MISSION COMMAND TRAINING PROGRAM
FORT LEAVENWORTH, KANSAS

MCTP Trends in a Decisive Action Warfighter Exercise

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Table of Contents

Introduction 5
1. WFX Execution 7
1.1. Trends by Warfighting Function 7
1.1.1. Mission Command: 7
1.1.1.1. Inconsistent Use of Operational Frameworks 7
1.1.1.2. Linking Commander's Critical Information Requirement (CCIR) to Decisions 8
1.1.1.3. Battle Rhythm Management 9
1.1.1.4. Knowledge Management Framework 10
1.1.1.5. Special Operation Forces (SOF)/Conventional Force (CF) Interdependence 11
1.1.1.6. Shaping Operations in the Deep, Close, and Security Fight at the Division Level 11
1.1.1.7. Planning Horizons and Plans Management 12
1.1.1.8. Rehearsals 15
1.1.1.9. Command Posts (CPs) 15
1.1.1.10. Military Decision Making Process (MDMP) Synchronization 16
1.1.2. Movement and Maneuver 16
1.1.2.1. Common Operational Picture (COP) 16
1.1.2.2. Current Operations Integration Cell (COIC) Functionality 17
1.1.2.3. Responsibilities for Support Area Management and Movement Control Planning 17
1.1.2.4. Wet Gap Crossing 18
1.1.2.5. Understanding Combat Aviation Brigade (CAB) Capabilities 19
1.1.3. Intelligence 21
1.1.3.1. Product Support to Intelligence Preparation of the Battlefield (IPB) 21
1.1.3.2. IPB and Running Estimates that Assess the Hybrid Threat 22
1.1.3.3. Predictive Analysis 22
1.1.3.4. Intel Inputs to Targeting Working Groups (TWG) 23
1.1.3.5. Information Collection Asset Prioritization and Synchronization 23
1.1.3.6. Unmanned Aerial System (UAS) Integration 24
1.1.4. Fires 25
1.1.4.1. Division vs. Brigade Fight (Deep Attack) 25
1.1.4.2. Linking Targeting to Shaping Operations 26
1.1.4.3. Airspace Control and Fires De-confliction 27
1.1.4.4. Combat Assessments in the Planning Process 27
1.1.4.5. Integration of Information Operations into the Targeting Cycle 28
1.1.4.6. Graphic Control Measures 29

1.1.4.7. Fires Planning 29
1.1.5. Sustainment 30
1.1.5.1. Distribution Management 30
1.1.5.2. Organizing Sustainment Staffs by Warfighting Functions 31
1.1.5.3. Operational Area Security 32
1.1.5.4. Sustainment Running Estimates 33
1.1.5.5. Conducting Parallel Planning 33
1.1.5.6. Sustainment Reporting 34
1.1.6. Protection 35
1.1.6.1. Oversimplification of Protection Efforts 35
1.1.6.1. Critical Asset List/Defended Asset List – Usage, Revision, and Linkage 35
1.1.6.3. Protection Working Groups 36
1.1.6.4. Development of the Critical Asset List/Defended Asset List 37
1.2. Missions Aligned to Organic Capabilities 37
1.3. Integration of Functional and Multifunctional Brigades 38
1.4. Special Staff 39
1.4.1. Operational Law (OPLAW) 39
1.4.1.1. OPLAW Integration with Staff 39
1.4.1.2. Staff Judge Advocate's (SJA) Role in the MDMP 39
1.4.1.3. Workstation Locations in the Command Post 40
1.4.2. Religious Support 40
1.4.2.1. Religious Support Common Operational Picture 40
1.4.2.2. Religious Support Integration in the MDMP 41
1.4.2.3. Religious Support to Mass Casualties (MASCAL) 41
1.4.2.4. Religious Battle Tracking 41
1.4.3. Public Affairs 42
1.4.3.1. Integration of Public Affairs in Staff 42
1.4.3.2. Public Affairs Annex and Guidance 42
1.5. Cyber Electromagnetic Activities (CEMA) 43
1.5.1. Trained Personnel to Plan, Coordinate, and Integrate Cyberspace Operations 43
1.5.2. Integration of Electronic Warfare 43
1.5.3. Organic CEMA equipment 44

2. Warfighter Exercise Design 45
2.1. Exercise Planning (Exercise Lifecycle Events) 45
2.1.1. Establish Effective Training Objectives for a Warfighter Exercise 45
2.1.2. Preparation 45
2.1.3. Mission Command Training 46
2.2. HICOM Manning 46
2.3. Participants in a Warfighter 46
2.3.1. Task Organization (Annex A) 46
2.3.2. Training Level (Perishable/Non-Resident) 47
2.4. Orders Production Timeline 47
2.5. Joint Force Component Integration 48
3. Warfighter Technical Design 49
3.1. Mission Command Information Systems (MCIS) 49
3.1.1. Equipment Availability 49
3.1.2. Version Control 50
3.1.3. Home Station Training 50
3.1.4. Field Service Representative Support 51
3.2. Pre-Start Exercise (STARTEX) – Communication Exercise (COMMEX) 51
3.3. Network Management/Architecture 52
3.4. DoD Information Assurance Certification and Accreditation Process (DIACAP) and Other Accreditation 53
3.5 Intel Data Flow 53
3.6. Warfighter Technical Design Conclusion 54
4. Conclusion – Trends for the Larger Army 57

Figure List

Figure 1: CCIR Process 8
Figure 2: 7-Minute Drill 10
Figure 3: Planning Horizons (FM 6-0) 14
Figure 4: Plans Transitions 14
Figure 5: Aviation Brigade's Roles 20
Figure 6: Suggested Sustainment Brigade WFF breakdown 31
Figure 7: Suggested Expeditionary Sustainment Command WFF breakdown 32
Figure 8: Technical Design Current Conditions 55
Figure 9: Technical Design Intermediate Conditions 55
Figure 10: Technical End State 56

Introduction

The purpose of this paper is to gather and disseminate MCTP observations in order to inform decisions that shape our future force. Our observations will focus on trends, defined as practices or actions seen on multiple occasions during multiple training events by a number of different units. While recognizing that one fiscal year 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 to transition from counterinsurgency operations to operationalizing the tenets of Unified Land Operations (ULO).

MCTP stands at the forefront of supporting the training of Army brigade, division, corps, and Army Service Component Command (ASCC) headquarters in Mission Command and ULO. In accordance with the Army's Combat Training Center Programs and the Chief of Staff of the Army's Training Guidance, MCTP conducted four multi-echelon Warfighter exercises, two Unified Endeavor exercises, four ASCC exercises, two culminating training exercises (CTE), and one brigade-level Warfighter Exercise (WFX)during Fiscal Year 2014. Together, these exercises met the training objectives of more than 65 units. Each exercise integrated functional and multi-functional brigades, sustainment units, and multi-component forces to include Army National Guard (ARNG) brigade combat teams (BCTs). MCTP works very closely with the Joint Staff, J7-South and other training partners to support exercise design with additional joint context infused throughout to support the training of units designated as future joint task forces (JTFs).

A WFX is a distributed, simulation-driven, master scenario events list (MSEL) supported, and multi-echelon tactical command post exercise. Training audiences fight against a live, freethinking adversary designed to train and rehearse units in the train and ready force pool for missions as a contingency expeditionary force or regionally aligned force as designated by Forces Command (FORSCOM). MCTP conducts WFXs directed by the CSA and scheduled by FORSCOM.

MCTP develops the exercise scenario derived from the operating environment outlined in the Training and Doctrine Command (TRADOC) G2-approved Decisive Action Training Environment (DATE). Incorporating CSA, FORSCOM, and Army Command (ACOM) guidance, MCTP adapts the exercise scenario from a common base scenario to meet each training audience commander's training objectives, and end state.

MCTP uses a computer simulation to provide representative combat and battlefield effects during the exercise and provides feedback to the commander in the form of detailed observations, which allow for the commander's own training assessment. During those training events, the Observer, Coach, Trainers (OC/Ts) observe and provide feedback on each unit's staff functions and processes. Further, retired general officers serve as senior mentors during the exercises, providing invaluable feedback to unit commanders through coaching and mentoring throughout the entire process. MCTP provides these observations and feedback to their training audiences through a formal and fully instrumented after-action review process. These unique, first-hand observations have yielded valuable insights into our Army: how it trains, how it thinks, and how it fights under the construct of Unified Land Operations.

In general, we have witnessed the challenges facing a division headquarters tasked to transform itself from the role of resource provider to a higher headquarters responsible for establishing a concept of operations, directing how its subordinates will cooperate to accomplish the mission (ADRP 5.0). Repeatedly, leaders struggle to clearly articulate their visualization of

operations in time, space, and purpose, often resulting in a lack of synchronization integral to achieving unity of effort.

From our observations, the friction inherent in the contiguous operating environment occurs more frequently and compounds at a more rapid rate in the dynamic environment of Decisive Action than in a more static environment. These differences exacerbate difficulties for unit commanders and their staffs attempting to synchronize efforts in time and space to achieve the commander's desired end state. This friction often results in units committing to action piecemeal, diluting the capabilities each brings to bear rather than capitalizing on the capabilities of integrated combined arms operations. As the lead agent of synchronization during the tactical execution of a Warfighter exercise, a division headquarters must provide for its subordinates a clear delineation of the operational framework — such as the deep, close, and security areas — and assign clearly understood roles and responsibilities within each. Two critical mechanisms for this delineation are the doctrinal use of graphic control measures and the development and dissemination of a synchronization matrix.

The intent of this paper is to share best practices for commanders and their staffs on doctrinal trends observed during MCTP support exercises. There is no intent to provide criticism or praise to any particular training audience; instead, this document will provide warfighting function trends from the WFX exercise design, scenario design, and technical design to improve brigades, divisions, corps, and ASCC's processes in Mission Command and the conduct of ULO in a Decisive Action Training Environment.

Decisive Victory!

EDWARD T. BOHNEMANN
COL, IN
Commanding

1. WFX Execution

1.1. Trends by Warfighting Function

1.1.1. Mission Command:

"Mission command is the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders in the conduct of unified land operations" (ADP 6-0). The philosophy of Mission Command is one of the foundations of unified land operations. This philosophy helps commanders capitalize on the human ability to take action to develop the situation and integrate military operations to achieve the commander's intent and desired end state. Mission command emphasizes centralized intent and dispersed execution through disciplined initiative. This precept guides leaders toward mission accomplishment. Observer, Coach, Trainers (OC/Ts) enable the Army's senior commanders and staffs to develop current, relevant, campaign quality, joint and expeditionary Mission Command instincts, and skills.

1.1.1.1. Inconsistent Use of Operational Frameworks

Observation: Units often improperly use the three operational frameworks: deep-close-security, decisive-shaping-sustaining, and main and supporting concurrently in operational planning.

Discussion: Army leaders are responsible for clearly articulating their vision of operations in time, space, purpose, and resources. An established operational framework and associated vocabulary can assist greatly in this task. Training audiences often fail to use Operational Frameworks (ADRP 3-0) to articulate the visualization of operations in time, space, purpose, and resources to generate options. During years of Wide Area Security (WAS) operations, higher headquarters often divided supporting and enabling headquarters amongst BCTs based on a fixed set of conditions in relation to main and supporting efforts. Units fail to recognize that during Combined Arms Maneuver (CAM) there are constantly shifting priorities, not only during transitions but potentially even within sub-phases. Using all aspects of the operational framework to describe decisive-shaping-sustaining, close-deep-security, and main-supporting efforts allows subordinates to understand changing roles as operations progress. Additionally, demands strain the unit's span of control and logistical support in a rapidly evolving environment while executing Mission Command on the move. Maintaining those enabling and supporting units within the higher headquarters will allow greater flexibility to exploit a unit's successes and to better protection their critical systems and capabilities.

Recommendations:

- Use all appropriate Operational Frameworks to describe shifting priorities between phases and sub-phases (see ADRP 3-0).
- Strongly consider the impacts of excessive task organization; maintaining enabling headquarters allows for more rapid shifts as priorities change.
- Higher headquarters should direct the specific frameworks to be used by subordinate headquarters; the frameworks should be consistent throughout all echelons.

References: ADRP 3-0, FM 6-0, ADP 5-0, ADRP 6-0

1.1.1.2. Linking Commander's Critical Information Requirement (CCIR) to Decisions

Observation: Units are not directly linking the CCIRs to decisions that the commander needs to make.

Discussion: Mission analysis identifies gaps in information required for further planning and decision making during preparation and execution of the operations process. Regardless of the type of operation or mission, the staff should identify decision points to identify opportunities or risks that affect the unit's ability to achieve the commander's intent. During mission analysis, the staff develops information requirements. Staffs struggle to develop and refine CCIRs (Priority Intelligence Requirements [PIR] and Friendly Forces Information Requirements [FFIR]) that support the commander's decision-making. CCIR development begins during mission analysis (ADRP 5-0) by taking into consideration friendly forces and the enemy threat templates developed during Intelligence Preparation of the Battlefield (IPB). The IPB process and identification of enemy courses of action lead to the identification of the initial Targeted and Named Areas of Interest (TAI/NAI). The TAIs and NAIs should have associated PIR and be linked to a decision point. Often, that is not the case.

Recommendations:

- Begin CCIR development during mission analysis and continue to refine throughout the planning and execution. Involve the commander early in CCIR development (see Figure 1). Ensure to link CCIRs to the commander's decision points and develop an information collection plan that will assist in answering CCIRs (see ADRP 5-0, FM 3-55, and FM 6-0).

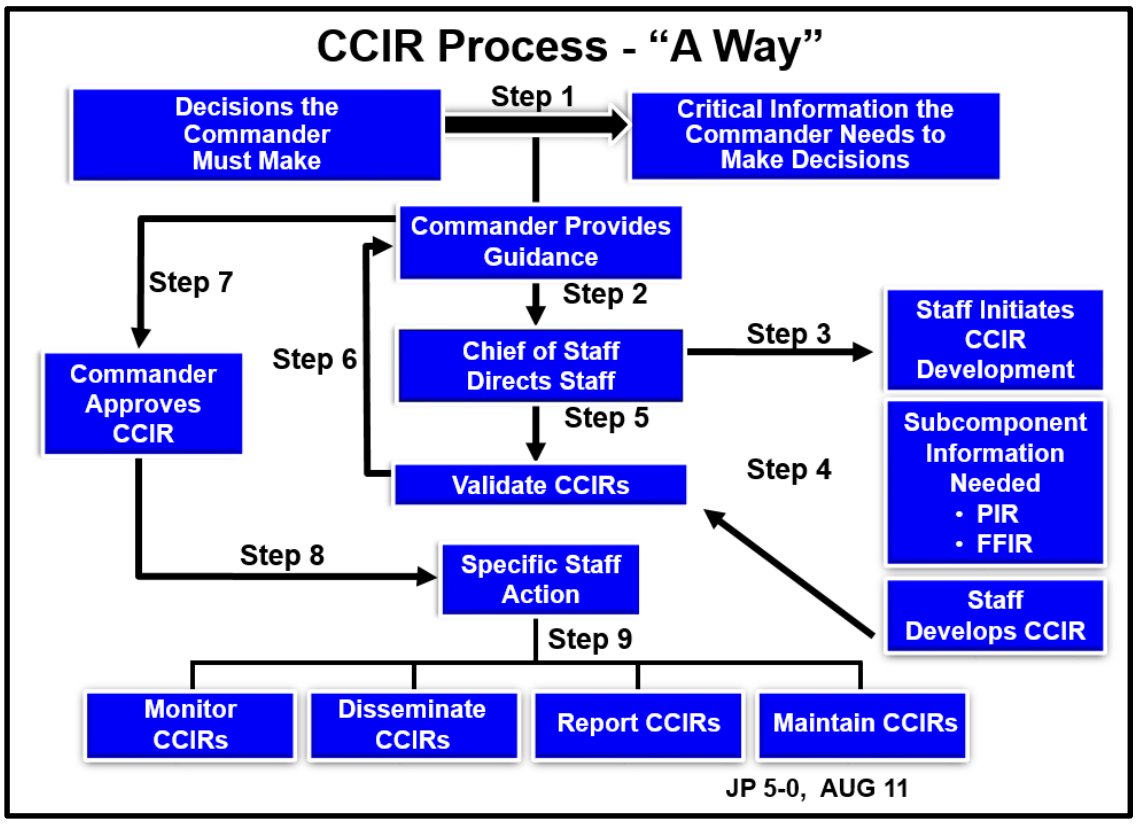

Figure 1: CCIR Process

- Conduct IPB during the planning process to identify enemy courses of action. These courses of action, when overlaid on a scheme of maneuver, will identify the commander's decision points, with associated CCIRs and NAI/TAIs. This forms the initial information collection plan where the G3/S3 assigns a unit or asset to monitor the NAI/TAIs and answer the associated CCIR. Ensure the synchronization plan shows the earliest and latest time intelligence is of value so units know the period of time they need to monitor the NAI/TAIs.
- The G3/S3 should manage the information collection plan. The G3/S3 will have to assign new tasks to subordinates, reprioritize information collection assets, adjust CCIRs, or modify the friendly course of action for answered CCIRs. The G3/S3 should develop the Decision Support Matrix (DSM) and Decision Support Template (DST) in order to assist the commander in his decision-making. An effective DST/DSM has CCIR linked to NAIs or TAIs with possible courses of actions.

References: FM 6-0, ADRP 5-0, ADRP 6-0, FM 3-55, JP 5-0

1.1.1.3. Battle Rhythm Management

Observation: Unit battle rhythms do not follow a logical process and lack procedures for refinement and adjustment.

Discussion: A battle rhythm is a deliberate daily cycle of command, staff, and unit activities intended to synchronize current and future operations (JP 3-33). The battle rhythm enables decision-making by synchronizing current and future operations planning with scheduled meetings and planning efforts. Too often, battle rhythm events are scheduled without the clear purpose, inputs, requirements, desired outputs and whom from the staff should attend. Frequently, there is not a clearly identified process to refine and adjust the battle rhythm, nor to notify the staff and outside agencies of changes.

Recommendations:

- Sequence battle rhythm events so they support the commander's decision-making process (see FM 6-0).
- Schedule enough time between events to allow participants to synthesize information and complete their input/output requirements.
- Utilize the 7-Minute Drill (see Figure 2). At the minimum, the 7-Minute Drill should have a purpose, the lead staff section or agency, location, frequency, required participants, the identified inputs and outputs, and who from the command group will participate.
- The chief of staff or XO should retain the approval authority for modifying the battle rhythm and approve all 7-Minute drills, ensuring changes continue to support the commander's decision cycle.

References: FM 6-0, ADRP 5-0, JP 3-33, ADRP 6-0

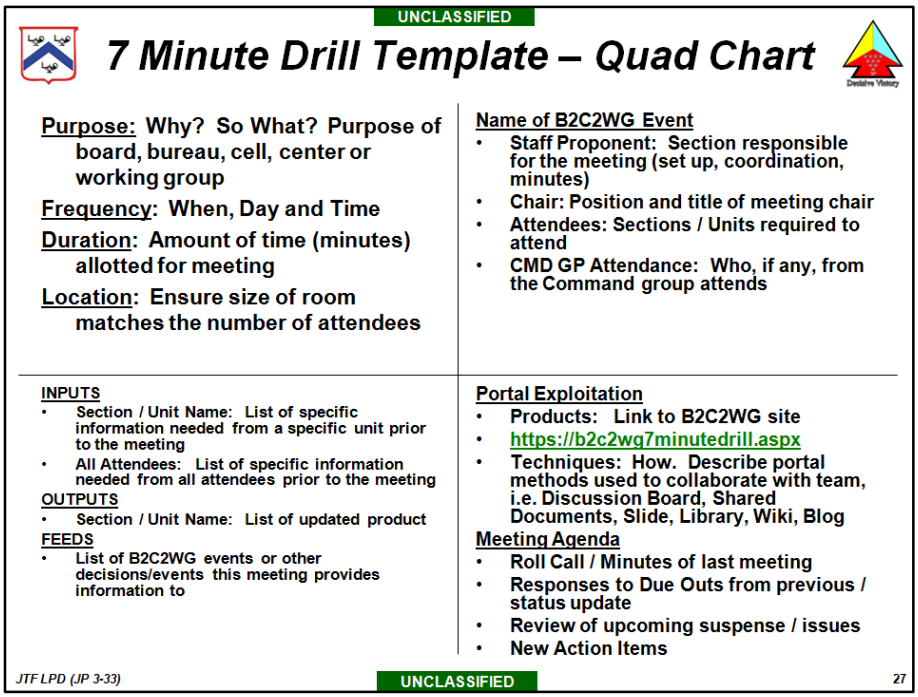

Figure 2: 7-Minute Drill

1.1.1.4. Knowledge Management Framework

Observation: Units Lack an understanding of the components of Knowledge Management (KM) and responsibilities of the Chief of Staff (CoS), Knowledge Management Officer (KMO), and staff for sharing information.

Discussion: Knowledge management is crucial to Mission Command and leader development. Commanders need knowledge and understanding in order to make effective decisions (ADRP 6-0). Knowledge management begins with educating leaders on the systems available, followed by how leaders operate those systems. Staffs use various information and knowledge management frameworks to assist commanders in processing information (FM 6.1.1). Units tend to focus on the tool component of knowledge management: specifically, SharePoint. The KMO should focus on people and processes within an organization to assist in creating a shared understanding (FM 6.1.1). A focus on a single tool often contributes to a deficient understanding of knowledge management, and thus leads to an underutilization of KMO. The CoS/XO must ensure that all staff members understand the purpose and function of the KMO and KM Section. The staff should assist the KMO in identifying knowledge or performance gaps. The KMO must continuously identify knowledge management gaps and, with the assistance of knowledge management representatives (KMR) from the staff, work through the KM process to eliminate those gaps.

Recommendations:

- Schedule the Army Knowledge Management Office Proponent for Senior Leader Workshops and KMR Training.
- Establish a functional KM working group chaired by the CoS and facilitated by the KMO.
- Establish KM functions early in the planning process with a KM assessment.
- Write and publish ANNEX Q (Knowledge Management) with guidance from the Chief of Staff in the orders process.

References: FM 6-0, FM 6.1.1, ADRP 6-0

1.1.1.5. Special Operation Forces (SOF)/Conventional Force (CF) Interdependence

Observation: SOF critical capabilities are not fully understood by CFs.

Discussion: In many conflicts, Special Forces operations occur before the initiation of hostilities through regional mechanisms and a theater security cooperation. This includes collaboration with local national forces conducting Foreign Internal Defense and Security Force Assistance and preparation of the environment (ADRP 3-05). After CF occupies an AO, units often have difficulty understanding SOF critical capabilities and assets. Conventional forces further fail to understand how to integrate SOF within CF at varying levels of command decisive and supporting operations. This leads to a misunderstanding of the supported/supporting roles between SOF and CF within the operational phasing. The Commander Joint Task Force (COMJTF) base order identifies transitions from supported to supporting roles. These transitions must be clearly understood and planned so that each element works in unison to achieve objectives within the Lines of Operations (LOOs). Phase III operations largely depend on conditions set by SOF during Phases 0-II. SOF's critical capability of special warfare helps shape the AOR prior to CF introduction into the theater. The CF must be aware of SOF's ongoing operations and then include the forward SOF elements into the overall concept and scheme. The existing SOF regional mechanisms develop civil and military assessments; influence operations and indigenous force capability/capacity; and, when necessary, provide a surgical strike option. These activities are designed to help shape the battle, deter enemy forces, and seize the initiative, and must be synchronized with any CF force in order to achieve unified land operations. Per ADRP 3-05, many factors must be considered prior to employing SOF, such as availability of CF resources to support the mission. Support could involve aiding, protecting, complementing, and sustaining employed SOF units. Support also can include airlift, intelligence, communications, inform-and-influence activities (IIA), medical, logistics, space, weather, and numerous other types of support.

Recommendations:

- The SOF representative working as part of the CF staff must provide a capabilities brief and must disseminate the SOF CDR's mission and intent to the CF.
- SOF must be integrated into all battle drills.
- CF should plan to complement the ongoing SOF special warfare plan.
- Both CF and SOF forces should fully understand each other's missions, systems, capabilities, and limitations.

References: ADRP 3-05, ADRP 6-0

1.1.1.6. Shaping Operations in the Deep, Close, and Security Fight at the Division Level

Observation: Units struggle with managing shaping operations in the Deep and Close fight, specifically when planning security and reconnaissance operations.

Discussion: An operational framework helps Division and higher headquarters establish priorities and achieve the commander's vision and end state (FM 3-94). Staffs often struggle with understanding their responsibilities concerning collection, reconnaissance, and security operations in the Deep and Close fight. Security operations are particularly important in the Deep fight for areas of operation not assigned to subordinate headquarters. Similarly, collection planning often lacks sufficient oversight from operational planners, leading to desynchronized activities. Time-distance considerations for deployment of reconnaissance or security elements (often days prior to execution of an operation) are not utilized, thereby preventing effective collection. Planning factors for survivability, support, and recovery are often neglected or inadequate for the reconnaissance/security

fight. Lack of detection capability degrades the effectiveness of shaping operations in support of BCTs. When collection results are not adequate in answering information requirements, plans are rarely refined or adjusted, nor do staffs adjust collection priorities to support shifting main and supporting efforts in pursuit of decisive operations. This lack of emphasis and coordination in the Division's area (AOs not assigned to subordinate headquarters or security areas) hinders subordinate headquarters executing the close fight. The rear or support area is also the location to base sustainment assets and provide logistics. The mission to coordinate and synchronize security operations within the support area is often tasked to the under-resourced Maneuver Enhancement Brigade (MEB). The MEB headquarters must plan and execute numerous other missions. Unless properly augmented by higher headquarters, it lacks an internal Tactical Combat Force (TCF), artillery, and aviation support needed to accomplish its security tasks in the support area (FM 3-81).

Recommendations:

- Operational planners must be involved early in the planning of reconnaissance and security operations in the Division's AO (Deep or unassigned areas); enemy intelligence templates and collection priorities serve only as a starting point for planning these activities.
- Execution of reconnaissance and security planning must occur well ahead of refined planning efforts for the remainder of the Division in order to be effective; this may require a back brief to the decision authority prior to finalization of the larger plan.
- A command post must be resourced to control operations in the support area.
- Resources (TCF, artillery, security) must be allocated to MEB to secure the support area.

References: ADRP 3-0, FM 3-94, FM 3-81, ADRP 6-0

1.1.1.7. Planning Horizons and Plans Management

Observation: Units have difficulty with plans management, assigning and prioritizing planning efforts, and developing a "plan to plan".

Discussion: Units divide staff into three sections: Personal Staff, Special Staff, and Coordinating Staff. Within the Coordinating Staff, the G3/S3 is further split into Current Operations (CUOPS), Future Operations (FUOPS), and Plans. The other staff sections organize cross-functionally with representatives from all warfighting functions using the traditional G-Staff model (i.e. G1, G2, G3, G4, and G5). Depending on the staff organization, a commander may assign a planning effort to the section he deems more appropriate to handle the problem set. One of the critical factors in assigning a planning effort is time. Some planning efforts will require a quick turn, sometimes with only hours to execute the Military Decision Making Process (MDMP), while others may require months until execution. Generally, commanders assign difficult, long-term planning efforts to Plans or the G5, while short-term problems, regardless of difficulty, go to CUOPS or FUOPS. During the course of an operation, the CUOPS and FUOPS sections become overwhelmed with planning efforts. They have limited time and assigned planners to work on their efforts, while the Plans section has only a few efforts to develop. When a plan transitions from one section to another, there is often a loss of planning momentum until the new planners become familiar with the effort.

Although staffs may conduct deliberate Military Decision Making Process when developing their initial plan, they often fail to formally determine what steps must be executed or abridged when conducting subsequent planning. The Division and lower HQ particularly assign branches and sequels to an order to individual action officers within Plans or FUOPs, rather than Operational Planning Teams. These junior officers often take on much of the work and begin executing without considering what MDMP steps are required. Consequently, when the staff assembles, the junior officers have little or no guidance as to inputs required to start planning. When this occurs, forces

available and a directed course of action drive maneuver plans, rather than the enemy situation. Usually work is compartmentalized, and collaboration and cross-functional discussion do not occur. This means that shaping and supporting efforts are routinely addressed post-development of the maneuver plan instead of considered as limiting or enabling factors. Protection and risk mitigation are rarely considered sufficiently, if at all. Time spent laying out a deliberate planning time line and conducting as many of the MDMP steps as possible, with all WfF members understanding their inputs, results in a more coherent and effective plan.

Recommendations:

- Establish a standard operating procedure for assigning planning horizon efforts (see figure 3). The commander or chief of staff/XO should set priorities and provide direction and guidance.
- Assign planning efforts with a short time to execution – generally no more than 24 hours – to Current Operations. Assign problems with 24 hours to several weeks until execution to Future Operations. The Plans cell can receive problems that have weeks to months to execute. As plans are refined, develop a transition plan where the different staff sections have time to learn and become intimate with the plan. The transition plan (see figure 4) should designate a point in time or event for transition to officially occur, but should also incorporate a "left seat/right-seat" period for the transition to occur (see FM 6-0).
- Approach subsequent planning efforts in a deliberate manner and clearly articulate a timeline, and responsibilities. Conduct some type of cross-functional analysis before setting a scheme of maneuver.
- Ensure integration of all staff in planning efforts for orders production.

References: ADRP 3-0, FM 3-94, FM 3-81, ADRP 6-0, FM 6-0

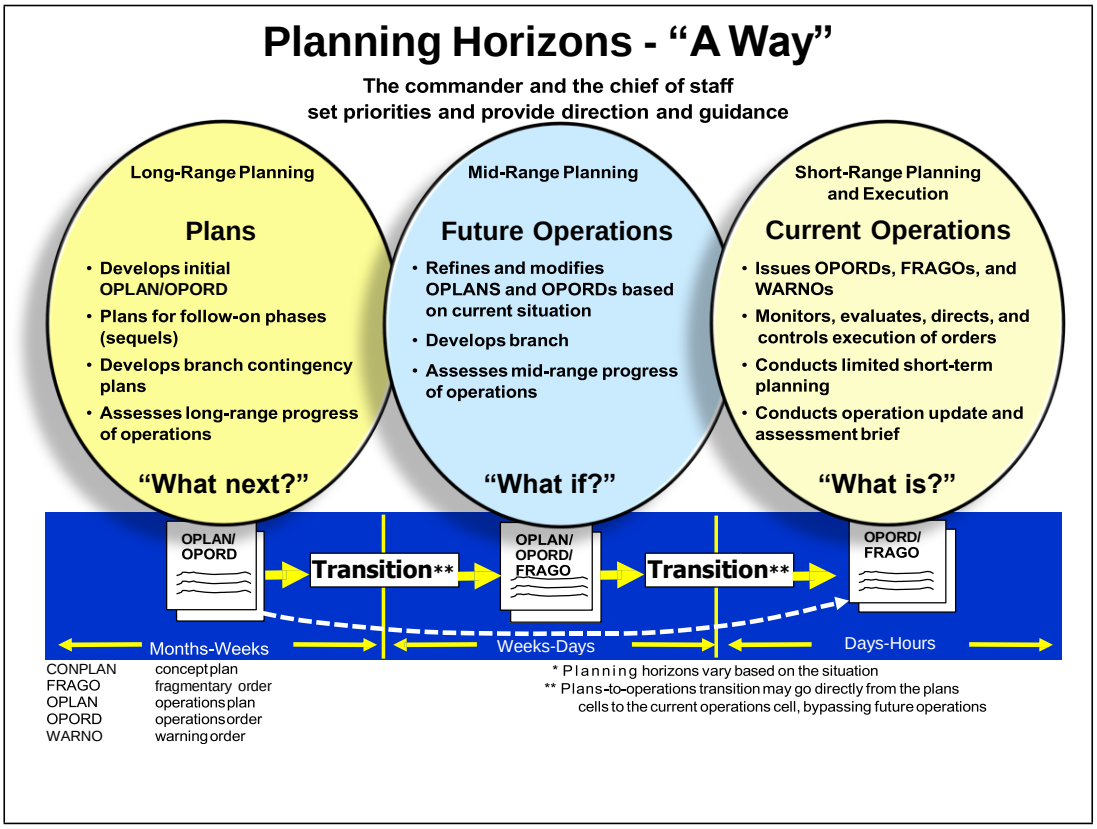

Figure 3: Planning Horizons (FM 6-0)

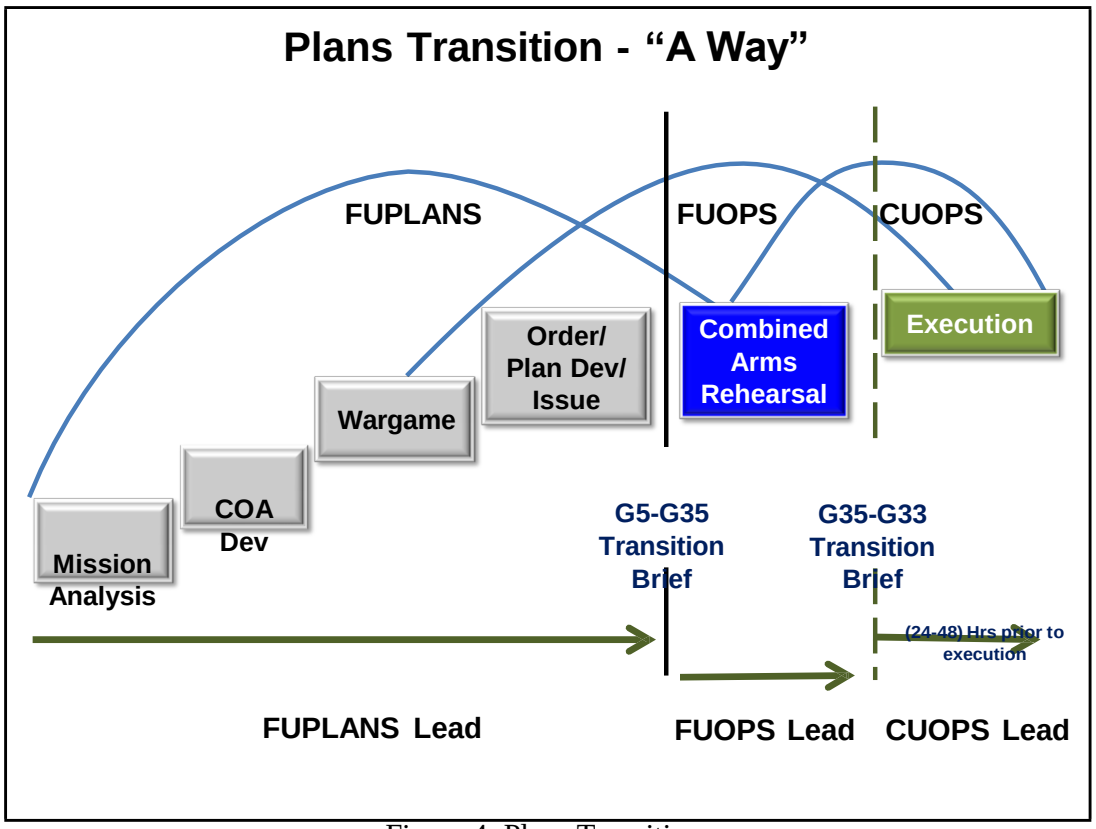

Figure 4: Plans Transitions

1.1.1.8. Rehearsals

Observation: Rehearsals in orders transitions (Plans, Future Operations, and Current Operations) are inadequate.

Discussion: Mission success depends as much on preparation as on planning. A successful transition from the planning phase in the Military Decision Making Process to execution requires those charged with executing the order to understand the plan fully. Rehearsals, to include confirmation briefings and plans-to-operations transition briefings, improve understanding of the concept of operations, control measures, decision points, and command-and-support relationships. During any Combined Arms Maneuver, the higher headquarters will conduct a Combined Arms Rehearsal. However, once decisive action begins, higher headquarters rarely conducts subsequent rehearsals when transitioning to new phases of the operation or when executing branches or sequels. Subordinate headquarters and the Current Operations cell often must execute plans with a poor understanding of the synchronization requirements of an operation. Because units rarely conduct orders transition from planners to Current Operations, they lack a clear understanding of execution requirements. One key aspect of rehearsals often overlooked is the transition of Mission Command responsibilities during offensive operations when multiple command posts are employed. Rehearsals should include criteria for transition of responsibility regarding execution of operations, decision-making authorities, and procedures for creating shared understanding.

Recommendations:

- Units must identify clear transition points for orders and must make a deliberate decision on the type of rehearsal that allow transitions from planning teams to CUOPS (FM 6-0).
- Planners must dedicate sufficient time to execute rehearsals within the command post and with subordinates.
- Timelines for development of planning efforts must include rehearsals and must be approved by CoS or Operations Officer.

References: ADRP 5-0, FM 6-0

1.1.1.9. Command Posts (CPs)

Observation: Units consistently take five to seven days to establish their tactical networks to fully-mission-capable (FMC) conditions on all Mission Command Information Systems (MCIS) platforms, and setup always requires substantial support from the field service representative (FSR).

Discussion: Establishing a CP includes setting up DRASH shelters, power grids and generators, and tactical networks infrastructure. This often takes a brigade-size unit 24 to 36 hours. It then takes an additional two to three days to establish interconnectivity between brigade and division units. This lack of proficiency in establishing CPs in a timely manner causes units to rely too heavily on contracted FSR support and jeopardizes full network operational capability in support of the mission.

Recommendations:

- Ensure home-station training plans include multiple iterations of establishing CPs and conducting CP jump operations to build and maintain proficiency of CP staffs.
- Incorporate cross training to relieve the burden on low-density personnel and develop staff competency in all CP operations tasks.

References: ADRP 6-0, FM 6-0

1.1.1.10. Military Decision Making Process (MDMP) Synchronization

Observation: Executive Officers/Chiefs of Staff do not synchronize or lead MDMP efforts across the staff.

Discussion: Chiefs of Staff (CoS) and XOs do not understand their role in synchronizing staff efforts during planning. They do not conduct sufficient time analysis, and they do not develop a detailed "plan to plan." This detracts from the staff's ability to execute cross-functional collaborative planning. XOs do not put enough emphasis on developing and enforcing appropriate digital and analog planning SOPs. Personnel understand the basics of MDMP, but the lack of direction results in stovepiped efforts until personnel are directed to compile slides for the MDMP briefing. XOs do not allocate enough time to rehearse and make necessary adjustments. The result is a missed opportunity to help the commander understand and visualize the operation and to provide the guidance needed to begin the next step. Units typically end up completing a major portion of the mission analysis during COA development. They complete COA development during COA analysis (wargaming).

Recommendations:

- The XO/CoS must lead staff planning efforts to ensure the commander can understand and visualize the operation. They must develop a "plan to plan" that includes time for staff to conduct both internal and cross-functional planning sessions. The timeline must address each step and sub-step of MDMP.
- The XO/CoS should recommend to the Commander what steps to abbreviate (see FM 6-0) and what steps (if any) to skip, to balance the level of detail with timely delivery of planning products to subordinate units. Units should develop a planning SOP that includes an initial timeline and prescribed formats (analog and digital) to reduce time spent on building and refining the mission analysis briefing. Selecting a common map (CPOF, Analog, Sketch or PPT map shot) can help define the area of operation/area of interest and prescribe a level of detail to focus analysis.

References: ADRP 5-0; FM 6-0

1.1.2. Movement and Maneuver

"The movement and maneuver warfighting function is the related tasks and systems that move and employ forces to achieve a position of relative advantage over the enemy and other threats. Direct fire and close combat are inherent in maneuver. The movement and maneuver warfighting function includes tasks associated with force projection related to gaining a position of advantage over the enemy. Movement is necessary to disperse and displace the force as a whole or in part when maneuvering. Maneuver is the employment of forces in the operational area. It works through movement and with fires to achieve a position of advantage relative to the enemy to accomplish the mission. Commanders use maneuver for massing the effects of combat power to achieve surprise, shock, and momentum. Effective maneuver requires close coordination with fires. Both tactical and operational maneuver require sustainment support" (ADRP 3-0). Observations of the movement and maneuver warfighting function are captured by monitoring the operations process, current and future operations integration cells, plans, and command posts.

1.1.2.1. Common Operational Picture (COP)

Observation: The common operational picture in the Current Operations Integration Cell (COIC) does not promote situational awareness and situational understanding.

Discussion: The COIC is the focal point for information flowing into and out of the headquarters. A successful COIC should utilize systems and tools that aid in maintaining situational awareness and understanding, synchronizing current operations, reacting to crisis situations (e.g. battle drills) and keeping the commander and staff informed to assist in timely decision making. Information should be clearly displayed for all personnel to see and understand and should be relevant to the common operational picture (CPOF/UAS/FMV feeds, and CCIR).

Recommendations:

- To ensure standardization and the ability to understand the common operational picture (COP), commanders must designate the standardized system to display, access, and share information (see FM 6-0). Common practice is to use a single display based on time and priority for multiple staff products.
- Unit SOP should define who is responsible for updating and maintaining the COP. It also should define who manipulates which screens to meet the needs of the COIC floor.
- How to share the COP across adjacent and subordinate formations should be determined (see FM 6-0).

References: FM 6-0

1.1.2.2. Current Operations Integration Cell (COIC) Functionality

Observation: The COIC is not anticipating the commander's decisions and tracking the CCIR.

Discussion: The COIC is responsible for assessing the current situation while regulating forces and Warfighting Functions in accordance with the commander's intent. The COIC must anticipate decisions and track associated CCIR to help the commander make required decisions. COIC personnel often are not aware of the commander's decision points associated with the CCIR, causing the staff to become reactive rather than anticipatory concerning upcoming decisions. This prompts the chief of operations to notify the commander that either a short-notice decision or past-due decision is required. Ultimately, this disrupts Mission Command and limits a shared understanding of the commander's intent.

Recommendations:

- Develop a decision support matrix with associated CCIR and post it in the COIC for all to see.
- Review and update the CCIR and decision support matrix routinely, in accordance with FM 6-0.
- Assign someone in CUOPs to monitor incoming reports to see if they trigger CCIR.
- Assign someone to monitor the decision support matrix and track upcoming decisions.
- Conduct a battle rhythm event to assess the decision support matrix and make changes as needed.

References: FM 6-0, ADRP 5-0

1.1.2.3. Responsibilities for Support Area Management and Movement Control Planning

Observation: Divisions often fail to conduct sufficient planning and management of movement control activities.

Discussion: Headquarters conducting offensive and defensive operations as part of Combined Arms Maneuver often assign areas of operation using the linear model. While this places the responsibility

for controlling activities with subordinate units, the higher headquarters still has responsibilities. When conducting a wet gap crossing or a passage of lines, higher headquarters is responsible for movement control. This is critical because not only do multiple BDEs operate within a subordinate AO; Division also has a responsibility to ensure forces organize to conduct the fight once they depart a subordinate headquarters' AO (upon reaching the release point). An assigned AO empowers subordinate commanders to use their own initiative; however, it also restricts movement for other units. When higher headquarters directs multiple units through a subordinate's AO, it must help manage those movements.

Similarly, when security operations in the support area are assigned to a subordinate unit, headquarters often fails to recognize the amount of coordination required to synchronize efforts and ensure support of priorities. A Maneuver Enhancement Brigade (MEB), for instance, is not organically able to control fires within the support area, nor does it have the forces to execute security tasks over a wide area without augmentation. A MEB also needs assistance in coordinating sustainment activities that transit the support area with adjacent and higher headquarters.

Division sustainment staffs are not conducting movement control in the division distribution network. Specifically, Division Transportation Officers (DTOs) and their staffs are not executing the four major movement control tasks, outlined by current doctrine, necessary to effectively integrate and manage movement and maneuver across the division's operational area.

Recommendations:

- Ensure higher headquarters maintains a role in synchronizing movement among subordinate units, in accordance with FM 3-94. This requirement includes establishing control measures, graphics, and mission command nodes.
- Involve movement control experts (DTO, MCT) when planning and directing units to move through an area along a route.
- Assign planning efforts for the support area to one of the integrating cells, and ensure all affected headquarters are tied in to planning movements.
- Ensure Division staffs establish processes to plan for and execute the following four movement control tasks:
    - Provide route synchronization in the divisional area
    - Ensure uninterrupted movement of theater/divisional/brigade convoys
    - Manage the movement request process
    - Establish periodic movements boards

References: ADRP 3-0, FM 3-94, FM 3-8, ADRP 5-0

1.1.2.4. Wet Gap Crossing

Observation: Units struggle to plan, rehearse, and execute a wet gap crossing.

Discussion: As division operations, wet gap crossings are exceedingly complex and require early and continuous synchronization of myriad assets at multiple echelons. Mission Command, Movement and Maneuver, Intelligence, Fires, IO, Sustainment, and Protection are all integral to the success of a wet gap crossing and require a combined arms approach. Execution matrices and/or checklists are critical in accounting for these numerous coordination efforts.

Recommendations:

- Early in the planning process, clearly define which assets to task organize to brigades and which to retain at the division level to shape brigade fights. Involve the engineer battalion/MEB early in the planning process. Engineer Brigade commanders and MEB

commanders best understand how to employ their unique capabilities to support the mission.

- Coordinate the efforts of engineers, military police, fires planners, sustainers, and maneuver forces to ensure mobility. Their combined efforts enable the Multi-Role Bridge Company's timely arrival at the crossing site with operational equipment.
- Co-locate headquarters by echelon to establish effective mission command nodes [DIV EN with the D-Main, Crossing Force Engineer (CFE) with the D-TAC, and Crossing Area Engineer (CAE) with the Crossing Force Commander (CFC)]. This simplifies communications and maximizes operational control.
- Maintain Air Defense Artillery (ADA) capabilities at or near the crossing site. ADA is crucial to protecting crossing assets, which present lucrative, stationary targets for enemy air. In turn, these ADA assets require Engineer assets to dig them in and ground forces to protect them.
- Coordinate fires to ensure that movement to the crossing site, crossing operations, and operations beyond the bridgehead are all properly shaped. The latter is often inadequately addressed. Units find themselves successfully on the far side of the wet gap only to be engaged by indirect fires because they are still under enemy observation. Fire support coordination is the planning and execution of fire so that targets are adequately covered by a suitable weapon or group of weapons (JP 3-09).
- As with fire support, use Information Operations to support all three phases of the wet gap crossing. Properly disseminated information directs internally displaced personnel (IDP) away from key routes to the crossing area, the crossing area, and future routes and areas of operation. IO also supports the deception plan.
- Execute a deception plan – this is key to the success of a wet gap crossing. Whether a physical plan involving maneuver forces and the employment of fires/smoke, a story line reinforcing a false course of action, or a combination of both, the deception plan removes focus from the actual crossing site.
- Emplace Critical Friendly Zones (CFZs) over existing bridges and crossing sites.
- Plan, prioritize and de-conflict the employment of ISR assets. Their use is equally important in the movement to the wet gap crossing, at the crossing, and after completion of it.

References: FM 3-90.12, JP 3-09

1.1.2.5. Understanding Combat Aviation Brigade (CAB) Capabilities

Observation: Higher Headquarters (Division and above) lack a clear understanding of the Aviation Mission Planning Responsibilities (by echelon) and do not have situational awareness regarding Army Aviation in a Decisive Action environment.

Discussion: Units have preconceived notions of how to employ Army Aviation based on multiple deployments in Iraq and Afghanistan. Unit experience typically consists of small two-ship teams rather than large forces employed as a maneuver element. Units frequently employ aviation in small teams in a "fire support" or "close air support" mode without any defined task or purpose. Audiences do not understand Attack and Reconnaissance Aviation doctrine and routinely fail to mass Army Aviation for decisive effect or integrate aviation into the overall scheme of maneuver. A lack of understanding can prevent the aviation employment headquarters from effectively planning and resourcing future aviation operations. A limited knowledge of the CAB missions (Interdiction Attacks, Joint Air Attack Teams, Close Combat Attacks, and Unmanned Aircraft Surveillance) can result in a lack of understanding of the brigade's operational posture and reach. Planning with a lack of capabilities knowledge can result in a reactive approach to the employment of assets.

Recommendations:

- Review current doctrine (see Figure 5) for employment of Army Aviation (FM 3-04.111, *Aviation Brigades*, 7 DEC 07 and FM 3-04.126, *Attack Reconnaissance Helicopter Operations*, 16 FEB 07) and practice integrating Army Aviation subject matter experts into planning and preparation for warfighter exercises.
- Break habits developed during COIN fights that lead to piece-meal employment and "fire support asset" utilization.
- Integrate Army Aviation as a maneuver force throughout the MDMP; assign task and purpose to aviation units, and mass aviation to achieve decisive effect.
- Ensure that units share an understanding of CAB capabilities and that all units understand the aviation mission planning responsibilities by echelon. The CAB must ensure that the higher headquarters is armed with the most current and accurate information regarding operational capabilities and resources.

References: FM 3-04.11, FM 3-04.126, ADRP 6-0

Aviation BDE's role in Army WfF

WfF	*Aviation Brigade's Role*
Mission Command	• Provide mission command on the move at all appropriate CAB C2 nodes • Provide retransmission capability to air and ground commander • Provide air traffic services (ATS)
Movement and Maneuver	• Support ground maneuver elements in contact through CCA • Conduct air assault in support of offensive and defensive operations • Conduct movement to contact to locate and destroy enemy forces
Intelligence	• Conduct area reconnaissance to identify adequate routes and locate bypasses • Perform surveillance to confirm and/or deny enemy activity
Fires	• Utilize attack reconnaissance assets (RW and UAS) to conduct battle damage assessment (BDA) of fires • Designate for laser-guided artillery or other service munitions during joint air attack team (JAAT) operations
Sustainment	• Perform aircraft recovery to include insertion of downed aircraft recovery teams (DARTs) and ground maintenance contact teams • Support forward arming and refueling point (FARP) emplacement and resupply operations • Perform casualty evacuation (CASEVAC) and aeromedical evacuation (MEDEVAC)
Protection	• Provide convoy security • Conduct area security through counter mortar and rocket operations

FM 3-04.111, Aviation Brigades

Figure 5: Aviation Brigade's Roles

1.1.3. Intelligence

"The purpose of intelligence is to support commanders and staffs in gaining situational understanding of threats, terrain, weather, and civil considerations. Intelligence supports the planning, preparing, execution, and assessment of operations. The most important role of intelligence is to support commanders and decision makers. The Army generates intelligence through the intelligence Warfighting Function. Intelligence leaders ensure that the intelligence Warfighting Function operates effectively and efficiently. They are the commander's primary advisers on employing information collection assets and driving information collection. Predictive threat assessments facilitate the commander's visualization and support decision-making. Intelligence leaders provide the commander with predictive assessments that consider all aspects of threats, terrain and weather, and civil considerations, and should provide the commander with an estimate regarding the degree of confidence the intelligence leader places in each analytic assessment. Intelligence analysis is not perfect and can be extremely time consuming and difficult. The G2/S2 staff must provide most likely and most dangerous threat COAs based on threat intent and capabilities during war-gaming" (ADRP 2-0).

1.1.3.1. Product Support to Intelligence Preparation of the Battlefield (IPB)

Observation: Staff officers struggle during the military decision-making process (MDMP) to develop relevant products to help the commander's decision making.

Discussion: Offensive tasks at all levels require effective intelligence to help the commander to avoid the threat's main strength and to deceive and surprise the threat. The entire staff, led by the G2/S2, develops IPB products to assist the commander in identifying all aspects within the area of interest that can affect mission accomplishment. During MDMP, intelligence leaders find it difficult to provide detailed products that help the commander visualize decisions. This often happens because G2s/S2s do not integrate the entire staff in the IPB process and thereby miss opportunities to achieve a shared understanding (e.g. use reverse warfighting function worksheets and incorporate intelligence products). Moreover, the G2/S2s do not collaborate face to face with other staff principals throughout the IPB process, hindering the commander and staff from understanding the environment and the threat, while laying a less than firm foundation for the remainder of MDMP. G2/S2s struggle with developing the event templates and a matrix to help the staff and commander understand and visualize the enemy force in combined arms maneuver. They also struggle with in-depth analysis for the High Value Target List (HVTL), which would assist the staff and commander in understanding how destroying each target will affect the enemy. Furthermore, intelligence collection plans typically lack the prioritization of assets and the understanding of what specific information to collect. Finally, named areas of interest (NAIs) do not always have Priority Information Requirements (PIR) associated with them or a time that information collection is required to observe the NAI.

Recommendations:

- Emphasize the need for face-to-face collaborative planning by staff principals during IPB as an integrating process to understand the OE and threat.
- Develop and use an Event Template and Event Matrix capturing enemy COAs to drive information collection and situational understanding. Adjust based only on intelligence updates.
- Develop a collection synch matrix with NAIs and associated PIRs. Determine the time for which information collection assets are required to be on station.
- Develop a process to synchronize the discussion of the commander decisions and the science involved to visualize during MDMP.

References: ADRP 2-0

1.1.3.2. IPB and Running Estimates that Assess the Hybrid Threat

Observation: Units often struggle to conduct initial IPB against a hybrid threat and to maintain accurate running estimates that fully account for the hybrid threat.

Discussion: Units focus on "muscle memory" of Wide Area Security (Low Intensity) threats and have trouble analyzing conventional threat forces (Combined Arms Maneuver). Units fail to recognize signature items and equipment combinations that would identify Opposing Forces (OPFOR) units. Furthermore, units do not adequately assess OPFOR strength using Battle Damage Assessment (BDA). Units regularly develop only a single complete threat course of action (SITEMP, Narrative, HVTs), and rarely associate it with High Value Targets (HVTs). Without more than one COA, it is difficult to determine or accurately predict the enemy's actions. Units rarely produce or utilize an Event Template and Event Matrix – tools that doctrinally form the basis of the information collection plan and aid in situation development (i.e. differentiation between most-likely COA and most-dangerous COA).

Recommendations:

- Staffs must ensure IPB results in multiple, discernible enemy COAs, complete with Event Template and Matrix. Core IPB outputs drive Information Collection and Targeting and assist in situation development and planning efforts (see ADRP 2-0).

References: ADRP 2-0, FM 3-55

1.1.3.3. Predictive Analysis

Observation: Intelligence Analysis is not predictive enough to inform a commander's decision making.

Discussion: Intelligence sections have difficulty conducting predictive analysis that can enable a commander to make informed decisions. Intelligence products lack sufficient detail and show a less informed understanding of the enemy situation and most-likely courses of action. Examples of these challenges include developing an accurate threat situation template and event template, an accurate and up-to-date digital and analog enemy common operational picture (COP), and updated PIR and ISR synchronization matrices to answer new information requirements. Products developed during IPB provide a basis for all planning. The lack of accurate, complete, and timely intelligence analysis products delays the staff's ability to conduct current operations and plan future operations. The Intel collection and targeting process then becomes reactive, instead of predictive, and may not adequately support the unit's mission.

Recommendations:

- Conduct thorough IPB during mission analysis and continually update the product. A thorough template (threat template and situational template) of the enemy allows the staff to develop a High Payoff Target List (HPTL).
- Develop an Event Template (EVENTEMP) portraying where the HPTs will be in time and space. This facilitate planning and the targeting process.
- Once the HPTL is defined, develop the Information Collection (IC) plan to support the updated maneuver plan (see FM 3-55).

- Complete the process cyclically, daily, or in the IC/Targeting Working Group, which occurs prior to the division IC/Targeting Working Group. This allows the unit to maintain a proactive targeting process and effectively supports the commander's mission and end state.

References: ADRP 2-0, FM 3-55

1.1.3.4. Intel Inputs to Targeting Working Groups (TWG)

Observation: Units provide inconsistent intelligence inputs that lack important details needed in the TWG to synchronize future fires.

Discussion: The TWG's purpose is to synchronize fires across multiple echelons of command in unified land operations. The current and future operations agenda involves enemy and friendly situational updates from the G2 that influence the high-payoff target list and the attack guidance matrix. Often, however, the G2 targeting cells do not utilize an event template to ensure a consistent and well-reasoned portrayal of high value targets and activities in time and space. Intelligence representatives brief an "intelligence summary" or "intelligence assessments" on significant activity in the past. These products often are vague and generally do not relate to upcoming operations. Division staffs continue to demonstrate that they do not fully understand (or take a very long time figuring out) how to most effectively utilize intelligence, surveillance, reconnaissance (ISR) systems to their fullest capabilities in support of lethal and nonlethal targeting throughout the entire D3A process. This weakness stems from an underdeveloped or nonexistent sensor-to-shooter linkage, vague primary, alternate, contingency, emergency (PACE) plans specifically supporting targeting and nonstandard fire support collaboration tools such as the fire support effects matrix (FSEM) and the target synchronization matrix (TSM) that are not coordinated with Intel synchronization matrix (ISM) or information collection plans (ICP). Staffs tend to treat ISR as a purely Intel function and leave the planning and coordination to the S2 staffers, when, in reality, ISR affects all the WfFs; principally, Mission Command, Protection, and Fires.

Recommendations:

- Ensure G2/S2 support to the TWG includes a doctrinal Event Template and Event Matrix that capture detailed activity (enemy and significant PMESS-PT) for the temporal period to achieve effects and shape the operational environment (see ADRP 2-0). Event templates provide the G3/S3 and fires cell with useful information to refine the plan. By projecting enemy courses of action, the G3/S3 can plan where, when, and what to shoot, jam, communicate, and maneuver against, with what results to expect. The event template also allows for refined understanding of when high value targets will present themselves, allowing the TWG to determine an effect and allocate assets to achieve that effect.
- Refine the Intelligence Synchronization Matrix (ISM) and Intelligence Collection Plan (ICP) to ensure they are synchronized with the Target Synchronization Matrix (TSM) and are detailed to show ISR assets collecting against specific targets or allocated to units.

References: ADRP 2-0, FM 3-60, FM 3-55,

1.1.3.5. Information Collection Asset Prioritization and Synchronization

Observation: Units lack understanding throughout all echelons of command with respect to the prioritization and allocation of information collection assets.

Discussion: The Army collects information through the operations and intelligence process to synchronize and integrate the operation of sensors, assets, and processing, exploitation, and

dissemination systems in direct support of current and future operations. In general, a deficit will exist between the volume of information collection assets allocated to a division and the assets a BCT requests for its operations. Divisional and subordinate units lack a shared understanding of the information collection priorities. This leads to the underutilization of information collection assets and misprioritization of missions. Typically, this is due to a misperception of asset capabilities, the dynamic nature (or lack) of some systems, and the realization that the collection plan is short on synchronization. There also exists a discrepancy between prioritization of information collection assets and the priorities for the operation stated by the commander.

Recommendations:

- Allocate information collection assets to subordinate units based on priorities approved by the commander.
- Accomplish information collection through an enabler synchronization process as part of the battle rhythm. The G3 is responsible for integrating information collection assets to support operations. The G2 is responsible for recommending priorities and coordinating them with the G3. The commander approves all priorities, and the staff enforces them daily.

References: ADRP 2-0, FM 3-55

1.1.3.6. Unmanned Aerial System (UAS) Integration

Observation: Brigade and division-level staffs often do not understand Unmanned Aerial System (UAS) capabilities or how to support or task them.

Discussion: The Army has been incredibly successful in introducing UASs from corps level to platoon in the past few years. Although still relatively new to combined arms operations, UASs are revolutionizing how the Army fights and gathers intelligence. However, divisions and CABs lack operational understanding concerning UAS capabilities, tasking process, and employment and integration in the overall scheme of maneuver. Additionally, CABs are not directly involved in the UAS mission planning and tasking process. Often, UAS is used as an intelligence platform, which allows the division G2 collection manager to conduct direct coordination and task the UAS Company without the CAB's input to support IPB. This tactic does little to integrate and synchronize UAS with the ground commander's scheme of maneuver and fires plan.

Recommendations:

- Division and brigade should collaborate to identify the absolute minimum information required for UAS mission tasking and employment.
- Thorough examples of orders for support to intelligence collection, fires, and maneuver units (to include CAB) should be developed in the tactical standard operating procedures (TACSOP) for use in staff training at all levels.
- Current operations and planning staff should receive training to ensure they understand the capabilities of the system and the requirements for planning and utilizing it.

References: FM 3-04.111, ADRP 2-0, FM 3-55

1.1.4. Fires

"Army fires systems deliver fires in support of offensive and defensive tasks to create specific lethal and nonlethal effects on a target. The fires warfighting function includes tasks associated with, integrating, and synchronizing the effects of Army indirect fires, air and missile defense (AMD), and joint fires with the effects of other warfighting functions. It includes planning for targeting; providing fire support; countering air, ballistic missile, cruise missile, rocket, artillery, mortars, and unmanned aircraft systems threats; and integrating joint and multinational fires. This represents the tasks the fires function must accomplish to complement and reinforce the other warfighting functions" (ADRP 3-09). Fires organizations require deliberate and dynamic targeting to achieve lethal and nonlethal effects against ground and aerial targets. For ground threats, fires leaders use the Army's targeting methodology to plan, prepare, execute, and assess effects on the ground. For aerial threats, fires leaders use air defense planning to determine air defense priorities and the tailoring of air defense artillery capabilities to defeat aerial threats. As a warfighting function, fires address requirements associated with offensive and defensive tasks supporting the concept of operations and integrated into the scheme of maneuver. A wide range of precision to conventional scalable capabilities provides the means for the employment of fires in unified land operations.

1.1.4.1. Division vs. Brigade Fight (Deep Attack)

Observation: Units struggle to plan deep fires in both time and space.

Discussion: Division fire support cells are not effectively planning, coordinating, and synchronizing fires within the deep-close-security operational framework. The division and brigade possess a different perspective of the deep fight. As a result, division-shaping operations are not effective and do not adequately set the conditions for the close fight. The division staff struggles to articulate fire support tasks, fire support allocation, or anticipated changes to fire support coordination measures. The fire support cell seldom updates the fire support plan beyond initial contact in order to provide subordinate units with changes to fire support planning efforts or objectives. Many staffs equate fires planning to targeting and therefore rely extensively on the targeting process to synchronize fire support assets throughout the operation. This causes division staffs to become fixated on the close fight and subsequently lose focus and momentum on planning the deep fight. The 72-96 hour targeting cycle is effective in allocating resources to engage high-payoff targets for brigades; however, it should not substitute for staff planning efforts to coordinate fires for branch plans or changes in phases of the operations. Because division staffs tend to focus on the close fight, there is limited asset reprioritization and reallocation to support the division shaping effort. Consequently, subordinate units do not provide input into the higher headquarters targeting cycle to validate or refine targets. The subordinate brigades often believe they are adequately resourced and do not request additional fire support.

Recommendations:

- Develop a fire support plan that describes methods of engagement, target support standards (TSS), and what restrictions the commander wants to attack different targets; and identify the targeting priorities (ADRP 3-09).
- Continuously update the fire plan.
- Require refinement/input of subordinate units.

References: ADRP 3-0, FM 3-94, ADP 3-09, FM 3-60

1.1.4.2. Linking Targeting to Shaping Operations

Observation: Targeting Working Groups often focus only on decisive operations and neglect shaping operations.

Discussion: The role of fires is to enable Army forces to seize and retain the initiative, prevent and deter conflict, defeat adaptive threats, and succeed in a wide range of contingencies. Fires in decisive action create effects and set conditions to enable commanders to prevail in unified land operations. In this regard, the fires targeting working group (TWG) synchronize fires for future operations. TWG often contains little discussion of joint fires planning, target nominations, or air-ground integration for targeting cycles beyond the 72 hour/3 day Air Tasking Order Cycle to allow effective shaping of the operational environment (OE). Rather, discussions center on high value target development with a review of information collection assets requested in the IC synchronization matrix for the next 72 hours. Moreover, there is insufficient fidelity of asset allocation in depth for the duration of the discussed targeting cycle, nor a look at the appropriate target sets to engage beyond the 72 hours. Units typically do not follow their own SOP conducting TWGs with regard to inputs and outputs of the meeting. Units struggle to fix the purpose of their meeting in reference to the operational timeline, whether tied to an ATO cycle or event-driven within the context of the existing OPLAN/OPORD.

Recommendations:

- In accordance with ADRP 3-09, review targets throughout the AO in both space and time. Threat COA inputs and detailed intelligence estimates must serve as the starting point for all TWG efforts.
- Review the commander's concept of the operation and his targeting guidance. The staff determines the targets that, if successfully attacked, will contribute to the success of the mission.
- Construct a high-payoff target list (HPTL) of prioritized targets; determine target selection standards (TSS); and prepare the attack guidance matrix (AGM) for the commander's approval (see ADRP 3-09).
- Prepare a targeting synchronization matrix that includes the prioritized high-payoff targets (HPTs); reconnaissance, surveillance and target acquisition (TA) assets tasked to acquire them; friendly assets tasked to attack them; desired effects and associated measures of performance (MOPs) and measures of effectiveness (MOEs) for assessment; and the assets tasked to conduct assessment (see ADRP 3-09).
- Quickly review the ongoing and next 24-48 hour ATO cycle's targets and associated Intel Collection Matrix and target list worksheet/JTARs; confirm prior nominations for the 48-72 hours cycle; and present new nominations for the 72-96 hour ATO cycle based on recommendations from the subordinate units and HQ staff functional area working groups.

References: ADRP 3-0, FM 3-94, ADP 3-09, FM 3-60, ADRP 3-09, FM 3-09.22

1.1.4.3. Airspace Control and Fires De-confliction

Observation: Units have difficulty integrating airspace control and fires de-confliction measures within the ground commander's operational environment (OE).

Discussion: Fires personnel coordinate airspace integration to ensure that conflicts between ground fires and air operations are minimized using fire support coordination efforts and airspace coordination measures (ACMs). This unified action mitigates the possibility of fratricide and duplication of effort. Units have difficulty integrating airspace control and fires de-confliction measures over and within a ground commander's OE. As a result, units decrease their ability to maximize integration of all airspace users, fires, and air and missile defense assets in order to achieve the desired effects on targets. Inefficient de-confliction of airspace users and fires assets increases the time required for clearance of airspace over and within the OE, further inhibiting the ability to obtain timely effects on targets. Common trends that cause this difficulty in airspace control and fires de-confliction include lack of full integration of airspace control into a unit's MDMP and lack of effective positioning of the key personnel required.

Recommendations:

- Airspace planners provide subject matter expertise during planning efforts to set conditions for near-real-time airspace control during mission execution. In order to provide flexibility and reduce risk, airspace planners should consider the echelon commander's priorities for airspace use. Keep the plan for integrating airspace users simple and flexible (see ADRP 3-09).
- Maximize the use of procedural means of control; limit (in number, size, and duration) ACMs to the minimum required for mission accomplishment in order to maximize flexibility for airspace users. Establish an airspace common operating picture that depicts planned and active ACMs (see FM 3-09).
- During mission execution, communication, and corroboration, continue coordination among airspace elements, the fires cell, air liaison officer, tactical air control party, intelligence sections, unmanned aerial system operators, and all other staff elements that represent airspace users. This communication enables the airspace elements to build complete situational understanding, synchronize ongoing airspace operations, and de-conflict fires and other airspace assets.

References: JP 3-52, ADRP 3-09, FM 3-09, FM 3-52, FM 6-0, ATP 3-09.24

1.1.4.4. Combat Assessments in the Planning Process

Observation: Integration of combat assessments into the planning process is poor.

Discussion: Intelligence collections plans often lack needed detail to derive battle damage assessment (BDA) and munitions effects assessments (MEA) which feed combat assessments. Units lack understanding of how to set conditions with shaping operations and establish criteria to measure effectiveness.

Recommendations:

- Combat assessment is the determination of the effectiveness of force employment during military operations. Plan for BDA with the realization that an asset used for damage assessment may not be available for collection.
- Plan and track combat assessments to validate that sufficient conditions are set before needlessly committing forces.

- Allocate intelligence collection assets for combat assessments. BDA is the timely and accurate estimate of damage resulting from the application of military force, either lethal or nonlethal, against a target. BDA results may cause plans and earlier decisions to change, calling for an update of IPB products, the HPTL, TSS, and/or the air ground matrix (AGM).
- Assess the effects of an attack. An assessment may be required for certain important targets. The same assets that acquire targets can also provide data on the effectiveness of the attack. BDA is determined via passive means (i.e. absence of activity from target) or active means (actively searching for the target). MEA is an assessment of the military force in terms of the weapon systems and munitions effectiveness.

References: ADRP 3-09, FM 3-09, FM 3-55, FM 3-60, FM 6-0, ATP 3-09.24

1.1.4.5. Integration of Information Operations into the Targeting Cycle

Observation: Units struggle to incorporate non-lethal effects while conducting combined arms maneuver.

Discussion: G39 (Information Operations) shops struggle to identify shaping effects in Deterrence or Decisive Action phases of an operation to influence enemy decision makers and deny the enemy the ability to reinforce or resynchronize operations. Units often have difficulty applying operational frameworks to describe how they will organize activities to achieve the commander's end state. In particular, mission analysis, course of action (COA) development, and wargaming seem to focus on post-stability operations, verse shaping operations in support of the maneuver element. The G39 shops neglect to simultaneously plan for and integrate effects into both an ATO cycle (72-hour periods) and long-term shaping efforts (3-12 months). Additionally, staffs struggle with collection planning. These two factors contribute to a unit's inability to conduct shaping operations. Although units develop high-payoff targets and priorities of fires, they often fail to tie collection planning to assessing and directing effects against those enemy capabilities that will allow subordinate units to succeed in executing the commander's decisive operation. After development of the base plan, staffs rarely come back to the commander and provide assessments on how they have achieved or failed to achieve conditions with shaping operations. Multiple shaping operations executed simultaneously create and preserve conditions for the decisive operation.

Recommendations:

- Establish battle rhythm events to ensure that commander's priorities, targeting priorities, and collection plans are aligned.
- Consider a broader range of non-lethal effects via information-related capabilities such as MISO, PA, CEMA, Space, Civil Affairs, and other effects to confront a hybrid threat. These options should be integrated with the lethal force. Although the effects may be outside the ATO cycle, they can generate alternative combat power across time and maneuver space.
- Identify a forum to provide routine assessments on effectiveness of shaping operations.
- Establish clear metrics for achieving desired effects in shaping operations.

References: ADP 5-0, FM 3-13, ADRP 3-09

1.1.4.6. Graphic Control Measures

Observation: Fire support coordination measures (FSCMs) and graphic control measures are not uniformly established, disseminated, tracked or understood.

Discussion: The lack of FSCMs and graphic control measures creates confusion about procedures for clearance of fires, degrades timely delivery of fires, and increases the risk of fratricide. Coordinated fire lines (CFL), once established, are not properly built in the Advance Field Artillery Tactical Data System (AFATDS) and disseminated, causing confusion on the location and effective time of the coordination measure. Often, AFATDS does not force coordination for CFL because a unit's boundaries or Zones of Responsibility (ZOR) are not established within AFATDS. Lack of established permissive control measures and a lack of understanding of the unit boundaries and ZORs influenced clearance of fires procedures. All requests for clearance were entered in the Division Fires Transverse Chat window without an understanding by the Field Artillery Brigade of the unit responsible for that area of operations and without an established process to track and document clearance for specific missions (zones of responsibility in AFATDS, no FSCM in rehearsal, management).

Recommendations:

- Plan graphic control measures and fire support coordination measures during COA development and disseminate as part of the order.
- Develop a digital SOP to leverage MCIS automation to establish, disseminate and track graphical control measures and fire support coordination measures and ensure AFATDS database and distribution lists are updated and accurate.
- Coordinate for AFATDS FSR refresher training or for a mobile training team to support home-station AFATDS training. Units should develop and adhere to Digital Sustainment Program.

References: ADRP 1-02, ADRP 5-0, FM 3-09, FM 3-60, FM 6-0, ATP 3-09.24

1.1.4.7. Fires Planning

Observation: Deliberate top-down fires planning lacks executable detail throughout the course of the operation.

Discussion: The Fire Support Execution Matrix and Fire Support Tasks (FST) are not reviewed and updated from the base order and adjusted for specific missions. Units planning for specific missions are not integrated among warfighting functions and do not synchronize fire support within the planning process. Planned targets generally do not include an observation plan, triggers, and delivery assets. They do not fully support the ground scheme of maneuver and are not published to subordinate units. Units also struggle to develop and rehearse an overall time line in support of operations, including target sequencing and the development of triggers, the identification of NAIs and TAIs, or triggers to activate ACAs or other FSCMs. The lack of detail in FSTs, particularly execution and assessment paragraphs, hinders field artillery units' ability to develop detailed, executable Field Artillery Tasks (FAT).

Recommendations:

- Develop defined fire support tasks, including target location, trigger, observer plan, delivery system, attack guidance and communication plan, to support the scheme of maneuver for specific missions.

- Develop a fire support execution matrix and publish the matrix and FSTs (FATs for artillery units) in a FRAGO.
- Rehearse the fires plan with all participants to synchronize fires with the overall operation.

References: ADRP 3-09, ADRP 3-90, FM 3-09, FM 3-60, FM 6-0, ATP 3-09.24

1.1.5. Sustainment

Sustainment is crucial to the success of all operations. It must be planned and synchronized with the operation at every level of command. It depends on joint and strategic links and must be meticulously coordinated to ensure delivery of resources to the lowest level. "The sustainment warfighting function includes the related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance in military operations. The Army's robust sustainment capability assists in providing crucial theater and port opening functions enabling joint forces to conduct strategic and operational reach. Once the theater is set, Army sustainment capabilities continue to provide the bulk of Army support to other services (ASOS), common user logistics (CUL), and other common sustainment resources. This enables joint forces with freedom of action and endurance. Through Mission Command, sustainment commanders instill confidence and disciplined initiative in subordinate commanders, which enable them to be bold in taking decisive action" (ADRP 4-0).

1.1.5.1. Distribution Management

Observation: The Distribution Integration Branch (DIB) within the Support Operations Section (SPO) is not utilized consistently.

Discussion: Given the relatively new MTOEs (Sustainment Brigades and Expeditionary Sustainment Commands) combined with their implementation in a wide area security role in an established theater (Iraq and Afghanistan), commanders and staffs are still unsure of their internal staff capabilities and how to properly utilize them to meet distribution management demands. Specifically, the DIB within the Support Operations Section (SPO) has not been consistently training across the units. Some utilize the section as a "Deputy SPO" section; some utilize it to synchronize the SPO internally; and some utilize it to integrate between Future and Current Operations. The Distribution Management Board (DMB), run by the DIB, typically is not executed to standard. It is not a cross-functional meeting attended by all six Warfighting Functions (WfF); it is not attended by subordinates and customers; and it is not a board, as it is not chaired by someone with decision authority.

Recommendations:

- Conduct deliberate planning and execution across all WfF. Use the DIB as the integrator between the Current and Future Operations planning horizons. The best physical location for the DIB section in order to accomplish this is on the Operations Center floor.
- Plan the critical path of the DMB, which allows all WfF to conduct working groups and boards prior to the DMB. The WfF should plan distribution requirements and synchronize all enablers (ISR, Route Clearance, Electronic Warfare, and Fire Support [indirect and attack aviation]) prior to the DMB. The DMB should include someone who has decision authority (Mission Command WfF) or who understands decision criteria for validating execution.
- Ensure the DMB and critical path of working groups and boards leading up to it are posted on the battle rhythm with an accompanying Seven Minute Drill.

References: ATTP 4-0.1, ATP 4-93, ATP 4-94, ADRP 3-37, JP 3-33

1.1.5.2. Organizing Sustainment Staffs by Warfighting Functions

Observation: Sustainment Brigade (SB) and Expeditionary Sustainment Command (ESC) staffs are not aligned by Warfighting Functions (WfFs).

Discussion: Sustainment Brigade (SB) and Expeditionary Sustainment Command (ESC) staffs generally align by the traditional S-staff structure rather than by Warfighting Functions (WfF). Their planners traditionally work for either the S3 or Support Operations Officer. As a result, there is a lack of understanding across the command and staffs of which time horizon or actions (MDMP Step or OPORD, FRAGO issued) result in transitioning from Plans to Future Operations or Current Operations. While FM 6-0 identifies three planning horizons, most Sustainment Commands organize into only two planning horizons: Future Plans and Current Operations. When staffs organize into WfF and Integrating Cells, with Future Plans aligned under the Mission Command WfF and Current Operations identified in the Movement & Maneuver WfF, the communication and transition between planning horizons is much clearer. Typically, Sustainment Commands align into the Mission Command, Sustainment, Intelligence, and Movement & Maneuver WfF with ease. They struggle with defining the Protection and Fires WfF Chiefs and subordinate elements and default to combining the two WfF into one element. A contributing factor to this observation is that SB and ESC MTOEs do not clearly define the WfFs and their chiefs. Shown below in Figures 6 and 7 is a solution to this gap. The traditional G/S-staff alignment is realigned into WfF. Additionally identified are the typical Boards, Bureaus, Centers, Cells, and Working Groups (B2C2WG) that the WfF chief chairs and also any partners with whom the WfF chief interacts with outside of the staff.

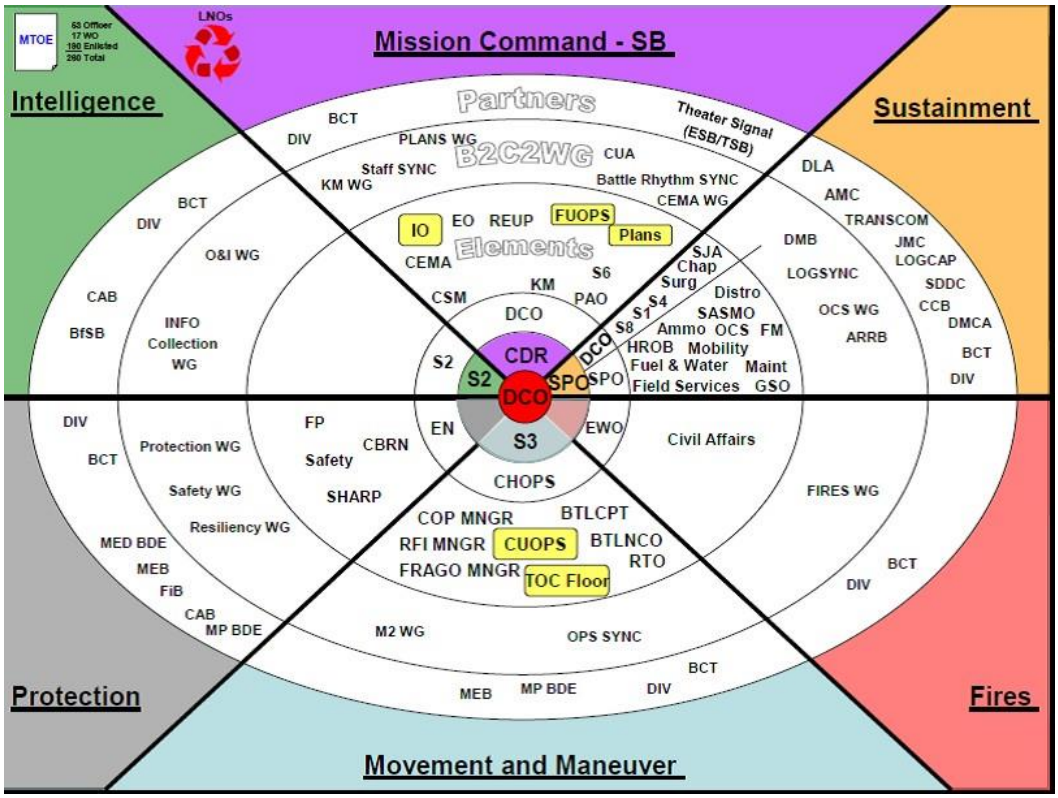

Figure 6: Suggested Sustainment Brigade WFF breakdown

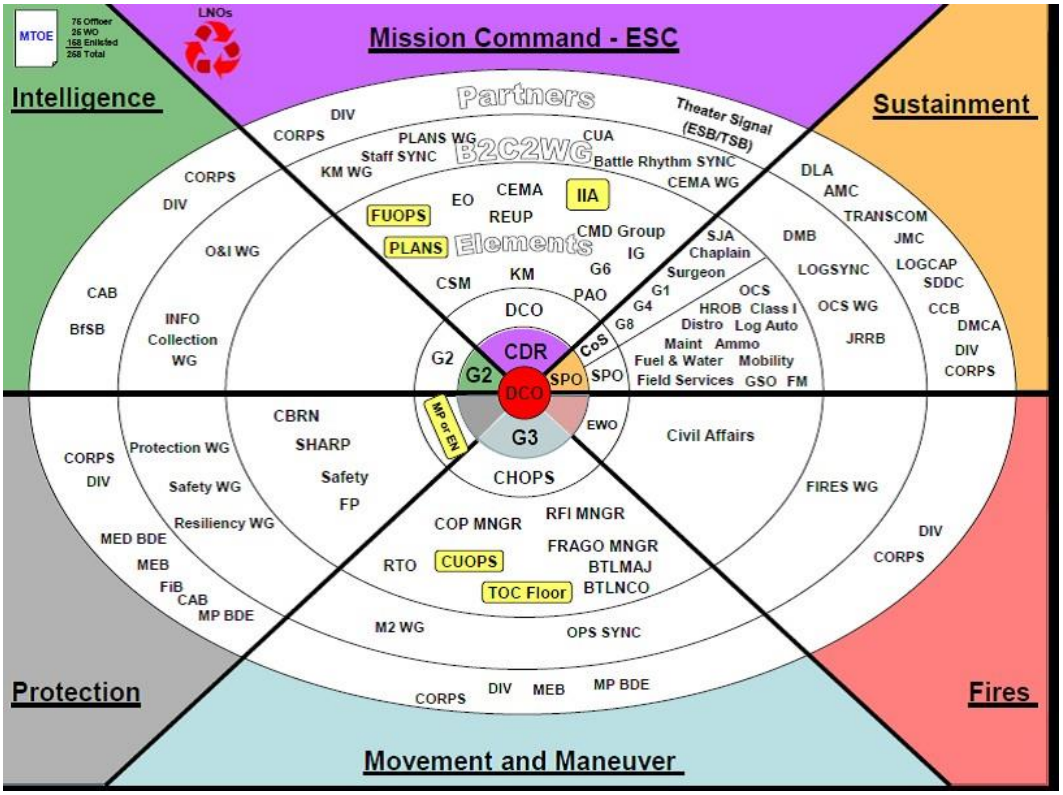

Figure 7: Suggested Expeditionary Sustainment Command WFF breakdown

Recommendations:

- Identify and resource all Warfighting functions and chiefs on SB and ESC unit MTOEs. Specifically resource for the Protection and Fires Warfighting functions to assist commanders and staffs. Until this occurs, take the following actions:
  - Identify either the Staff Engineer or Staff Provost Marshall section as the Protection Warfighting Chief.
  - Identify and train a unit Electronic Warfare Officer (EWO) by sending him to the Army Operational Electronic Warfare Operations Course (Additional Skill Identifier – 1J).
  - Identify the EWO as the Fires Warfighting Chief.
  - Identify a Plans Integrating Cell that works directly for the Mission Command WfF.

References: ADRP 6-0; FM 6-0; ATP 4-93ATP 4-94, ADRP 3-37, ADRP 3-09

1.1.5.3. Operational Area Security

Observation: Operational area security is not clearly addressed in operations or in the planning process.

Discussion: Within large echelon support areas, controlling commanders may designate base clusters for mutual protection and Mission Command. Within a support area, a designated unit, such as a Brigade Combat Team or Maneuver Enhancement Brigade, provides area security. Operational area security operations focus on the protected force, base, route, or area. This allows sustainment units to focus on their primary function, rather than on security. Units often fail to address operational area security in operations or in the planning process. Due to the past 10-plus years of war, the planning

of operational area security is a lost art, in large part, as a result of contracted logistics. For that reason, security requirements are often tasked to sustainment units.

Recommendations:

- The staff must tie into the intelligence and operations, and project troop-to-task requirements. This data will provide an accurate running estimate to assure freedom of mobility and sustainment operations that meet the commander's intent.
- Current and future threats must be identified, to provide the necessary data to project the requirement for support area security.
- Staff officers must understand the purpose of security operations in the support area to facilitate a unit's ability to return to mission accomplishment as quickly as possible rather than devoting sustainment and protection resources to limited tactical operations.

1.1.5.4. Sustainment Running Estimates

Observation: Staffs often fail to start and maintain running estimates.

Discussion: FM 6-0, Commander and Staff Organization and Operations, discusses running estimates. When used correctly, running estimates serve as both staff products and briefing tools to the commander during update briefs. The commander and staff can better communicate to determine how and when they commander wants to receive information. However, the example given for running estimates in doctrine (six paragraph text format) does not match the format most units use to track information and the means by which most commanders are comfortable receiving information (graphically depicted). Further, this method does not take into account Mission Command Information Systems. Therefore, staffs struggle with how to even start running estimates, much less maintain them.

Recommendations:

- Sustainment organizations should utilize planning tools such as OPLOG Planner, the Logistics Estimate Worksheet (LEW), and automated reporting systems such as S2MC/BCS3 to start running estimates.
- All running estimates should reside on a collaboration-enabled system such as CPOF.
- Running estimates should maintain a two-way relationship with the Common Operational Picture (COP). The content of the COP should drive the output of the running estimates. Updates to running estimates, which affect mission execution (enemy SITTEMP, projected maintenance, supply, or distribution challenges) affect what the commander wants displayed on the COP.

References: ADRP 4-0, FM 6-0

1.1.5.5. Conducting Parallel Planning

Observation: Units struggle with conducting parallel sustainment planning among the corps, division, expeditionary sustainment command, and theater sustainment commands.

Discussion: Mission Command enables sustainment commanders and staffs to operate in a decentralized environment. Using Mission Command in sustainment operations, commanders have the confidence they need to conduct decisive actions. The operations process within Mission Command for sustainment enables the planning and synchronization of strategic and operational support and delivers required sustainment in the appropriate quantity and quality to ensure tactical

success. Concepts of time, distance, requirement vs. capability, lift requirements, sustainment route planning, reporting, advanced coordination, etc. are often a lost art. The sustainment command and staffs lack the understanding of the division and corps priorities while conducting logistical planning. Furthermore, the corps and division staffs lack adequate running estimates to understand their own capabilities and the requirements they need to support their units on a daily basis.

Recommendations:

- The corps/division G4 should brief in the CUB/BUB the logistical concerns, which are important to the commander and provide detailed analysis from the sustainment commands to address the commander's concerns.
- The corps/division must completely understand what logistical support is needed to run their organizations on a daily basis.
- Sustainment staffs need to insert personnel in the corps/division current operations and future operations planning meetings and G4 sync meetings to conduct parallel planning in all operations.

References: ADRP 6-0, ADRP 4-0

1.1.5.6. Sustainment Reporting

Observation: Units are relying on Sustainment System Mission Command (S2MC) and Battle Command Support Sustainment Systems (BCS3) as the sole means for sustainment reporting. This is less responsive in Combined Arms Maneuver than it is in Wide Area Security.

Discussion: For the past decade, the Army's sustainment community has driven S2MC/BCS3 as the system of record for sustainment reporting. While this works well in a mature theater where distribution between forward operating bases with fixed sustainment nodes is the largest challenge, it does not work well in an operation that changes significantly by the hour. S2MC/BCS3 (stimulated by Joint Deployment Logistics Model (JDLM) and Logistics Federation (LOGFED)) exacerbates these problems as the simulation/stimulation for sustainment data during missions.

Recommendations:

- Units need to conduct "positive" reporting to reinforce the data on the S2MC/BCS3 system (daily LOGSTAT supported by a Sustainment Synchronization Meeting). As a point of consideration, units on the move do not have the networks and servers in place to use S2MC/BCS3 as the sole sustainment reporting system.

References: ADRP 4-0

1.1.6. Protection

Commanders and staffs synchronize, integrate, and organize capabilities and resources throughout the operations process to preserve combat power and freedom of action, and to mitigate the effects of threats and hazards. Protection safeguards the force, personnel (combatants and noncombatants), systems, and physical assets of the United States and unified action partners. Survivability refers to the capacity, fitness, or tendency to remain alive or in existence. For the military, survivability is about much more than mere survival; it is also about remaining effective. Military forces are composed of personnel and physical assets, each having their own inherent survivability qualities or capabilities that permit them to avoid or withstand hostile actions or environmental conditions while retaining the ability to fulfill their primary mission. These qualities or capabilities are affected by various factors (dispersion, redundancy, morale, leadership, discipline, mobility, situational understanding, terrain and weather conditions), and can be enhanced by tasks within the protection warfighting function (ADRP 3-37).

1.1.6.1. Oversimplification of Protection Efforts

Observation: Protection often is not addressed or is oversimplified during planning efforts.

Discussion: Planning is the first step to effective protection. The integrating processes of IPB, Targeting, and Risk Management are essential in providing assessments. These are crucial in identifying threats, hazards, risks and vulnerabilities; applying resources to address them; and synchronizing efforts across all Warfighting Functions/staff sections. Too often, units complete a basic risk assessment without sufficient detail. This product then fails to assist the commander in making effective decisions regarding risk. Units often fail to identify, in advance, what asset is the most vulnerable to enemy attack, or what type of enemy attack might threaten a given asset. Typically, units simply cut and paste the same critical asset list produced by higher headquarters with no added analysis. In applying resources to protect identified "at risk" assets, units often conduct troops-to-task analysis, but this understanding often does not get communicated across the staff or replicated within the simulations.

Recommendations:

- Integrate the protection staff into mission planning and vet protection actions across the staff to improve understanding of the continuous and enduring character of protection activities. This ensures that the entire staff contributes to the development of the scheme of protection and links staff estimates to that effort by going beyond planning and addressing preparation and execution, as well (see ADRP 3-37). Once this procedure is established, any OE changes will be reflected in the staff running estimates, and through the various working groups the scheme of protection and risk management process can be more easily updated.
- Clearly identify the mechanism for getting an assessment based on sound knowledge in front of a decision maker, and once a decision is made, ensure that the changes are codified in the orders process.

References: ADRP 3-37, ADP 3-0

1.1.6.1. Critical Asset List/Defended Asset List – Usage, Revision, and Linkage

Observation: The Critical Asset List and Defended Asset List are not used properly, linked, or revised as conditions change.

Discussion: Units commonly misunderstand the linkage between the Critical Asset List (CAL) and the Defended Asset List (DAL). The approved CAL is a prioritized list of critical assets, normally

identified by phase of the operation and approved by the joint force commander, that defend against air and missile threat (JP 3-01). The protection cell should recommend mitigation measures based on available resources to reduce the overall level of risk to these critical assets. The DAL is a prioritized subset of the CAL with some form of combat power applied for protection. Like the CAL, the DAL is a dynamic product and must be continuously updated as the operational environment changes. Units often fail to publish or update a CAL/DAL during the mission orders process. This leads to a lack of situational awareness for the staff, MSCs, and the commander regarding resources available and the movement and/or loss of critical assets. The DAL, when used, often includes only assets to be protected using Air and Missile Defense resources. It is not being used effectively to prioritize limited protection assets across all Warfighting functions. The application of some form of combat power to protect a critical asset makes it a defended asset. The combat power applied may be a unit, weapons system, electronic sensor, obstacle, or combination of any or all of these.

Recommendations:

- Develop the initial CAL/DAL during mission analysis and present during COA analysis. Both should be revised throughout MDMP, finalized at COA approval, and published in ANNEX E, Appendix 12 (ADRP 3-37).
- Incorporate the CAL/DAL in regularly occurring venues/events such as Battle Update Brief or Commander's Update Brief to seek decisions from the commander on changes to the CAL/DAL. These can be briefed by exception or as needed for the sake of brevity.
- Mitigation measures should include all possible assets across all Warfighting functions to include non-lethal, not just Air Defense Artillery assets.

References: ADRP 3-37, JP 3-01

1.1.6.3. Protection Working Groups

Observation: Protection Working Groups are poorly attended and are not integrated with other working groups or the commander's decision cycle.
Discussion: The Protection Working Group often does not include representatives from all the staff sections external to protection, including but not limited to Intelligence, Fires, Civil Affairs, Public Affairs, Staff Judge Advocate (SJA), Surgeon/Medical, Contracting, Operations, or subordinate units (as applicable). The meetings often do not have a published agenda that supports the commander's decision-making process, with well-defined inputs and outputs from a 7-minute drill. Additionally, key intelligence inputs often are missing, and the meeting outputs often do not reach a decision-making authority or written order.

Recommendations:

- Per ADRP 3-37, the Protection Working Group must include representatives or close coordination with all key functions of protection, including but not limited to Intelligence, Fires, Civil Affairs, Public Affairs, SJA, Surgeon/Medical, Contracting, Operations, or subordinate units (as applicable). A meeting agenda and read-aheads should be sent in advance to key attendees.
- A roll call should be conducted and personnel designated to take notes, follow the agenda, brief all required inputs, and keep the discussion centered on the outputs with the appropriate suspenses noted. EXSUM of the meeting should be created and distributed to all staff sections.
- The meeting outputs should be integrated into the commander's decision cycle and the mission orders process.

1.1.6.4. Development of the Critical Asset List/Defended Asset List

Observation: The Critical Asset List (CAL) often is not fully developed.

Discussion: Units often simply produce a list of assets deemed critical to the success of the unit's mission without conducting a thorough analysis, with input from all staff, to include prioritization of assets, assessed by phase, for vulnerability, criticality, and threats/hazards. This list should have an initial risk assessment and should be presented to the commander for approval and further development into a Defended Assets List.

Recommendations:

- Per ADRP 3-37, develop the CAL using the risk management process and manage in the Protection Working Group to prioritize the employment of protection resources against the threats and hazards identified in the risk management process. Since it is a dynamic product, the CAL needs continuous revision to ensure that changes in the operational environment are captured. This requires staff estimates to be updated on a regular basis.
- Incorporate the CAL in regularly occurring venues/events such as the Battle Update Brief or the Commander's Update Brief to seek decisions from the commander on changes to the CAL. These can be briefed by exception or as needed for the sake of brevity.

References: ADRP 3-37

1.2. Missions Aligned to Organic Capabilities

Observation: Divisions struggle to assign missions and tasks that are in line with subordinate unit organic capabilities.

Discussion: Typically, divisions assign missions and tasks that are outside of units' capability and scope, specifically the Maneuver Enhancement Brigade (MEB) and Functional Brigades. Frequently, individual staff sections within the division assign to the Maneuver Enhancement Brigade missions that are neither vetted nor synchronized to ensure that the MEB has the capacity to execute multiple new tasks in addition to the myriad tasks it is already executing. As a result, the MEB headquarters becomes the vetting mechanism for task saturation. As a common example, the Maneuver Enhancement Brigade is given responsibility for the Support Area, to include security, logistics, Phase IV activities, and countless other activities, but is given no formal authority over tenant and transient units that may specialize in some of those activities. Many of these units have small staffs that struggle to manage the data and information flowing into headquarters. Additionally, as the division continues to maneuver across the operating environment, it struggles to adjust those missions and tasks as the area of responsibility for the support area expands. One specific example is assigning Crossing Force Commander responsibilities to the Engineer Brigade or the MEB during a wet gap crossing while that brigade is simultaneously conducting support area activities. Finally, divisions frequently struggle with adequately resourcing the MEB to ensure that it can execute all of these assigned tasks (e.g. with fire support, aviation, and Intelligence Surveillance and Reconnaissance assets). Invariably, divisions tend to reassign critical assets away from the MEB in order to support maneuver Brigade Combat Teams, assuming risk in the support area and failing to strike a balance across the entire operating environment.

Recommendations:

- Deriving key tasks and purpose from the commander's intent, division staffs must ensure that critical and creative thinking extends to the assignment of missions and tasks to subordinate units commensurate with their METL. Too often at the division level, detailed analysis does

not follow from commander's intent and, as a result, units receive tasks not in line with their capabilities or are challenged to nest purposes with the higher headquarters.

- Division staffs must ensure that units assigned tasks outside of their METL or expertise receive the necessary attachments or augmentation to successfully achieve the purpose for the task. A constant and honest assessment of subordinate efforts (Measures of Performance and Measures of Effectiveness) will ensure assignment of the right task to the right unit with the right numbers and types of resources.
- Division staffs should refer to the following list, derived from lessons of past exercises. It provides examples where the staff may use caution before assigning without providing additional staff and functional resources. If properly resourced, units can accomplish many of these tasks without issue.
    - Information collection tasks, specifically collection and synchronization.
    - Movement Control tasks for the division area of operations.
    - Sustainment tasks for the division area of operations.
    - Stability tasks in the support area.
    - Targeting tasks in the support area.

References: ADRP 3-0, 5-0, 3-37, 3-90, 3-07, 6-0

1.3. Integration of Functional and Multifunctional Brigades

Observation: Divisions struggle to integrate, align, and enable functional and multifunctional (F/MF) brigades in the planning process and execution of the combined arms maneuver.

Discussion: The division or corps headquarters struggle to understand how F/MF brigades integrate into operational- and tactical-level operations. During mission planning, units tend to undervalue the need for F/MF brigades, and many lack an overall understanding of what F/MF brigades provide (e.g. Military Police, Engineering, Battlefield Surveillance Brigade, and Explosive Ordnance Disposal). This misunderstanding forces F/MF Brigades to exercise through a notional Higher Headquarters (HICOM) not fully manned or qualified to meet the training objectives of the F/MF units in the fight. Failing to assign these relationships properly during complex operations such as air assaults, wet gap crossings, etc. can hinder the F/MF brigade's ability to provide support to the maneuver commander.

Recommendations:

- Task organize Functional/Multifunctional Brigades with the command relationship of attached. Attachment creates a unit relationship where the higher headquarters must have training oversight and complete understanding of how to employ that subordinate organization. In accordance with FM 3-94, once the commander completely understands the chain of command, support relationships, and geographic responsibilities, he can properly exercise Mission Command. The attachment should be effective when the unit is identified as part of task organization to maximize collaborative planning and enhance effective utilization by the gaining headquarters.
- Discuss the specifics of the command and support relationships for critical events during wargaming and confirm during the Combined Arms Rehearsal to ensure all commanders have a common understanding of the relationships regarding employment of forces.
- During planning, and specifically wargaming, units should optimize the command and support relationships for the F/MF Brigades for the differing intricacies of particular operations and phases of those operations. Pay special attention to Tables B-1 and B-2, Appendix B, FM 6-0, to match the responsibilities and authorities that will support the

scheme of maneuver and provide the maximum flexibility for the utilization of the capabilities associated with the Functional and Multifunctional Brigades.

References: FM 3-94, FM 6-0, JP 1

1.4. Special Staff

1.4.1. Operational Law (OPLAW)

1.4.1.1. OPLAW Integration with Staff

Observation: The Brigade Legal section inadequately integrates with the brigade staff.

Discussion: Brigade Judge Advocates often have a close working relationship with the commander, but fail to develop adequate relationships with the Brigade staff.

Recommendations:

- The Brigade Judge Advocate should brief the role of the Judge Advocate, pursuant to FM 1-04, Legal Support to the Operational Army, 18 March 2013, to the brigade staff before the exercise. This will familiarize all parties with common operational legal issues and the role of the Judge Advocate in support of the Rules of Engagement, targeting, detention operations, claims, solatia, civil reconstruction, and internally displaced persons. Once the staff better understands what the brigade legal section can do in support of operations, the staff will better integrate the legal team and leverage that expertise.

References: FM 1-04

1.4.1.2. Staff Judge Advocate's (SJA) Role in the MDMP

Observation: There is a lack of understanding of the Judge Advocate's role in MDMP.

Discussion: The Office of the Staff Judge Advocate (OSJA) is not as involved as it should be in the staffing process. Division staffs often have no formal requirement for staffing orders or products through the OSJA. As a result, Judge Advocates are not reviewing orders prior to publication and may not contribute to or review command group decision courses of action prior to the commander's decision. As a result, CUOP often publishes orders with legally objectionable content that may have to be amended or rescinded with follow-on FRAGOs or clarifying guidance. Failure to do so may result in unintended/uninformed assumption of legal risk by the command. Brigade legal sections frequently arrive at the exercise with little preparation. This includes a failure to prepare relevant documents before the exercise, including the legal annex of the OPORD, a claims SOP, Brigade Investigations Policy, ROE training plan, and a Military Justice memorandum.

Recommendations:

- Ensure the staff SOP includes a requirement for a pre-publication legal review of orders or command decision COAs.
- Ensure the OSJA maintains 24-hour presence in the COIC and is located nearby the CHOPS or battle captain to facilitate review of orders.
- Ensure there is a JA present in or assigned to work with the FUOP and FUPLAN cells to assist in spotting legal issues and, as needed, staffing them through OSJA.

- Study FM 1-04, Legal Support to the Operational Army; Field Manual 27-10, The Law of Land Warfare; and the Operational Law Handbook/Supplement.

References: FM 1-04, FM 27-10

1.4.1.3. Workstation Locations in the Command Post

Observation: Judge Advocates' workstations are frequently situated in sub-optimal locations.

Discussion: Deployed Judge Advocates provide a range of services, from dynamic targeting to military justice. Some aspects require the Judge Advocates' physical presence in the Command Post (e.g. dynamic targeting, responding to a TIC situation), while other issues demand a more private workspace (e.g. military justice, personnel actions).

Recommendations:

- Judge Advocates should work with staff to secure a physical work location within the Command Post and a second workstation in a more private location where they can work on confidential legal issues for the commander.

References: ADRP 6-0

1.4.2. Religious Support

1.4.2.1. Religious Support Common Operational Picture

Observation: Division and brigade Unit Ministry Teams (UMTs) struggle to establish a Common Operating Picture (COP).

Discussion: Division and Brigade UMTs struggle to establish a single, relevant pasteboard that depicts a shared Common Operating Picture (COP). The UMTs generally do not have a dedicated CPOF or access to the sustainment sections. Generally, UMTs lack training on CPOF to post information and must depend on others to orient them to its functions. Therefore, casualty reporting on the G1/S1's tracker seems to lag behind the current operations. As a result, the Chaplain section receives outdated operational information. SPOT reports from the field help the UMTs maintain some level of situational awareness, but never to a level that allow direction from the UMT. Current Operations records SIGACTs promptly in the SIPR SharePoint; however, this information generally is not tracked by the UMTs.

Recommendations:

- Improve CPOF home station unit training in the Chaplain section operations team.
- Coordinate for dedicated equipment to improve Situational awareness and to enable simultaneous communication with subordinate units.
- Monitor SIGACTs tracker by the Battle Desk to improve situational awareness.

References: ATP 1-05.01, JP 1-05, AR 165-1, FM 1-05

1.4.2.2. Religious Support Integration in the MDMP

Observation: Unit Ministry Teams (UMTs) do not integrate in the Military Decision Making Process (MDMP).

Discussion: The BDE and DIV UMTs often fail to attend the staff MDMP meetings and unit rehearsals. UMTs need to provide religious support input to the MDMP and understand the concept of the operation to provide "big picture" insight. The absence of staff integration can cause a lack of tactical situational awareness and battle tracking.

Recommendations:

- Understand the importance of being actively involved.
- Attend the Division rehearsals throughout the orders process.
- Interact in the early planning stages of MDMP.

References: ATP 1-05.01, JP 1-05, AR 165-1, FM 1-05

1.4.2.3. Religious Support to Mass Casualties (MASCAL)

Observation: There is a lack of Coordination between UMTs and DIV medical planners.

Discussion: The religious support response was appropriate; however, the UMTs (DIV/BDE) did not have a written plan staffed through the unit's medical planner and coordinated with medical assets.

Recommendations:

- The DIV Surgeon cell should establish guidelines, policies, and procedures followed by the UMTs in the event MASCAL occurs within their AO.
- The DIV Chaplain section must be synched with the DIV Surgeon cell and be aware of all potential religious support requirements for casualties.

References: ATP 1-05.01, JP 1-05, AR 165-1, FM 1-05

1.4.2.4. Religious Battle Tracking

Observation: UMTs struggle to conduct battle tracking when task organized across the AO.

Discussion: The BDE and DIV Chaplain sections maintain general battle awareness by paying close attention to significant activities and the potential need for religious support. However, the Chaplain sections do not have an effective way to capture changes, especially with large task organizations and operational developments. Specialized units such as Signal, MI, and SF often are task organized across the AO, separate from their organic BN UMT. In these instances, area coverage religious support (RS) matrix, UMT locations, and appropriate coordination become more difficult to update without a clear common operating picture (COP).

Recommendations:

- The Chaplain section should identify events and information that affect religious support coverage. This should be a continual reporting process up and down the chain of command.

- The Chaplain section should make or obtain a map of the Operational Environment depicting location of BDE UMTs, BN UMTs, MSRs, CCPs, etc. UMTs should continually update the map and integrate into the Sustainment COP as well as the Sustainment Concept of Support.

References: ATP 1-05.01, JP 1-05, AR 165-1, FM 1-05

1.4.3. Public Affairs

1.4.3.1. Integration of Public Affairs in Staff

Observation: Brigade Public Affairs sections are not fully integrated in the staff processes.

Discussion: Brigades that are assigned NCOs as their PAOs often fail to effectively integrate them into the staff processes and exclude them from planning and operational functions that other staff primaries habitually attend. The PAOs often work for the CSM or the XO instead of the commander, and their public affairs duties are considered secondary to other tasks. Frequently, the NCOs had not been to Defense Information School (DINFOS) for the public affairs officer course and had no previous experience working on a staff.

Recommendations:

- Commanders, CoS, and XO should review the roles and responsibilities for public affairs officers outlined in FM 3-61, Public Affairs Operations. Command group members should be familiar with those roles and responsibilities and empower the NCO to accomplish them. The NCO must also have the access to the commander necessary to develop the trust required to execute his personal staff responsibilities.

References: FM 3-61

1.4.3.2. Public Affairs Annex and Guidance

Observation: Division Public Affairs staffs generally do not complete a comprehensive public affairs annex and public affairs guidance during the orders process. Additionally, the Division Public Affairs Offices often are slow to coordinate with subordinate unit public affairs shops.

Discussion: Often there is a lack of public affairs involvement in MDMP. As a result, insufficient public affairs guidance is published in the operation order. Division-level guidance and information is critical to brigade PAOs' ability to participate in the orders process. In addition, many division PAOs fail to reach out to subordinate PAOs prior to a mission in order to build relationships, establish reporting processes or discuss messaging. FM 3-61, Public Affairs Operations, outlines what information should be included in a public affairs annex and division Public Affairs officer responsibilities.

Recommendations:

- Division Public Affairs officers should actively involve themselves in the OPORD process and reach out to Brigade public affairs officers several months prior to the Warfighter to establish a dialogue, establish processes and ensure subordinate Public Affairs officers understand the commander's guidance on messaging.

References: FM 3-61

1.5. Cyber Electromagnetic Activities (CEMA)

1.5.1. Trained Personnel to Plan, Coordinate, and Integrate Cyberspace Operations

Observation: Cyberspace operations are still in their infancy in the general force, and units do not have personnel trained to plan, coordinate, and integrate cyberspace operations.

Discussion: While cyberspace operations are acknowledged as important and an emerging force multiplier, the majority of units that we have encountered do not have personnel trained to plan, coordinate, and integrate cyberspace operations. As a result, commanders and staffs do not fully understand how to integrate cyberspace operations during planning and throughout the operations process. Commanders struggle to issue guidance for offensive cyberspace operations (OCO), defensive cyberspace operations (DCO) and DOD information network operations (DODIN Operations). Plans lack specific mention of cyberspace operations in the commander's intent, concept of operations or supporting schemes. The recently published FM 3-38, Cyber Electromagnetic Activities (CEMA), provides guidance on what cyberspace is and how cyberspace operations should be planned, and the MDMP tables in Chapter 6 nest with the recently published FM 6-0. The recently published FM 6-02, Signal Support to Operations, also provides guidance on LandWarNet network operation, which overlaps with DCO and DODIN operations. These doctrinal sources will allow commanders and staffs to learn how and when to request for effects in designated cyberspace for delivery by specialized cyberspace capabilities.

Recommendations:

- Units should send qualified personnel to the Army Cyberspace Operations Planners' Course (ACOPC).
- Commanders and staffs should familiarize themselves with FM 3-38 and associated publications, integrate cyberspace planning into the MDMP cycle, and begin a regular Cyberspace Working Group, which includes representatives from all pertinent staff sections.

References: FM 3-38, FM 6-02

1.5.2. Integration of Electronic Warfare

Observation: Units are still learning how to integrate Electronic Warfare into plans and operations.

Discussion: Although most units now have MOS-trained personnel, effective staff integration is still nascent. Mission planning occurs without the CEMA staff's input, and units continually try to apply effects to an operation without integration in the planning cycle.

Recommendations:

- Commanders and staffs need to improve staff integration.
- CEMA planners need to assert themselves more into MDMP and educate their staffs as to how the effects they can integrate will complement the operation.

1.5.3. Organic CEMA equipment

Observation: A lack of organic equipment leaves CEMA staffs from the battalion to the corps level unable to provide needed effects consistently.

Discussion: Although the Electronic Warfare Planning and Management Tool (EWPMT) and the Multi-Function Electronic Warfare System (MFEWS) are under development, fielding for these systems will not be complete for an estimated 2-9 years. Without organic systems, units must compete for scarce resources and use systems that reside in other staff sections and are not tailored for EW operations. Without EW systems, CEMA staffs are less effective than they could be, and commanders and staffs tend to look for other means to their ends.

Recommendations:

- Incorporate joint Electronic Warfare systems into the planning cycle in support of operations.

2. Warfighter Exercise Design

2.1. Exercise Planning (Exercise Lifecycle Events)

2.1.1. Establish Effective Training Objectives for a Warfighter Exercise

Observation: Training objectives for a Warfighter exercise (WFX) do not focus on regaining dominance when conducting decisive action activities.

Discussion: The value of WFX resides in a unit's ability to focus on Battalion and higher maneuver warfare against regular, irregular, and insurgent enemy forces in a competitive decisive action environment. MCTP does not provide an evaluation of a unit's ability to perform specific tasks; commanders conduct their own assessments about their ability to execute tasks. The WFX serves to test a unit's ability to operate across a full range of military operations while focusing on Army core competencies: Combined Arms Maneuver (CAM) and Wide Area Security (WAS). Units should focus their training objectives on exercising their wartime METL tasks, specifically those that can be stimulated during the WFX against freethinking World Class Opposing Forces (WCOPFOR) in a short period of eight days. The FY14 Chief of Staff of the Army Strategic Priorities state to "rebuild the Army's combined arms maneuver and wide area security capabilities [by] employing our CTCs to challenge and certify Total Army formations in a comprehensive and realistic decisive action training environment." In the effort to train combined arms operations, it is critical to focus on core competencies "to develop the fundamental leader, individual and collective skills that support Unified Land Operations (combined arms maneuver to seize, retain, and exploit the initiative). We must embrace the concept of Unified Land Operations executed through Decisive Action. Training on the Army core competencies of CAM and WAS, coupled with the effective application of Mission Command, are key to our success and demand Command emphasis" (The FY 14 FORSCOM Training Guidance).

Recommendations:

- Build training objectives to exercise neglected core competencies involving CAM and WAS in a competitive and changing operational environment (offense and defense).
- Focus on Mission Command systems and relationships between the staff and commander.
- Utilize planning efforts to retain competency in planning for stability operations.

References: FY14 CSA Strategic Priorities, FY14 FORSCOM Training Guidance

2.1.2. Preparation

Observation: Units do not arrive to planning events with actionable decisions for subordinates to use for planning.

Discussion: Units without clear training objectives hamper future planning for themselves and their subordinates. This is especially critical for divisions and corps, as the subordinate brigades must nest their training objectives.

Recommendations:

- Come to the initial planning event with clear understanding of the commander's training objectives.

References: TR 350-50-3

2.1.3. Mission Command Training

Issue: Units struggle to synchronize their staff to conduct mission analysis during Mission Command Training.

Discussion: Most units struggle to synchronize their staffs to conduct mission analysis during MCT's due to several factors. Units often lack or fail to follow their SOP, causing confusion with staff duties, responsibilities, and product formats. This slows the process and usually results in an under-developed mission analysis. Most staff members are new to the unit and have not exercised within their Warfighting Function prior to the MCT.

Recommendations:

- Utilize current doctrine to conduct mission analysis and focus on the doctrinal inputs and outputs during the MCT. Have OC/Ts coach staff members through the process during the breakout sessions. Ensure the unit receives the OPORD and additional products NLT one week prior to the MCT, to ensure the unit has enough time to read and disseminate the products to the staff.

References: ADRP 6-0, ADRP 5-0

2.2. HICOM Manning

Observation: DIV/Corps that fill the High Command (HICOM) requirement the year prior to their Warfighter see benefit during execution as a primary training audience.

Discussion: All Warfighter exercises require a Division or Corps to replicate a HICOM Headquarters serving at either the Joint Force Land Component Commander (JFLCC) or Joint Task Force (JTF) level. This is a particularly useful experience for Divisions and Corps scheduled to participate in an upcoming WFX or Army Service Component Commander (ASCC) exercise. Their participation will allow them to experience the exercise planning process and allow them to see both what the training audiences experience and how the Exercise Control Group steers an exercise to meet training outcomes.

Recommendations:

- Units scheduled to train in a WFX should seek opportunities to serve as response cells or HICOMs in a preceding WFX.

References: TR 350-50-3

2.3. Participants in a Warfighter

2.3.1. Task Organization (Annex A)

Observation: Units struggle to provide their task organization with MTOE effective date to produce an accurate task organization.

Discussion: Sufficient lead time is required for orders production and database creation. When units fail to provide necessary MTOE and UIC data, the time available to provide a quality product is drastically reduced. This often requires last-minute adjustments to the database, at an increased cost to the Army.

Recommendations:

- Units should arrive at the initial planning event with their task unit MTOE effective date and UIC. This allows adequate time to produce an accurate Annex A. This also provides enough time for MCTP Models and Simulation personnel to build an accurate database, enabling a quality database scrub at the main planning event.

2.3.2. Training Level (Perishable/Non-Resident)

Observation: There is a distinct lack of formal training in Knowledge Management (KM) during Brigade Warfighter Exercises (BWFX).

Discussion: Most brigade-level knowledge managers have not received formal training due to the limited number of seats offered in the Knowledge Management Qualification course. This deficiency results in ineffective KM practices and Mission Command struggles during the BWFXs. The Army uses the Training Resource Arbitration Panel (TRAP) to identify and resource training requirements for units. As of now, most Reserve Component (RC) units are not programmed or dedicated slots for KM training to meet requirements. They must formally request seats in the five annual KM qualification courses.

Recommendations:

- RC should conduct TRAP process in conjunction with TRADOC to increase programmed slots for formal RC Knowledge Manager training throughout the force.

2.4. Orders Production Timeline

Observation: Units struggle to produce written orders in a timely manner, causing subordinates to execute missions before FRAGOs are published

Discussion: Primary Training Audience must produce their OPORD with adequate time for subordinate Brigades to conduct MDMP (must also consider the ARNG/RC planning timeline). Subordinates often execute orders based on verbal orders given between commanders. Higher staffs struggle to apply proper assessments and reallocate resources to support subordinate missions. Both factors challenge subordinate staffs to understand the higher headquarters command's guidance, causing them to plan from invalid assumptions without the proper resources to execute missions. When orders are published, they often leave subordinate staffs with mere hours to plan and prepare for missions prior to execution. This is particularly true for Warfighter exercises based on Total Army integration and multi-echelon concepts. Active duty units with ARNG/RC subordinates must consider their additional time requirements for orders production.

Recommendations:

- Units must establish crisis action planning teams capable of executing the Rapid Decision Making Process (RDMP) as soon as the commander issues guidance. Following the RDMP, units will allow subordinates to execute parallel planning. Units must publish FRAGOs for missions separate from the daily FRAGO process. Units must capture and disseminate commander's guidance for immediate action outside of normal battle rhythm events.
- Units must backward plan and ensure they utilize the 1/3-2/3 rule.

References: ADRP 5-0

2.5. Joint Force Component Integration

Observation: WFX exercise design has evolved from a land-centric, OEF/OIF model to that of a full-spectrum, interagency, joint, multi-component design that feeds and leverages JTF-level B2C2WGs, as outlined in Joint Doctrine. WFXs of the past have been based on integrating a handful of key "Joint Enablers," and did not require the full participation of sister-service components. Now, in exercising the fullness of the multi-echelon land component, and the subsequent internal and external component portions of joint B2C2WGs, a need has immerged to replicate and emulate peer, sister-components that can participate in the component- and JTF-level processes. The Land Component needs to interact and train with a realistic, doctrinally correct Air Component.

Discussion: The 505th Command and Control Wing Detachment 1, 505 Command and Control Wing, and Air Combat Command, does not appear to have adequate resources and forces--nor do they appear to have the inherent authority to task Air Force-wide organizations for the necessary resources and forces--to replicate a realistic, doctrinally correct joint/combined air component with the frequency needed to support the MCTP WFX schedule. Due to the lack of a shared joint scheduling process (or at least formal inter-Service --Army-Air Force process), as well as limited Air Force manpower and capacity issues, the Combined/Joint Land Component employed in WFXs does not have available, partnered Combined/Joint Air Component with which to train and exercise for all forecasted WFXs. There remains no set process where events and scenarios are agreed upon, and then scheduled with consent and approval of both Services.

Recommendations:

- Coordinate an inter-service process that solidifies commitment, forces, and resources to each event by both services.
- Planning for sister service participation in WFXs must take place at the Component level with General Officer oversight and the ability to allocate resources and de-conflict service exercises. The 505th Command and Control Wing will address this topic to provide clarity on the way forward.

3. Warfighter Technical Design

3.1. Mission Command Information Systems (MCIS)

Warfighter exercises (WFX) are simulation-driven exercises that rely on a consistent intelligence data feed to ensure that training audience units are capable of collecting intelligence against the opposing forces and incorporating that information in their planning process in order to meet unit training objectives. The lack of a consistent intelligence feed hampers unit operations and the unit's ability to meet training objectives. MCTP has observed several issues among training audiences that have reduced the consistency of the intelligence feed and limited the ability of training audiences to collect against the opposing forces in the simulation.

3.1.1. Equipment Availability

Observation: Training audience units fail to bring all of their assigned Mission Command Information Systems (MCIS) equipment, limiting their ability to engage in WFX activities (reset schedule, maintenance, or zero balance). In addition, HICOM and response cell systems requirements usually are not resourced early enough in the exercise to ensure MCIS platform and software version compatibility.

Discussion: Training audiences fail to bring their entire suite of fielded MCIS systems to Warfighter exercises. This usually is because the unit does not understand the necessity of the systems despite having been provided the information during exercise planning conferences. Another reason is MCIS platforms that are inoperable and awaiting maintenance. In other instances, units are waiting on reset activities in order to regain their MCIS systems. Finally, a number of units simply are not fielded the complete suite of MCIS systems. Regardless of the reason, the lack of these MCIS systems causes friction with Mission Command training for those units because they are incapable of receiving all of the automated information necessary to give the unit commander situational awareness and understanding. The lack of MCIS systems also truncates unit staff training and limits the staff's ability to manage command post operations. Due to the nature of computer network-based Warfighter exercises, there is a requirement to support the High Command (HICOM), response cells, and work cells with MCIS equipment and software of compatible versions to the training audience units. In several Warfighter exercises, the resourcing of this equipment and software was not identified until late in the planning process, which created challenges in supporting and connecting these exercise elements.

Recommendations:

- Higher Headquarters must track unit MCIS status and field/train units with the latest software versions of MCIS.
- Units must bring all of their Joint Network Transport Capability (JNTC) and MCIS equipment when conducting a Warfighter exercise to ensure they receive maximum training value from the event.
- HICOM, response cell, and work cell personnel and equipment must be identified at the initial exercise planning conference to ensure maximum time for identifying and remedying equipment and software version shortfalls.
- A permanent tactical server should be established under MCTP to eliminate HICOM equipment and software version issues as well as establish both flexible exercise standard MCIS software versions and a permanent simulation connectivity point.

3.1.2. Version Control

Observation: Training audience units have wide variances with the platform and software versions of their MCIS equipment due to fielding schedules, lack of maintenance, or interconnectivity issues (especially between AC and RC units) caused by the ARFORGEN process.

Discussion: Warfighter exercises are computer network-based, simulation-driven events that must have a common software version for all MCIS systems employed in the network to ensure MCIS correct message traffic flow and simulation feed. Warfighter exercises are directed by the Chief of Staff of the Army to incorporate at least one division headquarters and up to 10 functional and/or multi-functional brigades from all three components in a nested exercise network architecture to enable Total Army force, multi-echelon training in a simulated joint environment. Establishing the exercise standard software version for all MCIS systems is difficult due to the nature of this nested network architecture and the inclusion of Active and Reserve Component units. In multiple instances, units arrive at the exercise with software that cannot communicate within the network. This is often the result of differing ARFORGEN cycles and timelines between AC and RC units. However, it represents a critical failure in the conduct of a Warfighter exercise because full duplex communications paths to all training audience units cannot be established with mismatched software versions. This issue has been mitigated by upgrading training audience unit client MCIS systems to current software versions to enable tactical and simulation communications feeds, but operators and supervisors rarely receive the training necessary to be proficient on updated client systems when they are not fielded them in the ARFORGEN cycle. Further, the MCTP-operated simulation command and control adapters that translate WARSIM messages to MCIS USMTF messages must have a single software version to translate messages to; the adapters cannot handle multiple software version translation. Network-based, simulation-driven events must have a common software version for all Army Battle Command Systems.

Recommendations:

- Higher Headquarters must track unit MCIS status and field/train in the latest equipment and software versions of MCIS.
- A permanent HICOM tactical suite must be established under MCTP to eliminate HICOM equipment and software version issues as well as establish both flexible exercise standard MCIS software versions and a permanent simulation connectivity point.

3.1.3. Home Station Training

Observation: Unit operators and supervisors often lack the training to proficiently operate and manage their MCIS equipment. Units often rely completely on their G6/S6 sections to install MCIS equipment and troubleshoot operator-level connectivity.

Discussion: The lack of trained MCIS operators and supervisors causes issues with establishing Warfighter exercise networks and taxes the ability of Field Service Representatives (FSR) to help troubleshoot network connectivity problems. Due to limited proficiency in MCIS operations, units often rely on FSR “over-the-shoulder” training at the start of a Warfighter exercise to meet the minimum requirements of their assigned operator position. This reduces the FSR support required to establish and troubleshoot tactical network connectivity problems and raises the risk of failing to accomplish all training objectives. This lack of training also reduces the unit communications section’s (G6 or S6) ability to establish a secure network in a timely manner as operators rely on G6/S6 personnel to connect MCIS equipment and troubleshoot operator level errors on individual systems.

Recommendations:

- Per TR 350-50-3, each training unit is responsible for its own information management process internal to its staff and subordinate units, both in the classified and unclassified domains, during the planning and execution phases of the WFX. Units without organic information management architecture and equipment should coordinate with the senior training unit at their exercise location to extend information management portals for the subordinates to use.
- A standardized training program should be established for MCIS operators and supervisors to build and maintain efficiency and core competencies.
- Operator-level tasks and responsibilities should be standardized per MCIS platform.

3.1.4. Field Service Representative Support

Observation: Training audience units often underestimate or underfund FSR support, which limits availability for troubleshooting substantial technical issues in network connectivity.

Discussion: Army tactical networks have become extremely complex during the past decade, incorporating the latest commercial off-the-shelf technology and expanding automated capabilities across warfighting functions. This increase in size, scope, and complexity has not had a parallel structured training program to establish a military core competency skill set. The Army has mitigated this problem with extensive use of contracted FSR support. Unit command teams or staffs, with the exception of G6/S6 sections, do not understand this requirement for contracted support. Many units assign a Digital Systems Engineer (DSE) as special staff to the commander to advise him on unit MCIS requirements. However, this person often is positioned within the G6/S6. Due to the lack of understanding about this contracted support reliance by the command teams, Warfighter FSR support requests usually are not robust enough to cover the requirements. This reliance on contracted FSR support for all aspects of establishing and maintaining tactical networks is compounded by a general lack of proficiency observed among MCIS operators and supervisors. FSR personnel function as ad-hoc "over-the-shoulder" trainers to assist MCIS operators and supervisors in establishing basic, operator-level connectivity and operations tasks that reduce the time FSR personnel have to support network establishment and connectivity troubleshooting requirements.
This reliance on FSR support, coupled with under-resourcing support requests and misuse of FSRs as ad-hoc trainers, raises risk in terms of establishing tactical and simulation network connectivity necessary for the conduct of a Warfighter exercise.

Recommendations:

- Establish a standardized Army MOS training program to build and maintain efficiency of MCIS network support core competency skills.
- Establish a standardized training program for MCIS operators and supervisors to build and maintain efficiency and core competencies.
- Incorporate the DSE as a special staff to the commander to raise awareness of unit MCIS issues to the command level.

3.2. Pre-Start Exercise (STARTEX) – Communication Exercise (COMMEX)

Observation: Units often fail to conduct a comprehensive COMMEX for all Mission Command Information Systems (MCIS) to include voice, data, technical and network prior to the MINIEX. Units often lack a checklist or other codified methods to conduct a COMMEX.

Discussion: During the network establishment timeline before the start of a Warfighter, exercise units must establish their networks and conduct thread testing with MCTP to ensure that all

simulation feeds are reaching all participating MCIS systems. In addition, units must establish their Mission Command voice and enterprise level systems and applications to enable accomplishment of unit training objectives. The enterprise level systems and applications are the automated services and applications that support Mission Command but are not part of the Army Battle Command System, such as email, Microsoft SharePoint Portal, and Transverse chat. Units struggle to achieve MCIS connectivity within the limited time available during the pre-STARTEX week and often fail to conduct any comprehensive check of their digital or analog communication systems connectivity through a communications exercise (COMMEX) before starting the Warfighter exercise. This lack of a COMMEX generally causes friction during the start of an exercise and has continued during the entire length of a Warfighter exercise on some occasions.

Recommendations:

- The Senior Training Audience (Division or Corps) is responsible for coordinating and executing the COMMEX. Establish a model standard COMMEX checklist for corps, division, and brigade echelons.

3.3. Network Management/Architecture

Observation: Units generally fail to establish effective, well-documented network management and technical architecture (voice, data, and network, tactical) processes, procedures, and products for Warfighter exercises prior to arriving at the exercise location.

Discussion: The development of Army Mission Command Information System (MCIS) networks to enable Mission Command over the last decade has not had a parallel-standardized comprehensive training program to enable unit staffs to employ their tactical network architecture. There is also a lack of Army standardized model network architecture at the corps, division, and brigade echelons for units to use to assist in developing staff understanding of MCIS networks. This void in network standardization has driven a number of "home-grown" solutions at the unit level, with varying levels of success. However, when units come together for a Collective Training Event (CTE) or Warfighter, they lack a systematic process and language to address network management and the installation, operation, and maintenance of network architecture. Warfighter exercises directed by the CSA incorporate division and functional and/or multi-functional brigades from all three components in each exercise to achieve Total Army force, multi-echelon training in a simulated joint environment. The lack of a standardized model network architecture and training program hinders the establishment of a fully functional, multi-echelon MCIS network for units to train on during a Warfighter exercise. This problem is beginning to affect unit training during the course of a Warfighter exercise due to the inclusion of the 1st IO Command World Class Cyber OPFOR and its disruptions of poorly secured MCIS network operations.

Recommendations:

- Establish an Army standard model network diagram and DOD Information Assurance Risk Management Framework (DIARMF, i.e. the new DIACAP) packet process for units at the corps, division, and brigade levels.
- Establish a standardized Army MOS training program to build and maintain efficiency of MCIS network support core competency skills.
- Establish model network architecture installation checklists and procedures to guide units in establishing secure and interconnected MCIS networks.

3.4. DoD Information Assurance Certification and Accreditation Process (DIACAP) and Other Accreditation

Observation: Training audience lack a systematic procedure for network architecture establishment and documentation as well as an understanding of requirements for the Defense Information Assurance Risk Management Framework (DIARMF i.e. new DIACAP) for their tactical networks and MCIS equipment. This lack of procedure delays the Joint Training and Experimentation Network (JTEN) connection requests.

Discussion: This applies to all MCIS systems on any network. Units are not maintaining their MCIS and networks at home station. Units arrive with no systems or no authority to operate and no command emphasis to maintain those systems or networks. Although the Army has begun the Installation as a Docking Station (IADS) to address the lack of tactical server maintenance, the units are not tasked to complete a DIARMF packet in order to connect; they are given authority to connect through an Operational Forces Security Plan (OFSP) generated by their local Network Enterprise Center (NEC). Information assurance personnel (IA) do have some tasks to complete in order to receive an OFSP, but this is generally to satisfy NEC policies and procedures. The lack of understanding of the DIARMF at the unit communications section and command group level reduces the unit's capability to operate securely in any network environment and represents real risk in operational theaters. Warfighter exercises require the use of JTEN connections in order to push simulation traffic to geographically dispersed training locations. Training audiences are required to submit JTEN authority to connect requests to the Joint Staff (JS), J7, in order to connect to the exercise network. These requests must contain valid network diagrams and unit DIARMF packets. JS/J7 often delays or rejects these connections requests due to the lack of understanding by the training audience on network diagram and DIARMF requirements. This lack of emphasis on training and maintaining Army tactical networks is further compounded by the Army's lack of a standardized model network architecture upon which the units could train in establishing their tactical networks.

Recommendations:

- Place command emphasis on communications maintenance and training as well as Defense Information Assurance Risk Management Framework (DIARMF) training for unit IA teams and CMD GRPs in order to enable units to maintain systems and accreditation of those systems.
- Establish a standardized training program for MCIS operators and supervisors to build and maintain efficiency and core competencies. Stabilize trained operators and supervisors through periods of unit turbulence (change of command, reset, etc.).
- Establish an Army standard model network diagram and DIARMF packet process for units at the corps, division, and brigade levels.

3.5 Intel Data Flow

Observation: Division training audience (TA) Intel staffs are routinely unable to install, operate, and maintain (IOM) their tactical Intel systems in order to operate successfully in a Warfighter exercise (WFX). Specifically, divisions are consistently unable to receive and integrate simulation-generated Intel reports into their Trojan Spirit, ASAS, and DCGS-A systems, and often have not upgraded to current software.

Discussion: The TA inability to employ Intel systems centers on the fact that the tactical Army does not routinely use ACE BLK II, Trojan, or tactical DCGS-A. The resulting issues generally fall into three categories: atrophied skills, software issues, and dependency on outside organizations.

Atrophied skills: For the past 10 years, Division Intel staffs have routinely deployed into operational environments with an Intel architecture installed by their predecessor and maintained by contractors. Further, the architecture did not include tactical systems.

Software issues: There are two common issues with software. First, the intelligence staffs do not routinely install software upgrades to their systems. Second, scheduled updates often occur after the WFX is complete. If all participating units do not have the same software versions, older versions may not "talk" to newer ones.

Dependency on outside organizations: Intel staffs rely on national agency and/or Program Office representatives to IOM their Intel architecture. These representatives often do not support Army Intel programs of record. Furthermore, by allowing the Program Office to IOM the equipment for the training audience, Intel staffs are not training and performing their required Intel functions.

Recommendations:

- Intelligence staff members, with the training audiences, must train, prepare, plan, and integrate their tactical intelligence systems for their WFX. They must be proficient at operating the equipment and remain on the most up-to-date software to be prepared for the exercise.

3.6. Warfighter Technical Design Conclusion

- Full immersion of the commander into the environment in which he will have to command is essential to providing realistic internal and external stressors. Warfighting technology transformed how commanders and staff receive, share, and evaluate information. Provide the stimulus for this environment in order to get at "peeling the onion" on Mission Command.
- Seek innovative approaches to provide this environment. The "old school" methods of adding boxes or people is essentially throwing money at the problem. This is not effective or efficient, and in some cases is cost-prohibitive.
- Reduce the footprint of our physical plant forward to allow maximum flexibility to respond to developing requirements.
- Reduce the manning requirement on the military unit to reduce OPTEMPO.
- Reduce the setup/configuration/integration times to provide a more flexible schedule and faster turnaround times.
- The current configuration (see Figure 8) developed in the 1980s has not changed except to add more distributed sites to allow training audiences and higher commands to remain at home stations to participate in an exercise.

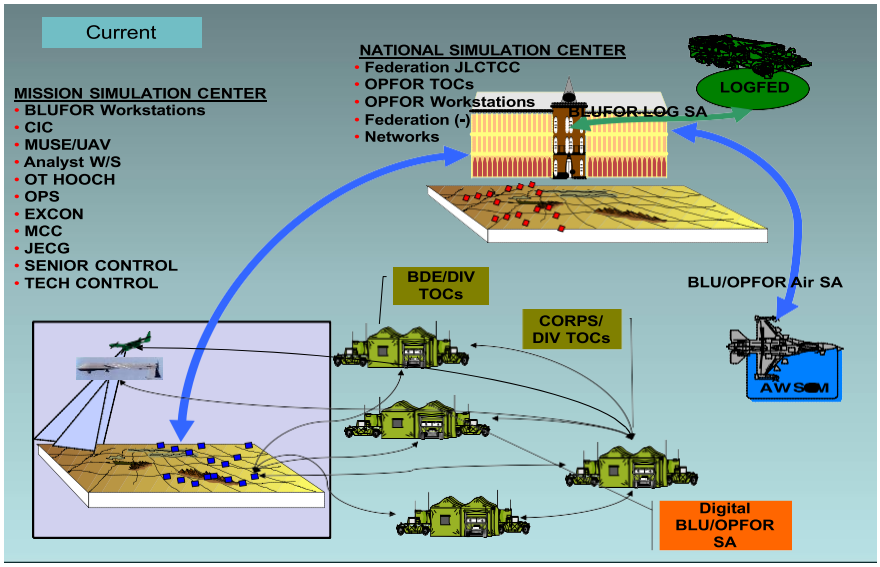

Figure 8: Technical Design Current Conditions

- Begin the process by moving key elements back to Fort Leavenworth and consolidate those functions to reduce staffing. Begin to analyze systems and procedures to develop methodologies to reduce equipment (see Figure 9).

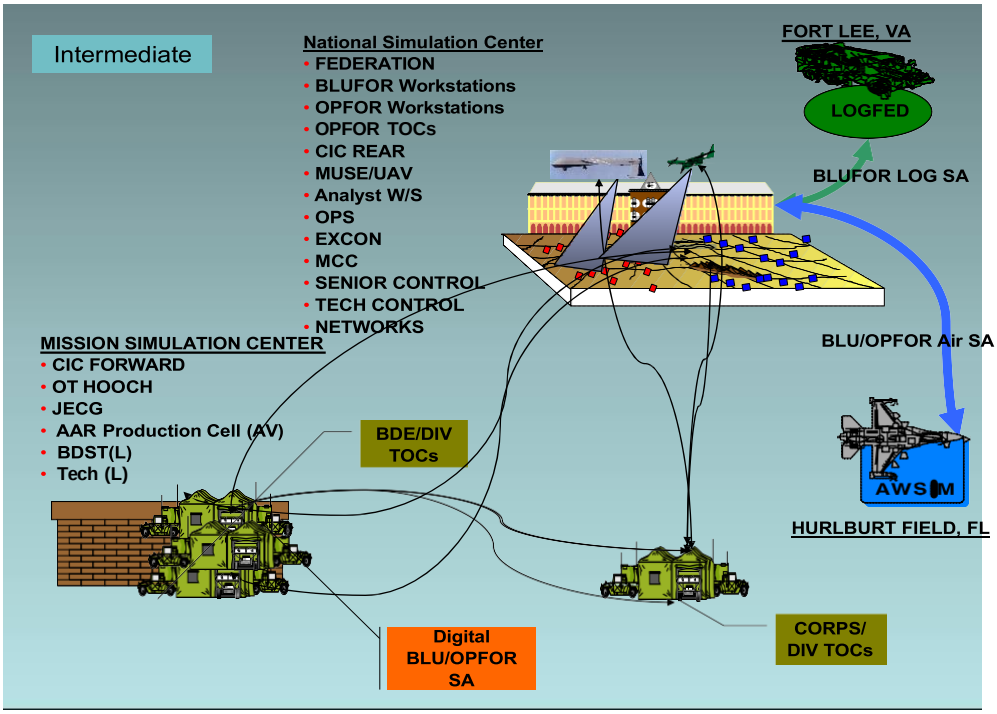

Figure 9: Technical Design Intermediate Conditions

- An optimal end state (see Figure 10) reduces the setup and execution times and exercise support requirements on the training audience and enablers by consolidating equipment, services and personnel. This end state will support the training objectives of the Mission Command Training Program.

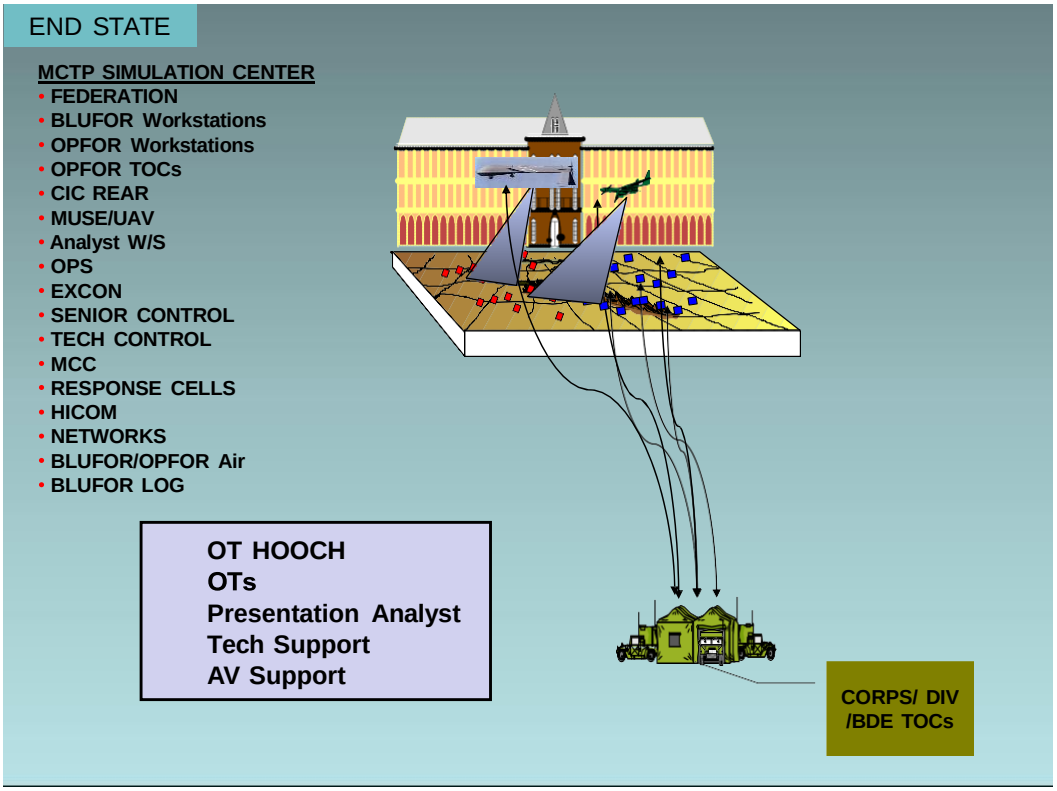

Figure 10: Technical End State

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4. Conclusion – Trends for the Larger Army

In 1995, MCTP (formerly BCTP) wrote *Perceptions II*, a consolidated trends and observation report. The Center for Army Lessons Learned (CALL) published this report as part of the overall Combat Training Center (CTC) trends effort. Almost 20 years later, brigade, divisions, corps, and ASCC staffs struggle with many of the same issues focused on the commander and staff's ability to execute Mission Command. Since 1995, the Army's technology and capabilities increased, but many of the best practices and lessons learned on unit staff processes and Mission Command remain constant. The following observations by MCTP apply to most units and reflect significant trends for the Army.

1. Inconsistent use of Operational Frameworks - Units often improperly use the three operational frameworks: deep-close-security, decisive-shaping-sustaining, and main and supporting concurrently in operational planning.

2. Planning Horizons and Plans Management - Units have difficulty with plans management, assigning and prioritizing planning efforts, and developing a "plan to plan."

3. Linking Decisions to CCIRs - Units are not directly linking the CCIRs to decisions the commander needs to make.

4. Battle Rhythm Management - Unit battle rhythms do not follow a logical process and lack procedures for refinement and adjustment.

5. Common Operating Picture (COP) - The common operational picture in the Current Operations Integration Cell (COIC) does not promote situational awareness and situational understanding.

6. Products development in IPB – Staff officers struggle to develop relevant products during the military decision-making process (MDMP) that would help influence the commander's decisions.

7. Current Operations Integration Cell (COIC) - The COIC is not anticipating the commander's decisions and tracking the CCIR.

8. Shaping Operations - Units struggle with managing shaping operations in the deep and close fight, specifically when planning security and reconnaissance operations.

9. Network Architecture - Units generally fail to establish effective, well-documented network management and technical architecture (voice, data, network, tactical) processes, procedures, and products for Warfighter exercises prior to arriving at the exercise location.

10. Linking Targeting to Shaping Operations - Targeting Working Groups often focus only on decisive operations and neglect shaping operations.

11. Combined Arms Maneuver: Wet Gap Crossing and Division vs. Brigade Attack - Units struggle to plan, rehearse, and execute a wet gap crossing and units struggle to plan deep fires in both time and space.