 6-0, *Mission Command*, page 12-9, paragraph 12-69, 05 MAY 2014).

3.6.1-3. COIC COP

Observation. The COIC COP did not provide timely and relevant information to enable decision making.

Introduction. Several units struggled to maintain an accurate digital or analog COP in the COIC that could provide the commander with the essential information that is required for situational understanding in support of rapid and effective decision making.

Vignette. Unit training objectives often listed that they desired to achieve shared understanding through a clearly articulated commander's intent; frequent and concise horizontal/vertical communication; and achieving, maintaining, and disseminating the BCT COP. FM 6-0 discusses and defines the COP as a single display of relevant information within a commander's area of interest tailored to the user's requirements and based on common data and information shared by more than one command. The COP integrates many digital information systems to display relevant information. Initially, commanders and staffs analyze their mission using operational and mission variables. They begin to develop the COP. Commanders determine their information requirements and additional information is collected by WfFs to the requirements the commander has articulated. Commanders and staffs continue to refer to and refine the COP as the situation evolves. They use the COP as a tool for developing knowledge and understanding. Commanders and staffs are obligated to share their understanding of the COP to subordinate and higher commands to facilitate synchronized operations and parallel understanding.

An effective COP begins with a shared understanding of what is expected to be on the COP. This must be clearly defined by the commander or his delegate (S-3, deputy commander (DCO), XO). Several units wasted valuable time by placing the information that the commander desired on the COP into other products. This meant that the information was available, but not displayed or in a shared location for the rest of the staff to use.

The accuracy of the analog COP was also hindered by the reliance of tracking friendly forces through Command Post of the Future (CPOF) or the Joint Capabilities Release (JCR)/Joint Battle Command–Platform (JBC-P). Units did not establish specific procedures for when to update the analog COP using the friendly-unit information displayed on CPOF or the JCR/JBC-P. This resulted in an assumption that the analog COP was always up-to-date with friendly-force information. Successful units posted a "last updated date time group (DTG)" on the analog COP, which allowed the commander and staff to make more reasonable estimates. The National Guard and Reserve units that were observed often lacked the training required on their digital systems to assist in building the digital COP on CPOF using their WfF-specific systems. An example would be publishing from the intelligence section's Distributed Common Ground System–Army (DCGS-A) through the Data Distribution Service (DDS) to the CPOF. If these systems are working and the personnel are properly trained, the COP becomes a more collaborative effort. Most units received only minimal refresher training on their systems during a unit CPX months before and some units had equipment that was either too old or not maintained to a standard that would allow it to work on the network.

Recommendations.

- Establish an SOP that lists the standard requirements for information displayed on the COP and describes the process each WfF will use to ensure the analog and digital COPs reflect the same updated information.
- Use the COP checklist in ATP 6-0.5, *Command Post Organization and Operations* (Appendix C, Table C-1), 01 MAR 2017, as a baseline document for building the standardized display requirements.
- Refine and integrate events such as shift change briefs and seven-minute drills into the overall process for ensuring COP accuracy by widening their scope and formatting agendas to specifically support collaboration and shared understanding. Additionally, ensure the SOP reflects the process of assessing the mission-specific COP display refinements that are necessary prior to execution.

References. FM 6-0, *Commander and Staff Organization and Operations* (with Change 2), 22 APR 2016; ATP 6-0.5, *Command Post Organization and Operations*, 01 MAR 2017.

3.6.1-4. Digital and Analog Transitioning

Observation. The BCT must be the transition point between digital and analog products.

Introduction. Army headquarters elements execute operations using mission command systems. The Army defines mission command systems as "the arrangement of personnel, networks, information systems, processes and procedures, and facilities and equipment that enable commanders to conduct operations (ADP 6-0, *Mission Command*, [with Change 2], page 11, 12 MAR 2014)." An information system "collects, processes, stores, displays, and disseminates information" (Ibid., page 12). An information system can be either digital or analog. Headquarters elements from battalion to division commonly execute mission command with a mix of digital and analog information systems. This mix of systems can fluctuate based on any number of reasons, from CP location (main [MAIN] or tactical [TAC]) to local enemy activity to commander's preference. The BCT must maintain the ability to transition between digital and analog systems because it has the responsibility, capability, and the need to do so.

Discussion. Although divisions are responsible to conduct operations, BCT commanders and staffs execute the details of battles and engagements (ATP 3-91, *Division Operations*, page 1-1, 17 OCT 2014). Brigades are responsible to clear airspace to execute fires. Although this can be executed with analog systems, it is more commonly executed by employing digital capabilities fielded to the BCT such as the Advanced Field Artillery Tactical Data System (AFATDS), Air and Missile Defense Workstation (AMDWS), and the Tactical Airspace Integration System (TAIS). At the battalion echelon, requests for these processes will likely be relayed through analog information systems. Battalion CPs are not resourced with personnel or systems to execute this process. The responsibility rests with the BCT.

Brigades maintain the capability to clear fires as well as execute other coordinating and planning functions. They have a different mix of personnel and equipment to plan and execute operations from all WfFs. The BCT staff is fielded additional digital systems as well as direct access to capabilities that provide brigade effects from the brigade engineer battalion signal company. BCTs are fielded these assets to operate their own networks without augmentation (FM 6-02.71, *Network Operations*, page E-1, 14 JUL 2009). Battalions are fielded fewer digital assets than the BCT and rely on the BCT S-6 for network access (Ibid.). Although they can be augmented by enablers as allocated from the BCT beyond their initial authorizations, they do not have mission command of additional digital communication assets. These capabilities can form a robust system that make the BCT capable of relaying information in digital format to the division as well as operating a more survivable analog system to follow CUOPS.

Responsibility, capability, and location on the battlefield create a clear need for a BCT to be the transition point between digital and analog. The BCT is at a unique position on the battlefield. Physically located closer to the forward line of troops (FLOTs) than the division, it is more sensitive to fluctuations in the front line trace of subordinate units. The BCT must maintain readiness to displace subject to conditions on the ground in order to increase survivability. Its information systems must be portable, simple, and continuously updated to retain continuity during the fight. Battalions are even more sensitive to changes in the FLOTs, which makes analog systems even more important at that echelon. Recognition and decisions must be reached quicker as echelons are closer to the enemy. Any break in information could have disastrous impacts to the fight.

Vignette. A BCT commonly arrives to its WFX planning to execute mission command with access to all information system capabilities that it is fielded. It has trained to use technology to aid the operations process and improve its ability to understand and visualize the COP. The division MAIN CP publishes guidance and distributes information through secure digital systems that mitigate its geographic dispersion from subordinate units. As the BCT receives the guidance and analyzes and distributes information, its subordinate units begin to encounter challenges. Frequent CP displacements drives battalions to rely on systems and processes that require minimal time to establish and maintain. The common systems that are less disrupted by frequent movement are provided by the lower TAC infrastructure, such as frequency modulation (FM), tactical satellite (TACSAT), and high frequency (HF) radio for voice and JCR to transmit graphic control measures. Battalions communicate frequently through TransVerse or Ventrilo chats, although operations frequently become executed through the lower TAC infrastructure. Despite this mix, the brigade MAIN CP is still required to communicate to the division MAIN CP on upper TAC infrastructure assets that provide increased visualization and understanding for the higher echelon. When forward-located TAC CPs at the brigade do not use their digital capability, they rely heavily on analog systems and processes that are less disrupted by movement and enemy action. By the end of the WFX, the successful brigade typically receives information from battalions by analog processes and communicates to higher headquarters digitally.

Recommendations.

Although the Army continues to work toward a materiel solution that will allow battalions and brigades to maintain digital connectivity while moving, BCTs must develop TTPs that allow them to communicate to division and battalion.

- BCTs must develop detailed SOPs that allow for the TAC CP to maintain all digital communications to division during times when the MAIN CP must move its location. This must include the ability to digitally clear ground and airspace for fires and receive all products and communication from division. This SOP must include the right personnel and equipment to maintain this digital link to higher headquarters.
- BCTs must also develop detailed SOPs that describe the roles and responsibilities across all their CPs, specifically including who is responsible to receive each digital product from division and how they are to convert the product into an analog. Units must codify how different products will be issued to battalion headquarters that lack the digital capability to receive products during combat operations. This transmission of WARNORDs, OPORDs, fragmentary orders (FRAGOs), intelligence products, graphics, and other products may be done through lower TAC infrastructure such as FM, TACSAT, HF radio, and JCR.

The BCT is the headquarters element that integrates and synchronizes combined arms effects from multiple domains on the battlefield. It occupies a key position on the battlefield with the responsibility, capability, and need to transition between digital and analog products. This transition is essential to massing fires and creating shared understanding to achieve success on the battlefield.

3.6.2. Intelligence

3.6.2-1. Split Brigade Intelligence Support Element (BISE) Operations

Observation. The need for a more mobile MAIN CP has led some units to split the BISE, with a portion remaining attached to the MAIN CP and another portion separated near the MAIN CP or as far away as the brigade support area (BSA).

Discussion. Armored BCTs and Stryker BCTs have determined a need for an increasingly mobile MAIN CP. These were typically constructed using three or more M1087, 5-Ton, family of medium tactical vehicles (FMTVs) expansible vans (also known as expando vans). This resulted in a reduced number of personnel in the intelligence cell inside of the MAIN CP due to a limited amount of available space. The remainder of the BISE was located in a tent or other shelter outside of the MAIN CP or as far away as the BSA. This led to several communications challenges that often restricted the brigade's ability to fully leverage the complete capabilities of the BISE. The lack of a CPOF in the segmented BISE or functioning data flow via DCGS-A through DDS often meant that the BISE could not assist S-2 CUOPS personnel in the COIC. This resulted in the S-2 CUOPS cell (typically only two personnel) building and maintaining the entire intelligence portion of the digital COP. One unit placed its geospatial section inside of the BISE at the BSA, which meant that all terrain analysis and map products were developed at the BSA and not the MAIN CP. This removed the unit from the numerous conversations during MDMP for product refinement and resulted in a semi-formal tasking process similar to requesting products from an external intelligence agency. This also resulted in the BSA

BISE being reliant on the communications capability from the BSB. The collocation of the military intelligence company's (MICO's) analysis platoon and other assets (e.g. Operational Management Team [OMT], Prophet Control) that may need to be integrated into the brigade intelligence section leads to better opportunities for fusion within the entire BISE. The separation of the BISE leads to communications planning that is equal to using a "reachback" cell. Having analysts physically located together cannot be underestimated. Supports *Mission Essential Task/ Supporting Collective Task: Provide Intelligence Support to Targeting and Information-Related Capabilities* (ART 2.4), *Provide Intelligence Support,* 01 JUN 2010*; Conduct Mission Command* (ART 5.0), *Conduct Command Post Operations for Brigades/Groups* (71-BDE-5100).

Recommendation. Conduct detailed analysis on the risk associated with split BISE operations. Codify the detailed communications plan to overcome the physical distance between the two BISE sections to include a primary, alternate, contingency, and emergency (PACE) plan for each type of product. Codify the roles and responsibilities in the unit SOP. A solution for the future would be to modify the equipment assigned on MTOE to the MICO to allow for the analysts to work from two locations.

DOTMLPF-P. This trend falls into several categories. The Army must decide what a MAIN and TAC CP need and then source a materiel solution. This will add the right equipment to the MICO to complete its mission. Before this happens, MCTP can help BCTs in training to prepare the unit to function in the correct method.

References. ADRP 2-0, *Intelligence*, 31 AUG 2012; ATP 2-19.4, *Brigade Combat Team Intelligence Techniques*, 10 FEB 2015; FM 2-0, *Intelligence*, 06 JUL 2018.

3.6.2-2. Intelligence Personnel Roles and Responsibilities

Observation. The brigade intelligence WfF typically did not have a clear understanding of its assigned roles and responsibilities.

Discussion. The initial organization of the intelligence WfF often lacked designated roles, responsibilities, and division of labor in accordance with its SOP prior to the start of the exercise. This hindered the section's ability to create comprehensive IPB products for mission analysis. Once it was assigned roles, members of the intelligence WfF were still not familiar with the responsibilities nor trained on the tasks associated with its roles and expectations. During the start of several exercises, personnel became confused on their roles and responsibilities as these constantly changed during the exercise, which led to desynchronized efforts within the overall S-2 section and intelligence support to the staff. This contributed to inaccurate information in the COIC, affected the accuracy of the digital and analog intelligence portion of the COP, and did not provide the battle staff or commander the information necessary to drive decisions during offensive operations. Successful teams posted clear priorities of work so that the entire section understood what they should be working on in the absence of key leaders in the BISE. Over time, intelligence sections typically refined their roles and responsibilities along with production due outs which increased their intelligence support to operations. Supports *Mission Essential Task/ Supporting Collective Task: Provide Intelligence Support to Targeting and Information-Related Capabilities* (ART 2.4), *Provide Intelligence Support,* 01 JUN 2010*; Conduct Mission Command* (ART 5.0), *Conduct Command Post Operations for Brigades/Groups* (71-BDE-5100).

Recommendation. Codify in SOPs roles and responsibilities to train S-2/BISE leaders and their junior Soldiers within their respective cells. This should include the purpose, responsibility, and intent in how their roles contribute to the overall mission.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by providing several ways to define the roles and responsibilities before a unit arrives at the brigade WFX. During the Day 1 WfF breakouts, the intelligence OC/Ts can lead a discussion on the topic with the BCT S-2 cell.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; FM 2-0, *Intelligence Operations*, 06 JUL 2018; ADRP 7-0, *Training Units and Developing Leaders*, 23 AUG 2012; ATP 2-19.4, *Brigade Combat Team Intelligence Techniques*, 10 FEB 2015.

3.6.2-3. Staff-Integrated IPB

Observation. There is a significant difference in unit mission analysis products and shared understanding in units that plan for and execute a staff-integrated IPB versus those that do not.

Discussion. Units that do not include staff-integrated IPB in its battle rhythm often struggle to develop an early shared understanding across the staff during mission analysis. This results in wasted time during COA DEV to gain the required shared understanding across the staff. Some units included an XO-led WG early in mission analysis that was solely focused on staff-integrated IPB. This provides a detailed understanding of the enemy across the staff. This process must be disciplined and trained on prior to executing it during a brigade WFX. The S-2 must provide each WfF access to detailed threat products so that it can research and understand these threat capabilities from its WfF's perspective. As an example, a fires officer on the unit's staff needs to know and understand the enemy fires assets and its capabilities to assist with developing the enemy SITTEMP. This allows the staff to provide detailed analysis and assist in building the enemy COAs as a team. Units that executed this process successfully often backbriefed the staff around a map. The time spent working on staff-integrated IPB is quickly made up during the rest of mission analysis and COA DEV due to shared understanding early in MDMP. Supports *Mission Essential Task/Supporting Collective Task: Provide Intelligence Support to Targeting and Information-Related Capabilities* (ART 2.4), *Provide Intelligence Support,* 01 JUN 2010.

Recommendation. Codify the staff-integrated IPB process in the unit's SOP. Allocate time in the battle rhythm specifically for a staff-integrated IPB WG.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by leading a discuss on the topic with the BCT S-2 cell. This topic will also be covered with the entire staff during the MDMP trends discussion.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; ATP 2-01.3, *Intelligence Preparation of the Battlefield*, 01 MAR 2019; FM 2-0, *Intelligence Operations*, 06 JUL 2018; ATP 2-19.4, *Brigade Combat Team Intelligence Techniques*, 10 FEB 2015.

3.6.3. Movement and Maneuver

3.6.3-1. Attack Aviation Employment

Observation. BCTs do not use attack aviation to mass effects at decisive points.

Discussion. Army attack aviation is frequently employed in a manner that piecemeals the AH-64 company to support a 24-hour block, rather than being massed at the decisive point. When the requested attack aviation is employed in support of combat operations, there is an unclear task or purpose, or attack aviation operates as a fires platform and not integrated with ground maneuver forces. Synchronization with the ground TAC plan is often a friction point due to the BCT being comfortable employing aviation assets in a COIN environment.

Recommendation. Involve the brigade aviation element early in MDMP and ensure it is involved in collaborative events such as operations synchronization meetings. Joining the S-3 and chief of operations (CHOPS) in the planning process and during execution has led to the most complete and integrated planning and execution supporting the brigade's scheme of maneuver. Understanding the crew duty day and flight requirements is key in building event-based triggers to elevate the readiness levels of the attack aviation assets in order to mass effects at the decisive point.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the targeting and MDMP classes.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; ATP 3-04.1, *Aviation Tactical Employment*, 11 SEP 2017.

3.6.3-2. Airspace Planning

Observation. Unit airspace plans do not support synchronization of aviation, close air support (CAS), or fires with ground maneuver elements.

Discussion. Airspace planning is often a struggle at the brigade level, as ADAM/BAE cells are frequently unfamiliar with planning considerations or lack trained personnel. Unit airspace plans consist mostly of Global Area Reference Systems (GARS) or a restricted operations zone (ROZ) instead of air corridors during execution due to the BCT not having airspace priorities or the ADAM/BAE not being integrated in the targeting and planning processes. The BCT MTOE limits the BCT to one TAIS, which creates friction during employment of the TAC CP. The TAIS aids a commander and the fires cell in rapid airspace clearance; however, when used in the TAC, airspace planning in the MAIN CP becomes difficult. This often results in the BCT falling back to real-time de-confliction as the primary means of airspace management, thus overloading the ADAM/BAE cell.

Recommendation. Best practices have shown that integration of the ADAM/BAE into the TWG provided understanding of airspace planning considerations and requirements by ATO day. Prioritization of airspace users based on the commander's airspace guidance provided quick real-time de-confliction when a conflict occurred. Units that had a unit airspace plan that integrated procedural altitude de-confliction with pre-planned airspace control measures (ACMs), such as ROZs and air corridors that varied by mission, were able to integrate intelligence collection assets, Army attack aviation, CAS, indirect fires, and ADA assets to mass effects on the objective while mitigating risk to friendly forces. This process built a cohesive unit airspace plan that facilitated the ADAM/BAE cell's ability to coordinate, integrate, and regulate the brigade's airspace. Units have also been most successful by keeping the TAIS at the MAIN CP and clearing fires through FM, TransVerse, or Ventrilo. We would recommend requesting a change to the MTOE of the unit to add a second TAIS box to the BCT for use in the TAC CP.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the targeting and MDMP classes.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; JP 3-52, *Joint Airspace Control*, 13 NOV 2014; ATP 3-52.1, *Mutli-Service Tactics, Techniques, and Procedures for Airspace Control*, 14 FEB 2019.

3.6.3-3. Air Assault Planning

Observation. BCTs do not conduct detailed air assault planning in accordance with Gold Book standards.

Discussion. The air assault planning process presents a problem set for most brigades due to the complexity of the planning process. The detailed planning and integration that is facilitated by the ADAM/BAE cell requires the air assault task force S-3 and staff to integrate participating units early to ensure the planning timeline is met. Most units abort the air assault planning process due to the difficulty in synchronizing the assets required to set the conditions for air assault execution. Because the planning timelines often fell behind, many products, such as the fires plan, ground TAC plan, and the abort criteria, could not get the attention they needed prior to execution.

Recommendation. Success depends upon the brigade aviation officer (BAO) ensuring the staff integrates the air assault planning into the brigade's MDMP. This prevents the air assault planning timeline from falling behind the main planning effort. With successful BAO integration with the fires and intelligence cells, planning for successful suppression of enemy air defenses (SEAD) using NAIs with assets allocated to them to ensure that the conditions were set in order to perform the air assault occurs in a timely manner. A conditions-based approach with clear abort criteria led to the highest percentage of mission success in execution.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the targeting and MDMP classes.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; FM 3-99, *Airborne and Air Assault Operations*, 06 MAR 2015; ATTP 3-18.2, *Air Assault Operations*, 01 MAR 2011.

3.6.3-4. NCO Integration and Utilization

Observation. NCOs are not employed in a manner that maximizes their capabilities to enhance CP operations.

Discussion. NCO roles and responsibilities are not well-developed or delineated within the CPs. This limits NCO contribution to missions such as CP establishment and teardown, equipment operation and maintenance, and minor/routine actions. Although these are important tasks, the NCOs could be better integrated in order to ease many of the common friction points that arise in a CP. Most of the issues with NCO employment stem from either the perception that NCOs are not trained in CP functions or key leaders lacking an understanding of how to fully integrate NCOs into activities such as CUOPS and MDMP. The lack of proper guidance and direction provided to the NCOs created significant gaps between the steps of MDMP, and hindered shared understanding within the COIC. Additionally, the lack of integration caused the NCOs to become reactive rather than proactive, which resulted in cumbersome and inefficient CP operations.

Recommendation. Establish NCO duties and responsibilities before the start of any operation or training exercise, and codify in unit SOPs. Place emphasis on which specific tasks/functions fall under which NCO leaders. Some of these critical functions would include battle-drill development, rehearsal, and refinement, gathering tools prior to each step of MDMP, KM oversight within a functional or integrating cell, and tasks that support shared understanding, such as COP updates and running-estimate refinement. Staffs should enhance mutual trust

between NCOs and officers by training the CP processes together. This can be done by trusting the NCOs to be highly capable of conducting their tasks. NCOs are in charge of running battle drills and rehearsals daily on the CUOPS floor. Key staff NCOs should attend battle staff and KM courses to better understand their roles in the staff. Leaders must ensure and support attendance of these specialized courses by their respective NCOs.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by developing a new class designed for senior NCOs and officers of the BCT. This will be incorporated into the day one schedule.

Reference. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016.

3.6.4. Fires

3.6.4-1. Massing Fires at the Decisive Point

Observation. BCT fires struggle at massing at the decisive point in high-intensity scenarios. The order in which fires are considered during the COA DEV step of MDMP is preventing planners from positioning and employing them effectively in execution. The root cause of this issue is a failure to consider Army operational frameworks when building a COA.

Discussion. Planning the maneuver main effort COA without integrating fires puts planners in the position of figuring out how fires can fit into a plan that is already deemed feasible without fires, instead of planning fires as a functional piece of the plan. This ends with poor FSTs at brigade, which leads to poor field artillery tasks (FATs) at the cannon battalion. This planning failure affects subsequent preparation and execution steps of operations. FSTs coming out of COA DEV that were generated by fires tagging onto the plan rather than from a maneuver requirement lack focus and detail, making it difficult for battalion FSOs to nest their FSTs with brigade's. Additionally, no guidance can be given to AFATDS operators regarding dynamic targets apart from the HPTL because there is no coherent fires plan. When fires ends its planning, the products that get back to the field artillery battalion tend to show sporadic targets that are not linked to the maneuver plan. The resulting FATs produced are generally ambiguous. This makes planning delivery system scheme of maneuver and setting resupply triggers difficult.

During the generate options step of COA DEV, units tend to fail at using Army operational frameworks to provide the sequencing and scope of their planning. FM 6-0, *Mission Command*, (with change 2), states, "The higher headquarters will direct the specific framework or frameworks to be used by subordinate headquarters; the frameworks should be consistent throughout all echelons." (FM 6-0, page 9-19, paragraph 9-98). When the wrong framework is chosen, or none is specified, planning can be become confusing and planners can only begin from their own area of expertise rather than a doctrinal point that addresses planning across WfFs. For example, most training audiences tend to only use the main and supporting effort frameworks which, "… designate a subordinate unit whose mission at a given point in time is most critical to overall mission success." (ADRP 3-0, *Operations*, page 4-8, paragraph 4-44, 06 OCT 2017). Commanders designate a main effort unit to identify who will receive priority of support (POS) and resources. As fires is a provider of support to begin with, this forces the BCT's organic fires battalion to focus primarily on servicing the designated main effort battalion.

If this is the end of planning, fires is working for individual battalions, and not the overall mission of the brigade commander. Although this tends to work well for small units in non-linear battlefield environments, when large-scale operations are involved in high-intensity conflict, a greater framework is required to properly synchronize efforts with the higher commander's intent.

Recommendation. During the "generate options" step of COA DEV, units should consider the decisive, shaping, and sustaining operations framework to include the main and supporting effort within each. This framework defines the operation that directly accomplishes the mission, rather than focusing on a single particular unit. By defining the focal point around which the operation is designed, fires is given an effort on which to mass. This would ensure that fire support is tasked with attacking targets for the brigade commander's effort, rather than individual maneuver units. This also gives fires the potential to relieve maneuver units of a battlefield task instead of maneuver inadvertently tasking itself. Finally, this would ensure that delivery system movement, placement on the battlefield, and protection is considered as well.

DOTMLPF-P. This trend is a training issue. This trend is highlighted at the consolidated main event planning conference, where BCTs are asked to incorporate training for this into their train-up. MCTP can also help BCTs by teaching this principle during the targeting and MDMP classes.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; ADRP 3-0, *Operations*, 06 OCT 2017; ATP 3-09.42, *Fire Support for the Brigade Combat Team*, 01 MAR 2016.

3.6.4-2. Fires Integration and Synchronization during MDMP

Observation. The fires WfF in the BCT struggles to integrate and synchronize fires in support of the commander's maneuver plan during the MDMP.

Discussion. Successful fire support planning is the result of the FSCOORD, FSO, and fires cell planners aggressively contributing to the BCT commander's planning and decisionmaking process (ATP 3-09.42, *Fire Support for the Brigade Combat Team*, paragraph 6-1, 01 MAR 2016). The brigade fires cells, during FY18, repeatedly struggled to integrate themselves, or the fires WfF, into the BCT's planning and decision-making process. Their inability to integrate fires into the planning process created incomplete, unsynchronized, and poorly-executed fires in support of the commander's maneuver plan. Brigade fires cells continually developed their fires plan after the complete maneuver plan had been developed and were created as an afterthought with minimal input from maneuver planners.

Recommendation. Brigade fires planners should understand when and where they need to inject themselves in the planning process to ensure they provide the maneuver plan with a complete fires plan that meets the commander's intent. Leaders should understand the importance of fires to the success of the maneuver plan and they should be able to clearly communicate the importance of fires to the brigade staff. The BCT fires cells should ensure that every plan has a clear, focused, and integrated fires plan that meets the commander's intent for maneuver and fires.

DOTMLPF-P. This trend is a training issue. This trend is highlighted at the consolidated main event planning conference, where BCTs are asked to incorporate training for this into their train-up. MCTP can also help BCTs by teaching this principle during the targeting and MDMP classes.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; ADRP 3-0, *Operations*, 06 OCT 2017; ATP 3-09.42, *Fire Support for the Brigade Combat Team*, 01 MAR 2016.

3.6.4-3. Plans to CUOPS Transition

Observation. Brigade fires cells lack an effective transition process for fires planning to CUOPS for real-time battle tracking, execution of the fire support plan, and assessment.

Discussion. Fires planners, through the execution of the planning process and MDMP, produce an Annex D to the brigade base OPORD, along with all associated attachments and appendices for mission execution. The problem is there is not always a deliberate hand-off or process to hand off the development to the CUOPS team. This leads to a lack of focus on executing the brigade fires plan and a lack of understanding of the commander's overall intent for fires as the operations progress. As a result, fires are disjointed from the operation, mass is not achieved, and fires are not used at the decisive point.

Recommendation. Roles and responsibilities between different members of the fires cell should be codified and understood by all its members of the fires cell. Fires cell personnel on the CUOPS floor should be fully engaged and involved in the planning process and understand the overall scheme and intent for fires. This should be confirmed and validated during the fire support rehearsal and the field artillery technical rehearsal as fires planners and those personnel on the CUOPS floor gain a shared understanding of the plan. Only with the shared understanding gained in those rehearsals can fires personnel on the CUOPS floor effectively adjust to changing conditions on the ground to achieve the commander's overall intent for fires and maintain focus on executing the approved concept of fires.

DOTMLPF-P. This trend is a training issue. This trend is highlighted at the consolidated main event planning conference, where BCTs are asked to incorporate training for this into their train-up. MCTP can also help BCTs by teaching this principle during the targeting and MDMP classes.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; ATP 3-09.42, *Fire Support for the Brigade Combat Team*, 01 MAR 2016.

3.6.4-4. Improper use of Coordinated Fire Line (CFL) and Fire Support Coordination Line (FSCL)

Observation. Units use the CFL and FSCL to define the deep fight within the operational framework. These FSCMs are permissive in nature to expedite fires, not to determine unit boundaries or AORs. The job of staff leaders, at all echelons, is to help the commander understand, visualize, and describe the operating environment. Units continue to use these coordination measures improperly and fail to use doctrinal terms to create shared understanding.

Discussion. At echelon, fires must shape the deep area fight to set the conditions for subordinate units in the close-area fight. As a staff, this area must be defined; to say the deep area is between the CFL and the FSCL is the wrong use of permissive FSCMs, because the deep area is defined as "the portion of the commander's area that is not assigned to subordinate units." (ADP 1-02, *Terms and Military Symbols*, page 1-27, 14 AUG 2018). This area should be designated through the operations process as the staff builds graphic control measures to frame the AO. The deep area extends from beyond the subordinate units' boundaries to the limit of the higher headquarters. Once this area has been identified, planners can begin to build graphic control measures to support the operation. Commanders give guidance to shape the deep area, speaking in terms of force ratios and enemy enablers that will prevent them from accomplishing the overall mission. ATP 3-94.2 states deep operations extend operations in time, space, and purpose. These operations involve efforts to prevent or limit uncommitted enemy forces from being employed in a coherent manner (ATP 3-94.2, *Deep Operations*, page 1-1, 01 SEP 2016).

Recommendation. This all starts with doctrine, specifically terms and military symbols as defined in ADP 1-02 (*Terms and Military Symbols*), ADRP 3-0 (*Operations*), and FM 3-09 (*Field Artillery Operations and Fire Support*). Use ATP 3-60 (*Targeting*) to focus the TWG to ensure units address all aspects needed per ATO. Use of doctrinal terminology is key throughout the planning and preparing phase to execution and assessment. Citing common terms and references in how an organization conducts business, especially with something as critical as the operational framework, should be used in the base OPORD. Consider updating unit SOPs to reflect the business rules of the organization to create shared understanding. Consider the inclusion of a forward boundary, which is primarily designated to divide responsibilities between a unit and its next-higher echelon.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the targeting and MDMP classes.

References. ADP 1-02, *Terms and Military Symbols*, 14 AUG 2018; ATP 3-94.2, *Deep Operations*, 01 SEP 2016; FM 3-09, *Field Artillery Operations and Fire Support*, 04 APR 2014.

3.6.5. Protection

3.6.5-1. Protection Working Groups (PWGs)

Observation. Brigade PWGs are crucial to generate shared understanding and integrate protection tasks that preserve combat power in support of unit operations.

Discussion. The protection cell that leads the PWG is not effectively coordinated or resourced at the beginning of brigade WFXs. This limits the unit's ability to conduct protection planning starting in mission analysis. PWGs are relegated to an afterthought or executed only if time permits. This diminishes the collection, synchronization, and analysis of protection information, which in turn restricts the input and participation during MDMP. Generally, units arrive to brigade WFXs with a protection coordinator appointed within 30 days, with minimal experience in the position, and limited understanding of the protection WfF or staff cell. The protection coordinator may not even know they are supposed to run a PWG. Therefore, the unit is lacking in the important outputs such as priority protection lists (PPLs), scheme of protection (with priority of effort [POE], POS, and task and purpose), PWG inputs, and running estimates. Without preparation or command emphasis for protection, units are unable to conduct effective PWGs in order to support brigade operations. The PWG is a critical piece of the battle rhythm, designed to assess and mitigate risks within any military operation and provide recommendations to the commander on how to most effectively preserve combat power.

Recommendation. Units should leverage a robust PWG to develop a consolidated and synchronized protection plan to preserve combat power. Unit leadership should be engaged and provide appropriate emphasis on protection, particularly PWGs. Upon arrival at a brigade WFX, a unit should have assigned a knowledgeable protection coordinator to execute the PWG, along with personnel to support 24-hour coverage in the COIC. Units can leverage the PWG to prepare protection products, such as the PPL, scheme of protection (POE, POS, and task and purpose), and running estimates. Units should also document roles, responsibilities, and products for the PWG into an SOP.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during breakout sessions.

Reference. ADP 3-37, *Protection*, 11 DEC 2018.

3.6.5-2. Seven Steps of Engagement Area Development during MDMP

Observation. The engagement area is where the commander intends to contain and destroy an enemy force using the massed fires of all available weapons and supporting systems. The success of any engagement depends on how effectively the BCT can integrate the obstacle plan, indirect fires plan, direct fires plan, and the terrain within the engagement area to achieve the brigade's TAC purpose (ATP 3-21.8, *Infantry Platoon and Squad*, page 3-55, paragraph 3-172, 12 APR 2016).

Discussion. The defense has inherent strengths. The defender arrives in the AO before the attacker and uses the available time to prepare (Ibid., paragraph 3-3, page 3-1). Defenders study the ground and select positions that allow the massing of fires on likely approaches. They combine natural and manmade obstacles to canalize attacking forces into engagement areas. Defending forces coordinate and rehearse actions on the ground, gaining intimate familiarity with the terrain. They place security, intelligence, and reconnaissance forces throughout the AO. These preparations multiply the effectiveness of the defense. Commanders continue defensive preparations in depth, even as the close engagement begins. The seven steps of engagement area development are:

- Identify all likely enemy avenues of approach
- Determine likely enemy schemes of maneuver
- Determine where to kill the enemy
- Plan and integrate obstacles
- Emplace weapon systems
- Plan and integrate indirect fires
- Rehearse the execution of operations in the engagement area

These steps are the foundation of defensive planning and the initial outline used during MDMP to draft COAs. Ensuring staff sections and WfFs are fully integrated during MDMP results in a complete defensive plan within a unified brigade vision that achieves the TAC purpose. When combining the steps of engagement area development with an understanding of the inherent strengths of the defense, it becomes clear that each step requires the integrated skill of several WfFs working in concert to develop COAs. For example, steps one through three are a combined effort of intelligence, protection, and movement and maneuver (M2), and studying the terrain to begin framing the engagement area. Steps four and five require the collaboration between these WfFs with the addition of fires to determine the massing of all available weapons and supporting systems.

Recommendation. Engagement development should be a coordinated effort between the staff sections, WfFs, maneuver units, and maneuver support units. All of these WfFs should have invested representation present during planning. The S-3 and BCT planner should ensure that efforts are integrated and information is collectively synthesized, attaining a shared understanding across the BCT. In the defense, synchronizing the effects of the WfFs with information and leadership allows a commander to apply overwhelming combat power against selected advancing enemy forces to defeat the enemy commander's plan and destroy the enemy's combined arms team. Defensive synchronization is the result of detailed planning and preparation among the various entities participating in an operation. Synchronizing prior planning and preparation bolsters the commander's combat power, increasing the effectiveness of the defense.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the defensive planning trends class and WfF breakout sessions.

References. FM 6-0, *Commander and Staff Organization and Operations* (with Change 2), 22 APR 2016; FM 3-90.1, *Offense and Defense Volume 1*, 13 APR 2015; ATP 3-21.8, *Infantry Platoon and Squad*, 12 APR 2016.

3.6.6. Sustainment

3.6.6-1. Collocation of the BCT Sustainment Cell with the BSB SPO Section

Observation. The physical collocation of the BCT's sustainment cell (S-4, S-1, medical) with the BSB SPO section at the BSB can be effective if processes and procedures are thoughtfully crafted and communication with the brigade MAIN/COIC and TAC is uninterrupted.

Discussion. Collocating the brigade sustainment operations cell (SOC) with the BSB SPO provides many advantages for the sustainment planners and executors. The full staffs of the brigade S-4 and BSB SPO can combine efforts to draft a concept of support during the initial MDMP while communication between the "planners" (brigade S-4) and "executors" (BSB SPO) is continuous throughout each MDMP step. Additionally, this concept provides subordinate units a one-stop shop they can contact with any sustainment requirements. However, this COA tends to separate the SOC from the rest of the brigade staff and places the initial concept of support at risk of lacking vital input from the other brigade-level WfFs. Additionally, separating the SOC from the brigade staff increases the difficulty for the sustainment WfF to assist during other events in the MDMP. The SOC is then challenged to synchronize its WfF across the brigade, especially if the brigade TOC and BSB SPO TOC are not in the same location. Ultimately, the SOC must keep the brigade commander aware of sustainment issues and battle track all sustainment for the brigade, which may be more difficult while separated from the brigade staff and TOC.

Recommendation. Do not collocate the SOC with the BSB SPO. The main efforts of the SOC should be MDMP and battle tracking with the brigade staff, including a full-time sustainment representative with the brigade plans cell. The BSB SPO and the SOC should work closely together, but collocating a brigade staff section in a battalion TOC can disrupt battalion operations. The use of LNOs is recommended to facilitate the required communication between the SOC and SPO. The following are suggestions to effectively facilitate information sharing for LNOs.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the WfF breakout classes.

References. ADRP 4-0, *Sustainment*, 31 JUL 2012; ATP 4-90, *Brigade Support Battalion*, (with Change 1), 29 APR 2016; FM 3-96, *Brigade Combat Team*, 08 OCT 2015.

3.6.6-2. Inaccurate Running Estimates after Initial Mission Analysis

Observation. Sustainment sections lose focus on maintaining accurate running estimates (of combat power and commodities) while trying to maintain situational awareness of their subordinate battalions' current logistical status. This leads to reactive, instead of proactive, sustainment support from the brigade (BCT or functional brigade). Staffs must use running estimates to develop, then track mission readiness goals and additional requirements (FM 6-0, *Commander and Staff Organization and Operations*, [with Changes 1 and 2], chapter 8, 22 APR 2016).

Discussion. During FY18, it was common practice to conduct initial mission analysis and development of running estimates using sustainment planning tools such as the quick logistics estimation tool (QLET). As the operation progressed, either within the current mission or when developing a new OPORD, these initial estimates were not updated using data gathered from the units via logistics status (LOGSTAT) reports. Brigade sustainment cells failed to capture data from the most recent battalion consumption reports that were tied to such missions as "attack" or "defend." Additionally, current combat power was not synchronized with projected sustainment requirements. For example, the loss of a M109A6 (Paladin) did not trigger a direct change in the estimated requirement of CL V needed for the field artillery battalion. Ultimately, this led to inaccurate information displayed on the overall sustainment common operational picture (S-COP).

Recommendation. SOCs maintain a digital and analog logistics synchronization matrix that forecasts commodity consumption and maintenance projections based on QLET (or other forecasting tools) estimates by phase/event. The estimates maintained within the BSB SPO section should be briefed at least daily during logistics synchronization meetings. This information should then be balanced against the other brigade WfFs during the brigade sustainment WG. Quantity on hand and predicted consumption rates for all classes of supply should be known by all battalion and brigade S-4s. These running estimates should be used by the BSB SPO for forecasting no less than 24 hours in advance to establish or maintain stockage levels.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the WfF breakout classes.

References. ADRP 4-0, *Sustainment*, 31 JUL 2012; ATP 4-90, *Brigade Support Battalion*, (with Change 1), 29 APR 2016; FM 3-96, *Brigade Combat Team*, 08 OCT 2015.

3.6.6-3. Integration of Staff Sections into a Functional Sustainment Cell

Observation. During MDMP, brigades (BCT or functional brigade) that conducted steps two and three as separate staff sections, rather than as a combined sustainment WfF (S-1, S-4, medical, financial management, unit ministry, and potentially judge advocate) struggled with integrating a cohesive initial concept of sustainment and subsequent activities during mission execution.

Discussion. The multiple primary and special staff sections that normally reside inside the SOC often draft and execute exclusive concepts of support in an attempt to best support the brigade commander's intent. Although the information presented from these staff sections is separated by the various appendices within Annex F of an OPORD, the execution within the SOC must be mutually supportive. During time-constrained exercises, organizational cohesion is unlikely to occur for units that do not have a daily habitual relationship. This tends to lead to reliance on unit SOPs that are not constructed to support the WfF concept. When subsequent planning sessions or MDMP are conducted, sustainment personnel recognize their need for internal integration. This integration leads to a more comprehensive COP that facilitates the execution of the commander's decision points.

Recommendation. Update unit SOPs (planning SOPs and TACSOPs) to reflect a unit's ability to task-organize into a WfF. Use a sustainment synchronization matrix (which addresses times, locations, tasks, commodities, units, modes, and routes) to allow each functional area within the SOC to visualize specific requirements. These requirements can be identified in relation to adjacent units and internal WfFs as well as in terms of time and space across the brigade's AOR. This matrix also facilitates SOC internal coordination efforts, external support requests, and can provide a basis for the execution of staff battle drills.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the WfF breakout classes.

References: ADRP 4-0, *Sustainment*, 31 JUL 2012; ATP 4-90, *Brigade Support Battalion*, (with Change 1), 29 APR 2016; FM 3-96, *Brigade Combat Team*, 08 OCT 2015.

3.6.7. Mission Command

3.6.7-1. Battle Tracking Products and Shared Understanding

Observation. Units fail to develop and display relevant products in the COIC (MAIN CPs) that give commanders (and staffs) the ability to quickly assess the operational environment.

Discussion. Units often display several digital and analog data products within the COIC; however, they struggle to understand which useful information/data is needed to conduct analysis. This greatly decreases the unit's ability to create and maintain situational awareness and shared understanding as the battle period progresses. A defining challenge for commanders and staffs is creating shared understanding of their operational environment, their operation's purpose, its problems, and approaches to solving them (ADP 6-0, *Mission Command*, [with Change 2] paragraph 11, 17 MAY 2012). 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 unified action partners by maintaining collaboration and dialogue throughout the operations process (planning, preparation, execution, and assessment).

Recommendation. Units should create and validate the TACSOP that establishes baseline products based on anticipated information requirements. Develop and refine digital and analog mission command systems and incorporate processes that support the units' ability to analyze, display, and disseminate data as it becomes available. Additionally, develop a strategy among WfF staff sections that enables elements to share relevant and pertinent information across the BCT staff and subordinate staffs.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the WfF breakout sessions.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; ATP 6-0.5, *Command Post Organization and Operations*, 01 MAR 2017.

3.6.7-2. Transition of Command and Control (C2) between the MAIN CP and the TAC CP

Observation. Units fail to adequately transition C2 of the fight between the MAIN CP and TAC CP during displacement operations.

Discussion. The failure to transition the fight directly correlates to lack of knowledge, experience, and SOPs. Most units have codified how they will transfer C2 between the MAIN and TAC in their SOPs, but some have not. Even if the unit has codified proper transition of C2 in its SOP (condition checklist), leaders and subordinates tend to not read their own SOP, which sets the condition for failure during C2 transition between the MAIN and TAC. When units do not diligently track specific requirements prior to handing C2 over to the MAIN or TAC, they often lose situational awareness over the fight and fail to establish crucial operating mission command platform systems (CPOF, AFTADS, and/or TAIS). Another contributing factor to units failing to conduct a proper battle handover is lack of exercising their TAC CP. Units rely heavily on their MAIN CP so there is a tendency to keep the most proficient personnel there to ensure success, but they do this at the expense of having the wrong personnel in the TAC. By not having the right personnel or equipment in the TAC, the TAC remains non-mission-capable and is never able to assume the fight.

Recommendation. Units should be capable of deploying, operating, positioning, and displacing CPs rapidly to operate in LSCO over great distances. In order to achieve this, units should establish and execute technical rehearsals of all mission command systems and exercise CP setup, displacement, and functions during training exercises. While exercising the TAC, units should identify and codify the roles and responsibilities within each CP in their SOPs to ensure effective synchronization of efforts.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the Mid-Event Planning (MEP) Conference and the WfF breakout sessions.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; ATP 6-0.5, *Command Post Organization and Operations*, 01 MAR 2017.

3.6.7-3. TAC CP Versus Command Group

Observation. A TAC CP is a facility containing a tailored portion of a unit headquarters, designed to control portions of an operation for a limited time. Meanwhile, the commander and selected staff members comprise the command group to exercise mission command away from a CP. The BCT commander employs the TAC CP as an extension of the MAIN CP to help control the execution of an operation or mission command task. The commander positions his command group near the most critical event, usually with or near the main effort or decisive operation.

Discussion. Brigades typically lack a detailed SOP and struggle to determine the right composition of personnel to move forward with the TAC CP in the midst of operations. Brigades also struggle to determine command, control, communications, computers, and intelligence (C4I) requirements for specific systems to allow the TAC CP to effectively control the fight (e.g. AFATADS and TAIS). By doctrine, usually the BCT S-3 leads the TAC CP (FM 6-0, *Commander and Staff Organization and Operations*, (with Changes 1 and 2), chapter 1, paragraph 1-5, 05 MAY 2014); however, brigades typically employ the TAC CP not as a CP, rather as a command group centered around the brigade commander when he goes forward. These are two separate mission command nodes that are used for different tasks.

Recommendation. Focus the employment of the TAC CP around controlling specific operations or tasks. Establish BCT SOPs to detach the TAC CP from the MAIN CP. Include personnel, essential equipment, and leadership required for the specific operation or tasks being performed. The Soldiers (by MTOE position or functionality) and equipment assigned to the TAC CP should be documented in the TACSOP. Establish the command group composition centered on the commander and his need to move around the battlefield to be at the critical events or collocate with the decisive operation. Codify baseline equipment for transport and C4I in the BCT SOPs.

DOTMLPF-P. This trend is a training issue. MCTP can help BCTs by teaching this principle during the MEP and breakout sessions.

References. FM 6-0, *Mission Command*, (with Change 2), 22 APR 2016; ATP 6-0.5, *Command Post Organization and Operations*, 01 MAR 2017.

CHAPTER 4

Sustainment

SECTION 4.1. INTEGRATING/SYNCHRONIZING ALL WARFIGHTING FUNCTIONS

Observation. Knowledge management (KM) principles need to be better employed to facilitate integrating and synchronizing all warfighting functions (WfFs).

Discussion. Effective KM enhances the shared understanding of an organization. Staffs struggle to sort, analyze, and share large volumes of information within the command post (CP) due to adhoc or nonexistent processes to enable information and knowledge flow. Units are not fully invested in creating KM processes that enable the staff's ability to empower subordinate units and support the commander's requirement to make informed decisions.

Recommendation. Identify and appoint a KM officer (KMO) as a primary duty as well as KM representatives as additional duties, to include school training. Empower the KM to establish standard operating procedures (SOPs) in support of knowledge sharing, battle rhythm processes, seven-minute drills, and data management.

Doctrine, Organization, Training, Material, Leadership, Personnel, Facilities, and Policy (DOTMLPF-P):

- **Training.** Ensure KMO and KM representatives are school trained. Train staff and emphasize establishing and maintaining continuity of KM processes.
- **Materiel.** Leverage digital system capabilities to support staff synchronization and enable knowledge flow.
- **Leadership.** Highlight importance of KM program from a senior level.
- **Personnel.** Attempt to assign KMO and representatives; ensure they are assigned duty long enough to build experience.

SECTION 4.2. BATTLE RHYTHM

Observation. Battle rhythms do not accurately depict daily events or requirements.

Discussion. Battle rhythms often were not developed with consideration toward critical path and enabling informed decision making by the commander. Battle rhythm version control issues were almost ubiquitous amongst units, which caused conflict with critical events and unnecessarily hindered follow-on processes.

Recommendations:

- Ensure adequate analysis is applied toward battle rhythm development.
- Consider inputs and outputs of each event, how events contribute to the critical path and ultimately aid staff analysis to enable informed decisions by the commander.
- Use complimentary products such as seven-minute drills to define the purpose of each battle rhythm event.
- Implement a process to ensure battle rhythm is altered only by authorized personnel. Implement regimented version control. Publish significant battle rhythm changes in fragmentary orders (FRAGORDs) in order to inform subordinate units.

DOTMLPF-P:

- **Training.** Document purpose of battle rhythm events and train staff to perform analysis required to achieve shared understanding and informed decision making.
- **Leadership.** Empower leaders to rigidly enforce meeting input and output suspenses and timelines.
- **Personnel.** Ensure all members of the staff understand the importance of the critical path and how battle rhythm events should build toward shared understanding.

SECTION 4.3. STAFF SYNCHRONIZATION

Observation. The expeditionary sustainment command (ESC)/sustainment brigade's common operational picture (COP) was observed as a challenge in four warfighter exercises (WFXs) during fiscal year 2018 (FY18).

Discussion. The COP assists the commander and staff in maintaining situational understanding and promotes a shared understanding throughout the command. It further aids the commander in visualizing and understanding the operational environment, facilitates collaborative planning, and assists with synchronizing WfFs. The impact of having an ineffective COP will likely result in a disruption in mission command, sustainment operations, and shortening of the operational reach of support operations (SPOs) throughout the theater.

Recommendations:

- Sustainment commands standardize reporting formats to ensure units are sending timely, accurate, and complete reports.
- Sustainment commands develop a unit-specific digital and analog COP (codified in the unit SOP) during the mission analysis phase of planning with approval of format by the commander/deputy commander (DCO).

DOTMLPF-P:

- **Training.** Expand enabling learning objective during mission command training (MCT) for building a COP and gaining shared understanding throughout the staff.
- **Organization.** Provide unit-based leader professional development (LPD) following MCT to refine products and expand knowledge.

SECTION 4.4. PLANNING FOR FUTURE SUSTAINMENT REQUIREMENTS/OPERATIONS

Observation. Units do not often develop a critical asset list (CAL).

Discussion. Across all WFXs during FY18, Operations Group-Sierra (OG-S) observed that units did not often develop a CAL during MDMP, which resulted in no defense plan. Units often created ad hoc CALs during WFXs or failed to develop one at all. Lack of or delay in CAL development generally results in no prioritization of critical assets defense. Further, units do not develop a defended asset list (DAL), which results in no planning for protection by phase.

Recommendation. Staffs begin CAL development during MDMP. OG-S should emphasize this during MCTs.

SECTION 4.5. LOGISTICS COMMON OPERATIONAL PICTURE (LOGCOP)

Observation. The LOGCOP was observed as a challenge during four WFXs in FY18.

Discussion. The SPO is responsible for integrating a logistics status (LOGSTAT) with the movement and maneuver COP (controlled by the current operations [CUOPS]/battle captain). The LOGCOP provides the commander with visualization and understanding of how effective sustainment units are supporting maneuver forces. The impact of having an ineffective LOGCOP will likely result in a disruption in sustainment services and shortening the operational reach of SPO throughout the theater.

Recommendations:

- The SPO distribution and integration branch (DIB) standardizes logistics reporting to ensure units are sending them a timely, accurate, and complete report.
- The SPO begins building a LOGCOP during the mission analysis phase and should be staffed throughout the sustainment command/brigade for maximum effect before presentation to the commander.

DOTMLPF-P:

Training:

- Expand enabling learning objective during MCT for building a COP and gaining shared understanding throughout the staff.
- Provide unit-based LPD following MCT to refine products and expand knowledge.

THIS PAGE INTENTIONALLY LEFT BLANK

CHAPTER 5

Special Operations/Specialty Functions

SECTION 5.1. SPECIAL FORCES INTEGRATION

5.1.1. Special Operations Forces (SOF) Organization

Observation. Initially, SOF units appear reluctant to organize their targeting process (targeting working group [TWG] and board) and planning perspectives in relation to the 24-48-72-96-hour air tasking order (ATO) cycle.

Discussion. SOF units are not accustomed to designing a targeting process from scratch because the last two decades of warfare included a joint force structure and pre-existing processes for air and intelligence, surveillance, and reconnaissance (ISR) allocation. Additionally, SOF units are hesitant to synchronize their battle rhythm with the ATO cycle because of the concern that it will constrain their flexibility to layer SOF effects. Fortunately, recent warfighter exercises (WFXs) have proven that layering can, and should occur within the ATO process because the ATO drives all combined force air component command (CFACC) operations and conventional unit targeting adheres to the ATO timeline. WFXs also provide a unique mission command challenge because the SOF enterprise has to design, refine, and execute a targeting process across multiple echelons for mission success (for example, special operations task force [SOTF] response cells have to manage tactical execution and initial targeting requirements; the combined joint special operations task force [CJSOTF] and special operations joint task force [SOJTF] echelons have to manage their own targeting working groups [TWGs] and targeting boards [TBs] for resource prioritization/allocation; and the SOJTF has to manage its special operations liaison element [SOLE] for integration with the ATO at the air component command [ACC]).

Recommendation. To achieve layered SOF effects within a daily targeting process, SOF units should focus their TWG and targeting board into four ATO planning horizons (96-, 72-, 48-, and 24-hour segments) and sequence the agenda from the future operations (FUOPS) to current operations (CUOPS) so that all collection and targeting resources across all warfighting functions (WfFs) are effectively planned, sequenced, and resourced by the SOJTF/JTF and the CFACC ATO.

References. Army Doctrine Reference Publication (ADRP) 1-03, *The Army Universal Task List*, 02 OCT 2015; ADRP 3-05, *Special Operations*, 29 JAN 2018; Army Techniques Publication (ATP) 3-60, *Targeting*, 07 MAY 2015.

Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, and Policy (DOTMLPF-P). This is a training gap observed throughout the year. Mission Command Training Program (MCTP) will be able to increase capabilities of the fires WfF for SOF by coaching training audiences on best practice tactics, techniques, and procedures (TTPs); battle rhythm development; and continued WFX integration into large-scale combat operations (LSCO) scenarios.

5.1.2. Integrated Fires

Observation. SOF units suffer from under-resourced fires sections.

Discussion. The CJSOTF mission requirements of maintaining a CUOPS, FUOPS, and targeting cell are similar to a conventional force brigade combat team (BCT) fires cell. The CJSOTF's modified table of organization and equipment (MTOE) manning does not adequately support the fires cell's requirements to maintain targeting operations across all planning horizons during 24-hour combat operations.

Recommendation. U.S. Army Special Operations Command (USASOC)/1st Special Forces Command (Airborne) (1st SFC) should increase the size of the fires sections within the special forces group MTOEs so they are, at a minimum, equivalent to maneuver BCT MTOEs in order to manage a targeting process during LSCO.

References. ADRP 1-03, *The Army Universal Task List*, 02 OCT 2015; ADRP 3-05, *Special Operations*, 29 JAN 2018; ATP 3-60, *Targeting*, 07 MAY 2015.

DOTMLPF-P. This is a personnel gap observed throughout the year with all SOF training audiences. Each SOF training audience has identified this flaw and are addressing the growth of targeting and fires sections with their respective higher headquarters.

5.1.3. Command, Control, Communications, Computers, and Intelligence (C4I) Interoperability

Observation. Army special operations forces (ARSOF) C4I interoperability with the greater Army continues to be a challenge within the WFX program.

Discussion. Although progress continues within the WFX program with C4I interoperability (for example, firewall exemptions approved, Distributed Common Ground System [DCGS] working on SOF information enterprise [SIE], a SOF Command Post of the Future [CPOF] common operational picture [COP] established and working, Advanced Field Artillery Tactical Data System [AFATDS] executing fires missions from SOF to conventional forces [CF], etc.), USASOC/1st SFC should continue to use the WFX as a venue to enhance ARSOF's C4I interoperability with U.S. Army Training and Doctrine Command (TRADOC) centers of excellence C4I initiatives to maintain readiness for SOF's contributions to LSCO. Recognizing that every theater may require different systems and platforms depending on the situation, establishing interoperability with conventional forces' C4I systems in a training environment will provide the foundation upon which ARSOF can build theater-specific systems to meet real-world contingencies. ARSOF's adaptability with multiple C4I systems ought to become part of the training readiness portfolio.

Recommendation. The SOF enterprise should attempt to acquire and maintain Army C4I systems (for example, DCGS, AFATDS, and CPOF/command post computing environment [CPCE]) and continue training on Army C4I systems during WFXs to sustain and enhance CF/SOF integration, interoperability, and interdependence (I3) in the years to come.

References. Field Manual (FM 6-05), *CF-SOF Multi-Service Tactics, Techniques, and Procedures for Conventional Forces and Special Operations Forces Integration, Interoperability, and Interdependence*, 04 APR 2018.

DOTMLPF-P. This is a comprehensive materiel, training, and personnel gap for ARSOF observed throughout the year with SOF training audiences. USASOC is aware of these challenges and continues to work with U.S. Special Operations Command (USSOCOM) and U.S. Army Forces Command (FORSCOM) to bridge the interoperability gap.

5.1.4. Liaison Officer (LNO) Teams

Observation. CF-SOF I3 depends on high-quality SOF LNO teams, access to conventional C4I equipment, and workspace within division/corps headquarters.

Discussion. High-caliber SOF LNOs and additional augmentees (intelligence, communications, and sustainment representatives) significantly contribute to the achievement of enhanced CF-SOF I3. SOF training audiences typically embed a liaison team in conventional division/corps staffs to mitigate risk, enhance complementary effects, and improve responsiveness. However, SOF LNO teams require a place to perform their duties, access to key division staff personnel, and access to conventional C4I systems. LNO teams must be located in a manner that allows them to interact with the CUOPS integrating cell (COIC) and joint air-ground integration center (JAGIC). This allows the LNO teams to quickly conduct coordination and deconflict operations. LNO teams must integrate with all staff sections within the division to properly share information, participate in key battle rhythm events, and inform division leadership of adjacent SOF operations. Training audiences must provide the SOF LNO teams with organic division C4I systems such as a secure telephone, CPOF, and a tactical Warfighter Information Network-Tactical Secret Internet Protocol Router (WIN-TSIPR) computer to communicate with conventional C4I systems.

Recommendation. SOF leadership continues selecting the best and brightest personnel to represent the SOF enterprise within corps/division training audience headquarters and considers making sustainment, communications, and intelligence augmentation personnel part of the SOF LNO package.

Reference. FM 6-05, *CF-SOF Multi-Service Tactics, Techniques, and Procedures for Conventional Forces and Special Operations Forces Integration, Interoperability, and Interdependence*, 04 APR 2018.

DOTMLPF-P. This is a training gap observed throughout the year. MCTP will be able to increase CF-SOF I3 by coaching training audiences to encourage and practice I3 on a more regular basis, incorporating SOF into multiple training venues, and conducting joint planning. During the exercise life cycle, MCTP will continue to enforce the CF/SOF memorandums of agreement developed by the training audiences that mandate effective SOF LNO integration within the division/corps headquarters.

5.1.5. Understanding SOF Capabilities

Observation. Divisions and corps lack a clear understanding of SOF capabilities during LSCO, which negatively impacts their SOF effects requests.

Discussion. General SOF capabilities include working with regional populations, gaining access to hostile areas, preparing the environment for FUOPS, targeting enemy networks and their critical infrastructure/capabilities, and assessing local situations for opportunities. During LSCO, SOF retains the ability to work in concert with partner-nation forces, host-nation forces, and potential indigenous populations to achieve joint SOF effects. This requires SOF and conventional forces to determine how SOF and its associated indigenous capabilities can contribute to LSCO. As a general practice, SOF should not be used as tactical reconnaissance elements for divisions and corps because these are considered conventional capabilities. SOF and its indigenous networks should be leveraged to aim for more challenging targets in denied space, such as launch and recovery unmanned aerial vehicle (UAV) sites; location and assessment of active underground facilities (UGFs); location and disruption of jammers, radars, and other critical high-payoff target list (HPTL) targets in the deep area; and disruption of enemy networks in the consolidation area. From a JTF perspective, SOF capabilities will be aligned against weapons of mass destruction (WMD), leadership networks, ballistic missile capabilities, and strategic/operational-level special reconnaissance tasks. These missions will likely consume a majority of SOF's capabilities. Any remaining SOF capabilities need to be prioritized against SOF-unique requirements as listed above and not for tactical reconnaissance unless there is no other option for the JTF.

Recommendation. Divisions and corps should focus on requesting SOF effects beyond the 96-hour mark and against problems beyond their conventional capabilities, to include leveraging indigenous capabilities supported by SOF, to ensure the joint force continues to employ SOF capabilities in a doctrinally correct manner. Integrating SOF LNOs into the division/corps targeting process is critical to generating doctrinally appropriate SOF effects requests.

References. FM 6-05, *CF-SOF Multi-Service Tactics, Techniques, and Procedures for Conventional Forces and Special Operations Forces Integration, Interoperability, and Interdependence*, 04 APR 2018; FM 3-05, *Army Special Operations*, 09 JAN 2014.

DOTMLPF-P. This is a doctrine, training, leadership, and education gap observed throughout the year. MCTP provided the Center for Army Lessons Learned with best practices and examples to be considered for publication. MCTP will continue to coach training audiences on the proper use of SOF to maximize joint SOF effects during LSCO.

5.1.6. Intelligence WfF and SOF Requirements

Observation. SOF units struggle to adapt the intelligence WfF-to-SOF requirements in LSCO and often poorly integrate the intelligence WfF with conventional units across echelons.

Discussion. Within the intelligence WfF, SOF intelligence cells generally lack foundational training on the joint intelligence preparation of the operational environment (JIPOE) and intelligence preparation of the battlespace (IPB) in a LSCO environment. This hinders the J-2/S-2's ability to effectively create enemy event templates (EVENTTEMPs) that support commander's decision points, SOF operations, and SOF targeting. Additionally, the SOF

units' Distributed Common Ground System-Army (DCGS-A) continues to hamper the SOF intelligence cells' ability to digest the sheer volume of intelligence reporting that occurs during LSCO and to synchronize the intelligence portion of the COP with conventional units' J-2/G-2 sections. These primary shortfalls often hamper SOF J-2/S-2's ability to adapt to the SOF intelligence requirements in LSCO and provide predictive assessments that are nested with commander's decision points and SOF operations and targeting.

Recommendation. SOF unit J-2/S-2s should develop a robust military intelligence (MI) training regimen with associated individual and collective MI tasks that focus on JIPOE, IPB, intelligence fusion, collection management, and MI architecture in order to adequately prepare for SOF intelligence requirements in LSCO. Additionally, SOF J-2/S-2s should train on and maintain their DCGS-A MI architecture equipment to maintain interoperability with conventional unit J-2/G-2s.

References. ATP 3-05.20, *Special Operations Intelligence*, 03 MAY 2013; FM 2-0, *Intelligence Operations*, 06 JUL 2018; Joint Publication (JP) 2-01.3, *Joint Intelligence Preparation of the Operational Environment (JIPOE)*, 21 MAY 2014.

5.1.7. Comprehensive Information-Related Capabilities (IRC)

Observation. Divisions, corps, and SOF units lack comprehensive IRC planning in relation to consolidation of gains.

Discussion. Planning for consolidation of gains must begin in the early stages of any operation. Many of the tasks required for successful consolidation of gains and Phase IV take place prior to the transition to Phase IV. In fiscal year 2018 (FY18), many divisions and corps failed to start planning for consolidating gains until they were more than halfway complete with Phase III, when the division support area was larger than the area in front of their forward line of troops (FLOTs). When the staffs did start planning, they often focused solely on security tasks and neglected the full consideration of IRCs and how they relate to the consolidation of gains. Delayed planning for consolidation of gains makes the division support areas more vulnerable to adversarial SOF, irregular warfare, and propaganda.

Recommendation. Include planning for consolidation of gains, including the use of all IRCs, as a critical part of the overall plan and Phase III.

Reference. FM 3-0, *Operations*, 06 OCT 2017.

DOTMLPF-P. This is a doctrine gap observed throughout the year. MCTP provided CF and SOF training audiences with best practices and examples to be considered for operations during consolidation of gains. MCTP will continue to coach training audiences on the proper employment of the IRCs to maximize effects during LSCO consolidation of gains, and to set conditions for effective stability operations.

5.1.8. Integration of the Sustainment WfF

Observation. SOF units struggle to integrate the sustainment WfF with conventional units across echelons and to develop non-standard sustainment methods synchronized with conventional sustainment operations.

Discussion. SOF units often fail to integrate sustainment considerations into operational planning. As a result, most SOF sustainment operations within WFXs become reactive, rather than deliberate and planned. Additionally, SOF units have not routinely trained non-standard sustainment support in a fast-paced environment such as LSCO. These issues are compounded by difficulties observed with SOF units' integration and synchronization with conventional sustainment brigades and theater sustainment commands. A lack of refined sustainment standard operating procedures (SOPs) and detailed concepts of sustainment are often the primary culprits of these WFX observations.

Recommendation. SOF units should emphasize sustainment operations early and often in the MDMP and operations process. Additionally, SOF sustainment units and staff sections should develop the concepts of sustainment in coordination with conventional sustainment units across echelons and develop refined SOPs to drive non-standard sustainment operations.

References. ADRP 5-0, *The Operations Process*, 17 MAY 2012; ADRP 4-0, *Sustainment*, 31 JUL 2012; FM 4-95, *Logistics Operations*, 01 APR 2014.

SECTION 5.2. CYBER-ELECTROMAGNETIC ACTIVITIES (CEMA)

5.2.1. Integration of Cyberspace Operations into the Unified Land Operations Fight

Observation. FY18 training audience corps and division staffs and their CEMA sections were challenged with their familiarity and understanding of offensive cyberspace operations (OCO) authorities, approvals, and responsibilities.

Discussion. Throughout FY18, corps and division staffs increased emphasis on the integration of OCO effects to support the unified land operations fight. However, there remains a significant knowledge gap with regards to cyberspace operations across staffs. The CEMA sections did not have enough trained personnel with regards to planning and integrating cyberspace operations to support unified land operations. Many of the corps and division staffs struggled to properly synchronize OCO effects with ISR and lethal effects, resulting in opportunities lost to inflict enemy battle damage assessment (BDA). Only a few of the training audiences successfully integrated and synchronized OCO effects with ISR and lethal effects to destroy adversarial forces.

Recommendation. Staff and CEMA personnel need to understand the requirements and limitations of requesting OCO effects through formalized training.

References. JP 3-12, *Cyberspace Operations*, 08 JUN 2018; FM 3-12, *Cyberspace and Electronic Warfare Operations*, 11 APR 2017.

DOTMLPF-P. The 17B transition course will train CEMA section personnel; however, the division and corps planners should receive priority for the Cyber Operational Planners Course (COPC) and the Army Leaders Cyberspace Operations Course (ALCOC).

5.2.2. Integration of Electronic Warfare (EW) into the Unified Land Operations Fight

Observation. CEMA staffs are challenged with integrating EW into the unified land operations fight. Integrating with lethal targeting and equipment limitations create these challenges.

Discussion. Non-lethal targeting gained significant attention throughout FY18 from corps, division, and brigade commands. Although the CEMA staffs execute non-lethal targeting and attend TWGs (lethal and non-lethal), the significant gap is "command visualization of all effects across space and time." Educating commanders about lethal and non-lethal targeting and how they complement each other offers the ability to provide enemies multiple simultaneous dilemmas (i.e., non-lethal inclusion into the fire support execution matrix). The other significant gap resides with communication to the battlefield coordination detachment (BCD) at the air operations center (AOC). The Army's program of record for that communication is AFATDS. The challenge begins with the relationship between EW and artillery. EW personnel do not get training on or have adequate exposure to AFATADS. To circumvent this, CEMA sections send their air support requests directly to the EW coordination cell (EWCC) at the AOC via e-mail, which creates a gap at the AOC for their ATO production cycle. The Army TRADOC Capabilities Manager-Electronic Warfare (TCM-EW) created an equipment list for fielding to units. That fielding includes an EW planning management tool (EWPMT) for CEMA staffs that communicate and synchronize to AFATDS and the BCD.

Recommendations:

- Increase integration of EW effects into lethal targeting and staff understanding on how non-lethal effects layer with lethal effects.
- Rapid fielding of EWPMT is recommended as this will greatly increase the effectiveness of the CEMA staff and best support communications with artillery and AOC systems.

References. JP 3-13.1, *Electronic Warfare*, 08 FEB 2012; FM 3-12, *Cyberspace and Electronic Warfare Operations*, 11 APR 2017.

DOTMLPF-P:

- Integration of EW effects into lethal targeting is a training gap observed throughout FY18. MCTP will be able to increase capabilities of division CEMA staffs through coaching training audiences on methods to describe effects that enable commander visualization.
- Fielding equipment is a materiel gap that will greatly enhance the capabilities of the division CEMA staff. The fielding is on-going and expected to be nearing completion by 2022.

5.2.3. Integration of Space Operations into the Unified Land Operations Fight

Observation. FY18 corps and division training audience staffs demonstrated marked improvement in the ability to plan, prepare, integrate, and execute space mission area activities in support of unified land operations.

Discussion. Integration at division level was aided by organizational structure. Space support elements (SSE) that were part of a CEMA section demonstrated greater understanding of the operational environment, leading to increased support across WfFs. Training audiences initially struggle to adapt combatant command (COCOM)-specific TTPs to a near-peer unified land operations fight. Understanding of an organization's space dependencies and potential impacts to operations varied greatly between units. Corps and division SSEs have shifted their focus to integrated joint special technical operations (IJSTO) to produce effects for their echelons operations.

Recommendations:

- Commanders and staffs should increase understanding and experience the challenges of conducting unified land operations against an adversary capable of denying/degrading Department of Defense (DOD) space capabilities in the WFX.
- Continue inclusion of space instruction during warfighter academics and home station space training provided by U.S. Army Space and Missile Defense (USASMDC).

References. JP 3-14, *Space Operations*, 10 APR 2018; FM 3-14, *Army Space Operations*, 19 AUG 2014; ATP 3-14.3, *Techniques for Army Space Forces*, 15 FEB 2018.

DOTMLPF-P:

- Introduce robust simulated non-lethal effects that are visible in future iterations of warfighter simulation (WARSIM) program to capture the impacts of conducting unified action in a degraded, disrupted, and denied operating environment.
- Increase training on impacts of the space domain on unified land operations during mission command training (MCT) events. Encourage corps and divisions to conduct space training at home station.

CHAPTER 6

Air Component

SECTION 6.1. AIRSPACE CONTROL

6.1.1. Airspace Planning

Observation. Unit airspace plans should be continually reviewed and updated to support division operations.

Discussion. As the airspace control authority, the joint force air component commander (JFACC) delegates the responsibility for airspace control and management of each division area of operation to the assigned division headquarters. This delegation will not occur until each division requests its required airspace in the form of a unit airspace plan. Once the airspace plan has been submitted and approved, it must be continually reviewed and updated to ensure it supports all operations within the division's boundaries. As the division's fight changes, so must the division airspace plan. The division's unit airspace plan must take into account the airspace requirements of all supported subordinate units. Leader visibility of the unit airspace plan can be a challenge with products visible, primarily in Tactical Airspace Integration System (TAIS). TAISs and operators can be a constrained resource that does not facilitate the commander's visualization.

Recommendation. Requesting and delegating division-assigned airspace is critical for safe, effective, and efficient fires. The division airspace manager should monitor and update the division airspace plan, ensuring it supports division operations to include all supported subordinate units. The process of updating the airspace plan should include all airspace users and become part of the daily battle rhythm. An airspace working group (AWG) may or may not be required, but has been an effective means of keeping the daily changes current. The attendees of the targeting working group (TWG) make up the preponderance of those required for an AWG. The development and updating of the unit airspace plan should not only take into account the deep fight, but should allow freedom of movement of aircraft supporting the efforts of echelons below division. Units should consider using a common reference system such as Global Area Reference System (GARS) when establishing a unit airspace plan. This is important to airspace users because boundaries and phase lines will never be in straight lines and not easily identified by users outside of the division.

References. Joint Pubication (JP) 3-52, *Joint Airspace Control*, 13 NOV 2014; Field Manual (FM) 3-52, *Airspace Control*, 20 OCT 2016.

6.1.2. Air Interdiction (AI) Mission Planning

Observation. The AI target update processes are not clearly defined at the division level. This routinely leads to ineffective AI missions.

Discussion. Effective AI requires timely and accurate target updates. Continual intelligence collection efforts and updates should take place to ensure effective destruction of intended AI target sets. The field artillery intelligence officer (FAIO) should identify a timeline for AI-nominated target updates. Intelligence collections on these target sets should occur before and after a strike. With the fluid nature of a LSCO fight, if there is not a directed process of updated targeting information, the effects of fixed-wing aircraft attacking and locating these targets will be significantly less effective. If timely information does not reach the end user, aircraft will return with unused munitions, put fires on the wrong location, or be forced to strike lower-priority targets.

Recommendation. A target refinement process should be defined, codified, and published inoperation order (OPORD)/special instructions (SPINS). Targets are location centric and incorrect targeting data leads to non-prudent risk. Targeting officers and air liaison officers (ALOs) should have heightened awareness of all requested interdiction targets, even if they are below a cut-line, as those targets are still likely to be struck and require high-fidelity data.

References. JP 3-03, *Joint Interdiction*, 09 SEP 2016; JP 3-60, *Joint Targeting*, 28 SEP 2018.

6.1.3. Strike Coordination and Reconnaissance (SCAR) Mission Planning

Observation. SCAR requests contained inconsistent location information that caused confusion. The quality control and prioritization of subordinate units' requests should involve the Air Force tactical air control party (TACP) to ensure shared understanding.

Discussion. The tactical problem of targeting large and mobile enemy units that are not in close proximity of friendly forces can be solved using SCAR. SCAR missions are flown in a specific geographic area and are elements of command and control (C2) used to match weapons effects with targets per the supported commander's prioritized target list through proper real-time allocation of interdiction assets. A SCAR mission is designed to effectively and efficiently destroy targets and conduct associated battle damage assessments (BDAs).

Recommendation. SCAR air support requests (ASRs) should provide the Military Grid Reference System (MGRS) corner grids of the kill box. This recommended method of location data provides confirmation that the SCAR aircrew and strike aircraft have accurate boundaries for the clearance of fires and that the associated fire support coordination measure (FSCM) built in the Advanced Field Artillery Tactical Data System (AFATDS) will provide reasonable assurance of deconfliction from friendly artillery.

Any additional target grids within the remarks section of the request should reflect suspected targeted area of interests (TAIs). Alternative options that are not recommended for location data are the center point of the airspace and a single corner of the kill box. The exclusive use of GARS in the location section is not advised because most SCAR requests will not encompass an entire GARS cell; it is more likely that a combination of quadrants and keypads will be used to build the boundaries. A standard should be published by the senior tactical element or the battlefield coordination detachment (BCD) to ensure standardization of SCAR requests. There is significant risk assumed in not clearly communicating the lateral limits of where aircraft have de facto free fires areas.

References. *Air Land Sea Application, Multi-Service Tactics, Techniques, and Procedures for Strike Coordination and Reconnaissance*, Army Techniques Publication (ATP) 3-60.2, Marine Corps Reference Publication (MCRP) MCRP 3-20D.1, Navy Tactics, Techniques, and Procedures (NTTP) 3-03.4.3, and Air Force Tactics, Techniques, and Procedures (AFTTP) 3-2.72, 31 JAN 2018.

THIS PAGE INTENTIONALLY LEFT BLANK

SUBMIT INFORMATION OR REQUEST PUBLICATIONS

To help you access information efficiently, the Center for Army Lessons Learned (CALL) posts publications and other useful products available for download on the CALL website:

https://call.army.mil

PROVIDE LESSONS AND BEST PRACTICES OR SUBMIT AN AFTER ACTION REPORT (AAR)

If your unit has identified lessons or best practices or would like to submit an AAR or a request for information (RFI), please contact CALL using the following information:

Telephone: DSN 552-9533; Commercial 913-684-9533

Fax: DSN 552-4387; Commercial 913-684-4387

Mailing Address: **Center for Army Lessons Learned**
ATTN: Chief, Analysis Division
10 Meade Ave., Bldg. 50
Fort Leavenworth, KS 66027-1350

REQUEST COPIES OF CALL PUBLICATIONS

If you would like copies of this publication, please submit your request on the CALL restricted website (CAC login required):

https://call2.army.mil

Click on "Request for Publications." Please fill in all the information, including your unit name and street address. Please include building number and street for military posts.

Note: Some CALL publications are no longer available in print. Digital publications are available by clicking on "Publications by Type" under the "Resources" tab on the CALL restricted website, where you can access and download information. CALL also offers Web-based access to the CALL archives.

CALL produces the following publications on a variety of subjects:

- **Handbooks**
- **Bulletins, Newsletters, and Observation Reports**
- **Special Studies**
- ***News From the Front***
- **Training Lessons and Best Practices**
- **Initial Impressions Reports**

FOLLOW CALL ON SOCIAL MEDIA

https://twitter.com/USArmy_CALL
https://www.facebook.com/CenterforArmyLessonsLearned

COMBINED ARMS CENTER (CAC)
Additional Publications and Resources

The CAC home page address is: **https://usacac.army.mil**

Center for Army Leadership (CAL)

CAL plans and programs leadership instruction, doctrine, and research. CAL integrates and synchronizes the Professional Military Education Systems and Civilian Education System.

Combat Studies Institute (CSI)

CSI is a military history think tank that produces timely and relevant military history and contemporary operational history.

Combined Arms Doctrine Directorate (CADD)

CADD develops, writes, and updates Army doctrine at the corps and division level. Find doctrinal publications at either the Army Publishing Directorate (APD) or the Central Army Registry.

Foreign Military Studies Office (FMSO)

FMSO is a research and analysis center on Fort Leavenworth under the TRADOC G2. FMSO manages and conducts analytical programs focused on emerging and asymmetric threats, regional military and security developments, and other issues that define evolving operational environments around the world.

Military Review (MR)

MR is a revered journal that provides a forum for original thought and debate on the art and science of land warfare and other issues of current interest to the U.S. Army and the Department of Defense.

TRADOC Intelligence Support Activity (TRISA)

TRISA is a field agency of the TRADOC G2 and a tenant organization on Fort Leavenworth. TRISA is responsible for the development of intelligence products to support the policy-making, training, combat development, models, and simulations arenas.

Capability Development Integration Directorate (CDID)

CDID conducts analysis, experimentation, and integration to identify future requirements and manage current capabilities that enable the Army, as part of the Joint Force, to exercise Mission Command and to operationalize the Human Dimension.

Joint Center for International Security Force Assistance (JCISFA)

JCISFA's mission is to capture and analyze security force assistance (SFA) lessons from contemporary operations to advise combatant commands and military departments on appropriate doctrine; practices; and proven tactics, techniques, and procedures (TTP) to prepare for and conduct SFA missions efficiently. JCISFA was created to institutionalize SFA across DOD and serve as the DOD SFA Center of Excellence.

Support CAC in the exchange of information by telling us about your successes so they may be shared and become Army successes.

CENTER FOR ARMY LESSONS LEARNED
10 Meade Avenue, Building 50
Fort Leavenworth, KS 66027-1350

https://call.army.mil

U.S. ARMY
COMBINED
ARMS CENTER

Intellectual Center of the Army

https://usacac.army.mil