ATP 4-92

Field Army and Corps Sustainment Operations

MARCH 2023

Headquarters, Department of the Army

Foreword

As the battlefield and terrain evolve, Army leaders must embrace the current and emerging doctrine that facilitates United States dominance across a multidomain battlefield. With challenged lines of communication and ever-changing fast-paced and lethal operational environments, achieving dominance in large-scale combat operations requires thorough knowledge and understanding of crucial sustainment tasks that shape support across all levels of warfare.

To achieve strategic objectives through deterrence and freedom of maneuver, sustainment organizations must have the ability to provide continuous and streamlined support that extends operational reach. As the premier land force, the Army maintains its status by staying abreast of new operational concepts and training our force to maintain combat effectiveness and dominance in all domains. During large-scale combat operations, Soldiers can expect to encounter multidomain threats and operations in complex terrain, among other challenges.

Today's fight includes threats from adversaries that seek to deny U.S. freedom of action. In response, our Army must adapt and prepare to win against a highly lethal near-peer forces. Army sustainer's ability to alter our priorities and training efforts to succeed in this highly contested lethal environment is vital to triumph over our nation's enemies.

As we change the way we fight and how we support the fight, ATP 4-92 seeks to reenergize sustainment at echelon. This publication is the second in the echelon series that includes ATP 4-91, *Division Support Operations*, and ATP 4-93, *Theater Sustainment Operations*. ATP 4-92 emphasizes sustainment operations at the corps and field army echelon collectively with partner manuals.

Sustainment operations enable force readiness. A ready force is capable of operational success through training preparedness. ATP 4-92 will facilitate the shaping of empowered sustainers primed to support the fight for prolonged periods.

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COMMANDING

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Army Techniques Publication
No. 4-92

Headquarters
Department of the Army
Washington, D.C., 14 March 2023

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Preface

ATP 4-92 provides sustainment doctrine to support field army and corps operations. It describes sustainment support at field army and corps echelons with particular emphasis on the expeditionary sustainment command, sustainment brigade, and the combat sustainment support battalion. This manual is also a companion manual to ATP 3-92 and provides the foundation for Army sustainment operations at the operational level of warfare.

The principal audience for ATP 4-92 is all members of the profession of arms. Commanders and staffs of Army headquarters serving as joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning the range of military operations and joint or multinational forces. Trainers and educators throughout the Army will also use this publication.

Commanders, staffs, and subordinates must ensure that their decisions and actions comply with applicable United States, international, and, in some cases, host-nation laws and regulations. Commanders at all levels will ensure that their Soldiers operate in accordance with the law of armed conflict and the rules of engagement. (See FM 6-27/MCTP 11-10C).

ATP 4-92 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which ATP 4-92 is the proponent publication (the authority) are italicized in the text and are marked with an asterisk (*) in the glossary. Terms and definitions for which ATP 4-92 is the proponent publication are boldfaced in the text. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

ATP 4-92 applies to the Active Army, Army National Guard/Army National Guard of the United States and United States Army Reserve unless otherwise stated.

The proponent of ATP 4-92 is the United States Army Combined Arms Support Command. The preparing agency is the G-3/5/7 Doctrine Division, United States Army Combined Arms Support Command. Send comments and recommendations on a DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) to Commander, United States Army Combined Arms Support Command, ATTN: ATCL-TD (ATP 4-92), 2221 Adams Ave, Bldg. 5020, Fort Lee, VA, 23801-1809; or submit an electronic DA Form 2028 by e-mail to: usarmy.lee.tradoc.mbx.lee-cascom-doctrine@army.mil.

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Introduction

ATP 4-92 was developed to describe sustainment organizations operating at the field army and corps echelons. It is written for commanders, staffs, and Soldiers at all levels, leaders and instructors at military institutions, students, and doctrine and training developers. It provides relevant information for Army sustainment organizations at the field army and corps echelon with emphasis on the expeditionary sustainment command, sustainment brigade, and combat sustainment support battalion operating in support of multidomain operations.

ATP 4-92 provides an overview of the field army and corps echelons and the subordinate units supporting each echelon. It describes the sustainment command headquarters' role, characteristics, organizational designs, task organization, command and support relationships, and command post activities supporting the field army and corps echelons.

ATP 4-92 has six chapters and three appendices:

Chapter 1 provides an overview of the field army and the corps as Army units, their respective roles as ARFOR, land component command, or joint task force, and their subordinate units. It also describes the operational environment and introduces the sustainment preparation of the operational environment process.

Chapter 2 describes operational-level sustainment organizations with specific focus on the expeditionary sustainment command, sustainment brigade, and combat sustainment support battalion. It also describes the headquarters staffs and their command and support relationships.

Chapter 3 explains sustainment planning at the field army and corps echelons and the operations process, describes support operations, and details support operations staff integration in sustainment operations.

Chapter 4 describes sustainment considerations for operational support during offensive and defensive operations.

Chapter 5 describes the field army and corps support area and considerations for emplacing the expeditionary sustainment command and its subordinates.

Chapter 6 describes health service support to field army and corps operations.

Appendix A describes operational sustainment support to joint, retrograde, and reconstitution operations.

Appendix B describes synchronization of class III, class V, maintenance, and medical support to the field army and corps.

Appendix C describes the sustainment preparation of the operational environment process.

The introductory table outlines changes to Army terminology reflected in ATP 4-92.

Introductory table. New, modified, and rescinded terms

Term	*Action*
support operations	ATP 4-92 becomes the proponent publication.
throughput distribution	ATP 4-92 becomes the proponent publication.

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Chapter 1
Field Army and Corps

This chapter provides an overview of the field army and corps. This chapter describes the roles these echelons can perform and provides a general discussion of sustainment in support of the Army operational contexts.

SECTION I – ARMY ECHELONS AS OPERATIONAL-LEVEL COMMANDS

1-1. A combatant commander (CCDR) typically requests a field army or corps to perform the role of joint task force (JTF) or joint force land component commander (JFLCC) depending on the scope and scale of the operation and when the Army will provide most of the land forces. These echelons have assigned or attached sustainment organizations capable of providing support across the competition continuum. Understanding the roles and functions of field armies and corps is essential to conducting sustainment operations. Figure 1-1 on page 1-2 provides a notional task organization for a field army with two subordinate corps and Figure 1-2 on page 1-3 a notional layout of sustainment forces in a theater of operations.

FIELD ARMY OVERVIEW

1-2. A *field army* is an echelon of command that employs multiple corps, divisions, multifunctional brigades, and functional brigades to achieve objectives on land (ADP 3-90). A *function* is the broad, general, and enduring role for which an organization is designed, equipped, and trained (JP 1, Volume 1). A *role* is the broad and enduring purpose for which the organization or branch was established (ADP 1-01). The field army is an operational headquarters that provides additional capacity to a CCDR facing peer adversaries capable of conducting large-scale combat within its area of responsibility (AOR). An *area of responsibility* is the geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations (JP-1, Volume 1). The Army constitutes a field army when a CCDR requires an Army headquarters to command and control a multi-corps operation. When the Army constitutes a field army, it must resource it from existing Army organizations. A field army provides command and control for United States (U.S.) Army and multinational corps or a Marine expeditionary force operating in a single operational area. An *operational area* is an overarching term encompassing more descriptive terms (such as area of responsibility and joint operations area) of locations for the conduct of military operations (JP 3-0). Considerations of the field army include—

- The field army does not have a table of organization and equipment. As such, it does not have a standardized design or organic or assigned forces.
- The time required to constitute a field army depends upon how quickly additional capabilities can be brought into theater. In an operational environment (OE) where an enemy has significant denial capabilities, this could take so long that it may not be possible to deny enemy operational and strategic objectives at acceptable cost.

FIELD ARMY ROLES AND FUNCTIONS

1-3. Field armies are most likely to be employed in theaters where adversaries have the capability of conducting large-scale ground combat. A field army's primary purpose is to deter and, if necessary, prevail in large-scale ground combat against peer adversaries. A field army is an operational-level headquarters and is typically tailored based on mission and operational variables. It can be organized, manned, equipped, and staffed to perform roles as the JTF headquarters or the JFLCC. The field army can also be the ARFOR.

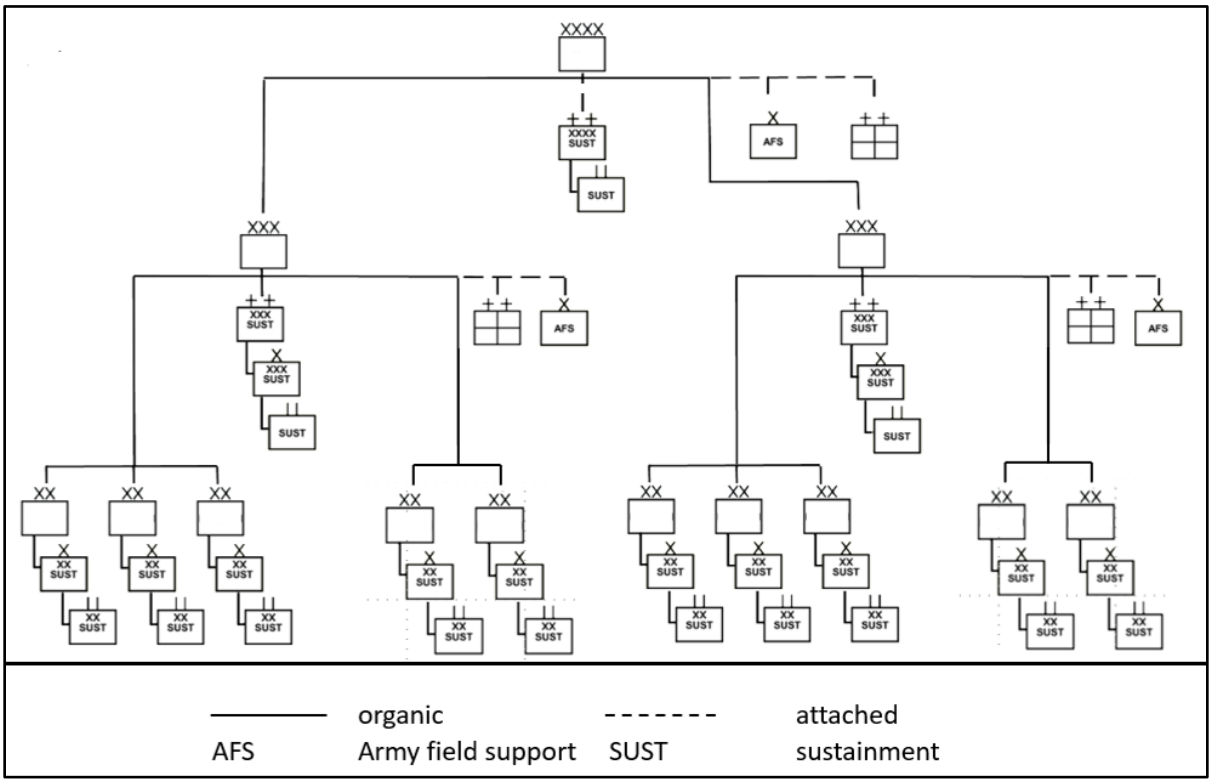


Figure 1-1. Notional task organization for a field army with two subordinate corps

Field Army as ARFOR

1-4. The field army may also perform the role of ARFOR with limited augmentation. The *ARFOR* is the Army component and senior Army headquarters of all Army forces assigned or attached to a combatant command, subordinate joint force command, joint functional command, or multinational command (FM 3-94). The ARFOR is the Army component of any joint force. Army doctrine distinguishes between the Army component of a combatant command and that of a joint force formed by the CCDR. The theater Army assigned to a combatant command is the Army Service component command (ASCC), and the Army component of a subordinate joint force is an ARFOR. During operations involving multiple corps-sized formations, the field army's most important Service role is as the ARFOR. With limited augmentation to its headquarters, the field army as ARFOR can—

- Execute command and control over multi-corps operations.
- Execute administrative control (also known as ADCON) over all Army forces in the area of operations (AO). An *area of operations* is an operational area defined by a commander for the land or maritime force commander to accomplish their missions and protect their forces (JP 3-0).
- Execute Army support to other Services in the form of executive agent and lead service responsibilities, inter-service agreement, or Service support agreements in the AO.
- Assume directed Army, joint, and multinational authorities and responsibilities.
- Shape an assigned operational area.
- Integrate unified action capabilities to support multidomain operations.
- Plan and coordinate for the consolidation of gains in an assigned operational area.

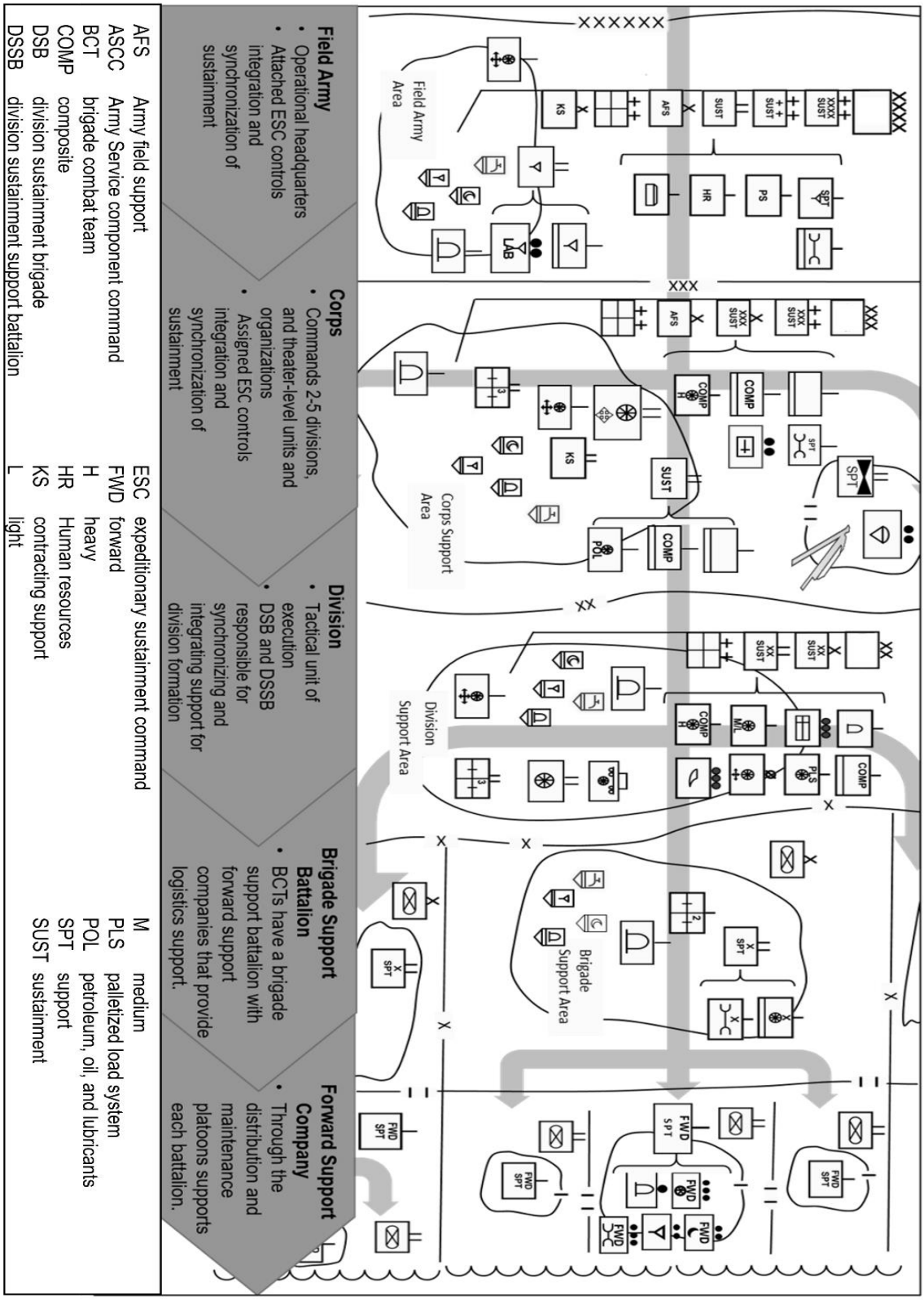


Figure 1-2. Notional sustainment units in a theater of operations

Field Army as Joint Force Land Component Commander

1-5. A JFLCC headquarters is a component of a unified command, subordinate unified command, or JTF. During large-scale combat operations, the field army is best suited to serve as the JFLCC commanding multiple corps, U. S. Marine Corps, and multinational forces to enable synchronization of maneuver on land. The JFLCC integrates and synchronizes efforts involving joint or multinational forces and exercises operational as well as tactical mission responsibilities.

1-6. As the JFLCC, the field army requires joint and multinational headquarters augmentation. Once established, the field army becomes the supported command within the land domain of the joint operations area (JOA). The *joint operations area* is the airspace, land area, and maritime area defined by a combatant commander or subordinate unified commander, in which a joint force commander directs military operations to accomplish a specific mission (JP 3-0). It will incorporate additional multinational units and designate subordinate corps areas of operation. The field army headquarters has the authority to designate target priorities, effects, and timing of fires to integrate and synchronize maneuver, fires, and interdiction within the land domain. Field army commanders employ subordinate corps to concentrate combat power, to accept or decline battle, and to exploit the outcome of tactical actions. *Combat power* is the total means of destructive, constructive, and information capabilities that a military unit or formation can apply at a given time. (ADP 3-0).

FIELD ARMY HEADQUARTERS AND SUBORDINATES

1-7. A field army is a provisional Army headquarters with echeloned responsibility. It does not have an approved organizational design. When constituted, the field army may consist of a headquarters, headquarters company, and special troops battalion. It may have a variable number of attached corps, an expeditionary sustainment command (ESC), a variable number of divisions normally attached to corps, and other attached combat enablers such as an Army field support brigade (AFSB).

1-8. A field army is responsible for the integration and synchronization of operational sustainment in its assigned AO. A field army is supported by its attached ESC. The ESC assists the field army sustainment cell with planning, coordinating, and executing sustainment operations.

Corps

1-9. The corps is the most versatile echelon above brigade due to its ability to operate at both the tactical and operational levels. While it is organized, staffed, trained, and equipped to fight as a tactical formation, the corps may be called upon to become a joint and multinational headquarters for conducting operations. Each U.S Army corps is task-organized with an assigned ESC for the integration and synchronization of sustainment operations in an assigned operational area or as directed by the corps commander. Additional information on the corps is provided later in this chapter.

Expeditionary Sustainment Command

1-10. An ESC may be attached to a field army to control the integration and synchronization of sustainment to support field army operations. When attached to the field army, the ESC provides sustainment support to units identified in the field army task organization in accordance with the priorities established by the field army commander. See chapter 2 for details on the ESC.

Divisions

1-11. The division is the Army's principal tactical warfighting formation during large-scale combat operations. Its primary role is to serve as a tactical headquarters commanding brigades. A division conducts operations in an AO assigned by its higher headquarters—normally a corps. It task-organizes subordinate forces to accomplish its mission according to mission variables. A division typically commands between two and five brigade combat teams (BCTs), a mix of functional and multifunctional brigades, and a variety of smaller enabling units. Each division has an assigned division sustainment brigade (DSB) responsible for synchronizing and integrating sustainment support for the division formation.

Theater Medical Command

1-12. The theater medical command (TMC) operational command post (OCP) may be attached to a field army to control the integration and synchronization of health service support (HSS) operations within the field army. The TMC command post staff supports the field army by providing reach back to the TMC main command post (CP) in the theater and conducting HSS planning for the field army. The TMC subordinate task-organized medical units typically have a general support (GS) relationship with units within their geographic area. See FM 4-02 for details on the TMC.

Army Field Support Brigade

1-13. A theater AFSB supports field armies as required. The AFSB's mission is to synchronize and integrate United States Army Materiel Command (USAMC) strategic capabilities (Army pre-positioned stocks, Logistics Assistance Program technical support, logistics readiness centers, strategic-level materiel management, sustainment maintenance, and Logistics Civil Augmentation Program [LOGCAP]) in support of ASCCs and corps. The AFSB and its subordinate battalions provide access to USAMC's broad range of strategic-level support to build and maintain combat power. The AFSB provides this support to the operational and tactical echelons of command in support of multidomain operations. The AFSB meets its mission requirements through its assigned and attached subordinate organizations, USAMC reach-back and call-forward capabilities, and contracted support. When supporting the field army, the AFSB and its subordinate battalions and call-forward capabilities are dependent upon the supported elements within the operational area for protection, HSS, signal support, and religious, legal, financial management, personnel, administrative, and logistics services. Additional information on the AFSB is provided later in the chapter.

CORPS OVERVIEW

1-14. A *corps* is an echelon of command and tactical formation that employs divisions, multifunctional brigades, and functional brigades to achieve objectives on land (ADP 3-90). The corps functions as one of the principal integrators of landpower into campaigns. A *campaign* is a series of related operations aimed at achieving strategic and operational objectives within a given time and space (JP 5-0). A corps headquarters is organized, trained, and equipped to control the operations of two to five divisions together with supporting theater-level organizations. When serving under another echelon during multi-corps operations, the corps is a tactical command and is optimized to serve as a senior tactical command during large-scale combat. See ATP 3-92 for additional information on corps operations.

CORPS ROLES AND FUNCTIONS

1-15. When a field army is not present, a corps is the primary link between the operational and tactical levels of war. Command at this echelon requires operational art, tactical expertise, and complementary employment of Army and joint capabilities. The corps headquarters has specific roles including acting as the senior Army tactical formation, ARFOR, JTF, and JFLCC. The field army performs distinct functions when in these roles.

Senior Tactical Formation

1-16. The corps may serve as the senior Army tactical formation in large-scale ground combat, commanding two to five Army divisions together with supporting brigades and commands. Large-scale combat operations require a corps headquarters to function as a tactical formation under a land component command or subordinate to a field army established under an alliance or coalition. *Large-scale combat operations* are extensive joint combat operations in terms of scope and size of forces committed, conducted as a campaign aimed at achieving operational and strategic objectives (ADP 3-0). As the senior tactical formation, the corps commander task-organizes and maneuvers divisions to destroy enemy land forces, seize key terrain and critical infrastructure, and dominate the land portion of the JOA.

1-17. The corps' primary role during large-scale combat operations is serving as the senior tactical formation. A corps supporting this strategic Army role performs functions that include—

- Task-organizing and allocating resources to divisions and brigades.
- Enabling subordinate division and brigade freedom of action.

- Setting priorities.
- Maneuvering divisions and other combat formations.

Corps as ARFOR

1-18. The corps may serve as the ARFOR when a field army is not present, and it is the only U.S. Army corps assigned to a higher echelon. With augmentation, the corps headquarters is organized, trained, and equipped to serve as the ARFOR in campaigns and major operations. It can control the operations of corps troops and two to five Army divisions while supported by theater-level organizations across the conflict continuum.

1-19. The corps assumes the role as ARFOR when it is the senior Army command in a JTF. It subsequently assumes administrative control of all Army forces assigned or attached to the JTF and operational control (OPCON) of all Army units that are not subordinate to another component of the JTF, such as a joint special operations command or task force.

1-20. As the ARFOR, the corps functions include—

- Execute administrative control of all Army forces assigned or attached to the JTF and OPCON of all Army units that are not subordinate to another component of the JTF.
- Execute Army support to other Services in the AO.
- Execute directed Service-specific support of Army forces in the JOA.

Corps as Joint Task Force

1-21. A corps may serve as a JTF headquarters (with significant augmentation) for crisis response and limited contingency operations. A JTF headquarters is constituted and designated by a joint force commander (JFC), the Secretary of Defense, a CCDR, a sub-unified commander, or a state governor activating the Air and Army National Guard to execute defense support of civil authorities or homeland defense missions. This designation is done in accordance with the National Security Act of 1947, Title 10, United States Code, and Title 32, United States Code.

1-22. A JFC establishes a JTF headquarters when the scope, complexity, or other factors of an operation require capabilities from at least two military departments operating under a single JFC. JTF headquarters responsibilities are driven by mission requirements. These requirements further drive the staff organization and manning required to support the CCDR.

1-23. The corps headquarters is the preferred Army unit to use as the core element for forming a JTF. Establishing a JTF is accomplished by adding augmentation from other Services and special operations personnel to transform the core element into a JTF headquarters. This augmentation includes officers inserted into the integrating staff cells, primarily in the plans cell and the current operations integrating cell. This augmentation does not include the personnel needed to augment the corps headquarters battalion network capability. Additional staff augmentation would be required for each functional cell, the public affairs section, and other personal staff sections.

1-24. A corps serving as the JTF headquarters should not perform as an ARFOR because of the differing roles and responsibilities inherent in each. JTFs focus on the operational level of warfare and use joint rather than Army doctrine. They are often comprised of multinational forces from allied and coalition partners along with U.S. forces.

Corps as Joint Force Land Component Command Headquarters

1-25. A corps is likely to become the JFLCC when the Army provides most of the land forces. As a JFLCC, the corps may exercise tactical control (TACON) or OPCON over Marine Corps forces as required by the JFC in addition to its attached Army forces and multinational divisions for a major operation. This will require significant augmentation from the joint and multinational force to perform successfully as an operational-level headquarters. This augmentation enables the corps to achieve campaign objectives directly through land operations or indirectly through supporting other components of the joint force. During limited contingency operations, the corps headquarters is the preferred headquarters to form the nucleus of a JFLCC.

1-26. When designated as a JFLCC, the corps follows joint doctrine. As a JFLCC headquarters, the corps has tasks that include, but are not limited to—

- Coordinating the planning and execution of joint land operations with the other components and supporting agencies.
- Designating the target priorities, effects, and timing for joint land operations.
- Providing mutual support to other components by conducting operations within the JOA.
- Coordinating with other functional and Service components in support of achieving JFC objectives.
- Providing an assistant or deputy to the area air defense commander (normally provided by the Army air and missile defense command) for land-based joint theater air and missile defense operations as determined by the JFC. The JFLCC provides inputs to the JFC-approved joint area air defense plan and the airspace control plan coordinated by the joint fires element (also known as JFE) and codified in the concept of operations (JP 3-09).
- Supporting JFC information operations by developing the information operations requirements that support land control operations and synchronize land force information operations assets when directed.
- Integrating the joint and Army networks within the Department of Defense (DOD) information networks throughout the AOR. Performing this function may require joint and Service augmentation.
- Performing joint security functions.
- Establishing standard operating procedures (SOPs) and other directives based on JFC guidance.

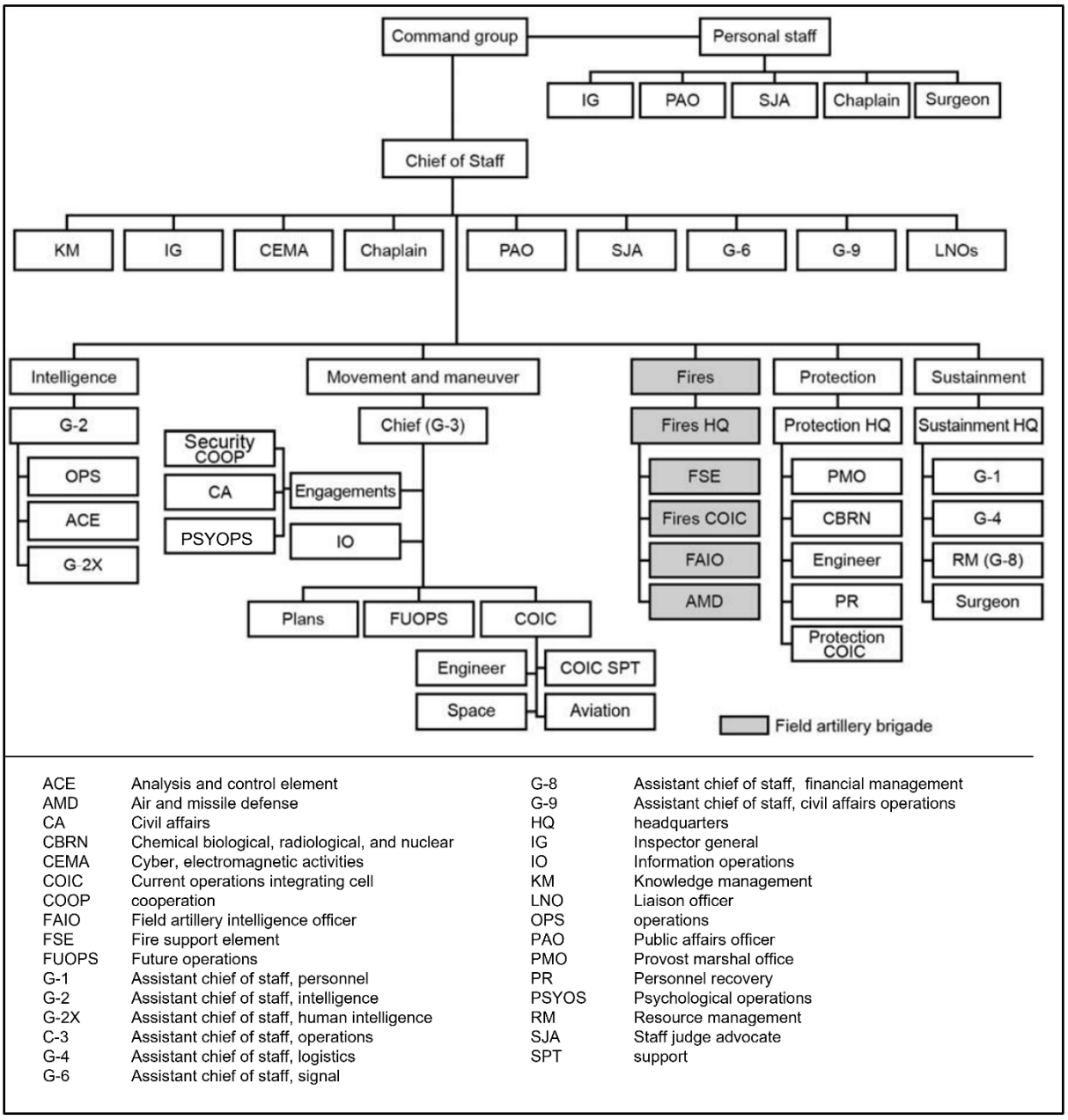
1-27. See FM 3-94 for additional information on the roles and responsibilities of a corps.

CORPS HEADQUARTERS AND SUBORDINATES

1-28. The Army structures corps headquarters with robust staffs and CPs and assigns and provides forces to accomplish their purpose. The theater Army apportions forces to the corps staff as required to accomplish geographic combatant commander (GCC) or JTF objectives.

1-29. The corps headquarters is organized with a command group and staffs. The *command group* is the commander and selected staff members who assist the commander in controlling operations away from a command post (FM 6-0). The staffs include coordinating staff, special staff, and personal staff. Coordinating staff officers are the commander's principal staff assistants who advise, plan, and coordinate actions of special staff officers within their area of expertise. They are directly accountable to the chief of staff or executive officer and have functional responsibilities over one or a combination of fields of interest. Special staff officers help commanders and other staff members perform their functional responsibilities. Special staff officers and their corresponding staff sections are organized according to professional or technical responsibilities.

1-30. Personal staff officers work under the immediate control of, and have direct access to, the commander. The personal staff includes the aide-de-camp, chaplain, public affairs, safety, internal review officer, inspector general, staff judge advocate, and surgeon. Most coordinating and special staff personnel work within the functional and integrating cells. The functional cells consist of the warfighting functions of intelligence, movement and maneuver, fires, protection, and sustainment. The integrating cells represent the three planning horizons of plans, future operations, and current operations. (See chapter 3 for more on functional and integrating cells.) Figure 1-3 on page 1-8 depicts the organization of a corps headquarters.



ACE	Analysis and control element	G-8	Assistant chief of staff, financial management
AMD	Air and missile defense	G-9	Assistant chief of staff, civil affairs operations
CA	Civil affairs	HQ	headquarters
CBRN	Chemical biological, radiological, and nuclear	IG	Inspector general
CEMA	Cyber, electromagnetic activities	IO	Information operations
COIC	Current operations integrating cell	KM	Knowledge management
COOP	cooperation	LNO	Liaison officer
FAIO	Field artillery intelligence officer	OPS	operations
FSE	Fire support element	PAO	Public affairs officer
FUOPS	Future operations	PMO	Provost marshal office
G-1	Assistant chief of staff, personnel	PR	Personnel recovery
G-2	Assistant chief of staff, intelligence	PSYOS	Psychological operations
G-2X	Assistant chief of staff, human intelligence	RM	Resource management
C-3	Assistant chief of staff, operations	SJA	Staff judge advocate
G-4	Assistant chief of staff, logistics	SPT	support
G-6	Assistant chief of staff, signal		

Figure 1-3. Corps headquarters

Sustainment Warfighting Function Cell

1-31. The corps headquarters is responsible for the integration and synchronization of operational sustainment in its assigned AO. The chief of sustainment is responsible for coordinating sustainment with the assistant chief of staff, personnel (G-1), assistant chief of staff, financial management (G-8), surgeon, and an assigned ESC. Subordinate division staff sections directly report to and coordinate with their corps counterparts. In turn, the corps staff directly coordinates with and reports to the field or theater Army. For additional information on the sustainment warfighting function cell staff in the corps see ATP 3-92.

Assistant Chief of Staff G-1, Personnel

1-32. The G-1 is the principal staff officer for all matters concerning human resources (HR) support (military and civilian). The G-1 also serves as the senior adjutant general officer in the command. Specific responsibilities of the G-1 include—

- Developing and implementing HR policies and procedures.
- Coordinating personnel support.
- Monitoring the HR situation and providing input to the common operational picture (COP).

1-33. The G-1 also has responsibility for the civilian staff, personnel officer, and the equal opportunity advisor. The G-1 prepares a portion of Annex F (Sustainment) to the operation order (OPORD) or operation plan (OPLAN). See FM 1-0 for additional information.

Assistant Chief of Staff G-4, Logistics

1-34. The assistant chief of staff, logistics (G-4) is both the chief of sustainment and the logistics section chief at the corps level. The G-4 is the principal staff officer for sustainment plans and operations, supply, maintenance, transportation, services, and operational contract support (OCS). The G-4's sustainment functions include—

- Synchronizing and integrating logistics operations to include maintenance, supply and services, transportation, general engineering, and mortuary affairs. *Logistics* is the planning and executing the movement and support of forces. It includes those aspects of military operations that deal with: design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel; acquisition or construction, maintenance, operation, and disposition of facilities; and acquisition or furnishing of services (ADP 4-0).
- Provide logistics input to the COP.

1-35. The G-4 has coordinating staff responsibility for the G-1, G-8, transportation officer, and the surgeon. The G-4 prepares Annex F (Sustainment), Annex P (Host-Nation Support), and Annex W (Operational Contract Support) to the OPORD or OPLAN. See ADP 4-0 for additional details.

Assistant Chief of Staff G-8, Financial Management

1-36. The G-8 is the corps comptroller and provides the commander with mission-essential funding to ensure operational success and protects funds from fraud, waste, and abuse. The corps G-8 coordinates, synchronizes, and funds validated resource requirements by identifying the appropriate source of funds. The G-8 primary responsibility is to provide fiscal advice and guidance to the corps commander, the corps staff, and subordinate units. Some corps G-8's functions include—

- Prepares budget estimates to submit to theater army through consolidating budget estimates from subordinate headquarters as well as internal analysis.
- Conducts financial management planning and synchronization with the fiscal triad to ensure support through the AOR.
- Receives funding from the theater army, then distributes and controls funds; provides status of funds and monitors obligations rates.
- Estimates, tracks, and reports costs for specific operations to support data call requests to theater army.
- Provides policy and fiscal guidance through the orders process.

Surgeon

1-37. The surgeon is charged with planning and executing the HSS mission within the corps. The surgeon advises the corps commander on the health status of the command; monitors, prioritizes, synchronizes, and assesses HSS; serves as medical contact officer for the corps; and provides analysis of health threats. Specific responsibilities of the surgeon include—

- Coordinating medical operations.
- Synchronizing and integrating HSS.

Assigned Forces

1-38. Generally, a corps is assigned two to five divisions, additional BCTs, an ESC, a maneuver enhancement brigade (MEB), an expeditionary military intelligence brigade (E-MIB), a field artillery brigade, an engineer brigade, a military police brigade, a medical brigade, and a corps signal brigade. The corps commander determines the appropriate command and support relationships for subordinate divisions and brigades based on the assigned tasks of the divisions and the allocation of the brigades.

Divisions

1-39. Divisions are the tactical units of execution for a corps. The primary role of the division is to serve as a tactical headquarters commanding BCTs in decisive action. *Decisive action* is the continuous, simultaneous execution of offensive, defensive, and stability operations or defense support of civil authorities tasks (ADP 3-0). During large-scale combat operations, divisions operate as tactical formations and not only as headquarters. The corps commander determines the number and types of BCTs necessary for the divisions to accomplish their respective missions.

1-40. Each division has an assigned multifunctional DSB that performs the following functions– distribution management and operations, transportation, supply support, field maintenance, HR, financial management operations, and personnel services. *Distribution management* synchronizes and optimizes transportation, its networks, and materiel management with the warfighting functions to move personnel and materiel from origins to the point of need in accordance with the supported commander's priorities (ADP 4-0). The DSB has an organic division sustainment support battalion (DSSB) to support tactical-level sustainment operations. The DSSB has organic headquarters, supply, maintenance, and transportation companies. As the DSB employs sustainment capabilities in support of the division, sustainers establish and maintain communication with the corps command and supporting ESC to effectively integrate and synchronize support to achieve effects at the tactical level. The DSB and DSSB are discussed further in Chapter 2.

Brigade Combat Team

1-41. BCTs are versatile, modular organizations with inherent capabilities that make them effective in any environment. There are three types of BCTs: armored, infantry, and Stryker. BCTs maneuver against, close with, and destroy enemy forces. BCTs have organic combined arms capabilities that include battalion-sized maneuver, field artillery, reconnaissance, and sustainment units. A BCT is normally subordinate to a division headquarters. However, a corps may hold a BCT or similar organization for a specific role such as the corps reserve or area security. *Area security* is a type of security operation conducted to protect friendly forces, lines of communications, and activities within a specific area (ADP 3-90).

1-42. Each BCT has a brigade support battalion (BSB) that provides logistics and Role 2 medical support to the brigade. The BSB is designed with a headquarters and headquarters company, distribution company, field maintenance company, medical company, and has a forward support company (FSC) for each maneuver battalion. The BSB also provides Role 1 medical care through the organic medical company (brigade support) (BSMC) for those units without organic medical assets on an area support basis and Role 2 medical care to all units in the brigade AO. *Area support* is a method of logistics, medical support, and personnel services in which support relationships are determined by the location of the units requiring support. Sustainment units provide support to units located in or passing through their assigned areas (ATP 4-90). See FM 3-96 for additional information on BCT operations and ATP 4-90 for additional information on the BSB.

Expeditionary Sustainment Command

1-43. When assigned to the corps, the ESC synchronizes and integrates sustainment (including medical) operations at the corps echelon. The corps ESC provides distribution management and HR support to units assigned or attached to the corps and any provided forces operating in the corps AO. A task-organized ESC assigned to a corps normally includes a finance support center, sustainment brigades, and a movement control battalion. The ESC commander and staff monitor the status of medical units supporting corps operations and collaborate with the medical organizations for effective sustainment integration. The ESC commander is the senior sustainment commander in the field army or corps. See chapter 2 for additional information on the ESC and other sustainment units supporting the corps command.

Maneuver Enhancement Brigade

1-44. The MEB is a multifunctional headquarters designed to command and control forces from multiple branches, but especially organizations that conduct tasks enabling support area operations. A *support area* is the portion of the commander's area of operations that is designated to facilitate the positioning, employment, and protection of base sustainment assets required to sustain, enable, and control operations (ADP 3-0). Higher echelon commanders base the MEB's task-organization on identified mission requirements for the echelon it is supporting. The MEB is dependent on the sustainment brigade assigned to the corps for logistics support. When properly task-organized, the MEB can perform military police, engineer, and chemical, biological, radiological, and nuclear (CBRN) missions. It also provides support to base camp and base cluster defense, route security and maintenance, liaison and coordination, construction, and host-nation (HN) support integration. A *base camp* is an evolving military facility that supports the military operations of a deployed unit and provides the necessary support and services for sustained operations (ATP 3-37.10/MCRP 3-40D.13). A *base cluster* is a collection of bases, geographically grouped for mutual protection and ease of command and control (JP 3-10). The MEB can be task-organized in total or in part to support a BCT, perform a specific mission in a BCT AO, or retain command and control of forces to complement or reinforce a BCT. See FM 3-81 and FM 3-94 for additional information on MEB operations.

1-45. The MEB is dependent on appropriate elements of the division, corps, or theater for religious, legal, financial management, personnel and administrative services, field feeding, field maintenance and recovery, and HSS. Augmentation is required for tactical air control party and joint tactical control elements for leveraging joint, coalition, and similar sister Service delivery platforms when performing air support combat operations within the assigned corps or senior Army headquarters AO. Density and employment of assets are dependent upon mission variables and the commander's discretion. Mission variables consist of mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and information considerations.

Military Intelligence Brigade (Expeditionary)

1-46. The E-MIB conducts multi-discipline intelligence operations in support of corps, combined joint task force (also known as CJTF), and division multidomain operations during large-scale combat operations. The E-MIB headquarters controls operations and manages resources within the E-MIB to meet corps, division, and JTF intelligence requirements and missions. The E-MIB headquarters receives, integrates, employs, and sustains intelligence enterprise capabilities in support of corps and JTF commanders. The E-MIB headquarters is responsible for the training and readiness of the assigned battalions and can be deployed to serve as the senior military intelligence command headquarters for field armies or other deployed operational Army headquarters. The size and composition of the deployed E-MIB and its subordinate organizations is dependent on the missions required to be performed in the AO.

1-47. The corps commander retains control of the E-MIB headquarters and headquarters company and one battalion. The corps commander task-organizes elements of the E-MIB to divisions (generally one military intelligence battalion) or as required to support the mission. The intelligence and electronic warfare battalion supporting the corps conducts multi-discipline intelligence analysis and processing, exploitation, and dissemination in support of the corps assistant chief of staff, intelligence (G-2). The battalion supporting the corps also provides multidomain intelligence analysis and targeting support; processing, exploitation, and dissemination; collection in support of corps multidomain effects; and counterintelligence and human intelligence to the corps. The intelligence and electronic warfare battalion supporting the corps exercises command and control of the corps electronic warfare company. E-MIB personnel that augment intelligence cells are dependent on the supported units for religious, legal, HSS, field feeding, finance, personnel and administration, motor maintenance, and logistical services. See ATP 2-19.3 for more discussion on E-MIB capabilities and operations.

Field Artillery Brigade

1-48. The field artillery brigade's primary task is conducting corps-level strike operations and augmenting division-level operations. The field artillery brigade provides the corps with the capability to mass effects during large-scale combat operations. It can employ Army fires and incorporate electromagnetic warfare. *Electromagnetic warfare* is military action involving the use of electromagnetic and directed energy to

control the electromagnetic spectrum or to attack the enemy (JP 3-85). An *attack* is a type of offensive operation that destroys or defeats enemy forces, seizes and secures terrain, or both. (ADP 3-90). The field artillery brigade can also request joint fires and coordinate with airspace control elements. It can detect and attack targets using a mix of its organic target acquisition and fires capabilities, supported organization information collection capabilities, and access to higher echelon headquarters information collection capabilities provided by national to tactical intelligence. The field artillery brigade has an assigned BSB with only distribution, ammunition transfer holding point (ATHP), maintenance, and service and recovery sections. The field artillery brigade has two assigned field artillery regiments, each with an assigned FSC. There may be more than one field artillery brigade assigned within the corps area. The brigade is dependent upon the ESC sustainment brigade for religious and legal support, HSS, finance, personnel, and administrative services, and on the aviation brigade for aerial forward observers. See FM 3-09 for additional information on field artillery brigade operations.

Engineer Brigade

1-49. An engineer brigade develops plans, procedures, and programs for engineer support. These include requirements determination, operational mobility and counter-mobility, general engineering, power generation, area damage control, military construction, geospatial engineering, engineering design, construction materials, and real property maintenance activities. The corps engineer brigade integrates and synchronizes engineer capabilities across the corps AO and reinforces subordinate corps units in the execution of engineer tasks by allocating mission-tailored engineer forces. It is capable of deploying a tactical CP and a main CP. The brigade is dependent on supporting sustainment units for religious, legal, HSS, finance, personnel, administrative, and logistics support. The brigade is dependent on the FSC of the engineer battalion for maintenance support (exception for medical and communications security [COMSEC] equipment). It is dependent on the corps-supporting sustainment brigade field feeding company for field feeding, the support maintenance company (SMC) for test, measurement, and diagnostic equipment support, and the signal brigade for information and communications support. See FM 3-34 for additional information about engineer operations.

Military Police Brigade

1-50. The Army allocates a military police brigade to a corps when the magnitude of functional military police requirements exceeds the capability of the MEB to control military police activities. During large-scale combat operations, a military police brigade conducts command and control for all task-organized units conducting or supporting military police operations. The brigade integrates capabilities from all three military police disciplines (police operations, detention operations, and security and mobility support) and integrates police intelligence operations into all military police missions. As required, the brigade exercises command and control of a tactical combat force conducting response force operations. When designated, it executes the duties of the JFC of detainee operations and exercises command and control of all assets performing theater-level detainee operations. Refer to the military police brigade table of organization and equipment section 1 narrative for extensive key sustainment dependencies, and FM 3-39 for additional information on the military police brigade and military police operations.

Corps Signal Brigade

1-51. A corps signal brigade provides signal support for corps and division operations. In large-scale combat operations, the corps signal brigade commands up to five expeditionary signal battalions or expeditionary signal battalions-enhanced. Corps signal brigades provide communications and information systems support to a theater Army headquarters, its subordinate units, and to joint, inter-organizational, interagency, and multinational partners throughout the corps AO as required. The corps signal brigade and its subordinate units install, operate, maintain, and secure their portions of the DOD information network-Army (also called DODIN-A). Each corps signal brigade leverages network extension and reach back capabilities to provide joint communications and information systems services to the CCDR and subordinate commanders, which supports command and control and enables the other warfighting functions. The corps signal brigade is dependent on the appropriate elements of the corps or the ASCC for religious, legal, field feeding, finance, transportation, and maintenance support, HSS, and personnel and administrative services. See FM 6-02 for more information on the corps signal brigade.

Additional Provided Forces Supporting the Corps

1-52. Depending on the corps role and mission, it may receive additional enabling capabilities including Army and joint forces. The corps is task-organized by the theater Army with an assortment of multifunctional and functional units to support operational requirements and enable success of the mission. For additional information on joint capabilities see JP 4-0.

1-53. Common corps enabling forces include the combat aviation brigade, expeditionary combat aviation brigade, air defense artillery brigade, civil affairs (CA) brigade, CBRN operations brigade, explosive ordnance disposal (EOD) group, psychological operations battalion, U.S. Air Force element, Army space support element, military history detachment, mobile public affairs detachment, cyberspace and electromagnetic activities, and special operations forces. Additional enabling elements include the AFSB, medical brigade (support) (MEDBDE [SPT]), corps aerial delivery company, and corps parachute office. A corps may also receive GS or direct support (DS) from a medical brigade under the TMC. The corps may also receive DS from the signal and air defense brigades commanded by the theater signal command and Army air and missile defense command, respectively. These forces may be attached, OPCON, or TACON to the corps. Planners must understand all the units that may support the corps to determine the scope of sustainment required to support corps operations.

Combat Aviation Brigade

1-54. The combat aviation brigade is organized and equipped to synchronize the operations of multiple aviation battalions simultaneously in order to support corps or division operations. The combat aviation brigade provides a corps commander with a maneuver advantage that can overcome the constraints of limiting terrain and extended distances. Attack, reconnaissance, utility, and cargo aircraft may maneuver independently under corps control in the echelon area or within an assigned AO. Alternatively, the combat aviation brigade's attack, reconnaissance, utility, and cargo assets may be under OPCON or TACON, or providing GS or DS to another brigade as situationally appropriate. Furthermore, a combat aviation brigade may receive OPCON of ground maneuver forces to conduct security or reconnaissance operations or to accomplish other economy of force missions. The use of aviation assets requires additional detailed planning and synchronization using specific airspace control processes to maximize results. The combat aviation brigade is dependent on appropriate elements of the corps for religious, legal, finance, and logistical support, HSS, personnel and administrative services, and supplemental transportation. It is also dependent on the U.S. Air Force for aviation weather support and a tactical control party to coordinate and control tactical air support. See FM 3-04 for additional information on Army aviation operations.

1-55. Each combat aviation brigade has an organic aviation support battalion. The aviation support battalion consists of a headquarters support company, a distribution company, an aviation support company, and a brigade signal company. The aviation support battalion provides aviation and ground field maintenance, ground and aviation recovery, network communications, resupply, and Role 1 medical support for the combat aviation brigade. The aviation support battalion provides maintenance augmentation to aviation battalions when required. The battalion supports the forward support elements, aviation maintenance elements, the brigade headquarters and headquarters company, and the unmanned aircraft systems, if applicable. The aviation support battalion also provides distribution of classes I, II, III (bulk), IV, V, and IX. It provides water storage and operates both an ATHP and a supply support activity (SSA). *Distribution* is the operational process of synchronizing all elements of the logistic system to deliver the "right things" to the "right place" at the "right time" to support the geographic combatant commander (JP 4-0). Unlike the BSB, the aviation support battalion does not have an assigned medical company but has a medical platoon that provides Role 1 medical care. Role 2 medical care is provided to echelons above brigade (EAB) units on an area basis by a medical company (area support) (MCAS). The aviation support battalion augments other medical sections organic to the combat aviation brigade and provides ground medical evacuation (MEDEVAC) from within the aviation support battalion. Also organic to the combat aviation brigade are four other battalions, each with its own supporting FSC.

Expeditionary Combat Aviation Brigade

1-56. The expeditionary combat aviation brigade is a multifunctional unit that is designed to air assault maneuver forces; position personnel, supplies, and equipment; evacuate casualties; conduct personnel

recovery; and provide command and control. When task-organized with an attack reconnaissance battalion or attack reconnaissance squadron, expeditionary combat aviation brigades provide the corps accurate and timely information collection, reaction time, and maneuver space, and destroy, defeat, disrupt, or delay enemy forces. The expeditionary combat aviation brigade has an organic assault battalion with subordinate headquarters and headquarters company, assault company, aviation maintenance company, and FSC. Also organic is an aviation support battalion with subordinate headquarters and support company, distribution company, and brigade signal company. The expeditionary combat aviation brigade is dependent on appropriate elements of the corps for religious, legal, finance, and logistical support, HSS, personnel and administrative services, and supplemental transportation. It is also dependent on the U.S. Air Force for aviation weather support and a tactical control party to coordinate and control tactical air support. See FM 3-04 for additional information on Army aviation operations.

Air Defense Artillery Brigade

1-57. Air defense artillery brigades are structured to perform several functions to support the Army air and missile defense commands and designated CCDR organizations such as the corps by providing air and missile defense integration and operations. Air defense artillery brigade functions include command and control activities, integration, planning, and liaison with joint, higher echelon units, and subordinate battalions. The air defense artillery battalions have an organic maintenance company for field-level maintenance. Air defense artillery brigades are generally aligned under the Army air and missile defense command and deployed to control the fires of subordinate units. Corps and divisions (when further delegated) may integrate air defense artillery firing units and radars into their defense plans, ensuring they integrate into local security measures. The air defense brigade is dependent upon appropriate elements within the corps and theater area for finance support, HSS, personnel and administrative services, and supplemental transportation. It is also dependent on the expeditionary signal battalion for signal support, an SMC for maintenance support beyond organic maintenance capability, and a field feeding company for field feeding support. See FM 3-01 for additional information on Army air defense artillery operations.

Civil Affairs Brigade

1-58. The CA brigade plans, manages, and conducts CA operations in support of an ASCC or a corps through command and control of attached CA units and staff support to the JTF or JFLCC as required. It plans, enables, shapes, and manages CA operations with and through indigenous populations and institutions, independent government organizations, nongovernmental organizations, and other governmental organizations by means of its civil liaison teams and civil-military operations center. It also trains, equips, and deploys assigned and attached CA battalions and companies. The CA brigade mitigates or defeats threats to civil society and conducts actions normally performed by civil governments across the range of military operations. CA brigades provide support by engaging and influencing the civil population and authorities through the planning and conducting of CA operations or enabling civil-military operations to shape the civil environment and set the conditions for military operations. CA functional specialists advise commanders and help or direct their civilian counterparts in security, justice and reconciliation, humanitarian assistance and social well-being, governance and participation, and economic stabilization. This unit is dependent upon the supported unit for legal, finance, unit maintenance, fuel, and field feeding support, HSS, and personnel and administrative services. See FM 3-57 for additional information on CA operations.

Chemical, Biological, Radiological, and Nuclear Operations Brigade

1-59. The CBRN brigades provide command and control of up to six assigned CBRN battalions and other task-organized units to support the corps, CBRN operational headquarters, theater Army, JTC, or JFLCC headquarters. CBRN brigades provide a wide range of CBRN capabilities that include reconnaissance, decontamination, and biological detection. With the advice of the staff and the corps CBRN section, the CBRN brigade commander evaluates and determines the CBRN unit support requirements for the corps. The brigade commander may advise the corps commander about the employment and sustainment of CBRN assets. A CBRN brigade is dependent on other organizations for religious, legal, field feeding, and finance support, HSS, and personnel and administrative services. The CBRN brigade is dependent on the CBRN battalion or co-located CBRN company for communications-electronics and COMSEC equipment

maintenance and wrecker support. In some instances, a corps may only be assigned a CBRN battalion. See FM 3-11 for more information on CBRN operations.

Explosive Ordnance Disposal Group

1-60. A corps conducting large-scale combat operations or limited contingencies may receive an EOD group as attached or under OPCON. The EOD group provides command and control, supervision, and staff planning for two to six EOD battalions. It coordinates requests for EOD support for non-military support or assistance, support with coalition EOD forces. The EOD group also coordinates with the rear area operations center for damage control associated with threat ordnance, and provides intelligence, information, and consolidates and disseminates intelligence and information pertaining to first seen foreign ordnance and unusual improvised hazardous devices. The EOD group positions its EOD companies at locations where they can best provide support throughout an AO. The EOD group depends on appropriate elements with the theater and corps area for religious, legal, finance, and field feeding support, HSS, personnel and administrative services, and an SMC for field level maintenance. See ATP 4-32 and ATP 4-32.1 for information on EOD.

Psychological Operations Battalion

1-61. The psychological operations battalions with their subordinate psychological operations companies are trained, organized, and equipped to conduct tactical military information support operations in support of joint forces and corps maneuver forces operating in the AO. The command section and primary staff perform the tactical military information support operations planning for a corps or JTF and supervise the activities of the tactical psychological operations companies deployed into theater. When directed, the psychological operations battalion can establish a psychological operations task force with regional and dissemination psychological operations asset augmentation to influence foreign populations and achieve behavior changes that are consistent with the maneuver commander's stated objectives. The psychological operations battalion is dependent on the supported unit for COMSEC equipment maintenance, communications-electronics maintenance support, sustainment maintenance, hasty and deliberate CBRN decontamination support, field feeding, and HSS. It is also dependent on the division headquarters for storage of authorized stockage list for psychological operations-peculiar equipment and coordination for psychological operations unique logistics support. Additional dependencies include religious, legal, finance, personnel, administrative support, supplemental transportation. The unit may also require indigenous writers, announcers, illustrators, and interpreter augmentation. See FM 3-53 for more information on psychological operations.

U.S. Air Force

1-62. The corps may require U.S Air Force fixed-wing aircraft support for operations. This support could include intelligence, surveillance, and reconnaissance; close air support; air interdiction; cyberspace and electromagnetic activities; and airlift missions. The type of U.S. Air Force liaison provided to a corps depends on the corps' role. As a tactical headquarters, the corps receives a corps tactical air control party. If the corps becomes a JTF or land component command in a limited contingency operation, the corps headquarters receives a joint air component coordination element as its U.S. Air Force air component rather than a tactical air control party.

Army Space Support Element

1-63. Army space support elements are organic to every field army and corps. They are an integral part of the staff and are directly involved in the planning and targeting process to optimize space capabilities and effects to meet the commander's intent. They coordinate directly with other staff functions to integrate space capabilities into plans and ensure space operations are synchronized with mission operations. If requested, an Army space support team may be tasked to augment the field army or corps organic space support element if the corps is serving as a JTF or land component command headquarters. The Army space support team plans, coordinates, and analyzes space capabilities and provides input to the corps staff. It is dependent on appropriate elements of the corps or unit to which attached for religious, legal, and finance support, HSS, personnel and administrative services, field feeding, communications-electronics and COMSEC equipment maintenance, vehicle recovery, and maintenance of other organic table of organization and equipment materiel. See FM 3-14 for more information on the Army space support element operations.

Military History Detachment

1-64. Military history detachments are small teams of officers and enlisted Soldiers that carry out directed collection of historical material during combat and contingency operations for use when writing official history. They are trained and equipped to gather historical documents and materials, conduct oral interviews, photograph events, and advise supported units about preserving historical information. The military history detachment provides expertise, advice, and assistance to the corps commander. The detachment is dependent on its supported unit for religious, legal, finance, field feeding, field maintenance, and logistical support, HSS, and personnel and administrative services. See ATP 1-20 for more details on military history detachment support operations.

Mobile Public Affairs Detachment

1-65. A mobile public affairs detachment provides direct public affairs support to the organic corps public affairs section to enhance planning, coordination, execution, and supervision of expeditionary and campaign public affairs operations in the corps AO. A mobile public affairs detachment can be assigned, attached, or OPCON to a corps and is dependent on the corps for command guidance. It is dependent on the supported unit for religious, legal, finance, field feeding, field maintenance, and logistical support, HSS, and personnel and administrative services. See FM 3-61 for more details on public affairs support operations.

Cyberspace Element

1-66. Corps staffs may request augmentation for cyberspace operations to work with the corps cyberspace and electromagnetic activities section—first from the regional cyber center and then from the Army Information Warfare Operations Center. This support can include planning for and executing DOD information network operations, offensive cyberspace operations, defensive cyberspace operations, and electromagnetic warfare operations. The regional cyber center, in coordination with the Army Information Warfare Operations Center, will provide support and determine any additional units, assets, or agencies that may be required to achieve military decision-making process (MDMP) effects. The *military decision-making process* is an iterative planning methodology to understand the situation and mission, develop a course of action, and produce an operation plan or order (ADP 5-0). The cyber warfare battalion is dependent on appropriate elements of the theater Army for legal, finance, field feeding, and theater-specific sustainment support, HSS, personnel and administrative services, transportation support not already within the organization, and contracted maintenance for commercial off-the-shelf non-standard communications and electronic equipment. See FM 3-12 for more information on the cyber protection brigade.

Cyber Warfare Battalion

1-67. The cyber warfare battalion enables the defeat of an adversary's information and unconventional warfare capabilities in and through the cyberspace domain and the electromagnetic spectrum (EMS) by means of offensive and defensive cyberspace operations. An *adversary* is a party acknowledged as potentially hostile to a friendly party and against which the use of force may be envisaged (JP 3-0). Its purpose is to deny the enemy access to mission-relevant terrain in cyberspace, repel enemy cyberspace attacks, and counterattack when directed. The cyber warfare battalion deploys rapidly and can operate using prepositioned and deployable infrastructure. Generally, the cyber warfare battalion deploys in support of the theater or field army. The cyber warfare battalion is organized with a headquarters company and three cyber warfare companies capable of providing tailored support to corps. For additional information see JP 3-85.

Special Operations Forces

1-68. Conventional forces and special operations forces regularly operate near each other within the corps AO to accomplish the JFC mission. Army special operations forces provide capabilities that expand the options available to a corps commander. During mission planning, the corps staff and special operations force planners include options regarding how to integrate conventional forces and special operations ground elements. A corps may receive a special operations command and control element, which provides capability to coordinate unilateral special operations with a conventional ground force headquarters and with a supported conventional force commander. At the corps level, the special operations command and control element coordinates with the corps operations center, fire support element, deep operations coordination cell,

and battlefield coordination detachment to deconflict targets and operations. It provides Army special operations forces locations through personal coordination, overlays, and other data to the fires cell and the battlefield coordination detachment. The special operations command and control element is dependent on the supporting corps element for religious, legal, and finance support, HSS, and personnel and administrative services. Special operations forces operating beyond the reach of their support elements in a corps AO will require religious, legal, and finance support, HSS, personnel and administrative services, field-level maintenance, transportation, and supply, field services, distribution, OCS, and general engineering support. See FM 3-18 for details on special forces operations support.

Army Field Support Brigade

1-69. The AFSB integrates and synchronizes delivery of USAMC strategic capabilities and enablers to the operational and tactical points of need in support of a theater Army and corps during large-scale combat operations. The AFSB also synchronizes acquisition, logistics, and technology systems contracted support with sustainment maintenance support for the theater Army and is responsible for the materiel readiness of all units and tenants within their assigned area. Logistics assistance representatives in the AFSB provide a built-in forward technical presence in the tactical environment and anticipate requirements for logistics assistance representatives throughout each Army strategic role. The forward stationed AFSBs are theater aligned, OPCON to the ASCC, and provide DS to a theater sustainment command (TSC). U.S.-stationed AFSBs deploy a corps logistics support element that is OPCON to their supported corps during large-scale combat operations. The composition of the corps logistics support element depends on mission variables, but generally includes senior leadership from each USAMC life cycle management command. The remaining portion of the U.S.-based AFSB continues to deliver materiel readiness, force generation, power projection, and mobilization force generation installation support. The AFSBs are dependent on the TSC for religious, legal, and finance support, HSS, personnel and administrative services, logistical services, transportation, field maintenance, unit supply, equipment maintenance, and Uniformed Code of Military Justice. See ATP 4-98 for additional information on AFSBs and their subordinate units.

Medical Brigade (Support)

1-70. The MEDBDE (SPT) is a subordinate command of the TMC. At the corps echelon, the MEDBDE (SPT) provides command and control for all assigned or attached medical units providing HSS to the corps. The MEDBDE (SPT) also plans, coordinates, and supervises class VIII supply and resupply (including blood management) support within the corps' AO. The MEDBDE (SPT) may also execute the single integrated medical logistics (MEDLOG) management mission when designated by the CCDR to provide Army support to other Services. For more information on the MEDBDE (SPT), refer to FM 4-02.

1-71. Although the MEDBDE (SPT) has no command relationship with the ESC, the MEDBDE (SPT) and the ESC coordinate to keep the ESC commander apprised of corps medical support operations and integrate medical support into the overall sustainment operation. The staff coordinates logistics requirements for effective medical support. Transportation for class VIII distribution and casualty evacuation is a primary logistics support requirement.

1-72. The medical logistics management center (MLMC) forward team collocates with the ESC distribution management center (DMC) to synchronize and integrate MEDLOG support. The MLMC forward team supports the development of the corps concept of support for MEDLOG with the ESC DMC.

Corps Aerial Delivery Company (Airborne)

1-73. A corps aerial delivery company supports the theater with personnel and cargo parachute packing, inspection, and supply and issue of aerial delivery equipment required for airdrop. It also provides aerial delivery support for Army, joint, or HN forces. This unit provides maintenance to aerial delivery equipment, and maintains ready-for-issue parachutes and rigged platforms as directed by the corps commander. The corps aerial delivery company depends on appropriate elements of the corps or theater for religious, legal, and finance support; HSS; personnel, administrative and logistical services; the field maintenance company for maintenance; and the field feeding company (EAB) or supported BCT for field feeding support. See ATP 4-48 and FM 4-40 for additional information on aerial and airdrop operations.

Corps Parachute Office

1-74. The corps parachute office advises the corps commander on all aerial delivery operations and acts as a liaison between the corps and division staffs for all aerial delivery operations. The corps parachute office provides operational planning and task organization for aerial delivery operations within the airborne corps or supported organizations. It provides continuity of all Department of the Army (DA) aerial delivery equipment directives as the airborne lead for all conventional forces. See ATP 4-48 for more information on the corps parachute office.

Corps Finance Battalion

1-75. The corps finance battalion reports to the ESC or to the sustainment brigade at echelons above division. The finance battalion commander is the primary account holder to the U.S. Treasury and is responsible for determining currency (U.S. and foreign) requirements, funding subordinate companies, and obtaining additional currency as needed. Corps finance battalions synchronize operations to provide disbursing services and pay support, execute finance policy and procedures, enforce internal controls, and provide critical information to the commander on the best allocation of fiscal resources.

SECTION II – OPERATIONAL ENVIRONMENT AND SUPPORT TO OPERATIONS

1-76. The range of military operations in a theater may extend from military engagement, security cooperation, and deterrence activities to crisis response and limited contingency operations to large-scale combat operations. A *military engagement* is contact and interaction between individuals or elements of the Armed Forces of the United States and those of another nation's armed forces, or foreign and domestic civilian authorities or agencies, to build trust and confidence, share information, coordinate mutual activities, and maintain influence (JP 3-0). *Security cooperation* includes Department of Defense interactions with foreign security establishments to build security relationships that promote specific United States security interests, develop allied and partner nation military and security capabilities for self-defense and multinational operations, and provide United States forces with peacetime and contingency access to allied and partner nations. (JP 3-20). *Deterrence* is the prevention of action by the existence of a credible threat of unacceptable counteraction and/or belief that the cost of action outweighs the perceived benefits (JP 3-0). All operations along this range share a common fundamental purpose—to achieve or contribute to the CCDR campaign plan.

THE OPERATIONAL ENVIRONMENT

1-77. The *operational environment* is the aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander (JP 3-0). An OE encompasses physical areas of the air, land, maritime, space and cyberspace domains. The OE also encompasses the information environment (which includes cyberspace), the EMS, and other factors. These factors include enemy, friendly, and neutral actors that are relevant to a specific operation. The OE involves interconnected influences from the global or regional perspective that impact on conditions and operations. See ADP 3-0, FM 3-0, and ATP 4-93 for additional information on the OE.

1-78. A *threat* is any combination of actors, entities, or forces that have the capability and intent to harm United States forces, United States national interests, or the homeland (ADP 3-0). Threats exist in all domains and may include individuals, groups of individuals (organized or unorganized), paramilitary or military forces, nation-states, or national alliances. Broad trends like globalization, urbanization, technological advances, and failing states affect land operations. These trends require field army and corps commanders and staffs to understand how current and potential threats organize, equip, train, employ, and control their forces and to continually identify, monitor, and assess threats as they adapt and change over time.

1-79. Field army and corps commanders and staffs use operational and mission variables to develop their understanding of the OE. Commanders must accept that when making some decisions, a lack of information and time may preclude them from achieving a complete understanding of the OE. Field army and corps

commanders and staffs use several tools to assist with understanding, visualizing, and describing an OE. These tools include—

- Running estimates as described in FM 5-0.
- MDMP as described in FM 5-0.
- Intelligence preparation of the battlefield (IPB) as described in ATP 2-01.3.
- Sustainment preparation of the OE.

SUSTAINMENT PREPARATION OF THE OPERATIONAL ENVIRONMENT

1-80. *Sustainment preparation of the operational environment* is the analysis to determine infrastructure, physical environment, and resources in the operational environment that will optimize or adversely impact friendly forces means for supporting and sustaining the commander's operations plan (ADP 4-0). It is a continuous shaping activity in the mission analysis phase of MDMP that the TSC and ESC sustainment planners use to analyze the OE to refine or update sustainment estimates to minimize impacts on the Army's ability to sustain a commander's operations plan. It identifies friendly resources (HN support, contractible, or accessible assets) or environmental factors (endemic diseases, climate) that could impact sustainment and is generally conducted in parallel with the IPB.

1-81. Sustainment planners analyze products that cover such topics as selection of lines of communications (LOCs), determination of operational stock assets, and design of the distribution network and information technology infrastructure. This analysis is conducted for the theater area and JOA. See FM 3-0 for additional analysis topics.

1-82. The sustainment preparation of the OE process consists of three steps within the context of the Army operations process and is nested within MDMP. These steps occur in synch with IPB. Each step of the sustainment preparation of the OE process has inputs, sub-steps, and outputs that eventually leads to a better understanding of the situation and facilitates the next step of the sustainment preparation of the OE process. The three steps of the process are as follows:

- Define the OE.
- Describe the physical environmental impacts on operations.
- Evaluate resources available.

1-83. Sustainment preparation of the OE is a continuous shaping activity involving analysis to determine infrastructure, environmental, or resource factors in the OE that impact the Army's ability to sustain the commander's OPLAN. When field army and corps commanders receive the mission, their staffs begin the operations process by using the OPORD and mission and operational variables to develop the operation's plan.

1-84. The analysis inherent in the sustainment preparation of the OE informs planning and ensures the corps plan is aligned with the higher headquarters. The three steps of the sustainment preparation of the OE process are identified in table 1-1 on page 1-20 and are discussed in appendix C.

Table 1-1. Sustainment preparation of the operational environment process

Step 1 Define the Operational Environment	
Inputs	***Outputs***
Commander's initial guidance Initial allocation of time Higher headquarters' plan or order Higher headquarters' intelligence products Running estimates	Update running estimates ASCOPE PMESII crosswalk Identify information requirements Submit requests for information and information collection
Step 2 Describe the physical environmental impact on sustainment operations	
Inputs	***Outputs***
Commander's initial guidance Initial allocation of time Higher headquarters' plan or order Higher headquarters' intelligence products Running estimates	Updated running estimates Updated risk management Develop initial information collection plan
Steps 3 Evaluate resources available	
Inputs	***Outputs***
Higher headquarters' plan or order Multinational agreements and programs UAP tables of organization and equipment UAP status reports UAP doctrine Transportation infrastructure assessments	Update running estimates Critical sustainment asset list Infrastructure development plan Agreements with other nations OCS contracts SPoOE analysis brief Theater logistics analysis Theater logistics overview

ASCOPE	areas, structures, capabilities, organizations, people, and events	SPoOE	sustainment preparation of the operational environment
OCS	operational contract support	UAP	unified action partner
PMESII	political, military, economic, social, information, and infrastructure		

SUPPORT TO ARMY OPERATIONS

1-85. Army sustainment enables multidomain operations by providing the support required to keep the Army and its unified action partners engaged in operations across the OE. Sustainment formations supporting Army operations do so within the Army operational contexts of competition, crisis, and conflict to ensure the field army and corps commanders' freedom of movement, operational reach, and prolonged endurance. At the field army and corps echelons, each command headquarters is supported by an ESC and a MEDBDE (SPT) that provide operational and tactical sustainment support as appropriate to enable Army forces.

SUSTAINMENT SUPPORT TO OPERATIONS DURING COMPETITION

1-86. Army operations during competition below armed conflict primarily focus on training for large-scale combat operations, building partner capabilities, setting favorable conditions in a theater should deterrence fail, and supporting theater Army campaign plans. ESCs supporting the field army and corps focus on integrating and synchronizing sustainment (including HSS) capabilities to support units' current missions during operations in competition. The ESC also plans for future missions in preparation for crisis and armed conflict.

1-87. In theaters where large-scale combat is possible, the Army may constitute a field army to focus on the threat while the ASCC maintains its focus on the entire theater. Once constituted, the field army concentrates on unit readiness activities and employs its attached ESC and MEDBDE (SPT) to support unit readiness

activities. During operations in competition, the ESC and MEDBDE (SPT) plan and synchronize sustainment support for field army security cooperation activities that include joint and multinational exercises, flexible deterrence operations, and decisive action operations in multiple operational areas. Planners use situational understanding and understanding of the OE to develop and refine OPLANs as conditions change in various operational areas across all planning horizons. A *planning horizon* is a point in time commanders use to focus the organization's planning efforts to shape future events (ADP 5-0). The ESC adjusts its task organization based on changes in sustainment requirements to support the operational area.

1-88. During operations in competition, the corps focuses on training for large-scale combat operations and employs its assigned ESC to integrate sustainment (including medical) to facilitate unit readiness. The ESC may be tasked to support a variety of specific supporting operations. For more discussion on operations during competition, see FM 3-94. Table 1-2 identifies ESC-specific sustainment tasks while supporting operations during competition.

Table 1-2. Sustainment tasks during competition

Task	*Executing Entity*
Train and support unit readiness activities	Field Army ESC and Corps ESC
Integrate and synchronize sustainment capabilities while planning for potential operations	Field Army ESC and Corps ESC
Develop and refine OPLANS	Field Army ESC
Adjust task organization based on changes in projected sustainment requirements	Field Army ESC

ESC expeditionary sustainment command OPLAN operations plan

SUSTAINMENT SUPPORT TO OPERATIONS DURING CRISIS

1-89. During a crisis response operation, Army forces focus on preventing further conflict. Army operations during crisis include all activities to deter the adversaries' undesirable actions and any opportunity to further exploit positions of relative advantage. Army forces conduct assigned tasks in preparation for lethal operations should armed conflict become necessary.

1-90. When a field army is constituted, the ASCC will conduct administrative activities and the TSC will maintain its responsibility for a selection of operational activities such as theater opening and reception, staging, onward movement, and integration. This allows the field army to focus on tactical operations. The ESC at the field army echelon supports field army staff planning and provides sustainment support for units attached to the field army. It coordinates with the field army G-4 and assistant chief of staff, operations (G-3) to develop the sustainment running estimates and identify shortfalls. The ESC also advises the field army staff on issues regarding task organization, sustainment capabilities, and risk.

1-91. When the Army employs a corps, the ESC assigned to the corps coordinates with the corps sustainment cell staff to determine initial sustainment requirements and confirm initial estimates. This ESC may also send a liaison to the TSC supporting the theater in which the flexible deterrent option is occurring. A *flexible deterrent option* is a planning construct intended to facilitate early decision making by developing a wide range of interrelated responses that begin with deterrent-oriented actions carefully tailored to create a desired effect (JP 5-0). As outlined in both the deployment order and OPORD, the corps plans the task organization and employment of subordinate units, integration and synchronization of operations, massing of effects, allocation of resources, and determination of priorities. The corps staff provides the primary Army interface to manage the time-phased force and deployment data list for all the forces assigned to it in a crisis operation. The corps carefully considers when its CPs will arrive at a port of debarkation in relation to the arrival of protection and maneuver forces. The commander of the ESC may provide recommendations to the corps commander on the deployment sequencing and task organization of subordinate logistics, financial management support, and personnel services units. The ESC G-4 and support operations (SPO) sections provide information to support the corps OPORD including annexes F (Sustainment), P (Host-Nation Support), and W (Operational Contract Support) in coordination with the AFSB and the contracting support brigade to refine sustainment estimates and produce the corps concept of support.

1-92. If the corps is conducting operations while major subordinate units are arriving in theater, the corps ESC may receive and integrate subordinate formations of its supported corps. Once the majority of the deploying force is integrated, the ESC then resumes the responsibility for planning and executing sustainment support to Army forces conducting operations in conflict.

1-93. During operations in crisis, ESCs provide tactical sustainment support that enables the field army and corps to build the combat power required to rapidly transition from competition to armed conflict. If the adversary ceases its provocative activities and tensions subside, Army forces may be directed to transition back to competition. Table 1-3 identifies ESC-specific sustainment tasks while supporting operations during crisis.

Table 1-3. Sustainment tasks during crisis

Task	*Executing Entity*
Provide sustainment support for attached units.	Field Army ESC, Corps ESC
Support field army staff planning.	Field Army ESC
Assist the field army G-4 and G-3 to develop running estimates and identify shortfalls.	Field Army ESC
Advise field army staff on task organization, sustainment capabilities, and risk.	Field Army ESC
Determine initial sustainment requirements and verify and confirm initial running estimates.	Corps ESC
Plan task organization and employment of subordinate units. Integrate and synchronize operations, massing of effects, allocation of resources, and determination of priorities.	Corps ESC
Manage the time-phased force and deployment data list for assigned units.	Corps ESC
ESC G-4 and SPO provide annexes F, P, and W for the corps OPORD.	Corps ESC
Refine the sustainment estimate and produce the corps concept of support.	Corps ESC
If already conducting operations the ESC may receive and integrate subordinate formations.	Corps ESC

ESC	expeditionary sustainment command	OPORD	operation order
G-3	assistant chief of staff, operations	SPO	support operations
G-4	assistant chief of staff, logistics		

SUSTAINMENT SUPPORT TO OPERATIONS DURING CONFLICT

1-94. Army forces operating in conflict focus on the defeat and destruction of enemy ground forces as part of the joint team. As described in ADP 3-0, Army forces close with and destroy enemy forces in any terrain, exploit success, and break their opponent's will to resist during large-scale combat operations. Army forces attack, defend, and conduct stability tasks to achieve GCC operational objectives. The ability to prevail in ground combat is a decisive factor in breaking an enemy's will to continue a conflict.

1-95. The characteristics of operations during conflict include volume, lethality, precision, and tempo. Operations during conflict require a volume of reinforcements, materiel, and equipment significantly greater than that of other operations. Sustainment operations will be performed at a higher tempo. Casualties are anticipated to be higher, requiring replacement of personnel and equipment on a larger scale. Operations during conflict require greater precision in distribution networks and require flexible and adaptable sustainment structure to meet mission requirements.

1-96. The ESC and its task-organized units synchronize and integrate sustainment support for the corps conducting decisive action operations. ESC operations extend from the field army or corps rear boundary to the division rear boundary. In some circumstances, ESC units may operate in the division support area. During operations in conflict, ESC units provide support to the field army or corps formations in accordance with the priorities established by the respective commander.

1-97. The ESC commander establishes the CP where it can best command and control subordinate elements, sustain large-scale combat operations, and mitigate the effects of dispersion, threat, and accelerated tempo. The ESC CP understands how the corps conducts operations and the corps execution concept. ESC liaisons participate in meetings and working groups with the corps to facilitate seamless support. The ESC anticipates placement of fuel, ammunition, repair parts, and select sustainment assets as far forward as possible to support forces. The corps sustainment cell, incorporating the recommendation of the corps transportation officer, plans and implements sustainment priorities for movement. These priorities become the basis of the ESC distribution plan.

1-98. The planners in the ESC proactively prepare support to field army and corps units in the offense with configured loads of fuel, ammunition, and repair parts. To ensure adequate support throughout operations, ESC planners must anticipate the required volume of class III, V, VIII, and IX. They also need to account for increased maintenance and recovery requirements and the transport, life support, and integration of personnel replacements. The ESC commander advises the field army or corps commander regarding supply considerations that might hamper operations or force the termination of operations.

1-99. Commanders expect increased losses to personnel, supplies, and equipment due to the highly destructive nature of large-scale combat operations. ESC commanders may be required to support reconstitution efforts to return ineffective units to a mission capable status as quickly as possible in order to meet campaign objectives. Reconstitution is directed and planned by the maneuver headquarters two echelons above the reconstituted unit. Reconstitution operations consisting of reorganization and regeneration operations are extraordinary actions that commanders plan and implement to restore degraded units' combat effectiveness commensurate with mission requirements and available resources. Reorganization should be considered when the operational pace, mission, or time does not allow for regeneration operations. Reconstitution is much greater and more complex than normal day-to-day sustainment actions. It uses existing systems and units since no resources exist to perform reconstitution. Commanders directing reconstitution use assets under their control or provided by higher echelons. For more information on reconstitution, refer to ATP 3-94.4.

1-100. When directed, Army forces transition back to conducting operations in competition below armed conflict by providing sufficient capacity and capabilities to protect civilian populations, execute or support stability operations, and rebuild HN security and governance institutions. A *stability operation* is an operation conducted outside the United States in coordination with other instruments of national power to establish or maintain a secure environment and provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief (ADP 3-0). The following list includes tasks the ESC may complete following successful operations in conflict:

- Implement the redeployment plan for forces not needed for this phase.
- Adjust posture in anticipation of redeployment to home station.
- Transfer theater-provided equipment as directed.
- Receive, integrate, and transition operations to a sustainment task organization designed to focus on area security and stability tasks.
- Support activities to close or transition an operational area.

1-101. Whenever possible, redeployment planning should begin in the same phase as deployment planning. Redeployment operations are conducted in accordance with the GCC redeployment OPLAN or redeployment policy. The redeployment OPLAN provides specific guidance to Army organizations preparing for redeployment, specifying the sequence for redeployment of units, individuals, and materiel. The plan also provides guidance on the support network, security requirements, and Army prepositioned stocks turn-in procedures. Table 1-4 on page 1-24 identifies ESC-specific sustainment tasks conducted while supporting operations during conflict.

Table 1-4. Sustainment tasks during conflict

Task	*Executing Entity*
ESC planners prepare to support units in the offense with configured loads of fuel, ammunition, and repair parts.	Field Army ESC, Corps ESC
ESC planners anticipate required quantities of class III, V, VIII, and IX. Account for potential increases in maintenance, recovery, transport, life support, and integration of replacements.	Field Army ESC, Corps ESC
ESC commanders should be ready to assist with reconstitution efforts.	Field Army ESC, Corps ESC
Be prepared to transition back to conducting operations in competition below armed conflict.	Field Army ESC, Corps ESC
Provide liaisons to meetings and working groups within the corps.	Corps ESC
Plan to place select sustainment forces, ammunition, fuel, and repair parts as far forward as possible to support the corps.	Corps ESC
Prepare a distribution plan based on the priorities identified by the corps sustainment cell and the corps transportation officer.	Corps ESC
ESC expeditionary sustainment command	

Chapter 2

Sustainment Organizations

Chapter 2 describes the field army and corps ESC. The chapter also describes the sustainment brigade, combat sustainment support battalion, DSB, and DSSB. It discusses how sustainment organizations integrate and synchronize sustainment functions at the operational and tactical levels to enable maneuver force freedom of action, operational reach, and prolonged endurance.

SECTION I – SUSTAINMENT HEADQUARTERS ORGANIZATIONS

2-1. At the field army and corps echelons, supporting sustainment headquarters plan and synchronize support for Army forces conducting combat operations across a multidomain extended battlefield. This section includes only selected sustainment headquarters organizations that operate at echelon. Figure 2-1 depicts the notional AOR command and control of sustainment forces in a theater.

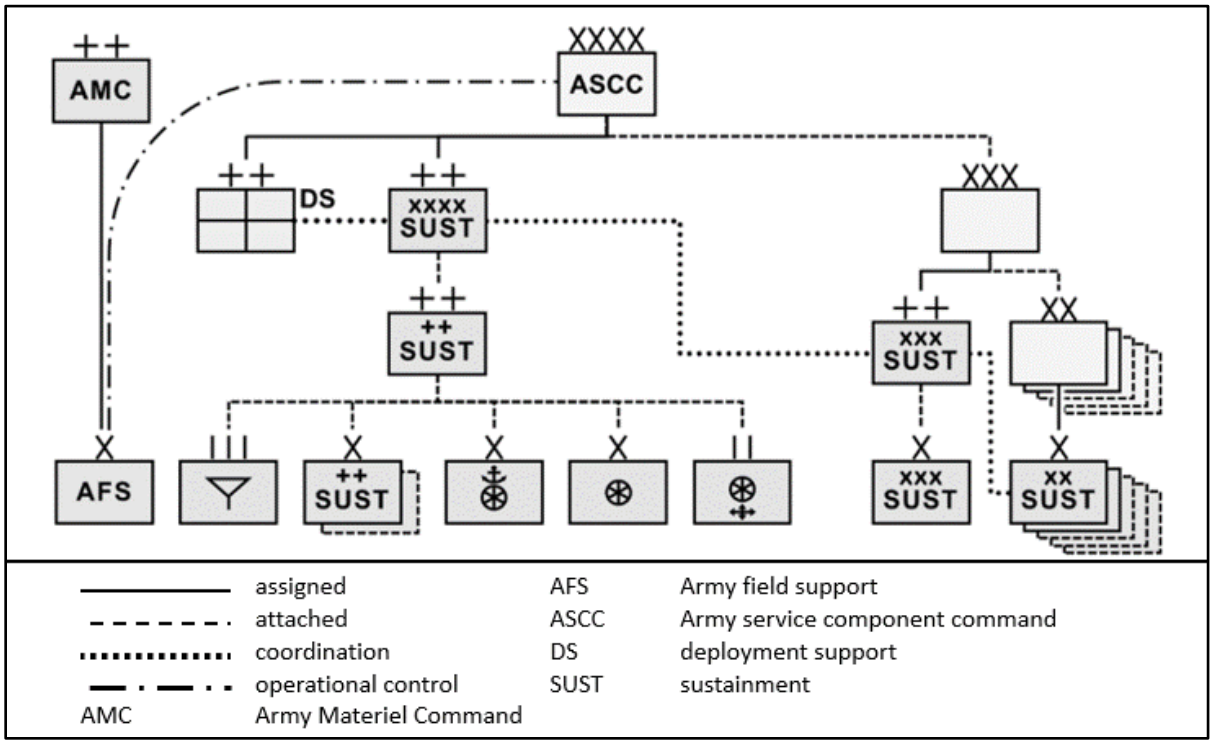


Figure 2-1. Notional area of responsibility command and control of sustainment forces.

EXPEDITIONARY SUSTAINMENT COMMAND

2-2. At the field army and corps echelon, a task-organized ESC provides sustainment support to Army forces and unified action partners conducting operations in the operational area. ESCs synchronize and integrate sustainment support at the field army and corps echelons.

ROLE, CORE COMPETENCIES, AND FUNCTIONS

2-3. The role of the ESC is to provide command and control for all assigned and attached units and plan, integrate, and synchronize sustainment support at the field army and corps echelons. The ESC headquarters is normally task-organized with sustainment brigades, a petroleum group, finance center, and movement control battalion. The ESC is attached to a field army and assigned to a corps. The ESC executes logistics support, HR, financial management, and distribution management operations at the operational and tactical levels of war.

Expeditionary Sustainment Command (Field Army or Corps)

Role: Provide sustainment support to the field army or corps through command and control of task-organized sustainment brigades, a petroleum group, finance center, and movement control battalion. It plans, integrates, and synchronizes sustainment support including medical.

Capability: Executes logistics support, human resources, financial management, and distribution management operations at the operational and tactical levels of warfare.

Command relationship: Attached to field army and assigned to a corps.

Support relationship: Provides support to forces as directed in an OPORD.

Span of operations: Executes missions in an assigned area of operation.

2-4. The core competency of the ESC is to command and control and integrate sustainment units supporting field army and corps operations. A *core competency* is an essential and enduring capability that a branch or an organization provides to Army operations (ADP 1-01). The ESC plans and synchronizes distribution management operations, financial management, and HR support. The ESC integrates HSS and MEDLOG operations into the overall sustainment support concept. The ESC manages requirements through the coordination and synchronization of the physical flow of forces, equipment, and cargo to meet the daily operational needs of the tactical units. The ESC monitors movements throughout the assigned JOA or AO and identifies and resolves problems to reduce interference to distribution networks. The ESC coordinates sustainment support and relays sustainment status across the logistics enterprise. The ESC controls distribution management, transportation operations, materiel management, and HR support. The ESC DMC materiel management branch serves as the nucleus for the field army or corps materiel and distribution management functions. This branch synchronizes and integrates strategic sustainment support from AFSBs, USAMC life cycle management commands, and the Defense Logistics Agency (DLA).

2-5. In addition to supporting a JOA or AO, an ESC may be task-organized to serve as the nucleus for a joint command for logistics when its higher headquarters is serving in the role of JTF or JFLCC. The ESC requires staff augmentation if it performs in any of these roles and should consider what additional capabilities are required to conduct deliberate mission analysis and support. Supporting an ARFOR, JTF, or JFLCC may require the ESC to use joint rather than Army doctrine.

CHARACTERISTICS AND CAPABILITIES

2-6. The ESC headquarters plans, coordinates, integrates, synchronizes, monitors, and controls sustainment operations within a JOA or AO. The headquarters staff is generally organized by warfighting function. However, ESC commanders may organize, tailor, or adapt their individual staffs as necessary to accomplish their assigned mission. They use meetings to bring staffs together to conduct current operations and further support planning, synchronization, and integration efforts.

2-7. The ESC mission determines the dependencies of its headquarters. The ESC may request and receive additional staff to enable planning and operations synchronization and enhance its mission capabilities. As a headquartered organization, the ESC is dependent upon the following units:

- Expeditionary signal battalion for communications support.
- SMC for field maintenance and recovery support.
- MCAS for Role 1 and 2 medical support. See FM 4-02 and ATP 4-02.1 for additional information.

FIELD ARMY EXPEDITIONARY SUSTAINMENT COMMAND

2-8. The ESC supports the field army and its theater enabling commands. The ESC is the controlling headquarters for the integration and synchronization of sustainment operations at this echelon. The ESC provides GS to units in their geographic area as tasked by an OPORD. An ESC attached to the field army supports forces in and provides distribution throughout the JOA. The field army ESC may be tasked to open or close the JOA as directed by the field army headquarters.

CORPS EXPEDITIONARY SUSTAINMENT COMMAND

2-9. The corps-assigned ESC plans for near-term operations and assists the corps sustainment cell with planning and coordinating sustainment to meet the demands of current operations. The corps ESC and its subordinate task-organized functional and multifunctional sustainment units provide GS for all units in the corps AO.

2-10. The corps ESC depends on the corps staff for long-range planning capability. EAB sustainment is dependent on corps units for medical support; signal support; intelligence, surveillance, and reconnaissance; fires; protection (engineer support and route security); and strategic partner planning capability for field maintenance support.

NOTIONAL ESC TASK ORGANIZATION

2-11. There is no standard configuration for the ESC. The ESC is a headquarters and has an assigned headquarters and headquarters company. The task organization of the ESC depends on the requirements of a given mission and may include of a variation of brigades, battalions, companies, detachments, and teams, each with differing command and support relationships. Planners consider all aspects of an assigned mission when determining which organizations to request in support of a specific named operation. Figure 2-2 depicts a notional ESC task organization.

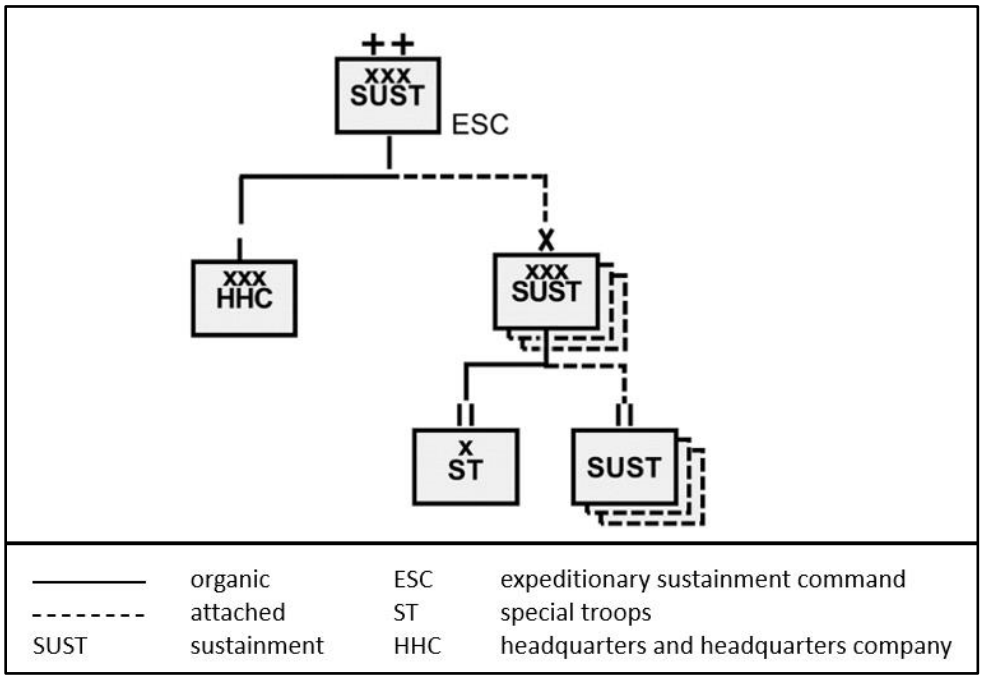


Figure 2-2. Notional expeditionary sustainment command task organization

HEADQUARTERS AND HEADQUARTERS COMPANY

2-12. The headquarters and headquarters company provides company-level administrative and logistics support to the ESC command group and staff. It consists of the company commander, first sergeant, HR,

maintenance, supply, and a CBRN specialist. It can perform field maintenance on company organic wheeled vehicles and power generation equipment. In addition to the responsibilities common to all commanders, the ESC headquarters and headquarters company commander coordinates billeting, field sanitation, and HSS for the command.

SUSTAINMENT BRIGADES

2-13. At the field army and corps echelons, sustainment brigades provide command and control for combat sustainment support battalions (CSSBs) and other functional sustainment battalions. The ESC conducts support operations for units operating at the field army and corps echelons. ***Support operations*** **consist of the staff function of planning, coordinating, and synchronizing sustainment in support of units conducting decisive action in an area of operations.**

2-14. At the field army and corps echelons, there are task-organized sustainment brigades attached to the ESC to provide sustainment support to Army forces and unified action partners conducting operations in the operational area.

ROLE, CORE COMPETENCIES, AND FUNCTIONS

2-15. The role of the sustainment brigade is to command and control assigned, attached, and OPCON sustainment units. It is the Army's primary brigade-level sustainment headquarters.

2-16. The core competencies of the sustainment brigade are to provide command and control of sustainment formations assigned and attached to the brigade, provide distribution management, and conduct support operations. The sustainment brigade executes distribution management, which includes distribution integration, transportation operations, and materiel management. The sustainment brigade also executes OCS and personnel services support. Sustainment brigade commanders ensure operations are nested with the ESC operations.

Sustainment Brigade
(Field Army or Corps)

Role: Sustain corps units through the command and control of assigned, attached, and OPCON sustainment units. Conducts support operations to plan, coordinate, and synchronize sustainment in support of units conducting decisive action in an AO.

Capability: A flexible headquarters that is task-organized to provide command and control, distribution management, and support operations in support of an ESC in the field army or corps area.

Parent: ESC.

Command relationship: Attached to an ESC.

Support relationship: General support

CHARACTERISTICS AND CAPABILITIES

2-17. The sustainment brigade can command and control up to six CSSBs or functional battalions and normally has a GS relationship with supported units. The sustainment brigade is both interoperable and agile. It is capable of operating in a joint, interorganizational, and multinational environment and can adapt to support all decisive action tasks simultaneously.

2-18. At the field army and corps echelons, the sustainment brigade is task-organized with units to execute logistics support. Sustainment brigades include their organic special troops battalions and are generally task-organized with CSSBs, motor transportation battalions, and petroleum, oils, and lubricants (POL) support battalions.

2-19. The sustainment brigade headquarters is not designed with a standalone tactical CP capability. The sustainment brigade can create and operate a tactical CP using organic assets, but not without accepting risk in other areas. Chapter 3 contains more information about the CP. Figure 2-3 depicts a notional sustainment brigade task organization.

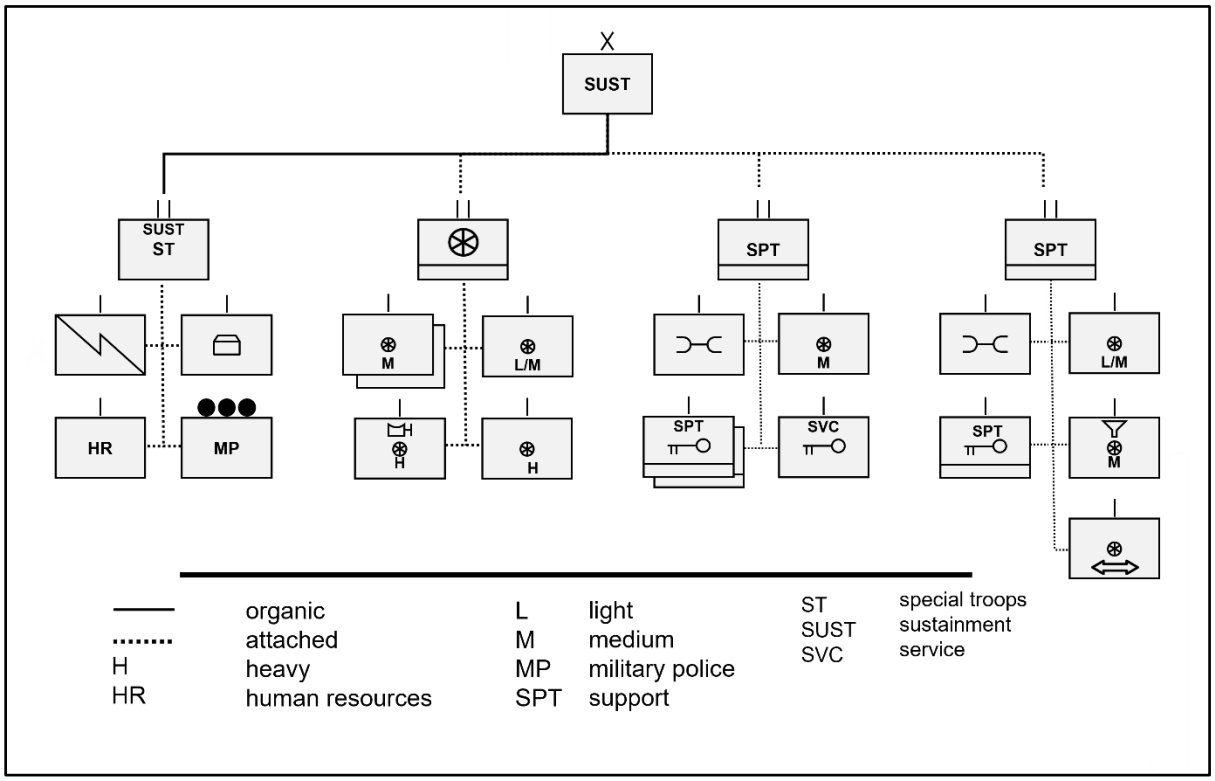


Figure 2-3. Notional sustainment brigade task organization

2-20. Sustainment brigades are not assigned an AO. The sustainment brigade operating in an AO is dependent upon the unit assigned AO responsibilities for terrain management, information collection, civil military operations support, clearance of fires, and security. The sustainment brigade conducts local security around its base or base cluster against level I threats. However, it must coordinate with designated combat reaction forces to defeat level II and defend against level III threats. Sustainment brigades, are dependent upon MCAS for Role 2 medical support. Special Troops Battalion

2-21. The special troops battalion is organic to the sustainment brigade and can command up to seven assigned, attached, or OPCON units. The special troops battalion is dependent on a brigade signal company for signal support, an SMC for field maintenance support, an MCAS for Role 2 medical support, and a field feeding company for field feeding support. These units support the special troops battalion, the sustainment brigade headquarters, and all organic, assigned, and attached units. The task organization may include units that perform functions not represented on the staff. Examples include aerial delivery, mortuary affairs, and military mail terminals.

Finance Battalion

2-22. The finance battalion is typically assigned to a sustainment brigade and provides GS. The battalion reports to the ESC or to the sustainment brigade at echelons above division. The finance battalion provides command and control to between two and six assigned and attached finance companies. It activates the disbursing station symbol number, known as DSSN, identifies currency requirements, and provides banking support, disbursing support, pay support, and cash control operations. Financial management capabilities must be part of the initial flow of forces into theater to support the contracting effort. The finance battalion establishes internal control procedures and provides commerce support and procurement support to include certifying, funding, and clearing paying agents. The finance battalion relies on the sustainment brigade for religious, legal, force protection, medical, signal, maintenance, transportation, and field feeding support.

Combat Sustainment Support Battalion

2-23. The CSSB is a multifunctional logistics headquarters that synchronizes and controls the execution of logistics support in a designated AO. It conducts maintenance, transportation, supply, field services, and distribution. CSSBs are typically attached to sustainment brigades supporting the field army and corps. CSSBs control all assigned and attached units in an operational area as directed by the sustainment brigade commander. CSSBs are discussed later in this chapter.

Motor Transportation Battalion

2-24. Motor transportation battalions are generally attached to sustainment brigades supporting the field army and corps and are task-organized with subordinate truck companies tailored to provide support based on mission requirements. The battalion provides command and control of assigned or attached units and synchronizes motor transport operations. See ATP 4-13 for additional information on motor transportation battalion operations.

Petroleum Support Battalion

2-25. POL support battalions are normally attached to sustainment brigades supporting the field army and corps. The POL support battalion provides command and control for bulk petroleum storage and distribution operations. The battalion commander and staff also direct operations at storage facilities, supervise programs for quality surveillance of petroleum products, and manage operations at mobile petroleum products laboratories. See ATP 4-43 for additional information on petroleum support operations.

Movement Control Battalion

2-26. Movement control battalions are generally attached to sustainment brigades supporting the field army and corps. The movement control battalion coordinates and synchronizes the execution of movements and transportation operations to ensure effective and efficient movements to support military operations. *Movement control* is the dual process of committing allocated transportation assets and regulating movements according to command priorities to synchronize distribution flow over lines of communications to sustain land forces (ADP 4-0). See ATP 4-16 for additional information on movement control operations.

COMBAT SUSTAINMENT SUPPORT BATTALION

2-27. At the field army and corps echelons, CSSBs may be attached to sustainment brigades to provide sustainment to Army forces and unified action partners conducting operations across a multidomain extended battlefield. At the corps echelon, the CSSB is the sustainment brigade's primary means to accomplish its support mission.

ROLE, CORE COMPETENCIES, AND FUNCTIONS

2-28. The CSSB is a multifunctional logistics headquarters capable of commanding and controlling up to six company-sized units assigned, attached, or as directed by its higher headquarters. The CSSB role is to synchronize and execute logistics support to field army or corps units conducting operations. The core competency of a CSSB is the command and control of logistics units providing maintenance, transportation, supply, field services, and distribution.

2-29. CSSBs have an organic headquarters and headquarters company and are task-organized with composite and functional sustainment companies, teams, and detachments

CHARACTERISTICS AND CAPABILITIES

2-30. The CSSB is expeditionary, inter-operable, and agile. CSSBs are expeditionary; they can deploy task-organized forces on short notice to austere locations and conduct logistics operations immediately upon arrival. CSSBs are inter-operable; they can task-organize rapidly and integrate joint, inter-organizational, and multinational requirements and capabilities. CSSBs are agile; they can synchronize logistics support across all decisive action tasks. The CSSB must be able to move and displace at the pace of the supported field army or corps units. CSSBs occupy terrain in the performance of their mission but are not considered terrain managers because they lack the capability to perform terrain management functions. *Terrain managemen*t is the process of allocating terrain by establishing areas of operation, designating assembly areas, and specifying locations for units and activities to deconflict activities that might interfere with each other (ADP 3-90).

2-31. The CSSB is dependent upon a sustainment brigade for administrative and logistics support. It is also dependent on a MCAS for Role 1 and 2 medical treatment and evacuation, and an expeditionary signal battalion for communication support.

Combat Sustainment Support Battalion (Field Army or Corps)

Role: Synchronize and execute logistics support for field army or corps units conducting operations.

Capability: Control and synchronize the logistics operations of up to six functional companies.

Parent: ESC, DSB, Sustainment brigade, ESC.

Command relationship: Normally attached to a sustainment brigade.

Support relationship: General support to all units in its area unless otherwise directed.

Span of operations: Corps rear area to the division rear area.

Mobility: Capability to transport 100% of its TOE equipment and supplies in a single lift

ORGANIZATION

2-32. CSSB task organization is determined by mission requirements and its command and support relationships as directed in the OPORD. The CSSB span of control is two to six company-sized units. CSSBs attached to sustainment brigades supporting the field army and corps echelons have an organic headquarters and headquarters company and are typically task-organized with a composite supply company, SMC, modular ammunition company, palletized load system truck company, and an inland cargo transfer company as depicted in figure 2-4 below.

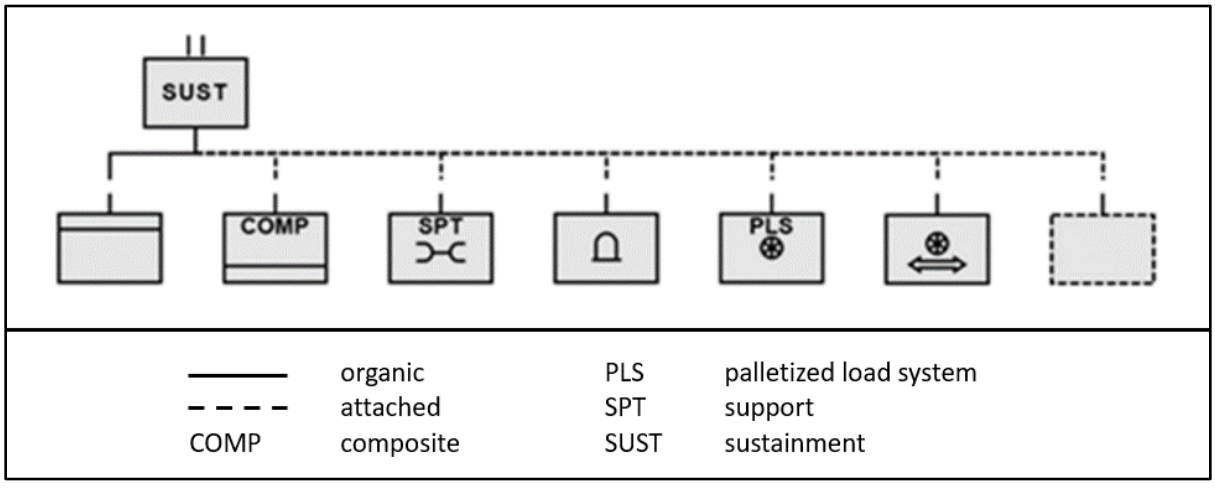


Figure 2-4. Example of a notional combat sustainment support battalion

HEADQUARTERS AND HEADQUARTERS COMPANY

2-33. The CSSB headquarters and headquarters company consists of the command group, personal and coordinating staff, and headquarters company. The CSSB provides command and control for all organic,

assigned, OPCON, and attached units to the CSSB. The staff conducts planning, synchronization, and coordination of logistics operations execution for all assigned and attached units.

2-34. The CSSB company headquarters provides leadership, supply, and maintenance to headquarters and headquarters company personnel. This small organization includes the company commander, first sergeant, and supporting supply, maintenance, and CBRN personnel. For additional information on the CSSB see ATP 4-93.1 and Appendices D.

DIVISION SUSTAINMENT BRIGADE

2-35. The DSB is a multifunctional logistics headquarters assigned to a division. The DSB commander synchronizes and integrates sustainment. The DSB commander is the senior sustainer in the division and is responsible for the execution of sustainment operations in the division AO.

2-36. The divisions within a corps or field army each have an assigned DSB. The DSB provides materiel management capability to the division. The DSB employs sustainment capabilities to create desired effects in support of the division commander's objectives. The DSB and its assigned and attached units provide DS to all units assigned and attached to the division as well as GS logistics, personnel services, and financial management to non-divisional forces operating in the division AO as directed by the division commander. Additional modular sustainment brigades, CSSBs, and companies may be attached to the division to sustain large-scale combat operations. Figure 2-5 depicts a notional task-organized DSB in a heavy division.

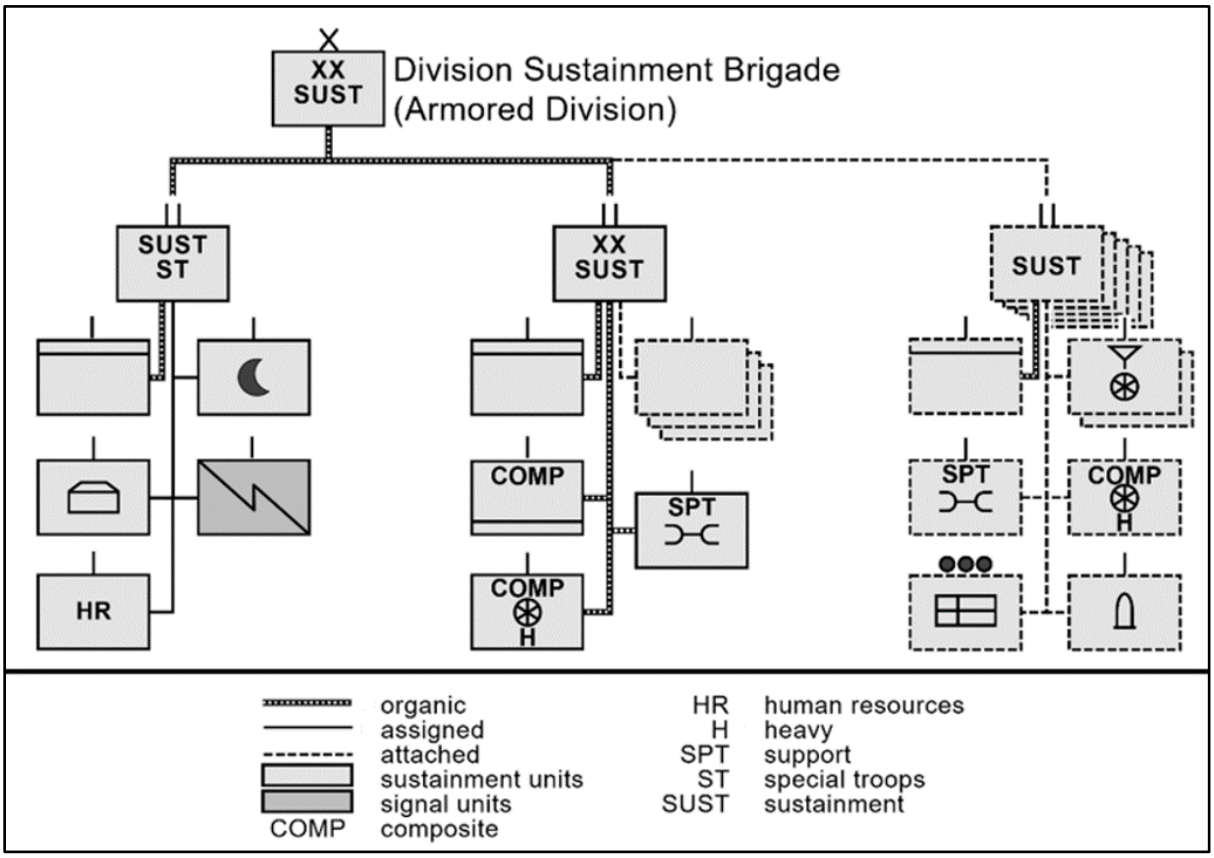


Figure 2-5. Notional task organized DSB in a heavy division

ROLE, CORE COMPETENCIES, AND FUNCTIONS

2-37. The role of the DSB is to command and control all subordinate units of the DSB and plan, synchronize, and integrate all sustainment support (including medical) for the division. The DSB can command and control up to seven battalions. The core competencies of the DSB are—

- Command and control sustainment formations assigned and attached to the division.
- Provide distribution management.
- Conduct support operations.

2-38. The DSB performs the following functions: distribution management and operations, transportation, supply support, field maintenance, HR, financial management, personnel services, and OCS requirements determination in coordination with subordinate units and division staff. Characteristics and Capabilities

2-39. The DSB is expeditionary, inter-operable, and agile. The DSB can deploy task-organized forces on short notice to austere locations and conduct sustainment operations immediately upon arrival. The DSB can organize rapidly and integrate joint, inter-organizational, and multinational requirements and capabilities.

DIVISION SUSTAINMENT SUPPORT BATTALION

2-40. The DSSB is a multifunctional battalion that is organic to a DSB and provides logistics support to a division. The DSSB organizational design includes four organic companies. It has the capability to command and control up to four additional companies, detachments, or teams.

ROLE, CORE COMPETENCIES, AND FUNCTIONS

2-41. The role of the DSSB is to provide command and control for organic and attached units and synchronize and coordinate logistics operations in a division task organization.

2-42. The core competencies of the DSSB are—

- Command and control organic and attached units.
- Synchronize, integrate, and control the execution of logistics operations.
- Provide administrative and logistics support for attached units, which includes communications and CBRN defense.

2-43. The DSSB performs the command and control function and the logistics functions of transportation, field maintenance, and supply with its organic units.

CHARACTERISTICS AND CAPABILITIES

2-44. The DSSB is a headquarters with organic company-level capabilities to support supply, transportation, and maintenance operations. These capabilities enable the battalion to provide water treatment and storage, non-mobile petroleum storage, and troop transportation support. DSSBs supporting a heavy division also provide heavy equipment trailer transportation support to the heavy tracked vehicles within the division. This includes delivery of combat vehicles forward of the rear area and catastrophic recovery from the close area. A *close area* is the portion of the commander's area of operations where the majority of subordinate maneuver forces conduct close combat (ADP 3-0).

2-45. The DSSB is dependent upon appropriate elements of the DSB for religious, legal, finance, personnel, and logistics services support. The DSSB is dependent upon the DSB for satellite communications, Army Health System (AHS) support, and administrative support. Additional dependencies include an MCAS for both Role 1and Role 2 medical support, a field feeding company (EAB) for field feeding support, and a modular ammunition ordnance platoon for munition accountability and handling.

ORGANIZATION

2-46. DSSBs include an HHC, composite supply company, composite truck company, and division SMC. They can also expand their capabilities by task organizing up to four additional company or below logistic units in accordance with requirements. Figure 2-6 on page 2-10 shows a DSSB for a heavy division. Figure 2-7 on page 2-10 shows a DSSB for a light division.

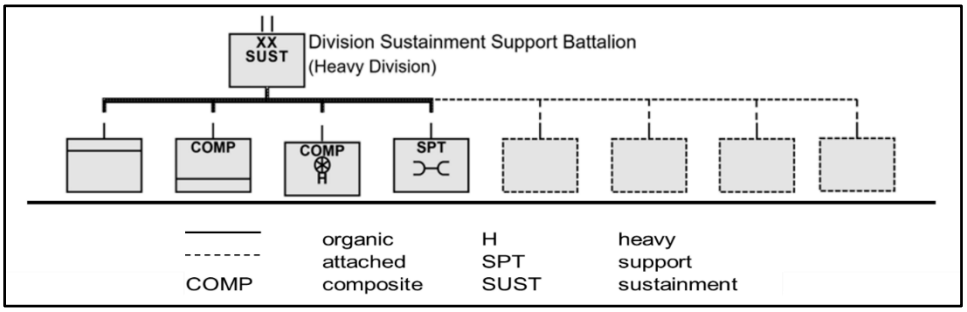


Figure 2-6. DSSB for a heavy division

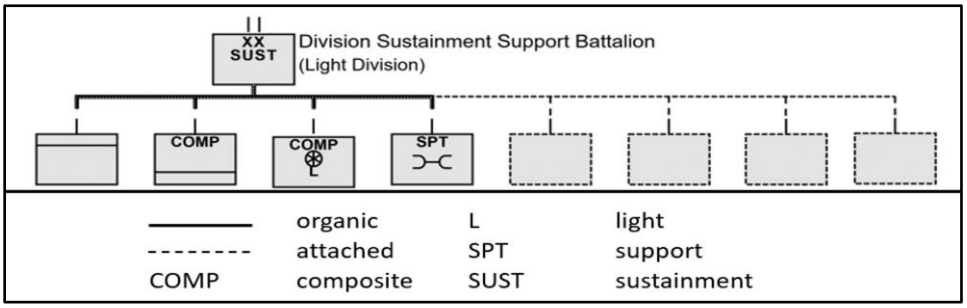


Figure 2-7. DSSB for a light division

2-47. See ATP 4-91 and FM 4-0 for additional information on the DSSB.

FUNCTIONAL COMPANIES SUPPORTING CORPS MISSION

2-48. Many functional logistics companies support the corps echelon to provide corps units with critical logistics capabilities. These functional companies provide GS within the corps rear area and DS to corps units operating forward in the corps close area.

QUARTERMASTER SUPPLY COMPANY

2-49. The quartermaster supply company will normally be attached to a CSSB. The company consists of a company headquarters and three supply platoons. Its mission is to provide supported units GS and DS of class II, III (packaged), IV, VII and IX, maps, and bottled water. The company consists of one to three multi-class SSA sites that include receipt, storage, and issue sections for perishable and semi-perishable subsistence. The company or its platoons may have a DS or GS relationship with supported units. Quartermaster supply companies are dependent upon the appropriate elements within the corps area for religious, legal, HSS, finance, and personnel and administrative support. Within the CSSBs, quartermaster supply companies may depend upon the composite truck company for the distribution and return of supplies, flat racks, and the multi-temperature refrigerated container system. They also depend upon the field feeding company (EAB) or supported BCT for field feeding support.

QUARTERMASTER COMPOSITE SUPPLY COMPANY (CORPS)

2-50. The composite supply company (corps) will normally be attached to a CSSB. Platoons and or sections from the composite supply company (corps) may operate as far forward as the brigade support areas. Its mission is to provide class I, II, III (bulk and packaged), IV, VII, IX, water purification, and water supply support and shower and laundry services (reserve component companies only). Active Component companies consists of a company headquarters, supply platoon, bulk petroleum platoon, tactical petroleum platoon, and water purification platoon. Reserve Component composite supply companies lack some of the bulk fuel assets, but have the additional capability to provide shower and laundry services. Composite supply companies are dependent upon the appropriate elements within the corps area for religious, legal, HSS,

finance, personnel and administrative, field level communications-electronics maintenance, and supplemental transportation support. Within the CSSBs, composite supply companies depend upon the composite truck company for the distribution and return of supplies, flat racks, and the multi-temperature refrigerated container system. They also depend on the SMC for field maintenance and the field feeding company (EAB) or supported BCT for field feeding support.

QUARTERMASTER WATER SUPPORT COMPANY

2-51. The water support company may be attached to the CSSB. The water support company produces, stores, and distributes potable water to supported units within the corps support area. The water support company is capable of producing between 300-450k gallons of water, storing 120k gallons, and distributing 20k gallons in one turn with organic equipment. The water support company may provide command and control to a tactical water distribution system detachment. The tactical water distribution system detachment provides additional potable water distribution by establishing, maintaining, and operating up to 10 miles of hoseline up to the corps rear area. The detachment may also provide two DS water supply points using organic equipment. The water support company is dependent on the CSSB for command and control, religious, legal, HSS, finance, automation, personnel and administrative, logistics services, maintenance, and CBRN support. It is also dependent on the SMC for field maintenance and recovery support. It is important to note that most water support companies are located in the Army National Guard and Army Reserve.

QUARTERMASTER MORTUARY AFFAIRS COMPANY

2-52. One mortuary affairs company is allocated per corps and is usually attached to a CSSB. The mortuary affairs company is designed to process up to 400 human remains per day from up to 20 mortuary affairs collection point locations. The mortuary affairs company may establish a main collection point at the corps support area to evacuate human remains to the theater mortuary evacuation point. The company operates the theater mortuary evacuation point with the ability to process up to 250 human remains daily. Mortuary affairs companies are dependent upon the appropriate elements of the corps for religious, legal, engineer, EOD, HSS, finance, personnel and administrative services, logistics services, and supplemental transportation support. They depend upon a CBRN (Heavy) company to provide decontamination of personnel and equipment and to provide CBRN-related technical support. The CBRN (Heavy) company assists with the decontamination of contaminated human remains during the tentative identification process at the mortuary affairs contaminated remains mitigation site. The unit is dependent on the field feeding company (EAB) or supported unit for field feeding support. For additional information on mortuary affairs, see ATP 4-46/MCRP 3-40G.3/NTTP 4-06/AFTTP3-2.51.

CLASSIFICATION AND INSPECTION COMPANY

2-53. The classification and inspection company is typically attached to a CSSB in the corps area or joint sustainment area. The company supports USAMC by rapidly returning repairable components to the repair facility and serviceable materiel back into the supply system for redistribution. The classification and inspection company receives, temporarily stores, classifies, inspects, and gains accountability of retrograde materiel, including supply classes II, III (packaged), IV, VII, IX, and X. The Army currently assigns all classification and inspection companies to the Army National Guard. The Army designed the companies as a permanent replacement to ad hoc redistribution property assistance teams. When deployed, the companies are dependent upon appropriate elements within the theater for religious, legal, HSS, finance, personnel and administrative services, and logistics support. The company also requires support from a field feeding company (EAB) for field feeding. Medium truck company support is also required for distribution and retrograde of supplies to the appropriate destination. See ATP 4-33 for additional information on the classification and inspection company.

MODULAR AMMUNITION COMPANY

2-54. The modular ammunition company is attached to a CSSB within the corps area. This company provides modular ammunition operations on an area basis within the corps AO. The modular ammunition company receives, stores, and issues munitions. This company normally consists of a headquarters platoon and three modular ammunition platoons with the command and control capacity to expand to five. The company can

operate ammunition supply areas at the corps level and may operate ammunition supply areas at the division level as required by the tactical situation. This unit is dependent upon appropriate elements within the corps or division area for casualty evacuation, vehicle recovery, religious, legal, HSS, finance, personnel and administrative services, and engineer support. Ammunition units may also require augmentation to provide security for ammunition support activities. See ATP 4-35 for more information about modular ammunition company operations.

SUPPORT MAINTENANCE COMPANY

2-55. The support maintenance company provides field-level maintenance support to units operating at the corps echelon. It will normally be attached to a CSSB or sustainment brigade. Support maintenance companies provide allied trades support, wheeled vehicle recovery, and quality control. They also provide maintenance for wheeled vehicles, communications, electronics, special electronic devices, ground support equipment, power generation equipment, utility equipment, and test, measurement, and diagnostic equipment. ATP 4-33 provides additional information on the support maintenance company.

MAINTENANCE SURGE TEAM

2-56. The maintenance surge team provide field-level maintenance to reinforce maintenance units supporting M1, M2/3, and Stryker weapon systems. It provides an EAB surge maintenance capability that is tailorable and flexible to fill gaps in maintenance support to M1, M2/3, and Stryker weapon systems. The maintenance surge team enhances the corps commander's ability to rapidly generate combat power by providing maintenance depth and flexibility at critical points of need. The team generally augments unit or battalion maintenance capability. See ATP 4-33 for additional information on the Maintenance Surge Team.

INLAND CARGO TRANSFER COMPANY

2-57. The inland cargo transfer company is generally attached to a CSSB. The inland cargo transfer company may operate intermodal terminals at corps hubs in two separate locations. The mission of the inland cargo transfer company within the corps AOR is to discharge, load, and transship cargo at air, rail, or truck terminals, convoy support centers, and central receiving and shipping points. The company has two cargo transfer platoons, but it is not considered modular. The inland cargo transfer company is dependent on appropriate elements within the theater for religious, legal, HSS, finance, personnel and administrative services, and logistics support. It also requires COMSEC maintenance, common-user land transportation (CULT) for full and partial unit moves, and SMC support for small arms and electronic maintenance. *Common-user land transportation* is the point-to-point land transportation service operated by a single Service for common use by two or more Services (JP 4-01.5). See ATP 4-13 for additional information on the inland cargo transfer company.

MEDIUM TRUCK COMPANY (CARGO) (EAB LINE HAUL)

2-58. The medium truck company (cargo) (EAB line haul) is normally attached to a motor transportation battalion or a CSSB. This company provides transportation for the movement of containerized, non-containerized, and palletized cargo, bulk water products, and dry or refrigerated cargo. It is employed in both local and line haul operations in the corps AO. This unit is equipped with the M915 series tractor truck that tows the M872 40-foot, 34-ton semi-trailer. The 34-ton capacity can support 40 feet of containerized or non-containerized cargo, including two twenty-foot equivalent unit containers or one forty-foot equivalent unit container on its open deck. The unit is dependent on appropriate elements within the theater for religious, legal, HSS, finance, personnel and administrative services, and logistics support. It also requires support from the SMC for allied trades support and field maintenance on utilities equipment, engineer equipment, small arms communications and electronic equipment, special electronic devices, computers, and COMSEC equipment. The unit is dependent on appropriate elements within the corps for external convoy force protection and escorts, and on CULT for the transportation of the multi-temperature refrigerated container system. See ATP 4-11 for additional information on the medium truck company (cargo)(EAB line haul).

MEDIUM TRUCK COMPANY (CARGO) (EAB TACTICAL)

2-59. The medium truck company (cargo) (EAB tactical) is normally attached to a motor transportation battalion or CSSB. This company provides transportation for the movement of containerized, non-containerized, and palletized cargo, bulk water products, and dry and refrigerated cargo. It is employed in both local and line haul operations in the corps AO. The company is equipped with the M1088 medium tactical vehicle tractor that tows the M871 30-foot, 22.5-ton trailer. The 22-ton capacity can support lift capabilities for 60 trailers at one time. This unit is dependent on appropriate elements within the corps for religious, legal, HSS, finance, personnel and administrative, and logistics support. It requires support from the SMC for allied trades support and field maintenance on utilities equipment, power generators, engineer equipment, quartermaster equipment, chemical equipment, small arms communications and electronic equipment, special electronic devices, and computers. It also relies on the corps for external convoy force protection and escorts, and on CULT for the transportation of the multi-temperature refrigerated container system. See ATP 4-11 for additional information on the medium truck company (cargo)(EAB tactical).

MEDIUM TRUCK COMPANY (POL 5K) (EAB TACTICAL)

2-60. The medium truck company (POL 5k) (EAB tactical) is attached to a CSSB. This company provides transportation for the movement of bulk petroleum products through the utilization of the family of medium tactical vehicles (also known as FMTV) tractor with associated semi-trailer tanks. It is employed in both local and line haul operations in the corps and division AO and provides either bulk or retail fuel distribution. The company is authorized 60 family of medium tactical vehicles tractors (M1088), which are the same tractors authorized in the light-medium truck company, and 60 5k tankers (M967). The unit is dependent on appropriate elements within the theater for religious, legal, HSS, finance, personnel and administrative, and logistics support. An SMC provides support for small arms, communications electronics and COMSEC equipment, and a field feeding company (EAB) provides field feeding support. See ATP 4-11 for additional information on the medium truck company (POL 5k)(EAB tactical).

MEDIUM TRUCK COMPANY (POL 5K) (EAB LINE HAUL)

2-61. The medium truck company (POL 5k) (EAB line haul) is attached to a CSSB. This company provides transportation for the movement of bulk petroleum products using tractor trucks with associated semi-trailer tanks. It is employed in line haul operations in the corps rear areas and may provide support to divisional units as required by the tactical situation and in accordance with the theater movement plan. Hauling methods include direct haul, shuttle, relay, and inter-modal operations. The company is authorized 60 M915 tractor trucks and 60 semi-trailer tanks. The medium truck company (POL 5k) (EAB line haul) requires improved road conditions. The unit is dependent on appropriate elements within the theater for legal, HSS, finance, religious, personnel and administrative services, and logistics support. It also requires support from an SMC for allied trades support and field maintenance on utilities equipment, engineer equipment, small arms communications and electronic equipment, special electronic devices, computers, and COMSEC. The unit is dependent upon appropriate elements within the theater for external convoy force protection and escorts. See ATP 4-11 for additional information on the medium truck company (POL 5k)(EAB tactical).

COMPOSITE TRUCK COMPANY (LIGHT)

2-62. The composite truck company (light) is attached to the CSSB or DSSB. This company provides transportation and convoy protection assets for the movement and distribution of dry and refrigerated containerized cargo, general non-containerized cargo, ammunition, bottled water, and bulk water (when equipped with tank racks and load handling system compatible water tank racks). The composite truck company (light) also assists with unit moves, transports personnel, and provides security escort for contracted trucks. The unit is dependent on appropriate elements within the theater for religious, legal, HSS, finance, personnel and administrative services, and logistics support. An SMC provides allied trades support and field maintenance on power generators, quartermaster equipment, chemical equipment, small arms, communications and electronic equipment, special electronic devices, COMSEC equipment, and computers. The unit is also dependent on the field feeding company (EAB) or supported unit for field feeding support. See ATP 4-11 for additional information on the composite truck company (light).

COMPOSITE TRUCK COMPANY (HEAVY)

2-63. The transportation composite truck company (heavy) primary mission is to provide transportation and convoy security support to CSSB or DSB operations for a heavy division. The company has a company headquarters, an operations section, one platoon with heavy equipment transporter systems, two platoons with PLS, one platoon with medium tactical vehicles, and a maintenance section for field-level maintenance on organic equipment. It is employed in the brigade and division support areas. This unit is organic to DSSBs in heavy divisions. This unit can conduct both line haul and local haul in all threat environments. It can perform escort missions for contracted trucks integrated into unit convoys. Its primary role is to distribute ammunition, containers, unit equipment, dry cargo, and bulk water (when equipped with tank racks). It also performs unit moves and transports personnel.

2-64. The composite truck company (heavy) is dependent upon appropriate elements within the field army, corps, or division support area for religious, legal, finance, field feeding, and personnel and administrative services. The company is dependent on the division SMC for allied trades support and for field maintenance on power generators, engineer equipment, quartermaster equipment, chemical equipment, small arms, communications and electronic equipment, special electronic devices, COMSEC equipment, and computers. See ATP 4-11 for additional information on the composite truck company (heavy).\

FIELD ARMY AND CORPS MEDICAL SUPPORT

2-65. HHS is an element of sustainment and is executed at the field army and corps echelons. Various units and staff sections including the field army and corps surgeon have responsibilities to plan and execute medical support. The ESC is responsible for integrating medical support into the overall sustainment support concept.

2-66. Field army and corps surgeons plan, coordinate, synchronize, and resource area medical support augmentation to organic medical capability and capacity. They also provide medical support for large-scale casualty evacuation events and enable prolonged care.

2-67. The TMC provides direct or GS to the corps through the MEDBDE (SPT). MEDBDEs (SPT) will have hospital centers and medical battalions (multifunctional) (MMB) attached. The MEDBDE (SPT) and subordinate medical units are task-organized based on the size, complexity, and duration of the operation and the population supported.

2-68. The MEDBDE (SPT) is a subordinate command and control organization of the TMC. It provides the command and control and planning capabilities necessary to deliver responsive and effective HSS across the range of military operations. Like the TMC, the focus of the MEDBDE (SPT) is driven by mission variables to ensure the right mix of medical forces and expertise (operational, technical, and clinical) to synchronize HSS during multidomain operations. Chapter 6 provides greater detail regarding medical support.

SECTION II – SUSTAINMENT STAFF ORGANIZATION

2-69. The ESC, sustainment brigade, and CSSB are headquarters organizations, each with a distinct staff organization to support the commander. Unlike other sustainment headquarters, the ESC is doctrinally organized by warfighting function. However, commanders may organize, tailor, or adapt their individual staffs during operations to accomplish their assigned missions. The sustainment headquarters staff may also be augmented with additional staff capability when required. Each headquarters plans, coordinates, synchronizes, monitors, and controls sustainment operations in an operational area within its respective AOR.

2-70. The ESC staff is comprised of a deputy commander, a chief of staff, and personal, special, and coordinating staff officers. The sustainment brigade and CSSB staffs consists of an executive officer and personal, special, and coordinating staff officers. Figure 2-8 depicts the personal, special, and coordinating staffs of a notional ESC headquarters staff.

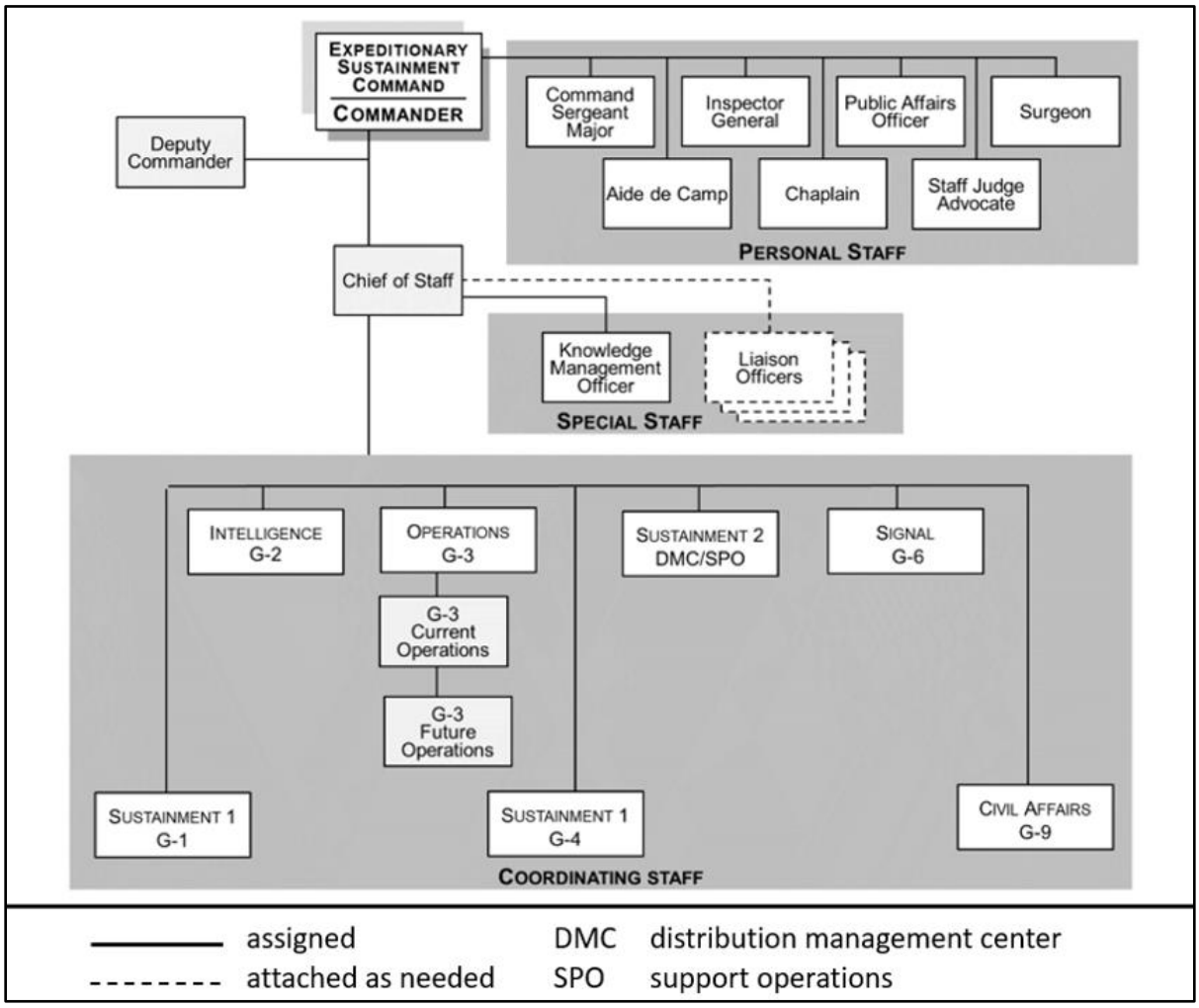


Figure 2-8. Notional expeditionary sustainment command staff

COMMAND GROUP

2-71. The ESC command group is comprised of the commander, deputy commander, and the command sergeant major. For subordinate brigades and battalions, the command groups generally include the commander, the executive officer, and the command sergeant major. The command group supports the commander's decision-making and leadership requirements while enabling mission accomplishment anywhere in an AO.

COMMANDER

2-72. The ESC commander is the senior logistician and sustainment integrator in the field army or the corps. The commander is responsible for commanding and controlling every aspect of the ESC to ensure it effectively supports the field army or corps commander's mission and intent. The commanders drive their organizations' operations process through understanding, visualizing, describing, directing, leading, and assessing operations. Each commander must understand the supported unit's mission as well as the maneuver commander's intent and desired end state. The ESC, sustainment brigade, and CSSB commanders must also understand the current OE, capabilities, limitations, and problems their units may face during execution. The commanders visualize how their organizations will employ their capabilities to support the supported organization's mission and achieve the end state. This includes solutions to anticipated problems in terms of restated mission, intent, and desired end state.

2-73. The ESC commander is not the field army or corps logistics planner. The commander provides information on ESC capability to the field army or corps commander, G-4, chief of staff, and G-3 so the field army or corps staff can develop a viable sustainment plan to achieve the field army or corps commander's intent. The ESC commander also stresses the importance of integrating HSS into the field army or corps operational concept. The ESC commander must also synchronize sustainment tasks and information flow between the respective field army or corps G-4 and the ESC DMC. The ESC commander must weigh the ESC's efforts with field army or corps main efforts. A *main effort* is a designated subordinate unit whose mission at a given point in time is most critical to overall mission success (ADP 3-0).

2-74. As the senior logistician in the field army or corps, the ESC commander coaches both the ESC and the field army or corps staffs on the importance of synchronized logistics. The ESC commander acts as both a senior mentor and an advocate for logisticians and the sustainment warfighting function in the field army or corps.

DEPUTY COMMANDER

2-75. The ESC deputy commander's role, responsibilities, and authority vary, and are based on the ESC commander's discretion, the mission, and the scope and complexity of operations. The deputy commander extends the ESC commander's control in a specified area and may assume duties (to include command duties) as delegated by the commander, either explicitly or by SOP. When the commander is temporarily absent from the command, the deputy commander of the ESC may assume increased responsibilities for directing planning, preparing, or executing on behalf of the ESC commander. The deputy commander may also oversee staff augmentees or liaisons.

2-76. The relationship between the deputy commander and the staff is unique. ESC deputy commanders do not have their own staffs but can request staff assistance at any time. Certain staff elements may be supervised or controlled by the deputy commander based on responsibilities assigned by the commander.

CHIEF OF STAFF OR EXECUTIVE OFFICER

2-77. The chief of staff is also known as executive officer at brigade echelons and below. The chief of staff or executive officer is normally delegated executive management authority as the commander's principal officer, freeing the commander from routine details of staff operations and management responsibilities by—

- Communicating the commander's intent to the staff and to subordinate commanders as necessary.
- Coordinating and directing primary and special staff actions and exchanges with the commander to ensure efficient and prompt staff action.
- Ensuring staff integration and coordination internally, with higher headquarters and subordinate units, and with adjacent units.
- Monitoring the status of all subordinate units and unit status reporting.

COMMAND SERGEANT MAJOR

2-78. The command sergeant major is the senior noncommissioned officer (NCO) of the command and is both a member of the command team and personal staff. The command sergeant major is responsible for providing the commander with personal, professional, and technical advice on enlisted Soldier matters and the NCO corps. The command sergeant major is also responsible for mentoring NCOs on the staff and in subordinate organizations and directs the NCO development program to develop enlisted leaders. Command sergeant major duties and responsibilities vary according to the commander's specific desires. See FM 6-0 for additional information on the role of the command sergeant major.

PERSONAL STAFF

2-79. Personal staff officers work under the immediate control of the commander and have direct access to the commander. The ESC commander's personal staff includes a command sergeant major, aide-de-camp, inspector general, chaplain, public affairs officer, staff judge advocate, safety officer, and surgeon. The sustainment brigade personal staff is generally composed of the staff judge advocate, chaplain, safety officer, and surgeon. Battalion-level personal staffs include a representative of the servicing office of the staff judge advocate, the chaplain, and safety officer.

AIDE-DE-CAMP

2-80. The aide-de-camp serves as a personal assistant to the ESC commanding general. The aide-de-camp provides for the commander's well-being, security, and provides relief from routine and time-consuming duties. See FM 6-0 for additional information on the aide-de-camp role.

INSPECTOR GENERAL

2-81. The inspector general advises commanders on the overall welfare, climate, and state of discipline of the command and is a confidential advisor to the commander. The inspector general executes four functions for the command: teaching and training, inspections, assistance, and investigations. The inspector general also conducts surveys and studies in accordance with the commander's guidance and prepares Annex U (Inspector General) to the OPORD or OPLAN. See FM 6-0 for additional information.

CHAPLAIN

2-82. The chaplain advises the commander on all religious, moral, ethical, and morale issues with potential impact on operations. The chaplain and a religious affairs specialist form the unit ministry team (UMT), which is assigned at each echelon from ESC through battalion. The UMT provides religious support to all assigned or attached service members, family members, and authorized civilians. The UMT also coordinates with higher, subordinate, and adjacent UMTs and chaplain sections for area and denominational coverage requirements. FM 1-05 provides further detail regarding religious support and UMT duties and responsibilities.

PUBLIC AFFAIRS OFFICER

2-83. The public affairs officer advises the commander on all public affairs operations. As a skilled communicator, the public affairs officer may serve as the organization's spokesperson. The public affairs officer conducts planning and integrates and synchronizes information-related actions and themes in unit plans and orders. This officer works closely with the staff to integrate strategy and unity of effort to communicate the commander's perspective and message. The public affairs officer coordinates and monitors DOD and embedded media and works with information-related capabilities such as combat camera, military information operations, and lessons learned programs. The public affairs officer also prepares Annex J (Public Affairs) of the OPORD or OPLAN. FM 3-61 offer details about public affairs at every level of command.

STAFF JUDGE ADVOCATE

2-84. The staff judge advocate (also called the SJA) serves as the primary legal advisor to the commander exercising general court-martial convening authority as prescribed by the Uniform Code of Military Justice, the Manual for Courts-Martial, and applicable regulations. The staff judge advocate is a member of both the commander's personal and special staff. In accordance with Article 6 of the Uniform Code of Military Justice, the commander and the staff judge advocate shall communicate directly at all times on matters relating to the administration of military justice including, but not limited to, all legal matters affecting the morale, good order, and discipline of the command. The staff judge advocate provides legal advice and support to the staff and coordinates actions with other staff sections to ensure the timely and accurate delivery of legal services throughout the command. The staff judge advocate provides legal guidance regarding the Judge Advocate General Corps six core legal disciplines: military justice, national security law, administrative and civil law, contract and fiscal law, claims, and legal assistance.

2-85. At brigade and above echelons, the servicing office of the staff judge advocate also provides legal services to Soldiers and their family members (on occasion). These services include: claims by Soldiers, medical evaluation and disability law, Soldier and family legal assistance, and special victim counsel services. Commanders must be aware that Soldiers suspected of criminal offenses pending non-judicial punishment (Article 15) and at courts-martial are entitled to counsel from Trial Defense Services. Trial defense counsel may provide limited legal counsel and representation to Soldiers facing minor disciplinary actions or in need of legal assistance services. Trial Defense Services act independently of any other branch and the local Office of the Staff Judge Advocate to which they are otherwise attached or affiliated for administrative or logistics support.

2-86. At echelons below brigade, paralegals are assigned to the battalion personnel staff officer (S-1) section of each subordinate battalion. Their assignment to the battalion S-1 section is designed to provide legal support to battalion commanders and Soldiers, while acting under the direction and supervision of the brigade judge advocate and brigade senior paralegal NCO. The brigade staff judge advocate and brigade senior paralegal NCOs retain the flexibility to consolidate battalion paralegal Soldiers at the sustainment brigade headquarters. Members of the legal section participate in the brigade operations planning process. Legal professionals are integrated into the drafting, shaping, and reviewing of operational plans, orders, and annexes across staff sections. See FM 1-04 for additional information about legal support.

SAFETY OFFICER

2-87. The safety officer coordinates safety activities and advises the commander and staff on matters relating to the Army safety program, including its implementation and effectiveness. The safety officer implements numerous programs including the command safety and occupational health program and the accident prevention program. Safety officers also serve as the point of contact for all explosives safety management program-related actions. These include explosives safety deviation requests, explosive storage limits and licenses, and explosives safety site plans. Additional information regarding the safety officer may be found in FM 6-0, AR 385-10, AR 700-13, DA PAM 385-1, and DA PAM 385-10.

SURGEON

2-88. The ESC surgeon is a member of both the personal and special staff and reports directly to the commander. The surgeon's staff is considered special staff and executes the actions required of the surgeon. The surgeon advises the commander on the health of subordinate units and ensures OPLANs and OPORDs include all HSS functions. The surgeon utilizes medical control from the medical command and control medical function to coordinate and synchronize the other nine medical functions. The ESC surgeon or medical operations officer should brief the HSS plan to the commander in its entirety. For more information on surgeon duties and responsibilities, refer to FM 4-02.

2-89. The ESC surgeon section coordinates with staffs at higher, adjacent, and supported units and with Army special operations forces operating within the ESC operational area. This section coordinates with the field army or corps surgeon section and supporting MEDBDE (SPT) or TMC for HSS within the ESC operational area, to include the placement and support requirements of medical units and elements. This coordination ensures that medical support is integrated and synchronized with the ESC's concept of operations and helps determine capabilities required to meet the medical requirements identified by the surgeon. The ESC surgeon section is also responsible for coordinating the GS and DS relationships of organic medical units and supported medical units or elements, whether OPCON or attached to the command. For more information on the surgeon section staff coordination, refer to FM 4-02. For more information on medical planning, refer to ATP 4-02.55.

SPECIAL STAFF

2-90. At the ESC, sustainment brigade, and CSSB headquarters, the number of special staff officers and their responsibilities vary with authorizations. If a special staff officer is not assigned, the officer with coordinating staff responsibility for the area of expertise assumes those functional responsibilities. See FM 6-0 for additional information on special staff.

KNOWLEDGE MANAGEMENT OFFICER

2-91. The knowledge management officer develops knowledge management techniques, policies, and procedures, performs staff planning and coordination of knowledge management, and integrates and synchronizes knowledge management functions and activities between echelons. The knowledge management officer also evaluates and leads the staff in assessing the effectiveness of knowledge management. See ATP 6-01.1 for additional information on knowledge management.

LIAISON OFFICER

2-92. A liaison officer is the commander's representative sent to another headquarters or agency to facilitate close working relationships. The liaison officer is a subject matter expert who is usually embedded in another

organization to provide face-to-face coordination and promote synchronization and cooperation between the two headquarters and reports back to the chief of staff (executive officer). A primary consideration in assigning liaison officers is their ability to speak and act on behalf of the command in a limited capacity. Depending on the mission requirement, commanders may appoint one or more liaison officers to work directly with an organization on a regular basis over a relatively short time. As the types and needs of missions vary, so do the authorities and responsibilities of liaison officers.

COORDINATING STAFF

2-93. Coordinating staff officers are the commander's principal assistants who advise, plan, and coordinate actions within their area of expertise or warfighting functions as depicted in table 2-1. The ESC and its subordinate sustainment command headquarters coordinating staffs include the intelligence, operations, sustainment 1, sustainment 2, signal, and CA sections. Each sustainment 1 element includes the staff G-1, G-4, and G-8. The sustainment 2 element is comprised of the DMC and SPO sections which focus on sustainment support external to the respective command headquarters. See FM 6-0 for additional information on coordinating staff.

Table 2-1. Coordinating staff tasks

Staff	*Tasks*
G-1/S-1	Man the force. Provide human resources services. Coordinate personnel support. Headquarters management.
G-2/S-2	Oversee the intelligence function. Provide the commander and staff with assessments of threat capabilities. Identify gaps in intelligence and develop collection strategies. Disseminating intelligence products. Coordinate intelligence requirements with supporting, higher, lateral, and subordinate echelons. Work with staff on intelligence preparation of the battlefield. Process priority intelligence requirements. Evaluate enemy intelligence capabilities that may impact operations.
G-3/S-3	Training. Plans and operations.
G-4/S-4	Sustainment plans.
G-6/S-6	Signal.
G-8/S-8	Resource management.
G-9/S-9	Civil affairs.
See FM 6-0 for more detailed descriptions and interactions between the staff.	

FM	field manual	G-4/S-4	assistant chief of staff, logistics / brigade or battalion signal staff officer
G-1/S-1	assistant chief of staff, personnel / brigade or battalion intelligence staff officer	G-6/S-6	assistant chief of staff, signal / brigade or battalion financial management staff officer
G-2/S-2	assistant chief of staff, intelligence / brigade or battalion operations staff officer	G-8/S-8	assistant chief of staff, financial management / brigade or battalion civil affairs operations staff officer
G-3/S-3	assistant chief of staff, operations / brigade or battalion logistics staff officer	G-9/S-9	assistant chief of staff, civil affairs operations / brigade or battalion civil affairs operations staff officer

SUSTAINMENT 1 (G-1 OR S-1)

2-94. The G-1 or S-1 is the principal staff officer at echelon for all matters concerning HR support for assigned and attached Soldiers. The ESC G-1 and subordinate S-1s have similar roles; the primary differences are scale and scope. The information that follows applies to both.

2-95. G-1 or S-1 responsibilities include personnel readiness management; personnel accountability; strength reporting; casualty operations; essential personnel services; postal operations; morale, welfare, and

recreation operations; and HR planning and operations. The battalion and sustainment brigade S-1s are linked to their higher command G-1s for reporting and coordinating personnel actions. The G-1s can provide guidance to subordinate S-1s if requested. The G-1 or S-1 participates in the operations process and is responsible for developing the plan to ensure personnel support is adequate to accomplish the assigned mission. The G-1 or S-1 develops paragraph 4.b (Personnel), for the organization's OPORD and also prepares appendix 2 of annex F (including all tabs for attachment to the OPORD as required). The G-1 and S-1 follow personnel policies and reporting requirements established by higher headquarters.

2-96. The ESC G-1 has unique responsibilities and challenges. One such challenge is the mix of Active Component and Reserve Component personnel typically serving in an ESC. Many Reserve Component personnel are deployed as individual augmentees or as modular units deployed without their parent company headquarters. Additionally, many of the units and augmentees have different rotation policy and legal limitations that affect current and long-term operations and require extensive management for compliance and audit reasons.

2-97. ESC G-1s and subordinate S-1s also track accountability of civilians and contractors that support sustainment operations. Information concerning civilians and contractors is shared with the OCS branch and the G-4 or battalion or brigade logistics staff officer (S-4) in order to track execution and performance of contracts. See FM 1-0 for more information on HR operations.

INTELLIGENCE (G-2 OR S-2)

2-98. The G-2 or battalion or brigade intelligence staff officer (S-2) is the principal staff officer responsible for advising, planning, and coordinating the actions of the intelligence warfighting function that support current and future operations and plans. The G-2 or S-2 leads the staff in the IPB process; provides terrain, geospatial engineering, and weather analysis; executes assigned security duties; and oversees the intelligence functional cell. The G-2 or S-2 prepares Annex B (Intelligence) of the OPORD, coordinates with the G-3 or battalion or brigade operations staff officer (S-3) in the development of Annex L (Information Collection), and monitors intelligence requirements to support current and future operations. The G-2 or S-2 also monitors intelligence reports, assessments, and products from higher, lower, adjacent, and subordinate units and coordinates with other intelligence organizations to provide timely, relevant, accurate, and predictive intelligence to support logistics missions.

2-99. Examples of G-2 or S-2 input to support operations includes analysis regarding how weather affects LOCs and the impact that an adversary's tactic changes have on convoys, supply routes, and sustainment hubs. The G-2 or S-2 develops ways to collect, analyze, and disseminate information from subordinate units conducting support missions. These include any contractors or civilian personnel who participated in the support mission within the field army or corps support area. The G-2 or S-2 must evaluate all information to determine its value and ability to answer the commanders' priority intelligence requirements, or if it requires updating intelligence annexes to an OPLAN, OPORD, daily intelligence summary for subordinate units, and intelligence estimates. The G-2 or S-2 may also exercise oversight of sensitive compartmented information reception, transmission, and storage and manage the command security program. The G-2 or S-2 facilitates intelligence training and readiness for alerted and rotational forces. For more information, see ADP 2-0, ATP 2-01.3, and FM 6-0.

MOVEMENT AND MANEUVER (G-3 OR S-3)

2-100. The G-3 or S-3 is the principal staff officer responsible for movement and maneuver, including development of plans and operations. The ESC G-3 section is partitioned into three distinct subsections of current operations, current operations support, and future operations. When planning for operations extends beyond the normal planning window for the S-3 future operations cell, the commander, chief of staff, or designated representative task-organizes additional planning capability from other parts of the staff, subordinate organizations, or both.

2-101. The sustainment brigade S-3 section includes elements of CA, fires, and protection warfighting functions. The CSSB S-3 section structure is similar to the sustainment brigade but operates on a much smaller scale and requires fewer personnel than the brigade. The G-3 or S-3 synchronizes and integrates current operations (including support operations) with the other warfighting functions in time, space and

purpose. This is executed across the planning horizons in accordance with the commander's intent and desired end state. The G-3 or S-3 also coordinates with all other staff officers and sections during the development of plans and orders to ensure synchronization.

2-102. The G-3 or S-3 section translates external support requirements established by the SPO into missions for the unit and prepares, publishes, and distributes written orders (warning, operations, and fragmentary) to subordinate units for execution. The G-3 or S-3, with the information provided by the SPO, develops key paragraphs of the OPORD: references, time zone, task organization, paragraphs 1, 1.a, 1.b, 1.d, 1.e, paragraph 2, paragraph 3, and paragraph 5. The G-3 or S-3 also prepares annex A (Task Organization), C (Operations), D (Fires), E (Protection), and other annexes for attachment to the OPORD as required.

2-103. The G-3 or S-3 develops running estimates to ensure operations are achieving the desired effect and adjusts the operation as necessary. The G-3 or S-3 also develops the unit task organization to support operations and plans and executes operations security. The ESC G-3 section also maintains situational awareness, tracks the field army or corps operations, and maintains the command's COP. The G-3 or S-3 section plans tactical troop movements and is responsible for determining route selection, priority of movement, timing, security, quartering, staging, and preparing movement orders.

2-104. After the field army or corps terrain manager provides the respective ESC with a designated area, the ESC G-3 recommends a specific location for the ESC base and proposes its layout in coordination with the ESC chief of staff and SPO. The ESC G-3 also develops the base defensive plan in accordance with the ESC commander's guidance.

SUSTAINMENT 1 (G-4 OR S-4)

2-105. The G-4 or S-4 is the lead sustainment planner within a command headquarters for sustainment plans and operations. The ESC G-4 and subordinate S-4s have similar roles; the primary differences are scale and scope. The information that follows applies to both. The G-4 or S-4 is responsible for developing, coordinating, and monitoring plans, policies, procedures, and programs for supply, transportation, maintenance, field services, and facilities internal to the organization.

2-106. The G-4 or S-4 continuously maintains accurate status of the organization's logistics (supply, equipment on-hand, and equipment serviceability) and readiness status. The G-4 or S-4 determines logistics requirements for subordinate units, monitors the logistics posture of subordinate units, and establishes support priorities in accordance with the commander's priorities and intent. The G-4 or S-4 also monitors and analyzes unit equipment readiness status and informs the commander. This includes when a mission-critical item of equipment or principal weapon, mission systems, or equipment that is deemed essential to accomplishing the mission are non-mission capable. The S-4 reports logistics readiness to the higher headquarters G-4 or S-4. If heavy supply and equipment losses dictate a reorganization at echelon, the G-3 or S-3 and the G-4 or S-4 will coordinate to develop a plan to cross-level supplies and equipment within the unit to meet mission requirements.

2-107. The G-4 or S-4 participates in the operations process and is responsible for developing the plan to ensure logistics support is adequate to accomplish the assigned mission. The G-4 or S-4 is responsible for developing paragraphs 4, 4a, annex F, and appendix 1 (including all tabs and exhibits) for attachment to the OPORD as required.

2-108. The ESC G-4 and subordinate S-4s coordinate with their respective higher headquarters G-4s or S-4s to ensure support requirements are understood. This is critical to support higher headquarters sustainment planning. The G-4 or S-4 submits a logistics status (LOGSTAT) report to the higher headquarters as directed and reports supply and equipment shortages that affect the organization's mission accomplishment. The ESC G-4 also coordinates with the sustainment headquarters supporting the ESC. The supporting ESC SPO section, where applicable, shares the G-4 or S-4 responsibility to coordinate with the supporting sustainment headquarters. The G-4 or S-4 may provide a copy of the OPORD to the supporting sustainment headquarters to accurately communicate support requirements.

2-109. The G-4 or S-4 establishes a LOGSTAT reporting procedure for all subordinate units to report supply and maintenance status. The G-4 or S-4 monitors the status of subordinate support organizations to ensure they have all supplies and equipment required to accomplish their individual support missions. The

G-4 or S-4 works with the OCS branch in their supporting DMC or SPO section to identify requirements, monitor and ensure contract performance, and assist contracting agencies with contract administration processes. For more information, see ATP 4-10/MCRP 4-11H/NTTP 4-09.1/AFMAN 10-409-O.

2-110. The G-4 or S-4 coordinates the strategic and operational deployment of the unit by maintaining unit equipment lists and assisting in developing in-theater unit movement plans. The G-4 or S-4 also monitors field feeding, property book activities, maintenance operations, unit basic loads, equipment operational status, and the status of requisitions for equipment and supplies for the organization. The G-4 or S-4 manages the unit's budget, including the funding approval portion of execution management under Global Combat Support System-Army (GCSS-Army), acquires and assigns facilities, and develops the internal organizational LOGSTAT report. G-4 or S-4 personnel also man their respective sustainment functional cells in the main CP and the tactical CP (if established).

SIGNAL (G-6 OR S-6)

2-111. The assistant chief of staff, signal (G-6) or battalion or brigade signal staff officer (S-6) is responsible for overseeing the organization's network operations and information to support interoperability networks among the supported force. The G-6 or S-6 section establishes and maintains systems and software security for tactical automation, network management, and communication links with higher, adjacent, and subordinate units. The G-6 or S-6 integrates automated information systems, manages the network, performs information assurance and spectrum management operations in support of DOD information network-Army operations and Army EMS operations for the respective organization. *Electromagnetic spectrum operations* are coordinated military actions to exploit, attack, protect, and manage the electromagnetic environment (JP 3-85). The G-6 or S-6 ensures the commander can communicate to facilitate effective command and control of subordinate units. They determine the supportability and feasibility of the signal plan supporting each course of action the staff considers during MDMP.

2-112. The G-6 or S-6 also ensures that planners reflect the sustainment automation support management office (SASMO) functions in the brigade electronic warfare plan to ensure the security and use of the very small aperture terminal (commonly known as VSAT) and wireless combat service support automated information system interface (also known as CAISI) network. Signal specialists install, operate, and maintain their unit's communications equipment and ensure communication links with higher, adjacent, subordinate, and supported units. The G-6 or S-6 develops paragraph 5c of the OPORD and prepares annex H for attachment to the OPORD as required.

SUSTAINMENT 1 (G-8 OR S-8)

2-113. The G-8 or battalion or brigade financial management staff officer (S-8) is responsible for the preparation, resource management analysis, and implementation of the budget for assigned or attached units. The ESC G-8 supervises the development, synchronization, evaluation, defense, and execution of the command budget estimate and the program objective memorandum; establishes, controls, and audits all financial management systems; and advises the commander on matters pertaining to programming and budgeting, finance and accounting, cost analysis, and management practices. The G-8 responsibilities include—

- Coordinating and synchronizing resource requirements identification and fulfillment methods by identifying types and sources of funding.
- Capturing operations costs through standard accounting systems and managing the operating systems that pay personnel and providers (contractors, HN partners, and suppliers).
- Tracking and reporting costs of battlefield operations to support efforts of reimbursement of costs initially paid from available training and readiness funds.
- Obtaining guidance on fund citations and funding levels and disseminating that information to tactical financial managers and supporting finance elements.
- Utilize the General Fund Enterprise Business System, known as GFEBS, to access financial date and information for strategic decision making.

2-114. The sustainment brigade S-8 integrates all financial management requirements into the unit’s operational planning and assists with developing the financial management concept of support. The S-8

identifies, certifies, and manages funds available for immediate expenses and monitors all expenditures, including contract expenditures. The S-8 is a part of the brigade's OCS, local purchase, and credit card processes. The S-8 submits spending plans, monitors the status of requirements packets and coordinates contracting and financial management support for the sustainment brigade's field ordering officers and pay agents. The S-8 also coordinates and manages the audit and internal control program.

2-115. The G-8 or S-8 is part of the fiscal triad along with the OCS element and staff judge advocate. The G-8 or S-8 considers aspects of the law and contracting process when developing funding requirements submitted to the higher headquarters. More details about the G-8 or S-8 and financial management operations are in FM 1-06.

CIVIL AFFAIRS

2-116. The CA officer is the principal staff officer responsible for planning, integrating, evaluating, and assessing civil and HN considerations into the MDMP. A CA officer lead is assigned to the ESC. A sustainment brigade's CA section includes two CA NCOs. The section continually provides updated information on the civil component of the OE through the civil information management process within the civil-military operations center. This data can identify current capabilities and resources of the indigenous population and institutions that can support operations through use of the OCS process. The CA operations staff develops Annex K (Civil Affairs Operations) to OPLANs, concept plans, and OPORDs. CA officers and NCOs play an important role in the planning and execution of protection of civilian missions. See Annex A for additional information. For a full discussion on the requirements and duties of the CA element, see FM 3-57.

SUSTAINMENT 2 (DISTRIBUTION MANAGEMENT CENTER)

2-117. The DMC is the operational center within the ESC responsible for planning, coordinating, integrating, and synchronizing the functions of distribution (through the integration of transportation management and materiel management), logistics services, field services, financial operations, and OCS for an operational area. The ESC DMC also focuses on integrating and synchronizing the transportation and movement of units, supplies, and materiel into, within, and out of the operational area.

2-118. The ESC manages the distribution networks through the DMC. Distribution networks refer to the four joint deployment and distribution enterprise networks: physical, financial, information, and communications. The DMC staff continually evaluates the distribution networks and integrates products and assessments with the remainder of the ESC coordinating staff while supporting the ESC G-3 future operations cell or operation planning team. The more thoroughly the DMC staff anticipates capacity shortfalls and plans for resolutions, the fewer challenges the attached sustainment brigades will have. Refer to JP 4-09 and ATP 4-0.1 for more information about distribution networks.

2-119. The DMC staff assists the higher headquarters sustainment cell planners in identifying all sustainment support requirements (including unified action partner requirements) for an operational area. The DMC staff provides the technical supervision for the external logistics mission and integrates and synchronizes sustainment support to the force in accordance with supported commander priorities. The DMC may be augmented with liaisons from other sustainment organizations (such as the AFSB corps logistics support element) to integrate and synchronize sustainment support more effectively and efficiently.

2-120. The ESC DMC includes staff from seven subordinate branches: distribution integration, materiel management, transportation operations, OCS, HR operations, financial operations, and SASMO.

SUSTAINMENT 2 (SUPPORT OPERATIONS OFFICER)

2-121. The SPO officer is the principal staff officer for planning, coordinating, and synchronizing external sustainment operations at echelon. The SPO, by exercising staff supervision over the DMC, maintains visibility of the distribution system. The *distribution system* is that complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military materiel between the point of receipt into the military system and the point of issue to using activities and units (JP 4-09). Generally, the DMC and SPO staffs are responsible for conducting distribution management

by integrating the functions of distribution planning, transportation, materiel management, and the sustainment services of field services, maintenance, OCS, and SASMO. The ESC DMC staff performs support operations functions and is responsible for integrating HR and financial management support operations for supported units.

2-122. At the field army echelon, the ESC DMC and subordinate unit SPO staffs focus on integrating support from the theater echelon and providing sustainment support to the corps assigned to the field army. Similarly, at the corps echelon, the corps ESC DMC and subordinate unit SPO staffs focus on integrating support from the field army echelon and providing support to the divisions. It is the responsibility of the SPO officer to understand the complexity of the dynamics involved when coordinating distribution with multiple government, civilian, multinational, and joint Service entities.

2-123. Sustainment support at the field army and corps echelons requires the DMC and SPO staffs to build and maintain situational awareness and be ready to respond accordingly. Support operations are more effective when the DMC or SPO staff develops and nurtures relationships with other echelon DMC and SPO staffs. The relationships facilitate an exchange of information that may be used to develop and maintain situational awareness, resulting in better synchronized and coordinated responsive support.

2-124. The SPO officer synthesizes analytical information and facts provided by the staff to assist the commander in understanding, visualizing, and describing future sustainment activities. The SPO officer uses professional judgment resulting from experience, education, and situational understanding to develop the COP and make recommendations to the commander. Examples of tasks the SPO officer may conduct include—

- Translating the commander's operational priorities into priorities of sustainment support across the range of military operations.
- Verifying overall requirements for the supported force.
- Coordinating and supervising the implementation of policies and directives relative to supporting current and future operations.

Chapter 3 provides additional details on SPO operations.

SECTION III – COMMAND AND SUPPORT RELATIONSHIPS

2-125. Command and support relationships establish clear responsibilities and authorities between higher headquarters, subordinate, supported, and supporting units. Doctrine sets general guidelines for command and support relationships, but mission orders will determine the details of the relationships. For each operation, the ESC commander, and subordinate commanders ensure orders clearly express command and support relationships. Additionally, the higher headquarters and supported organizations of the ESC must understand their own command and support relationships with respect to the ESC. Army command and support relationships are defined and explained in ADP 3-0.

2-126. Changes in command relationships do not necessarily require changes in support relationships, especially if the nature of the support does not change. Simple command and support relationships expressed in written orders increase the likelihood of success. The ESC and subordinate commander's task-organize the force to provide specific capabilities in support of mission requirements by establishing command and support relationships. These commanders closely evaluate the outcome they wish to achieve and then decide which combination of command and support relationships to assign subordinate units. The relationships must accommodate the known situation and empower subordinate leaders to respond to the unknown.

2-127. The ESC and subordinate commanders may choose to establish informal relationships. The informal relationship among sustainment units, other multifunctional and functional support brigades, and logistics staffs provides another source of information for sustainment commanders to consider when determining appropriate command and support relationships and internal task organization.

COMMAND RELATIONSHIPS

2-128. Command relationships define the responsibility and authority of a command over a subordinate unit. Army command relationships are organic, assigned, attached, OPCON, and TACON. Command

relationships unify effort and enable commanders to use subordinate forces with maximum flexibility. The type of command relationship often relates to the expected longevity of the relationship between the headquarters involved and can shift throughout phases of operations. The type of command relationship quickly identifies the inherent responsibilities of the gaining and losing Army commanders. Leaders and Soldiers must understand the different kinds of command relationships and the impact those relationships have on providing and receiving sustainment support.

2-129. *Organic* forces are those assigned to and forming an essential part of a military organization as listed in its table of organization for the Army, Air Force, and Marine Corps, and are assigned to the operating forces for the Navy (JP 1, Volume 2). *Assign* is to place units or personnel in an organization where such placement is relatively permanent, and/or where such organization controls and administers the units or personnel for the primary function, or greater portion of the functions, of the unit or personnel (JP 3-0). Unless specifically stated, assigned includes administrative control. *Attach* is the placement of units or personnel in an organization where such placement is relatively temporary (JP 3-0). *Operational control* is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission (JP 1, Volume 2). *Tactical control* is the authority over forces that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned (JP 1, Volume 2).

2-130. At the field army and corps echelons, sustainment headquarters command relationships may vary according to the mission and affect the gaining commander's degree of control. For example, the ESC attached to the field army and the ESC assigned to the corps have different command relationships based on the duration of the mission.

2-131. Command relationships also identify the degree of control of the gaining unit. For example, an attached relationship between the field army and its ESC enables the field army to maximize the capacity of the subordinate ESC and influence and assess the sustainment effort provided based on the field army commander's priorities and mission. This command relationship also gives the field army the authority to establish priorities, change the ESC task organization, assign a position or AO, and impose further command or support relationships. Table 2-2 on page 2-26 explains command relationship responsibilities.

Table 2-2. Command relationship responsibilities

If relationship is—	*Then inherent responsibilities—*							
	Have command relationship with—	May be task organized by—[1]	Unless modified, ADCON responsibility goes through–	Are assigned position or AO by—	Provide liaison to—	Establish and maintain communications with—	Have priorities established by—	Authorities commander can impose on gaining unit further command or support relationship of—
Organic	All organic forces organized with the HQ	Organic HQ	Army HQ specified in organizing document	Organic HQ	N/A	N/A	Organic HQ	Attached, OPCON, TACON, GS, GSR, R, DS
Assigned	Gaining unit	Gaining HQ	Gaining Army HQ	OPCON chain of command	As required by OPCON	As required by OPCON	ASCC or Service-assigned HQ	As required by OPCON HQ
Attached	Gaining unit	Gaining unit	Gaining Army HQ	Gaining unit	As required by gaining unit	Unit to which attached	Gaining unit	Attached, OPCON, TACON, GS, GSR, R, DS
OPCON	Gaining unit	Parent unit and gaining unit may pass OPCON to lower echelon HQ[1]	Parent unit	Gaining Unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	OPCON, TACON, GS, GSR, R, DS
TACON	Gaining unit	Parent unit	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	TACON, GS, GSR, R, DS

Note: [1] In NATO, the gaining unit may not task-organize a multinational force. (See TACON.)

ADCON	administrative control	HQ	headquarters
AO	area of operations	N/A	not applicable
ASCC	Army Service component command	NATO	North Atlantic Treaty Organization
DS	direct support	OPCON	operational control
GS	general support	R	reinforcing
GSR	general support-reinforcing	TACON	tactical control

SUPPORT RELATIONSHIPS

2-132. Support relationships define the desired purpose, scope, and effect when one capability supports another. There are four support relationships in Army doctrine: DS, GS, reinforcing, and general support-reinforcing (GSR). Army support relationships are not command authorities and are more specific than joint support relationships. Commanders establish support relationships when subordination of one unit to another is inappropriate but when support responsibilities must be established. There is no need for a support relationship if a command relationship is already established. When a command relationship exists, it provides the commander adequate authority to direct the actions of the subordinate supporting unit. Commanders assign a support relationship when—

- The support is more effective if a commander with the requisite technical and tactical expertise controls the supporting unit rather than the supported commander.
- The echelon of the supporting unit is the same as or higher than that of the supported unit. For example, the supporting unit may be a brigade, and the supported unit may be a battalion. It would

be inappropriate for the brigade to be subordinated to the battalion; hence, the echelon uses an Army support relationship.

- The supporting unit supports several units simultaneously. The requirement to set support priorities to allocate resources to supported units exists. Assigning support relationships is one aspect of command and control.

2-133. ADP 3-0 discusses Army and joint support relationships. JP 4-0 and STANAG 2406 ALP-4.2 have more information about the authorities, organizations, and control mechanisms that enable the synchronization of logistics in support of the joint and multinational force commander. Table 2-3 explains support relationship responsibilities.

Table 2-3. Support relationship responsibilities

If relationship is:	***Then inherent responsibilities:***							
	Have command relationship with:	May be task-organized by:	Receives sustainment from:	Are assigned position or an area of operations by:	Provide liaison to:	Establish and maintain communication with:	Have priorities established by:	Can impose on gaining unit further command or support relationship by:
Direct support[1]	Parent unit	Parent unit	Parent unit	Supported unit	Supported unit	Parent unit; supported unit	Supported unit	See note 1
Reinforcing	Parent unit	Parent unit	Parent unit	Reinforced unit	Reinforced unit	Parent unit; reinforced unit	Reinforced unit; then parent unit	Not applicable
General support–reinforcing	Parent unit	Parent unit	Parent unit	Parent unit	Reinforced unit and as required by parent unit	Reinforced unit and as required by parent unit	Parent unit; then reinforced unit	Not applicable
General support	Parent unit	Parent unit	Parent unit	Parent unit	As required by parent unit	As required by parent unit	Parent unit	Not applicable
Note: [1] Commanders of units in direct support may further assign support relationships between their subordinate units and elements of the supported unit after coordination with the supported commander.								

2-134. Higher headquarters designate support relationships through appropriate orders to specify the details of the support relationship. The normal support relationship for all sustainment units in the corps area is GS. Other support relationships may be designated based on mission requirements.

2-135. Sustainment brigades usually have a GS relationship with supported units unless otherwise directed by order. The sustainment brigade may direct a subordinate unit to have a DS relationship with supported units operating forward of the rear area. For example, the OPORD may direct a corps sustainment brigade to provide GS to units operating in the corps rear area and DS to corps units operating forward in the division AO. The sustainment brigade would then assign a unit to provide that DS, while the remainder of the sustainment brigade continues to provide GS to the force as a whole. Reinforcing and GSR support relationships are less common. Each support relationship directed in unit orders should reflect the commander's priority of support.

2-136. A CSSB normally has a GS relationship with units in the corps area. The sustainment brigade may direct that the CSSB have a DS relationship with a multifunctional support brigade or functional brigades such as the MEB or engineer brigade, or with special operations forces. The sustainment brigade commanding a CSSB must identify all supported units by name and the support relationship in OPORDs. The sustainment brigade must also identify the duration of the support relationship if a change is expected during the operation.

The OPORD establishes the priority of support for all supported units. The CSSB OPORD incorporates the priority of support for each company within the battalion identified in their higher headquarters OPORD. For example, a SMC might support five units. All five units must be identified in the order. One unit may have priority over the other units. This prioritization ensures the maintenance company knows the supported units and can plan based on this directive. This logic applies to all types of supporting units, such as supply, transportation, and field service units. A CSSB with a DS relationship has the priority set by the supported unit. Sustainment units do not normally use reinforcing and GSR support relationships.

2-137. Each support relationship directed in an OPORD reinforces the commander's priority of support. If a supported unit requires a higher priority, the supporting unit must query its parent unit and request a higher priority. The parent unit will decide whether or not to change the priority of support and will issue new orders if the priority is changed. Priorities may change through phases of the operation and the parent unit will issue orders identifying the changes. Some units may choose to use an area support methodology expecting to gain efficiencies through its use, but area support is not a formal support relationship and does not guarantee support.

AUTHORITIES AND SUPPORT RELATIONSHIPS

2-138. Administrative control, coordinating authority, and direct liaison authorized are not authorities through which command may be exercised.

ADMINISTRATIVE CONTROL

2-139. *Administrative control* is direction or exercise of authority over subordinate or other organizations in respect to administration and support (JP 1, Volume 2). Administrative control is Service authority and not a command or support relationship. It is exercised under the authority of and is delegated by the Secretary of the Army. JP 1, Volume 2, ADP 1-01, and ADP 3-0 provide details about relationships and authorities.

COORDINATING AUTHORITY

2-140. Coordinating authority and direct liaison authorized are authorities applicable to Army forces. These relationships assist commanders in facilitating collaboration both within and outside their respective organizations, and they can promote information sharing concerning details of military operations. Coordinating authority is a consultation relationship, not an authority through which command may be exercised. Coordinating authority is more applicable to planning and similar activities than to operations.

DIRECT LIAISON AUTHORIZED

2-141. *Direct liaison authorized* is that authority granted by a commander (any level) to a subordinate to directly consult or coordinate an action with a command or agency within or outside of the granting command (JP 1, Volume 2). Direct liaison authorized is a coordination relationship, not an authority through which command may be exercised. Direct liaison authorized is more applicable to planning than operations and always carries with it the requirement of keeping the commander that granted direct liaison authorized informed. An example of this coordination relationship may occur between the ESC SPO staff officers and the field army and corps G-4 staffs. Successful coordination relationships require members to have a firm understanding of their respective organization's mission and battle rhythm to support effective coordination and collaboration. For sustainment commands, coordination relationships with their supported units include exchange of information such as commander's priorities, status reporting, and sustainment-related insights that lead to improved support.

Chapter 3

Planning For Sustainment Operations

This chapter explains the operations process to include sustainment planning and execution. It further describes the DMC and subordinate unit SPO staffs and the staff involvement in sustainment operations. This chapter also discusses CP operations at the field army and corps echelon.

SECTION I – THE OPERATIONS PROCESS

3-1. The Army's basic conceptual structure for organizing and employing command and control is the operations process. Army leaders use the major activities of command and control during operations (planning, preparing, executing, and continuously assessing) to analyze the OE in terms of the operational and mission variables. Operational variables consist of political, military, economic, social, information, infrastructure, physical environment, and time. How these variables interact in a specific situation, domain (land, maritime, air, space, or cyberspace), or area of interest describes a commander's OE but does not limit it. An *area of interes*t is that area of concern to the commander, including the area of influence, areas adjacent to it, and extending into enemy territory (JP 3-0). Commanders, applying understanding of the operational variables in relation to the mission variables, must visualize the OE, describe their intent, and direct staff and subordinates through plans and orders to execute the mission.

PLAN

3-2. Planning helps commanders create and communicate a common vision between themselves and their staffs, subordinate commanders, and unified action partners. Planning keeps sustainment commanders and staffs focused on the future in spite of current operational requirements. Planning results in production and issuance of a plan and orders that synchronize the action of forces in time, space, and purpose to achieve objectives and accomplish missions. The ESC may plan for weeks or months in advance, whereas a CSSB may plan for days or hours. MDMP facilitates collaborative planning among higher and subordinate commands by the continuous sharing of information. Unit G-3s or S-3s and SPOs should collaborate throughout MDMP from receipt of the mission until the OPORD is published and disseminated.

3-3. The staff's role in the operations process is to assist commanders with understanding situations, making and implementing decisions, controlling operations, and assessing progress. While planning is a phase in the operations process, planning does not stop with the production of an order. At the ESC, sustainment brigade, and CSSB, planning efforts in support of the operations process are a series of continuous and cyclical activities. During preparation and execution, the plan is continuously refined as the situation changes. Through the assessment phase, subordinates and others affected by the plan provide feedback regarding the effectiveness of the plan and recommend aspects to maintain and suggest areas of the plan to improve.

3-4. Commanders issue plans and orders to subordinates to communicate their understanding of the situation and directives from higher commands in order to achieve a desired end state. Commanders at each level must plan and provide subordinates with commander's guidance, mission, and intent aligned with the directives received from higher headquarters. For example, the ESC commander issues orders to the sustainment brigade and after the sustainment brigade staff conducts the operation process, the sustainment brigade commander may in turn issue orders to the CSSB.

3-5. A plan is a continuous, evolving framework of anticipated actions that maximizes opportunities. The measure of an effective plan is not whether execution transpires as planned, but whether the plan facilitates the desired outcome in the face of unforeseen events. Effective plans and orders foster initiative.

3-6. Planning helps leaders—

- Understand and develop solutions to problems.
- Overcome operational problems (an issue or set of issues) that impede commanders from achieving their desired end state.
- Anticipate events and adapt to changing circumstances.
- Keep the force oriented on future objectives despite the requirements of current operations.
- Task-organize the force and prioritize efforts.

3-7. FM 6-0 includes key components of a plan or order as well as descriptions and formats for mission orders and appropriate annexes.

PREPARE

3-8. *Preparation* includes those activities performed by units and Soldiers to improve their ability to execute an operation (ADP 5-0). MDMP drives preparation that usually begins upon receipt of a warning order from the higher headquarters. The sustainment commander and staff conduct a time analysis early in the planning process that helps them determine what actions they need to take and when to begin those actions to ensure forces are ready and in position before execution. The plan may require the commander to direct subordinates to start necessary movements, conduct task-organization changes, and execute other preparation activities before completing the plan.

3-9. Leaders and Soldiers take required time to understand the plan, develop the plan, and rehearse key parts of the plan. Preparation activities include confirmation briefs, training, information collection, transitioning from plans to operations, and rehearsals.

PLANS TO OPERATIONS TRANSITION

3-10. CSSBs and other organizations are dependent on brigade-level future operations and plans cells for long-range planning horizons, typically 96 hours and beyond. The CSSB has a current operations integration cell. The current operations integration cell monitors mission execution, issues mission orders, reviews intelligence, responds to emergency resupply requests, maintains the COP, maintains the synchronization matrix, and conducts briefings and meetings. The S-3 current operations section is responsible for developing and maintaining the plan until the time of orders issuance to support current operations. The commander determines who leads the current operations integration cell. Typically, this position is assigned to the SPO.

3-11. At the sustainment brigade and the ESC, the responsibility for developing and maintaining the plan shifts from the plans (or future operations) cell to the current operations cell as a plan nears the time of execution. The transition from plans (future operations) to operations is deliberate to ensure members of the G-3 or S-3 current operations cell fully understand the plan before execution. This transition is the point at which the current operations cell becomes responsible for controlling execution of the OPORD. This responsibility includes answering requests for information concerning the order and maintaining the order through fragmentary orders. This transition enables the plans (future operations cell) cell to focus its planning efforts on sequels, branches, and other planning requirements directed by the commander. The G-3 or S-3 staff officer is responsible for managing the handover of a plan from future operations to current operations.

REHEARSALS

3-12. A *rehearsal* is a session in which the commander and staff or unit practices expected actions to improve performance during execution (ADP 5-0). The four types of rehearsals are the backbrief, combined arms rehearsal, support rehearsal, and battle drill or SOP rehearsal. Methods for conducting rehearsals are limited only by the commander's imagination and available resources. Commanders use rehearsals as a tool to ensure staffs and subordinates understand the concept of operations and commander's intent. See FM 6-0 for more information on types and methods of rehearsals.

3-13. Commanders often verbally issue orders to subordinates in situations requiring quick reactions. At battalion and higher levels, written fragmentary orders confirm verbal orders to ensure synchronization, integration, and notification of all parts of the force. If time permits, leaders verify that subordinates

understand critical tasks. Methods for doing this include backbriefs and confirmation briefs. A *backbrief* is a briefing by subordinates to the commander to review how subordinates intend to accomplish their mission (FM 6-0). A *confirmation brief* is a brief that subordinate leaders give to their higher commander immediately after the operation order is given to confirm understanding (ADP 5-0). It demonstrates their understanding of the higher commander's intent, their specific tasks, and the relationship between their mission and the other units in the operation. Commanders conduct backbriefs and confirmation briefs between themselves and within staff elements to ensure mutual understanding.

3-14. Briefers may use a script as a guide to ensure all key areas are addressed during a rehearsal. The use of a script deters potential off-topic ramblings or unprepared participants. The use of terrain models that briefers can stand on or point to increase the likelihood of achieving a shared understanding.

3-15. Sustainment leaders must participate in both combined arms rehearsals and support rehearsals. A sustainment organization providing DS for a maneuvering unit conducting the main effort must understand the maneuver plan in order to develop an effective concept of support. The combined arms rehearsal ensures that subordinate unit plans synchronize with those of other units and that subordinate commanders understand the intent of the higher headquarters. The execution matrix, decision support template, and OPORD typically outline the rehearsal agenda. These tools, especially the execution matrix, drive and focus the rehearsal. The commander and staff use them to control the operation's execution. Any templates, matrixes, or tools developed within each of the warfighting functions (such as the logistics synchronization matrix) should tie directly to the supported unit's execution matrix and decision support template.

3-16. Support rehearsals help synchronize each warfighting function with the overall operation. Conducting sustainment rehearsals immediately after the combined arms rehearsal ensures understanding and synchronization of the unit's maneuver and sustainment plan as it traverses the battlefield. The sustainment rehearsal helps synchronize the sustainment warfighting function with the other warfighting functions to create a common understanding of the plan. It is critical that the combined arms team and all elements of sustainment are represented and participate in sustainment rehearsals. This ensures a shared understanding of how these elements integrate with one another to accomplish the mission.

3-17. The sustainment rehearsal ensures synchronization of sustainment efforts before, during, and after operations. It is a validation of the logistics synchronization matrix and the concept of support. The rehearsal focuses on the sustainment operations of the supported and supporting units across time and space as well as the methods of support during an operation.

EXECUTE

3-18. During the execution phase, commanders focus their efforts on directing, assessing, and leading while improving their understanding and modifying their visualization. Initially, commanders direct the transition from planning to execution as the order is issued and the responsibility for integration passes from the plans (future operations) cell to the current operations cell.

3-19. At echelon, sustainment command headquarters G-3 or S-3 current operations and the supporting SPO focus on resolving issues to achieve the desired results. The supporting DMC or SPO section usually uses a synchronization matrix as a visual and sequential representation of critical tasks and responsible organizations. The G-3 or S-3 focuses on defining command and support relationships and geographical placement of units while generating and synchronizing staff support to the tactical units executing the mission. These efforts include the assignment of responsibilities among staff sections and CP cells for conducting analysis and decision making. The G-3 or S-3 has the primary responsibility to ensure success of the operation during execution. The supporting SPO assesses the operation during execution to determine impacts on the planning of follow-on sustainment operations.

ASSESS

3-20. During the course of the operations process, commanders integrate their own assessments with those of the staff, subordinate commanders, and other unified action partners. Primary tools for assessing progress of the operation include the OPORD, COP, personal observations, running estimates, and the assessment plan. The commander's visualization forms the basis for the commander's personal assessment of progress.

The staff and commander use assessment and supporting data to provide feedback to improve support effectiveness and efficiency and to optimize sustainment operations.

3-21. The commander has multiple tools to use as checks and balances, to include mission command systems, logistics information systems, internal assessment, and feedback from supported units. As the commander and the command sergeant major execute their battlefield circulation plan, they are not only checking on their Soldiers but also speaking with supported units, including the field army and corps G-4, to verify the quality of support. Assessment is continuous. It precedes and guides every operations process activity and concludes each operation or phase of an operation.

SUSTAINMENT PLANNING AND EXECUTION

3-22. At the field army and corps echelons, sustainment planning and execution is a collaborative process between the supported unit and the supporting DMC or SPO staff. The supporting SPOs for the CSSB, sustainment brigade, and the ESC require direct involvement from supported commanders and staffs to develop sustainment staff estimates that identify each supported unit's requirements. The supporting SPO provides input to the supported G-4 or S-4, who is responsible for developing the concept of support and integrating estimates provided by their unit's staff. For example, at the corps echelon, the ESC SPO provides input to the corps G-4 on the corps concept of sustainment. The corps concept of sustainment represents how these tactical command headquarters will employ sustainment assets to support units within and beyond the assigned AO. The ESC, using attached sustainment brigades in support of the corps, must be able to sustain units operating within and beyond the corps support area.

3-23. During the planning process, each SPO identifies sustainment capability gaps and shortfalls and coordinates with the next higher sustainment headquarters for mitigation. For example, the sustainment brigade coordinates with the corps ESC SPO in order to mitigate sustainment capability gaps. Coordination may include requirements for field services, bulk fuel storage and distribution, water purification, bulk water storage and distribution, general supply, transportation, and mortuary affairs.

3-24. The ESC, sustainment brigade, and CSSB SPOs and their respective G-3s or S-3s must be cognizant of task organization changes to the supported units in order to make support-related recommendations to higher command. This is especially critical when supporting the units forward of the assigned support area. For example, it may be necessary to move specific sustainment capabilities from one location in the corps support area to another location in order to support a corps unit operating in support of the main effort division.

3-25. Sustainment planning and execution requires an understanding of the role of the G-3 or S-3 in comparison with the role of the SPO. The G-3 or S-3 is responsible for monitoring the execution of operations and battle tracking. The SPO manages sustainment operations. This may include changing essential tasks, redirecting convoys, shifting maintenance priorities or capability, or dispatching additional convoys with additional supplies to replace destroyed supplies. SPOs integrate and synchronize efforts to ensure the appropriate sustainment tasks occur to accomplish the mission. Effective sustainment planning and execution requires collaboration among SPOs, the surgeon, staff functional cells, respective sustainment unit G-3 or S-3, and their supported G-3 or S-3.

3-26. A key consideration for the SPO is balancing sustainment capabilities between reserves for future use and current operations. If the reserve is held and the current mission fails future requirements may expand exponentially.

LOGISTICS SYNCHRONIZATION MATRIX

3-27. The ESC, sustainment brigade, and CSSB SPO sections integrate higher command sustainment operations into their synchronization matrices. The synchronization matrix is a decision support product—essentially an execution matrix. It identifies sustainment tasks to be accomplished, the unit designated to execute the task, and the time and location the task will be executed. When developed properly, the synchronization matrix clearly shows all tasks to be accomplished to support the supported unit or event in terms of time and space. The logistics synchronization matrix is a key component of sustainment rehearsals, synchronization meetings, maintenance meetings, and other battle rhythm events.

3-28. Sustainment command SPO staffs and their respective G-3 or S-3 staffs update the matrix or create a new matrix to support each planning cycle. The staffs use updated LOGSTAT reports and running estimates as source information to update the matrix. The format of a logistics synchronization matrix is not standard, but it must have two critical characteristics—it must be easily understood by the commander and subordinate units and detailed enough for the SPO to use as a planning and synchronization tool.

SUSTAINMENT OVERLAY

3-29. A sustainment overlay is a graphic representation of the locations of sustainment units, support areas, main supply routes, alternate supply routes, transportation facilities, unit boundaries, control measures, supply points, maintenance collection points, mortuary affairs collection points, ambulance exchange points, and other sustainment activities. A sustainment overlay should accompany an OPORD and be distributed to supported units. For example, the sustainment brigade provides sustainment overlays to all the sustainment brigade's supported units. In addition, logistics planners of the maneuvering units must combine the sustainment overlay with the operations overlays from the other warfighting functions to build a complete COP at echelon.

SUSTAINMENT SYNCHRONIZATION MEETING

3-30. The ESC, sustainment brigade, and CSSB SPOs conduct sustainment synchronization meetings at their respective echelons. Attendees include, at a minimum, the executive officers and G-4s or S-4s of supported organizations; the ESC, sustainment brigade, or CSSB DMC or SPO section; medical planners and representatives; and representatives from the next higher echelon supporting sustainment unit. Attendees consider calendars, unit battle rhythms, current orders, logistics reports, the sustainment synchronization matrix, commander's guidance, and other pertinent information. Meeting products include warning orders, supporting SPO guidance, updated calendars, synchronization matrices, and logistics posture and status.

3-31. Effective sustainment synchronization meetings participants include—

- Supported unit executive officer.
- Supported unit S-4.
- Supported unit S-3.
- Supported unit S-2.
- Supporting SPO.
- Supporting DMC or SPO staff section.
- Supporting unit executive officer.

3-32. Agenda may include—

- Enemy situation and updates.
- Upcoming missions.
- Updated logistic synchronization matrix.
- LOGSTAT.
- Contract status update.
- Combat power.
- Transportation movement request status.
- HSS issues.
- Sustainment information systems issues.
- Updated sustainment overlay.

LOGISTICS REPORTING

3-33. The LOGSTAT is critical to sustainment support planning, decision making, and execution. Units use it to provide a real-time status of supply and equipment readiness. LOGSTATs provide visibility on critical shortages, allow commanders and staff to forecast future support requirements, project mission capability, plan and decide on sustainment courses of action, and inform the COP. In some instances, the LOGSTAT may be the only means available to request resupply from higher headquarters or supporting organizations.

Accurately reporting the logistics and medical support status is essential for keeping units combat ready. Over or under-estimating reports and inaccuracies mask actual unit readiness and has negative effects on sustainment support. Report formats vary by type of unit or by mission. The format and the information provided may be tailored to the commander's critical information requirements to support decision making for a specific mission or a phase of an operation. LOGSTAT reports include the unit on-hand stockage levels and projections over the next 72 hours. The reports format balances the need for detail against the risk of burdensome reporting requirements. Reporting too many items makes reporting burdensome and may dilute actual readiness posture. Figure 3-1 depicts the flow of LOGSTAT reports in an infantry BCT.

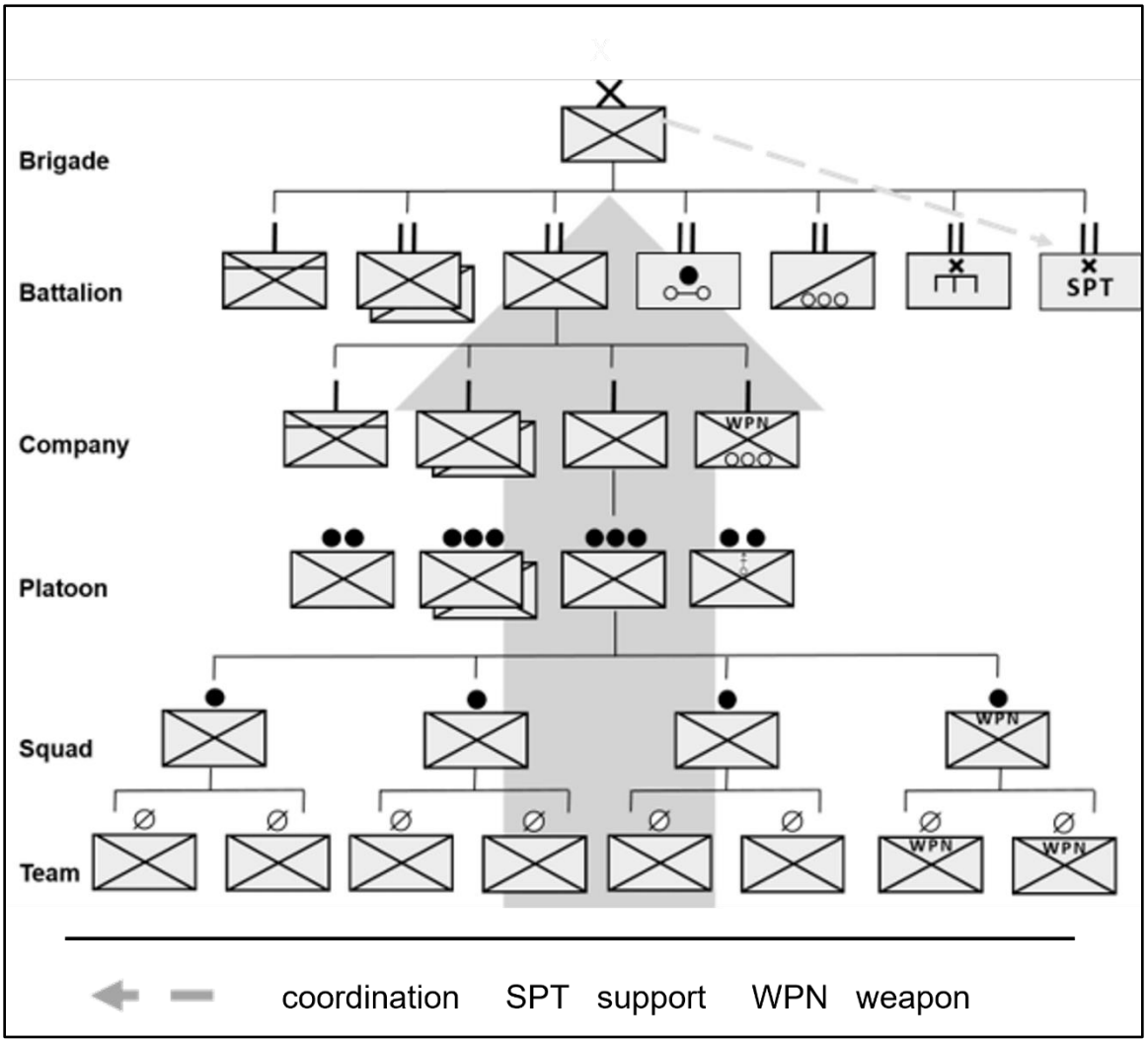


Figure 3-1. LOGSTAT reporting in an infantry brigade combat team

3-34. Operational units submit LOGSTAT reports such as the readiness status of vehicles, weapon systems, critical equipment shortages, and critical supply or ammo shortages through unit command and staff channels based on command relationships. Equipment status is collected from the lowest unit up. Compilation of the LOGSTAT typically begins with the company headquarters and is passed to the battalion S-4, then to the brigade S-4, and on to higher. Maneuver companies also provide a copy of the LOGSTAT to their supporting FSC. In figure 3-1 all reports flow to the brigade G-4 who validates the report before passing it up to higher headquarters. The G-4 then passes the LOGSTAT to the BSB SPO to coordinate resupply.

3-35. At the field army or corps echelon, there may not be a division headquarters so organic reports may pass from the battalion or brigade level directly to the field army G-4 or corps G-4. The field army or corps G-4 uses information from submitted LOGSTAT reports to analyze readiness and report critical needs and

supply class priority to the supporting ESC SPO. The ESC DMC staff executes the distribution management process to distribute supplies in accordance with the field army or corps' priorities. Leaders at all levels analyze the LOGSTAT report and forecast requirements based on current balances and upcoming mission requirements. Once logistics information is gathered, a leader may cross-level materiel within the organization.

3-36. Sustainment units submit a unit LOGSTAT as well as a report on status of their support stocks. Figure 3-2 depicts the flow of these reports. These reports are similar to a LOGSTAT reporting status of on-hand stocks used to resupply supported units. For example, a class III storage unit reports how much fuel is on hand, an ammo unit reports major ammo item on hand, and a field feeding company reports class I and water on hand. These reports are integral to the materiel management asset visibility and asset reporting functions. The sustainment unit reports support sustainment planning, decision making, and execution. Therefore, accuracy and timeliness are critical. At the field army and corps echelon, command relationships dictate the reporting chain. Generally, the sustainment report flows through the supporting company to the DSSB or CSSB SPO, on to the DSB or sustainment brigade SPO, and then to the ESC SPO. The ESC DMC staff uses the information from the report to understand support capacity and to request additional stocks from the TSC.

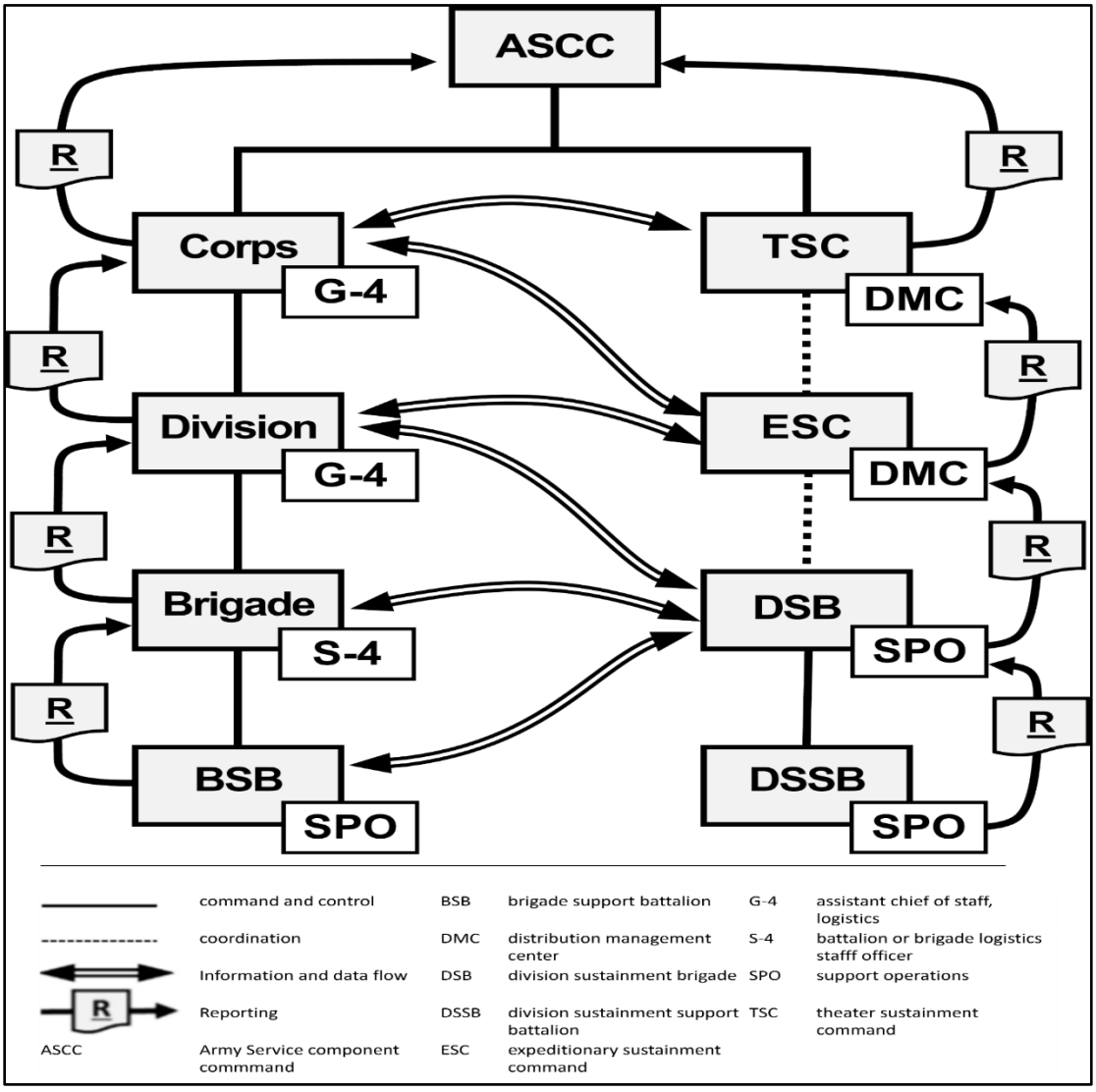


Figure 3-2. LOGSTAT reporting through sustainment headquarters

3-37. Elements of information from GCSS-Army inform the LOGSTAT and support stock reports. GCSS-Army functionality provides the ability to drill down within reports to display originating and supporting documentation. Materiel managers can monitor and process on-hand stocks, forecasts, procurement, maintenance of stock, equipment maintenance, disposal, retrograde, and distribution of materiel. If the network is degraded affecting GCSS-Army accessibility, LOGSTAT reporting must be completed using analogue methods. Units using an alternative reporting method to pass the information through the reporting chain must be provided a format. Generally, information required on LOGSTATs include status on all classes of supplies and equipment readiness. Additional details to include in a logistics report are gallons of fuel on hand and projected usage, changes to anticipated expenditure rates, and any incident having significant impact on the logistical posture of a tactical unit. Capturing the status of weapons systems and critical equipment is also necessary. Each higher headquarters must clearly define the reported metric criteria (such as percentages or colors) and define those criteria in the unit SOP. Typical reporting metrics include cases, number of items, gallons, liters, and other specific metrics. The supporting ESC reporting requirements include information such as—logistics information systems' connectivity status, route and transportation node status, and distribution platform capabilities.

3-38. Command headquarters determine reporting frequency and items to report. The actual reports will be formatted to meet the commander's requirements. Examples of reported items include, but are not limited to, the following—

- Class I and water.
- Critical class II, including critical clothing or common table of allowances, better known as CTA 50 items for Soldiers.
- Class III bulk and packaged. This includes quantities in organic vehicle fuel tanks and organic fuel tankers.
- Class IV barrier materiel.
- Critical class V. Focus is on class V that supports main weapon systems, including– main battle tank ammunition, attack aircraft missiles, long-range or precision artillery ammunition, air defense ammunition, and anti-tank ground missiles.
- Critical class VII shortages. This reports critical class VII battle losses, such as—main battle tanks, helicopters, and artillery systems. It reports all on-hand critical class VII items non-mission capable for maintenance and lack of repair parts.
- Critical class VIIIA (medical consumables) and class VIIIB (blood and blood components) items.
- Critical class IX. Focus is on items that are required to return critical weapon systems to mission capable status.

3-39. Planners base LOGSTAT report data collection on operational and mission variables and should not overwhelm subordinate units with submission requirements. A report that requires status on too many unnecessary types of supplies or information will overwhelm staffs by requiring inordinate amounts of time to complete and by providing information unnecessary for decision making. While this publication provides a standardized example for LOGSTAT reports, annexes, formats vary as required by the commander. The field army or corps G-4 should establish an organic operations LOGSTAT report format for the field army or corps organic and attached units. This format and reporting times are included in Annex F of the field army or corps OPORD. The ESC SPO officer establishes the format for the sustainment LOGSTAT. This format and reporting times is included on Annex F of the ESC OPORD. The frequency of a LOGSTAT report varies. Units often complete a LOGSTAT report twice daily, but during periods of increased intensity, the commander may require status updates more frequently. As long as automation is available, LOGSTAT reports relayed through near-real-time automation provide the commander with the most up-to-date data.

3-40. The organization's battle rhythm is critical when considering reporting cut-off times, as of times, and reporting times. Automated feeds will offer near real time status, but if a unit is consolidating information manually, it will have to determine cut off and reporting times to synchronize with the rest of the organization. If logistics updates are part of the ESC and field army or corps commanders' daily battle rhythm or part of an update briefing, the ESC and field army or corps designates logistics reporting times as current as possible for these events to provide the commander with the best status. It is also important to allow enough time to analyze the data to provide the commander with a considered recommendation on future courses of action.

PLANNING CONSIDERATIONS FOR SUSTAINMENT OPERATIONS

3-41. Throughout operations, ESC commanders, subordinate sustainment commanders, and their respective staffs will face various problems requiring unique and creative solutions. Information gathered during planning allows logistics planners to make informed deductions about future operations and forecast sustainment to achieve a successful outcome. Planning is thinking critically and creatively; it entails identifying and evaluating potential decisions, actions, and their consequences. Planning involves thinking about ways to influence future events and respond to potential issues.

3-42. The planning considerations listed below include examples of what sustainment planners may have to account for during large-scale combat operations for each of the warfighting functions. Used properly, these considerations assist planners in identifying specific support or operational requirements based upon available information. This list should not be considered all-inclusive. Considerations will vary at echelon and for individual operations.

3-43. Sustainment planning considerations include—

- Plan for inconsistent or inaccurate LOGSTAT reporting from supported units. Establish PACE communications plans to ensure effective personnel asset visibility and LOGSTAT report delivery.
- Plan to support emergency resupply accomplished through airdrop or ground transportation.
- Expect to conduct continuous review and analysis of demands and computation of corps requirements for supplies, equipment, and maintenance support.
- Expect increases in controlled exchange or cannibalization of salvage or unserviceable equipment.
- Expect high demand for obscurant supplies and equipment.
- Anticipate executing refueling and resupply operations in covered and concealed locations as far forward as possible.
- Expect increased demand for class VIII (medical materiel and blood products).
- Anticipate the need for utilization of nonmedical and supporting transportation assets for casualty evacuation operations.
- Incorporate EOD requirements in the class V forecast. Explosive ordnance filled with insensitive high explosives require significantly more class V for safe disposal.

3-44. Command and control planning considerations include—

- Anticipate that enemy attacks on space and cyberspace domains, to include the EMS, will degrade communications and digital information transmission.
- Expect highly adverse impacts on satellite communications, use of digital information and command and control systems, positioning, navigation, timing, information collection, internet operations, and radio communications.
- Development and execution of primary, alternate, contingency, and emergency (PACE) communications plans are critical.
- Identify sustainment forces that will support the defense reserve force in all types of defense tasks.
- Understand how terrain may limit or degrade line-of-sight communications and force the need for retransmission stations.
- Conduct frequent assessment of sustainment task organization to ensure it is adequate and positioned properly to support the sustainment mission.

3-45. Movement and maneuver planning considerations include—

- Expect sustainment resupply and support elements to relocate within the operational area to provide additional support to the main effort.
- Expect requirements for unmanned aircraft (classes III[B], V, and IX repair parts) to increase during defensive operations. Unmanned aircraft systems often require motor gasoline or aviation gasoline.
- Understand and anticipate how terrain, defense obstacles, control measures, fire support coordination measures, movement restrictions, and terrain will affect the methods of supply distribution and resupply.

- Coordinate with the appropriate G-3 or S-3 to ensure distribution operations are synchronized with movement requirements and restrictions.
- Identify main and alternate movement routes. Task and coordinate with movement control units for road usage or de-confliction during retrograde operations.
- Anticipate and plan for support to special operations forces, which may include special ammunition, specialty fuels, and non-standard equipment maintenance.
- Task and coordinate with movement control units for road usage or de-confliction during retrograde operations.
- Plan to support attack helicopter operations to include fuel, maintenance, munitions, and placement of forward arming and refueling points.
- Coordinate with support area terrain managers to deconflict airspace for aerial delivery, U.S. Air Force airland delivery, and aeromedical evacuation requirements.
- Coordinate with support area terrain managers to coordinate and de-conflict airspace for aerial delivery and air MEDEVAC requirements.

3-46. Intelligence planning considerations include—

- Situation development, target development, and support to lethal and nonlethal targeting, warning intelligence, assessment, and protection.
- Providing the commander and staff with assessments of enemy capabilities, intentions, and courses of action as they relate to the mission.
- Identifying weather information gaps.
- Identifying intelligence gaps and developing collection strategies.
- Disseminating intelligence products throughout the unit and to higher and subordinate headquarters.
- Answering requests for information from subordinate commanders, staffs, and higher and adjacent units.
- Coordinating unit information and intelligence requirements with supporting higher, lateral, and subordinate echelons.
- Leading the staff in performing IPB.

3-47. Fires planning considerations include—

- Offensive and defensive fires operations greatly increase consumption of long range, obscuration, and precision munitions.
- Anticipate frequent and rapid relocation of fires units to shift supporting units accordingly.
- Ensure quantity and positioning of modular ammunition units at EAB are sufficient to support fires ammunition requirements.
- Ensure the correct type and quantity of ammunition transportation assets are properly positioned to support ammunition distribution for fires operations.

3-48. Protection planning considerations include—

- Understand the enemy threats that exist within the AO to develop an effective defense plan.
- Expect direct enemy attack by small unit, special operations ground forces, attack aircraft, and long-range artillery. Ensure that base defense measures are adequate to detect and defeat small unit ground operations.
- Consider the need for unit dispersion and concealment to prevent detection and mitigate effects of long-range fires and attack aircraft.
- Consider employment of a base cluster operation consisting of multiple small, dispersed bases versus a single large base to facilitate concealment.
- Plan for CBRN conditions. This includes increased requirements for non-potable water and chemical defense equipment. Planning must include detailed procedures for processing contaminated human remains, contaminated waste disposal, and equipment decontamination.
- Plan to position EOD assets to render safe and dispose of explosive hazards. Planning should also include providing counter EOD or improvised explosive devices.

- Plan for adequate convoy security for convoys. This may be from internal sources or from coordinated external sources.

3-49. Sustainment planning considerations for current and future operations include—

- Incorporate all sustainment elements: personnel services, HSS, financial management, and logistics.
- Understand the concept of operations to ensure adequate support to the main effort, to include cross-leveling sustainment assets.
- Expect greatly increased consumption of supply classes III (packaged and bulk), IV, V, VIII, and IX.
- Position supply assets dispersed and well forward and consider use of configured loads.
- Expect increased maintenance and vehicle recovery requirements. Be prepared to cross-level maintenance and recovery assets accordingly.
- Expect a significantly increased personnel fatality rate and provide adequate mortuary affairs support to divisions.
- Casualty rates may exceed Role 1, Role 2, and Role 3 support and patient holding capacity. Higher casualty rates will also place greater demands on MEDEVAC capacity and the distribution of class VIII.
- Personnel replacement operations to fill losses due to casualties and fatalities will place additional demand on transportation assets.
- Expect increased personnel mobility requirements that will place demands on transportation assets and compete with distribution demands.
- Expect shortfalls in tactical class III (bulk) distribution capability.
- Anticipate increased demands on aerial delivery assets to support emerging special operations forces requirements that exceed organic special operations force capability.
- Plan for increased consumption and distribution requirements of class X in support of special operations forces and other government agencies.

SECTION II – SUPPORT OPERATIONS OFFICE

3-50. The SPO staff performs SPO functions that include developing support plans across all planning horizons. The ESC, sustainment brigade, and CSSB all have organic SPO staffs that serve as the interface between supported and supporting units. The SPO officer leads the effort for planning, coordinating, and synchronizing sustainment operations at each sustainment command echelon, based on support relationships directed in the OPORD. Figure 3-3 on page 3-12 depicts a sustainment brigade SPO section.

3-51. The ESC DMC and subordinate sustainment command SPO office staffs plan and coordinate external support operations. They balance external sustainment support requirements with their respective organization's sustainment capabilities. They have different organizational scopes of responsibility but generally perform similar functions. These consist of distribution planning, transportation planning, materiel management, and planning and managing the sustainment functions of field services, maintenance, OCS, HR, and financial operations for their supported units. The CSSB SPO office staff generally focuses on synchronizing transportation, maintenance, supply, fuel, and ammunition support for supported customers. The SPO office may assist the supported unit G-4 or S-4 with developing logistics support concepts and support annexes to ensure the command has adequate sustainment to support the mission. For example, the ESC SPO office may assist the corps G-4 with developing the sustainment support concept and support annexes to ensure corps units have adequate sustainment to accomplish their missions. See ATP 4-0.1 and FM 4-0 for more information.

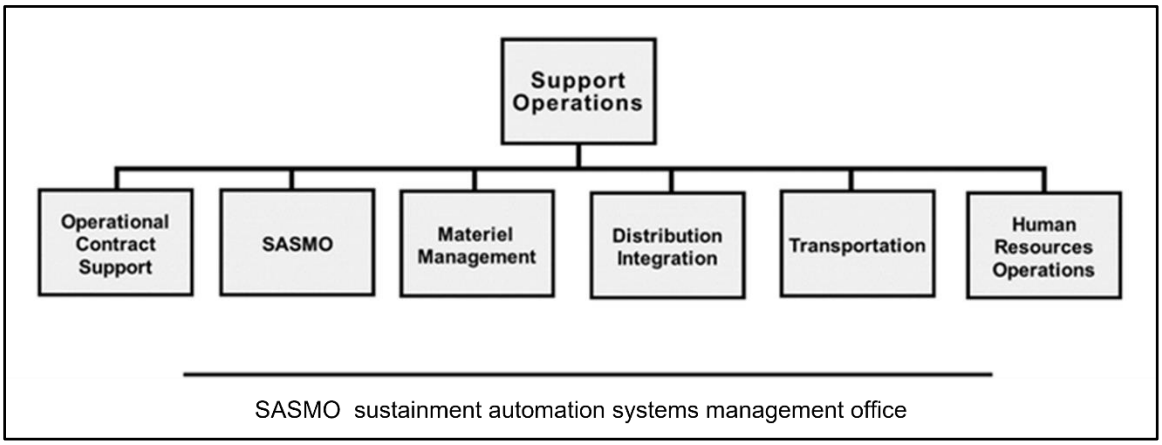


Figure 3-3. Notional example of sustainment brigade support operations

DISTRIBUTION INTEGRATION BRANCH

3-52. The ESC and sustainment brigade SPO distribution integration branches (DIBs) integrate their DMC transportation management and materiel management activities and processes into distribution actions supporting decisive action tasks throughout the operational area. The DIB develops the distribution plan for the supported higher headquarters and contributes information towards the development of the headquarters movement plan. The DIB integrates the transportation assets anticipated to be available by mode and node (provided by the transportation operations branch) with the forecasted materiel and service requirements (provided by the materiel management branch). By integrating the transportation assets anticipated to be available with the forecasted materiel, service, and movement requirements, the DIB can develop a distribution plan that 1) satisfies future requirements by priority, 2) identifies shortfalls, and 3) informs the supported headquarters G-4 or S-4 of the risk associated with the shortfalls. This risk assessment enables the supported G-4 or S-4 to justify requesting additional transportation while in the mid-range planning horizon.

3-53. At echelon, the DIB coordinates the activities of its respective SPO staff and ensures the staff integrates with the remainder of the command headquarters staff. The SPO officer translates the commander's guidance to the SPO staff, provides direction, and then uses SPO outputs to recommend and create a COP to support the commander's visualization. Based on the commander's guidance, the DIB integrates and prioritizes available transportation assets and route information provided by the transportation operations branch with commodity and other transportation requirements provided by the materiel management branch into an initial distribution plan.

3-54. At the ESC command level, the DIB is staffed to support multiple boards, bureaus, centers, cells, and working groups. The ESC SPO officer or DIB chief may organize these personnel as required to meet planning requirements. Working groups may be formed to support multiple lines of effort or to support plans and operations across all planning horizons. At echelon, the DIB requires a complete awareness of the LOGSTAT of subordinate and supported units to optimize resources and task subordinate organizations in support of ongoing and future operations. The primary functions of the DIB are focused around planning, coordinating, and managing distribution operations for an operational area. Additional functions of the DIB are listed below:

- Synchronize future operational area distribution operations with supported command's concept of operations.
- Monitor and assess sustainment operations for impact on future operations.
- Synchronize supported commander requirements with distribution capabilities.
- Develop the distribution plan for the operational area.

3-55. An example of how the DIB may coordinate efforts during large-scale combat operations occurs when the supported operational commander notifies the ESC regarding plans for a new line of effort. The ESC

DMC staff would coordinate a mission analysis with all ESC CP warfighting functional cells. Personnel from the DIB would participate in the mission analysis on behalf of the DMC.

3-56. At echelon, each branch within the SPO office contributes to the mission analysis. The DIB integrates input from each SPO branch. The following example is very simplistic and intended only to show how the DIB integrates the rest of the DMC or SPO office into future operations planning. Assume the new line of effort is an offensive maneuver to a new location. The transportation operations branch estimates haul capacity shortfalls and recommends task organization changes. The materiel management branch identifies additional petroleum requirements and recommends new storage locations. The OCS branch assists the staff and subordinate units in identifying additional requirements for commercial support. The OCS branch also coordinates for validation, approval, and sourcing through supporting contracting agencies. The DIB synthesizes the recommendations from all SPO branches and conducts an analysis to determine if the operation is feasible. This analysis answers questions such as—

- How many days are required to move the force to the new location using the available transportation assets?
- How many days are required to prepare the new location (new POL storage site) and build the required stockage levels?
- What conditions must exist to close one supply point and open a new supply point?

3-57. The DIB integrates the SPO's analysis into the command's future operation cell to develop the command headquarters' concept of support for the new line of effort. This is briefed to the ESC commander and then to the supported operational commander and staff.

TRANSPORTATION OPERATIONS BRANCH

3-58. The ESC and sustainment brigade transportation operations branches of the DMC or SPO office develop the movement program and route synchronization plans for the distribution plan. The field army or corps transportation office is the staff office responsible for route synchronization of all movements throughout the AO, to include unit movements. The transportation branch staff plans, coordinates, and synchronizes inland surface transportation (rail, road, and inland waterway) and air transportation (airland, airdrop, and sling load) capabilities at echelon. At the field army and corps echelon, the ESC and sustainment brigade's transportation operations may be categorized as either intra-theater operations or container operations. See ATP 4-0.1 and FM 4-0 for more information.

3-59. The transportation operations branch balances transportation requirements against transportation capabilities. The staff monitors and assesses transportation operations for impact on future operations based on priorities established by the field army or corps commander. To execute operations, the branch must effectively manage and maintain visibility of distribution assets (including both U.S. and HN CULT assets) within the distribution network. Examples of distribution assets include trucks, rail, aircraft, pipeline, containers, and Army watercraft. To meet requirements and optimize the distribution flow, the ESC liaises and coordinates with HN-contracted transportation providers (through the supporting contracting office) as well as supported units and recommends cross-leveling of assigned or attached distribution assets within the operational area as necessary.

3-60. The Army distribution system is designed to optimize available infrastructure, reduce response time, maximize throughput distribution, and support time-definite delivery. ***Throughput distribution*** **is a method of distribution which bypasses one or more intermediate supply echelons in the supply system to avoid multiple handling.** Effective distribution management synchronizes and optimizes the various sub-elements of the distribution system. Methods may include maximizing containerization, increasing standardized transportation and materials handling equipment, integrating aerial re-supply as a routine method of delivery, integrating and synchronizing retrograde operations across all available transportation modes, reducing storage, reducing transportation mode transfer handling requirements, and increasing in-transit visibility in an operational area. This branch coordinates (through the supporting contracting agency) with contract transportation providers, mode operators, and supported units.

3-61. When developing the ground distribution system, the DMC or SPO office should identify, evaluate, and compare factors that tend to facilitate convoy movement. They should also facilitate control, which includes movement restrictions, route classification, traffic flow, choke points, and rest halts. This requires a

thorough understanding of the current enemy situation along the route to include the identification of danger areas and potential ambush sites. Depending on the level of threat, the sustainment organizations should work with the supporting MEB or local terrain manager to obtain convoy escorts or establish a movement corridor that provides for coordinated responses to level I and II threats.

3-62. The transportation operations branch, in coordination with the ESC G-3, G-4, and field army or corps transportation officer, coordinates and manages movement control operations in the field army or corps support area. The movement control officer is the staff officer in the transportation operations branch responsible for validating and prioritizing a movement requirement before requesting external support. Depending on higher commanders' priorities and determined task organization, it may be necessary for a movement control team (MCT) to work with the movement control officer to assist in providing a range of transportation support planning, programming, and operations required to support the spectrum of military operations

3-63. The MCT is critical to provide movement control depth to assist the movement control officer with the responsibilities of coordinating movement control operations supporting distribution. The team operates on a 24-hour basis to assist the movement control officer in planning, scheduling, controlling, coordinating, and regulating mode operations. The team's automation systems also provide the sustainment brigade linkage to the theater movement control network and maintain in-transit visibility of materiel and personnel transiting into, within, and out of the field army or corps area.

3-64. The transportation operations branch conducts transportation planning in support of large-scale combat operations. The branch develops theater highway regulation, traffic circulation, and maneuver and mobility support plans. The branch manages all facets of transportation information related to planning, coordinating, and evaluating all methods of transportation movement control and logistics support. Additional examples of transportation operations branch tasks are listed below:

- Develop the movement plan as part of the field army or corps distribution plan.
- Manage transportation operations to include mode, terminal, and movement control and CULT support.
- Plan, monitor, and control movements into, out of, and across the operational area.
- Monitor and assess transportation operations for impact on future operations.
- Oversee the development and implementation of the movement program executed by the movement control battalion.

3-65. The movement control officer coordinates with the field army or corps and ESC G-3s on operational movements and with the field army or corps and ESC G-4s on sustainment planning. The movement control officer assists the field army, corps, and ESC G-4s and the field army or corps transportation officer in developing guidance and resolving transportation issues. The movement control officer advises on transportation matters that include—

- Priorities for transportation and movement to support theater plans and orders.
- The availability of subordinate organization transportation assets.
- Movement regulating of main supply routes and alternate supply routes that the field army or corps will control.
- Assisting the G-4 in preparing, updating, and maintaining the transportation portion of the logistics estimate, including participation in MDMP for future operations.

3-66. The transportation operations branch also plans, resources, monitors, and manages aerial delivery operations within an operational area. The senior airdrop systems technician in the transportation operations branch is the advisor to the commander for all aerial delivery operations for an operational area. The transportation operations branch also plans, executes, and manages Army watercraft systems operations within an operational area.

3-67. Movement boards produce validated movement programs. A movement control officer from the field army, corps or ESC will normally chair the board. In a joint or multinational environment the ESC G-4 or the deputy commanding general for support could chair. Movement programs ensure all internal movement requirements are matched with appropriate capabilities and confirm coordination and synchronization for mission execution of movements occurring with the next 24-48 hours. For movement occurring outside of

48 hours, planners must identify potential requirements along with the availability of committed assets. Representatives in the movement board should include but are not limited to—

- ESC and sustainment brigade movement control officer.
- Field army or corps transportation officer.
- Field army, corps, or ESC G-1, G-2, G-3, and G-4.
- Subordinate S-4s and supporting SPOs.
- Representatives from organizations attached to the ESC.
- Provost marshal.
- Subordinate unit engineers.
- MCTs providing area support.
- Protection enablers (to include biometric capabilities).
- Cyberspace electromagnetic activities cell.

3-68. Intermodal operations are critically affected by the manner in which container management policies are enforced and container management is subsequently executed. The ESC's transportation operation branch also maintains visibility and control of physical distribution and container management. Visibility and control of containers are maintained in accordance with GCC policies. This will ensure adequate numbers of containers are available to support distribution system requirements.

3-69. The ESC can direct cross-leveling of distribution resources to meet requirements and optimize distribution flow. Depending on the role of the field army or corps, the supporting ESC transportation operations branch may coordinate all aspects of intermodal container use and manage container operations to include synchronizing support to retrograde operations. A *retrograde* is a type of defensive operation that involves organized movement away from the enemy (ADP 3-90). The branch coordinates with joint and strategic partners to synchronize deployment and distribution efforts and optimize distribution within the JOA by employing all transportation modes available.

MATERIEL MANAGEMENT BRANCH

3-70. The materiel management branch at each echelon develops plans, policies, programs, and procedures involving supply activities; maintains liaison with supported and supporting units; and recommends allocation of resources to support mission requirements. Materiel managers must develop a clear understanding of operational requirements. Materiel managers receive requirements, determine where the materiel is available, and direct materiel release based on command guidance and priority. Requirements determination results in a clear understanding of the actual supply requirements to meet operational needs and aids materiel managers in defining capabilities to support anticipated workloads. Materiel managers must have visibility of all field army or corps requirements to ensure the distribution system operates effectively. When determining requirements, field army or corps and ESC logistics planners (assisted by sustainment brigade materiel managers) identify a quantity of supplies that must be retained in the support area. That quantity may change as the OE changes.

3-71. Materiel managers identify, plan, resource, and implement management actions to ensure that all classes of supply are available for distribution. They satisfy the commander's requirements and priorities through appropriate sourcing, maintenance, and distribution of materiel and equipment. Materiel managers continuously analyze stock status to manage workload and control potential backlogs or bottlenecks generated by competing requirements and priorities. Situational awareness of the OE and supported commander's requirements drive the distribution, redistribution, and reprioritization of materiel. Materiel managers maintain accountability of materiel and cross-level materiel across the designated support area to fill shortages and ensure materiel is available to meet operational needs. Materiel managers also identify the decision points at which priority, quantity, or delivery dates could change in order to fulfill shortages or accommodate operational requirements. Figure 3-4 on page 3-16 outlines the five subordinate sections in the materiel management branch: field services, supply, munitions, fuel and water, and maintenance.

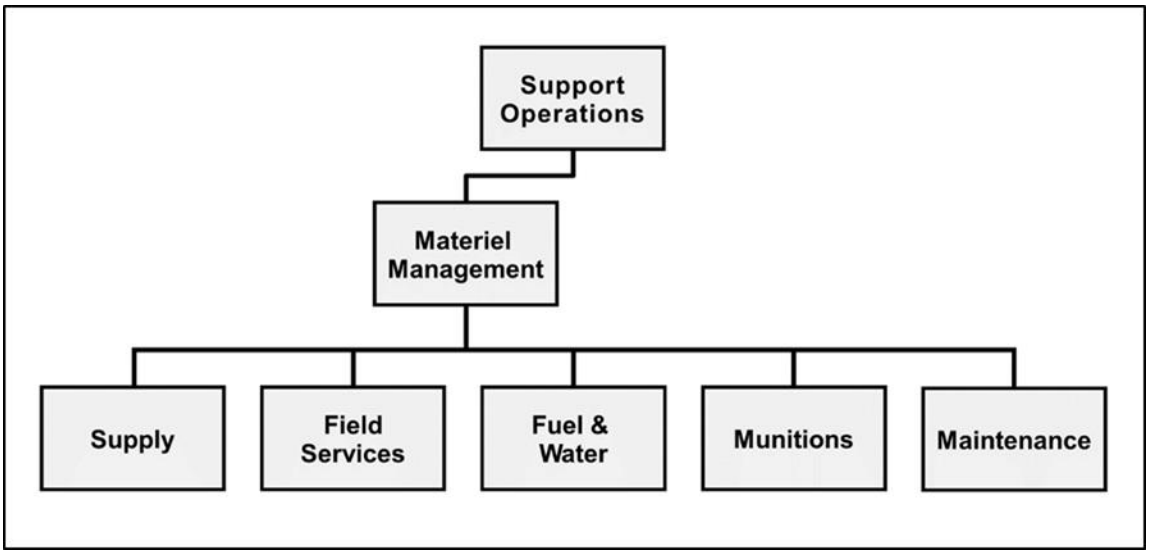


Figure 3-4. Notional sustainment brigade materiel management section

3-72. The ESC and sustainment brigade materiel managers exercise executive, administrative, and supervisory direction of class VII property accountability, maintenance readiness and general supplies, demand-supported supplies, and munitions. The sustainment headquarters G-4 or S-4 executes property accountability and class VII management for the headquarters and all assigned and attached units. The SPO is responsible for the remainder of the materiel management tasks. These tasks include—

- Reviewing work at the SSA and subordinate support operations to ensure appropriate levels of effectiveness.
- Monitoring subordinate SSA excess posture to ensure the excess is justified based on future operations or that the SSA has requested disposition instructions.
- Monitoring SSAs to ensure repairables are being turned in within allotted timeframe.
- Monitoring SSA overdue deliveries to ensure they are being resolved effectively and in a timely manner.
- Monitoring SSA performance statistics to ensure appropriate supply performance and customer support.
- Reviewing the zero-balance report comprised of on-hand, due-in, and due-out information on materials that are authorized to be stocked.
- Reviewing purchase requests and orders.

3-73. GCSS-Army is an enterprise resource planning tool that provides materiel managers across the Army a single database for visibility, anticipation, requisition, and demand satisfaction. GCSS-Army materiel management tasks include release strategy, release agents, resource management, and account assignment for purchasing. The system provides access to critical logistics information used to support distribution and materiel management that may affect the outcome of combat operations, combat power generation, and future operations planning. Materiel managers can use GCSS-Army to allocate and synchronize the flow of supplies in accordance with the commander's priorities. Materiel managers can also use GCSS-Army to monitor processes, conduct quality control, and adjust processes based on outcomes of performance.

SUPPLY SECTION

3-74. The supply section of the materiel management branch controls, manages, and directs the receipt, storage, and distribution of classes I, II, III (package), IV, VI, VII, VIIIA (medical consumables), IX, and X to sustain ESC-supported units. The supply section forecasts and establishes supply stockage objectives at the field army or corps echelon to meet mission requirements. This section assists supported commanders' sustainment staffs in validating the requirements against commanders' priorities for their formations. The

supply section develops plans to build necessary stockage levels in staging areas for conducting operations. This section maintains asset visibility of supplies across the operational area and provides commanders with real time solutions for supply shortfalls and long lead time repair parts.

3-75. In conjunction with the maintenance section of the materiel management branch, the supply section reviews equipment status reports from GCSS-Army to—

- Identify errors that could stall repair parts distribution (such as incorrect project code).
- Identify shortfalls due to GCSS-Army limitations.
- Identify potential lateral support.
- Facilitate lateral support between tactical SSAs.

3-76. To mitigate supply shortfalls, the supply section routinely communicates with strategic sustainment partners such as the supporting AFSB, DLA, and other agencies. The supply section routinely attends field army or corps sustainment synchronization meetings and maintenance meetings. Contributions to these meetings include standard pricing reports and identified or resolved issues for critical repair parts.

3-77. General supply operations include the requisition, receipt, storage, protection, maintenance, issue, distribution, redistribution, and retrograde of supplies. Levels of supply are broadly classified under the levels of warfare as strategic, operational, and tactical. Strategic supplies are items under the control of DLA or the USAMC life cycle management commands. Operational supplies are theater supplies that are positioned to replenish tactical stocks when strategic replenishment is not feasible. Tactical supplies are under the control of BSBs and FSCs. The following paragraphs discuss who manages each class of supply and how each could be distributed.

Class I

3-78. SPO class I materiel managers at each echelon monitor LOGSTAT reports to ensure required class I stocks are available to supported units. Class I materiel managers maintain visibility of on-hand stocks and forecast supported unit consumption over the next 24, 48, and 72 hours. Field army or corps assigned and attached units submit class I supply requisitions for resupply to their respective unit class I manager using the LOGSTAT report. Stocks will be issued at each echelon if available. If stocks are not available, the LOGSTAT report will prompt the supporting sustainment headquarters to anticipate a request for support. For example, requisitions flow from the requesting unit through Army information systems and a corps supporting sustainment brigade class I manager uses the LOGSTAT to evaluate the requirements and then direct the issue of class I through GCSS-Army to the SSA. The sustainment brigade DIB, in coordination with the transportation operations branch, collaborates with the sustainment brigade S-3 to develop the OPORD that directs transportation units to distribute supplies based on priorities of support published by the corps G-3 and G-4.

Class II, III (Packaged), IV, VIIIA and IX

3-79. Field army or corps units arrive in theater with a predetermined amount of class II, III (packaged), IV, VIIIA (medical consumables), and IX supplies. Class II, III (packaged), IV and IX are commonly known as general supplies. Classes II, III (packaged), VIIIA (medical consumables), and IX requisitions flow from the requesting unit through Army information systems to the support activity.

3-80. The ESC and sustainment brigade headquarters supply branches maintain awareness of future operations to anticipate increases in the different classes. The supply branch maintains visibility of all on-hand stocks of all supply classes and forecasts the field army and corps consumption over the next 24, 48, and 72 hours. The ESC uses the sustainment brigade to integrate and synchronize resupply operations. The supporting sustainment brigade DIB, in coordination with the supply branch, collaborates with the S-3 to develop an OPORD that directs the composite supply company to distribute supplies. Concurrently, the DIB, in coordination with the transportation operations branch, collaborates with the S-3 to develop an OPORD that directs transportation units to transport stocks to the requesting unit based on priorities of support published by the field army or corps G-3 and G-4.

3-81. The supporting sustainment brigade SPO supply branch monitors the capacity and performance metrics of separate unit SSAs and conducts staff assistance visits on behalf of the corps G-4 when necessary. The

supply branch directly manages the capacity and performance of the supporting SSAs to ensure they are able to provide responsive support to customer units. The supply branch also monitors the capacity and performance metrics of separate unit SSAs.

MUNITIONS SECTION

3-82. The munitions sections of the ESC DMC and sustainment brigade SPO conduct materiel management for conventional ammunition. These sections forecast and establish field army and corps ammunition stockage levels to meet mission requirements. They assist the sustainment staffs of the operating forces they support with validating their requirements against the commander's priorities for their formations. The munitions section monitors distribution, stockage objectives, stockage levels, requisitions, and redistribution. They also recommend sourcing, plan ammunition replenishment operations, and maintain asset visibility of ammunition across the operational area. These sections coordinate with quality assurance specialists (ammunition surveillance) for issues related to the receipt, storage, inspection, maintenance, surveillance, issue, use, and disposal of munitions. The sustainment brigade munitions section is also responsible for the quality surveillance operations of supported units to ensure that materiel in the stockpile meets established explosive safety and serviceability criteria and is properly classified. The sustainment headquarters SPO munitions section manages, inspects, and coordinates resupply in support of field army or corps assigned and attached units. See AR 702-12 and AR 385-10 for more information.

3-83. The ESC SPO munition section, in collaboration with the corps G-3 and G-4, reviews all requests and balances them against the controlled supply rate (CSR) and the field army or corps commander's priorities. The *controlled supply rate* is the rate of ammunition consumption that can be supported, considering availability, facilities, and transportation. It is expressed in rounds per unit, individual, or vehicle per day (ATP 3-09.23). The ESC uses the sustainment brigade to integrate and synchronize munition resupply operations. This sustainment brigade DIB, in coordination with the munition section, collaborates with the S-3 to develop an OPORD that directs the attached modular ammunition company to fill requisitions from on-hand stocks. Concurrently, the DIB, in coordination with the transportation operations branch, collaborates with the S-3 to develop an OPORD that directs transportation units to transport stocks to the requesting unit based on priorities of support.

3-84. The sustainment brigade munitions section also coordinates special transportation and aerial delivery requirements for munitions. At the ESC level, the munitions section has the additional task of providing information to the field army or corps G-3 to support establishment of the CSR. Some ammunition requirements are prioritized due to scarcity and may not be issued due to unavailability. See FM 4-30 and ATP 4-35 for additional information.

FUEL AND WATER SECTION

3-85. At the ESC and sustainment brigade, the fuel and water staffs plan, recommend resourcing, monitor, and analyze fuel and water support operations in the operational area. The ESC fuel and water section forecasts and establishes fuel stockage levels at the field army and corps echelons to meet mission requirements. For example, the corps-assigned ESC SPO fuel and water section monitors assigned divisions' current on-hand quantities by unit, fuel requirements by unit, and unit storage capacity in anticipation of future resupply request to the corps G-4. The section assists supported sustainment staffs in determining requirements and validating requirements against the commander's priorities. The DIB schedules movement of fuel and water forward into the support area based on a combination of available storage, distribution assets, and anticipated customer demands. The DMC or SPO fuel and water section provides on-hand visibility across the operational area and recommends priority of issue.

3-86. At the field army or corps echelons, the ESC and sustainment brigade fuel commodity managers monitor LOGSTAT reports to ensure required class III (bulk) stocks are available to supported units. Both sustainment headquarters SPO fuel commodity managers maintain visibility of on-hand stocks and forecast field army and corps consumption over the next 24, 48, and 72 hours. The sustainment brigade fuel and water section directs the receipt, storage, inspection, testing, quality, issue, distribution, and accountability of the bulk fuel stocks. The ESC uses the sustainment brigade to integrate and synchronize bulk fuel resupply. This supporting sustainment brigade DIB, in coordination with the fuel and water section, collaborates with the S-3 to develop an OPORD that directs the composite supply company through to fill requisitions from on-

hand stocks. Concurrently, the DIB, in coordination with the fuel commodity managers, collaborate with the S-3 to develop an OPORD that directs the transportation units to transport stocks to the requesting company based on priorities of support published by the field army or corps G-3 and G-4.

3-87. In the absence of the field army, the SPO fuel and water section in the ESC supporting the corps coordinates with the joint petroleum office or the area petroleum office and DLA Energy to plan, coordinate, and oversee all phases of bulk petroleum support for U.S. forces and other organizations in an operational area. The section also manages and accounts for bulk petroleum in an operational area. The fuel and water section staff coordinates petroleum operations and monitors quality surveillance resources and testing results in an operational area. The Army normally manages overland petroleum support, including inland waterways, to U.S. land-based forces of all DOD components. See JP 4-03 for more information.

3-88. The sustainment brigade water commodity managers monitor LOGSTAT reports to ensure required water stocks are available to supported units. The ESC and sustainment brigade water commodity managers maintain visibility of on-hand stocks and forecast field army and corps consumption over the next 24, 48, and 72 hours. At the sustainment brigade, the fuel and water section plan and coordinate water support with subordinate organizations.

3-89. The ESC uses the sustainment brigade to integrate and synchronize water resupply. The supporting sustainment brigade DIB in coordination with the fuel and water section collaborates with the S-3 to develop an OPORD that S-3 directs the composite supply company to fill requisitions from on-hand stocks. Concurrently, the DIB, in coordination with the water commodity managers, collaborates with the S-3 to develop an OPORD that directs transportation units to transports stocks to the requesting company based on priorities of support published by the field army or corps G-3 and G-4.

3-90. The fuel and water section coordinates with preventive medicine for water quality surveillance. The section may also coordinate with DLA, which procures all water treatment chemicals, some water treatment system components, and some water treatment system replacement parts from commercial businesses. The section also manages water distribution throughout theater by using military produced, contracted, and locally procured assets.

MAINTENANCE SECTION

3-91. The maintenance section of the materiel management branch conducts maintenance management. This section forecasts and establishes maintenance capability at the operational support echelon to meet mission requirements. The supporting ESC is the fleet maintenance manager for field army or corps formations assisting staffs in monitoring and analyzing maintenance readiness of forces. The maintenance section includes aviation, electronic, and ground maintenance. See ATP 4-33, for more information.

3-92. The corps-supporting sustainment brigade SPO maintenance section oversees corps maintenance operations in coordination with the corps G-4 maintenance section and in accordance with corps policies. This section conducts trend analysis, fleet management, and oversees field and sustainment maintenance requirements. The staff collects and analyzes maintenance data and reports and provides the means to identify significant trends and deviations from established standards isolating equipment maintenance issues. This information is reported to the ESC to enable its SPO maintenance managers to—

- Enforce commander's priorities relating to the repair of specific types of equipment.
- Identify required support for specific units.
- Coordinate with USAMC AFSBs to plan, coordinate, and integrate sustainment maintenance capability within the operational area.
- Ensure the maximum number of combat systems remain fully mission capable.

3-93. The sustainment brigade SPO maintenance section coordinates with the AFSB SPO for USAMC capabilities to assist in resolving systemic materiel-related equipment problems. When deployed, the sustainment brigade SPO maintenance section coordinates with the AFSB corps logistics support element for sustainment-level technical expertise and maintenance capabilities to build and maintain corps combat power. The corps logistics support element is an ad hoc organization formed from an AFSB's structure that deploys with its associated corps headquarters and supports it by integrating and synchronizing USAMC capabilities into corps plans and operations. The corps ESC works closely with the AFSB corps logistics

support element. See ATP 4-98 for more information regarding AFSBs. The coordination and collaboration between the corps ESC and AFSB corps logistics support element provide the basis for the effective employment of USAMC sustainment maintenance capabilities throughout the operational area. Examples of tasks the SPO maintenance section performs are listed below:

- Coordinate new equipment fielding and verify Soldiers with the required maintenance specialties are scheduled for training.
- Exercise staff supervision over test, measurement, and diagnostic activities, to include managing calibration efforts across an operational area.
- Exercise staff supervision over aviation maintenance activities.
- Provide assistance on cross-leveling aviation equipment in an operational area.

3-94. The SPO maintenance section manages maintenance operations for field army and corps forces operating in the corps or joint support area who do not have an organic maintenance capability. The sustainment brigade SPO maintenance section coordinates with the SMC to provide support to units and establish support relationships. The maintenance section recommends employment of maintenance surge teams (if available) based on commander's priority of support.

3-95. The lethal nature of large-scale combat operations increases the propensity for damage to equipment and the need for equipment replacements. In preparation for future operations such as deployments that involve changes in support relationships or task organization, the maintenance section reviews the authorized stockage list of SSAs within the AO to ensure the stocked class IX will meet the forecasted requirements of the supported force. The maintenance section assists those maintenance activities in building a list of shop stock that is adequate to support the force. The sustainment brigade SPO maintenance section monitors and maintains visibility of corps combat power using GCSS-Army. The maintenance section conducts predictive analysis to provide sustainment brigade and supported unit leadership estimates on when equipment will be repaired and available for use. These projections on when an equipment fleet will reach a specific operational readiness rate can assist the corps staff in determining when to begin an operation or transition from offensive to defensive operations. A *defensive operation* is an operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations (ADP 3-0). The maintenance section also provides recommendations to the corps G-3 and G-4 on how the corps can reallocate equipment in support of reorganization activities.

FIELD SERVICES SECTION

3-96. The field services section of the materiel management branch plans, recommends resourcing, monitors, and analyzes field services support to forces in an operational area. Field services enhance unit effectiveness and mission success by providing basic needs for Soldiers. Field service functions include aerial delivery, field feeding, shower and laundry, mortuary affairs, and water treatment. The materiel management branch field service section only manages field feeding, showers and laundry, and mortuary affairs—the fuel and water section manages water treatment and the transportation operation branch manages aerial delivery. These services are provided through a variety of organizations responsible for field service support at the tactical and operational levels. The type and level of field services provided differs depending upon a supported commander's requirements and the existing infrastructure in the operational area. See ATP 4-42 for more information.

3-97. ESC SPOs at the field army and corps echelons assist their respective supported headquarters G-4 with determining the requirement for and placement of mortuary affairs assets in the support area. Requirement and placement considerations include casualty estimates from the supported forces G-3 or S-3, force structure, and the mortuary affairs concept of support. Refer to JP 4-0, ATP 4-46/MCRP 3-40G.3/NTTP 4-06/AFTTP3-2.51, and AR 638-2 for more information. Mortuary affairs-related tasks include the following:

- Recommend redistribution of mortuary affairs assets throughout an operational area as required.
- Monitor and manage mortuary affairs-specific equipment and supply stockage levels throughout an operational area.
- Process flight requests for movement and tracking of human remains movement throughout an operational area and to the designated theater mortuary evacuation point with onward movement to the continental U.S. port mortuary.

- Manage and track personal effects cases in an operational area.
- Maintain records for all mortuary affairs cases within an operational area.

3-98. The field service section must consider additional field equipment assets at major nodes within the operational area to provide life support services to units flowing into or out of the operational area. These assets include tent systems to support dining facilities, showers, laundry, and billeting.

3-99. At the field army or corps echelon, the ESC and sustainment brigade field services sections monitor the combat effectiveness of units providing field service support in the designated support area or other operational area supported by the ESC to ensure continued and responsive support.

3-100. The field services section must be integrated with the DIB and monitor changes in current and future operational plans. The field services section may recommend relocation of field service units or changes to support relationships or procedures based on changes to the operational plan.

SUSTAINMENT AUTOMATION SUPPORT MANAGEMENT OFFICE

3-101. Two critical tools for Army sustainment operations are the enterprise business systems used to perform day-to-day sustainment functions and the sustainment network (called the sustainment transport system) that transports data among leaders, staffs, and managers. The SASMO ensures that all sustainment automation systems are functioning properly and maintains network connectivity. At the field army and corps echelons, the SASMO is located within the ESC and its subordinate sustainment brigade. The SASMO is the primary office responsible for logistics information systems support to the commander.

3-102. The SASMO is a key component of the theater distribution infrastructure. The systems administrator role in the SASMOs maintains the enterprise business systems used to collect data utilized by leaders and their staffs for decision making. As the system administrator, the SASMO—

- Installs and maintains the sustainment data transport infrastructure (video, voice, and data).
- Installs, operates, and maintains local area networks and wide area networks.
- Maintains network security of routers and transmission systems and troubleshoots physical layer network problems.
- Performs cybersecurity functions (identify, protect, detect, respond, and recover) according to the prescribed risk management framework.
- Tracks trends and historical data to preserve confidentiality, integrity, and availability of the enterprise business systems, applications, and networks for which they are responsible.
- Manages, maintains, and restores tactical sustainment communication networks by addressing vulnerabilities and improving systems security with limited involvement from the G-6 or S-6.

3-103. In the role of network administrator, the SASMO installs, operates, secures, and maintains the sustainment data transport system. The sustainment transport system is separate from the Army's tactical network. The modernized sustainment transport system is part of the Army's Unified Network Plan. SASMO network administrators react to counter the effects of incidents on the network. Reaction to network or information system intrusions incorporates restoring essential information services and initiating attack response processes. The sustainment transport system provides a communications capability that is set up and operated by SASMOs at every echelon from theater to company level. This connectivity integrates sustainment automation and enables delivery of logistics, personnel services, finance and comptroller, and AHS support required by the warfighter. While intelligence and mission command systems cluster within CPs and tactical operations centers, sustainment automation is widely separated, often beyond line-of-sight distances from CPs and tactical operations centers and operated at the individual, squad, or team level.

3-104. The SASMO is the focal point for all new sustainment automation fielding, software changes, and sustainment automation maintenance. See ATP 4-0.6, for more information on SASMO operations

OPERATIONAL CONTRACT SUPPORT

3-105. *Operational contract support* is the process of planning for and obtaining supplies, services, and construction from commercial sources in support of CCDR-directed operations (JP 4-10). OCS integrates commercial sector support into military operations. Contract support may be used to augment other support

capabilities by providing additional sources of supplies and services. These supplies and services include all classes of supply (class VIII, contracting support provided by medical personnel, and class IX may be limited), labor, mortuary services (within specific parameters), laundry, showers, dining facility services, sanitation, and transportation. Other contracted services may include billeting, maintenance and repair, printing and copier support, equipment leasing, and limited minor construction.

3-106. The OCS branch executes tasks associated with the three OCS functions performed by the organization requesting contract support, not the supporting contracting organizations. For example, the OCS branch reviews requirements packages submitted by a subordinate unit but does not award or administer contracts. Both the ESC and sustainment brigade SPO OCS branches work closely with the contracting support battalion, contracting support brigade, and the Army field support battalion and AFSB LOGCAP planning cells. Refer to JP 4-10, ATP 4-10/MCRP 4-11H/NTTP 4-09.1/AFMAN 10-409-O, and associated regulatory guidance for techniques to legally obtain and effectively utilize available commercial support in support of CCDR-directed military operations.

3-107. The SPO OCS staff has special skills that are in demand during operation planning and deployment. Each SPO officer must establish priorities for the OCS staff to maintain focus on their respective commander's priorities. The OCS staff plans, coordinates, and monitors sustainment-related contract support. There are three broad types of contracted support that impact the field army and corps echelons: theater support, external support, and system support.

3-108. Theater support contracts are contracts awarded by contracting officers deployed to the operational area. These contracts provide supplies, services, and minor construction from commercial sources. Theater support contracts are the type of contract support that is typically associated with contingency contracting. Examples of theater support contracts include—

- Theater transportation contracts (service).
- Install security fencing at supply points (minor construction).

3-109. External support contracts are awarded by contracting organizations whose contracting authority does not derive directly from the theater support contracting head of the contracting activity or from systems support contracting authorities. External support service contracts provide a variety of logistics and other related services support. External support contracts normally include a mix of U.S. citizens, third country nationals, and local national contractor employees. The largest and most commonly used external support contract is LOGCAP. This Army program is commonly used to provide life support, transportation support, and other support functions to deployed Army forces and other elements of the joint force. Examples of external contract support include—

- LOGCAP-operated dining facilities and supply support activities.
- DLA prime vendor contracts.

3-110. Systems support contracts are awarded by Service or U.S. Special Operations Command matrixed contracting offices. These contracts are funded by directed appropriations and managed through acquisition program executive officers and their program managers. These contracts provide what is commonly known as contractor logistics support through deployed field service representatives. Systems support contract-related employees are mostly U.S. citizens who have habitual relationships with a particular unit or serve as members of a fielding or modification team.

3-111. The SPO OCS branch conducts contract support integration, contracting support (assistance), and contractor management in coordination with the contracting support brigade and battalion.

CONTRACT SUPPORT INTEGRATION

3-112. The sustainment brigade and ESC identify capability requirements for specific contingency plans, OPLANs, or OPORDs. The requirements are passed to the supported command G-4 or S-4 for aggregation and analysis to determine how the field army or corps will meet the requirements. One way to meet a capability requirement is with contract support.

3-113. Sustainment brigades and ESCs should be prepared to develop and assist supported units with developing acquisition-ready requirements packages for validation, funding source determination, prioritization, approval, and submission to the supporting contracting activity for execution of a contract. The

packages include a detailed performance work statement for service requirements or detailed item description or capability for a commodity requirement. Depending upon theater Army or JFC policies, certain items or specific dollar amount requests may require a formal requirements review board. The requirements review board prioritizes requirements for contracting support in support of the Annex W (Operational Contract Support) and priorities established by the CCDR, subordinate joint commands, and the ARFOR.

3-114. Listed below are examples of OCS branch activities for the supported higher headquarters:

- Participate as a member of the requirements review board or joint requirements review board.
- Incorporate and synchronize theater support contracts and external contract support actions with the overall supported headquarters (field army and corps) concept of support.
- Assist the G-4 or S-4 with planning, integrating, and synchronizing OCS into the supported unit concept of support.
- Assist with requirements determination, validation, and prioritization for OCS support and serve as intermediary for the G-4 or S-4, the contracting support brigade or battalion commander, and the AFSB.
- Conduct contractor integration planning and execution in coordination with the supported unit G-3 or S-3 and G-4 or S-4, contracting support battalion commander, and AFSB or Army field support battalion.

CONTRACTING SUPPORT

3-115. Field army and corps headquarters have an aligned contracting support brigade providing DS for their operations. The contracting support brigade at these echelons provides DS focused contracting planning support and execution to the headquarters and GS to subordinate to subordinate maneuver elements within the field army or corps AO.

3-116. At the corps echelon, the ESC has an aligned contracting battalion. This contracting battalion is under the command and contracting authority of the supporting contracting support brigade and in provides DS to ESC operations. The contracting battalion provides focused contract planning support and execution to the ESC headquarters and subordinate sustainment elements. For more information regarding contracting support brigade and contracting battalion support the field army and corps see ATP 4-71.

CONTRACTOR MANAGEMENT

3-117. Contractor management is a shared responsibility between the requiring activity and the supporting contracting organization. Contractor management-related planning responsibilities cross all primary and special staff functional lanes. The supporting contracting activity provides advice and assistance in contractor management planning and execution as well as including contractor management aspects within the contract. One of the most important ESC contract management tasks is to nominate and track contracting officer's representatives for every service contract and LOGCAP task order as directed.

3-118. OCS is supported by the ESC staff. Examples of ESC staff involvement include legal authority and discipline, contractor visibility and accountability, movement control, and protection. Legal jurisdiction over contractor personnel falls under the Military Extraterritorial Jurisdiction Act of 2000. This act allows persons who are employed by or accompanying the armed forces overseas to be prosecuted for any offense that would be punishable by imprisonment for more than one year if committed within the special maritime and territorial jurisdiction of the U.S. Commanders should consult the supporting contracting officer and judge advocate general before taking any legal actions against a contracted person. Contractor personnel visibility and accountability are essential to determine and resource government support. The supported element contracting officer's representative, the G-1, and the OCS branch share responsibility for accountability of contractors supporting the ESC. The OCS branch coordinates this shared responsibility. See ATP 4-10/MCRP 4-11H/NTTP 4-09.1/AFMAN 10-409-O for additional information regarding OCS.

HUMAN RESOURCES OPERATIONS BRANCH

3-119. The HR operations branch supports the execution of key functions related to G-1 or S-1, casualty, public affairs, and postal organizations operations. It plans, coordinates, integrates, and manages the

emplacement and operations of subordinate HR elements. The branch synchronizes the concept of support plans for casualty, public affairs, and postal operations throughout the ESC operational area. The HR operations branch provides technical guidance to HR organizations and is the most important planning and coordinating element on the battlefield for the delivery of HR support.

3-120. The following bullets represent the critical functions for the HR operations branch. This list is not restrictive or complete but highlights major tasks and responsibilities. The HR operations branch—

- Integrates execution of HR support between the HR support company and HR organizations in the operational area.
- Integrates execution of external HR support between supported unit G-1s, adjutant generals, S-1s, and sustainment organizations.
- Anticipates and synchronizes support requirements with other sustainment elements and organizations (transportation, billeting, and feeding for transient personnel).
- Plans, projects, and recommends HR support requirements for current and future military operations by participating in the operations process and MDMP.
- Ensures the emplacement and displacement of HR support organizations are synchronized with the concept of support plans for casualty, public affairs, and postal operations.
- If supporting a field army or corps designated as ARFOR, the ESC deploys as part of the ESC early entry element to assist in establishing initial theater casualty, public affairs, and postal operations.

3-121. The ESC SPO DMC supports the higher headquarters G-1 or adjutant general through its HR operations branch. The field army or corps G-1s who are responsible for planning casualty operations and personnel replacement for the formation identify the units in need of replacements by priority. The ESC and sustainment brigade HR operations branches then collaborate and coordinate to execute personnel replacement operations by developing a personnel distribution plan that is incorporated in the ESC overall distribution plan. The HR operations branch that monitors personnel replacement should also participate in the ESC transportation related boards. The HR operations branches coordinate transportation to move replacements from personnel holding areas to receiving units.

3-122. Upon the receipt of a request for support from the corps G-1 or AG, the ESC HR operations branch supports the corps by evaluating HR requirements against available resources and unit priorities. If the requested support can be provided by the ESC, then it is coordinated with the supporting HR company. If the request cannot be supported, it is forwarded to the ESC HR operations branch supporting the field army echelon or TSC HR support company. Any HR support issues that cannot be resolve are forwarded to the next higher sustainment command headquarters for prioritization and reconciliation. The corps G-1 would also report the shortage to the higher headquarters. See ATP 1-0.2 and FM 1-0 for more details about the HR operations branch.

FINANCIAL MANAGEMENT OPERATIONS BRANCH

3-123. The finance support center's mission is to provide theater-level synchronization of all theater finance units. When supporting the TSC, the finance support center develops the theater finance strategic plan for the TSC commander, provides technical oversight to finance units in theater, participates in the financial management force flow planning in coordination with U.S. Financial Management Command, performs central funding, banking, finance plans and operations, internal controls, finance system support, and executes finance theater-level execution policy, procedures, and orders. Technical oversight encompasses the provision of recommendations and advice to theater commanders regarding the employment, integration, direction, and control of finance forces for the accomplishment of assigned missions. The finance support center provides finance synchronization by recommending to the commander optimized employment, integration, direction, and control of finance forces. When supporting an ESC, it conducts currency distribution to subordinate battalions within the ESC, internal controls, finance system support, and technical oversight to finance elements within the ESC.

3-124. Capabilities include the following:

- Issues finance directives, policies, guidance, and procedures.

- Provides theater-specific input to national providers on strategic finance directives, policies, and guidance.
- Interprets and disseminates strategic finance directives, policies, and guidance provided by national providers.
- Develops and publishes theater-specific finance operation policies and procedures for implementation.
- Conducts finance operations.
- Conducts resource management operations.
- Establishes currency requirements (U.S. and foreign currency) and provides central funding support for all finance units in the AOR.
- Implements and enforces internal control measures.
- Supports appropriated and non-appropriated funds accounting for the theater.
- Negotiates HN banking agreements.
- Participates in the coordinated defense of the unit's area or installation.

SECTION III – THE DISTRIBUTION MANAGEMENT PROCESS

3-125. *Distribution management* synchronizes and optimizes transportation, its networks, and materiel management with the warfighting functions to move personnel and materiel from origins to the point of need in accordance with the supported commander's priorities (ADP 4-0). In order to satisfy materiel requirements, distribution managers continuously assess the capabilities of the distribution process to develop strategies for mitigating issues as they arise.

3-126. The distribution management process is a methodology for ensuring that materiel reaches supported units when required to prolong endurance. Approaching distribution as an enterprise takes into consideration that organizations and functions associated with distribution integrate from the battlefield back to the suppliers, to include the industrial base. This process is complex; materiel managers must understand the supported commander’s priorities and requirements to plan, prepare, integrate, and distribute within the OE. The effectiveness of the overall distribution system is diminished by inefficiency in any of the supporting networks. Distribution management includes—

- A number of independent and mutually supporting networks. (physical, communications, information, and financial).
- A complex network of joint and Service military organizations, commercial sector agencies, working groups, sections, facilities, methods, and procedures.
- The broad range of activities concerned with effective and efficient provision of materiel and personnel.
- Ongoing efforts to procure, store, maintain, and issue materiel to equip and sustain the force from deployment through combat operations and redeployment.
- Synchronize multi-nodal, multimodal, intertheater, and intratheater transportation operations for moving materiel and troops in the assigned area.

3-127. Materiel managers determine and validate materiel requirements for distribution to supported units, obtain materiel to be distributed by appropriate commodity and quantity, and coordinate its distribution according to command priorities. Transportation managers identify units with adequate modes to meet distribution requirements and verify routes and nodes suitable for the distribution plan. Distribution integrators use the information provided by the materiel and transportation managers to develop a distribution plan that will satisfy the materiel requirement by commodity, quantity, priority, recommended mode, routes and nodes. This information is communicated to the unit operations office for inclusion in the OPORD concept of operations. The distribution plan must be synchronized with supported headquarters operations and across all warfighting functions. Failure to achieve this synchronization may hinder execution of the distribution plan once the operation begins.

3-128. The process described in this section provides fundamental materiel management, distribution integration, and transportation operations functions that are executable at any echelon. The process may be supported by any automated sustainment information system but is not system dependent; it may be executed

without automation. This capability is advantageous during periods of degraded communications. Sustainment leaders, materiel managers, and transportation managers understand the entire process and all associated functions as the process extends from the division close area to the strategic support area. This understanding is important because effective execution of the process captures materiel demand (by commodity, quantity, and priority) from operational units at the lowest level. The process compiles the demands at each echelon until it creates a theater materiel demand that is communicated to and is actionable by strategic providers.

3-129. Sustainment leaders, materiel managers, and transportation managers operate in complex environments. The distribution process provides clear functions that establish plans, provide materiel visibility, and ensure accuracy, timeliness, and availability to allow the distribution process to operate as smoothly as possible.

3-130. The TSC is the distribution manager within an AOR and plans distribution operations to resupply the theater. If an ESC is deployed, it is the distribution manager for its specified JOA. The ESC attached to the TSC plans for resupply of the JOA. Field army and corps ESCs plan distribution throughout an AOR or JOA based on the mission. Sustainment brigades plan distribution to resupply division operations. The CSSBs execute distribution in their respective areas. The distribution managers—

- Synchronize materiel and movement management operations by maintaining a COP.
- Ensure visibility of distribution assets, to include aerial delivery platforms and palletized loading system flat racks.
- Enforce priorities established by the supported headquarters.
- Maintain continuous liaison with supported units to ensure the uninterrupted flow of materiel, units, personnel, mail, and other goods.
- Coordinate directly with the theater aviation command or designated theater aviation brigade G-3 or S-3 to move commodities by rotary or fixed wing aircraft.
- Advise the commander on the use of air movement to support distribution operations.

3-131. Figure 3-5 illustrates the four components of the distribution management process. Logisticians integrate materiel management and transportation management, and the two combine to form the overall distribution management process. This figure lists materiel management, distribution integration, and transportation functions. The functions are not executed by a single staff section or organization. There is a division of responsibility that varies by organization. SPO staff sections execute many of the planning functions while subordinate companies execute other functions.

MATERIEL MANAGEMENT FUNCTIONS

3-132. Materiel management is the continuous situational understanding, planning, and execution of supply and maintenance capabilities to anticipate, synchronize, and direct all classes of supply to maximize combat power and enable freedom of action in accordance with the supported commander's priorities. Materiel management is executed in support of the full range of military operations. Coordination between staff elements and executors is crucial to ensure effective management of the process. The materiel management component of the distribution process-

- Is executed in the ESC DMC materiel management branch.
- Is executed by the sustainment brigade SPO materiel management branch.
- Is executed in the CSSB SPO.
- Is executed by supply support organizations and activities.
- Encompasses coordination between the supported units, the supporting units, materiel managers, distribution managers, and operations staff at all echelons to synchronize with all warfighting functions.

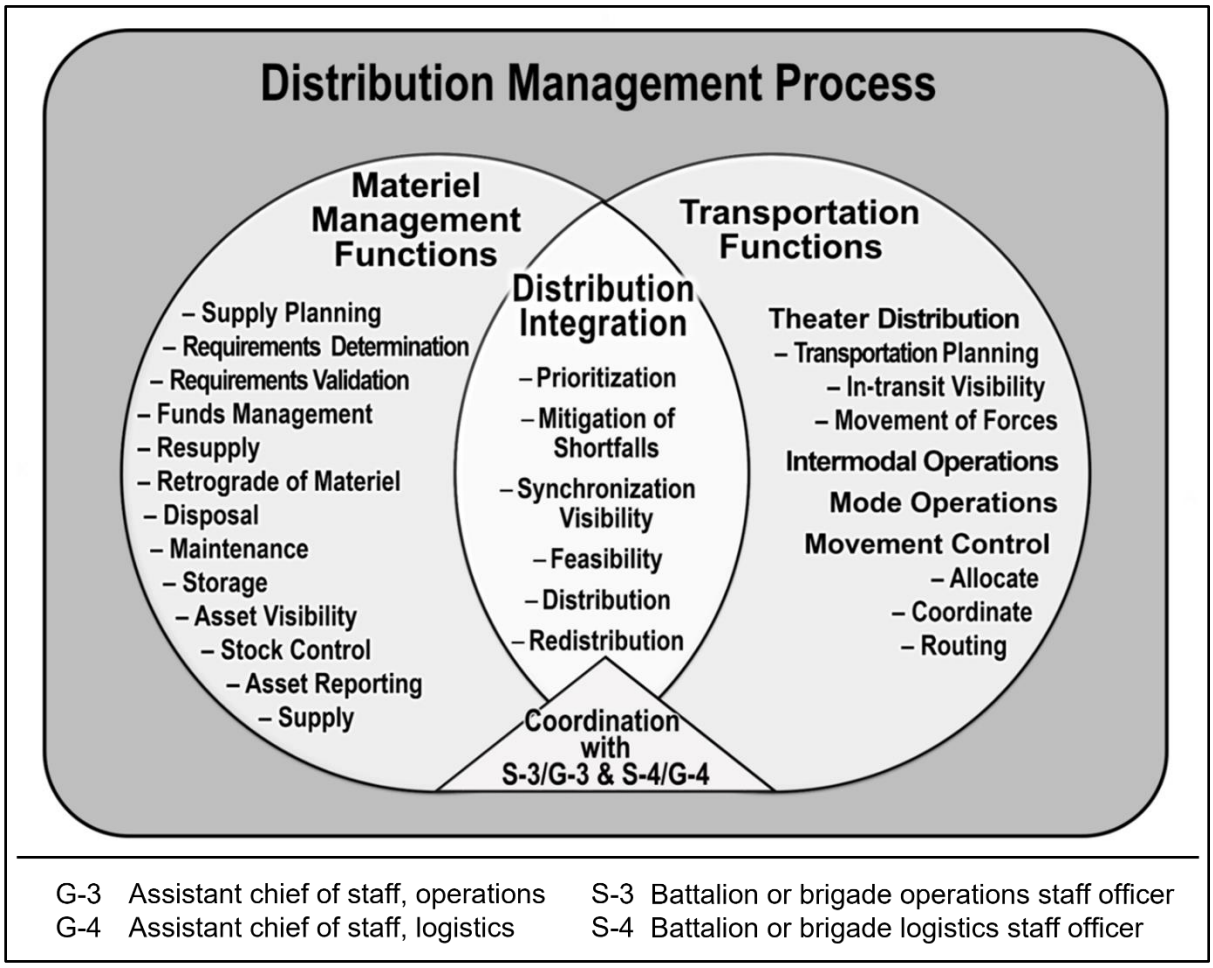


Figure 3-5. Distribution management process

3-133. Materiel management is comprised of 13 functions. These functions are discussed in the following paragraphs.

SUPPLY PLANNING

3-134. Supply planning is comprised of forecasting and establishing supply stock levels at each support echelon to meet mission requirements. This process translates an operating force's composition into specific supply requirements. Planning ensures that adequate supplies and transportation assets are available. The materiel management branches in the ESC and sustainment brigade and the SPO in the CSSB execute this task.

REQUIREMENTS DETERMINATION

3-135. Determining and understanding a supply requirement to support an operating force is important because it aids materiel managers in defining priorities of support. Requirements determination is based upon requirements communicated from operating forces and forecasted by sustainment organizations supporting these forces. The materiel management branches in the ESC and sustainment brigade and the SPO in the CSSB execute this task.

REQUIREMENTS VALIDATION

3-136. Requirements validation involves validating and prioritizing available logistics assets against an established or forecasted requirement. Requirements validation avoids excess materiel and misuse of logistics transportation and maintenance assets. It ensures that no requests for logistics support are passed to a higher headquarters until on-hand assets are determined insufficient to meet the requirement. Requirements validation also includes establishing controlled rates of supply if necessary. The materiel management branches in the ESC and sustainment brigade and the SPO in the CSSB execute this task.

FUNDS MANAGEMENT

3-137. Finance officers manage the obligation of funds in support of supply operations. The materiel management branches in the ESC and sustainment brigade and the SPO in the CSSB execute this task.

RESUPPLY

3-138. Resupply includes obtaining supplies to meet support or operational requirements through the use of the requisition process, OCS, and local purchase.

RETROGRADE OF MATERIAL

3-139. *Retrograde of material* is an Army logistics function of returning materiel from the owning or using unit back through the distribution system to the source of supply, directed ship to location, or point of disposal (ATP 4-0.1). Supply support organizations and activities execute this task.

DISPOSAL

3-140. Disposal is the systematic removal of materiel that is uneconomically repairable or obsolete. It is accomplished through the process of transferring, donating, selling, abandoning, or destroying materiel. It is normally directed through program management channels but may also be a command decision if the OE dictates. Supply support organizations and activities execute this task.

MAINTENANCE

3-141. Maintenance consists of all actions necessary for retaining an item in or restoring it to a specified condition to support the supply system. Supply support organizations and activities execute this task.

STORAGE

3-142. Storage is the organizing, sorting, and safeguarding of materiel. Storage includes warehouse management, receiving, storing, issuing, securing, inventory management, and accounting for materiel. Warehousing does not imply the use of fixed facilities. Tents, containers, and open areas also serve as warehouses. Supply support organizations and activities execute this task.

ASSET VISIBILITY

3-143. Asset visibility provides materiel managers visibility to determine location, movement, and on-hand status by commodity, nomenclature, and unit, enabling improved decision making on sources of support and prioritization. Materiel management branches in the ESC and sustainment brigade and the SPO in the CSSB execute this task.

STOCK CONTROL

3-144. Stock control involves maintaining proper location and identification of materiel. Materiel managers need correct identification and location of materiel stored in warehouses to ensure the proper item of supply is issued to meet requirements. Unidentified, improperly cataloged items result in excess items being ordered by materiel managers. Supply support organizations and activities execute this task.

ASSET REPORTING

3-145. Asset reporting includes vertical and horizontal reporting of asset on-hand status. It is a critical component of asset visibility, requirements determination, and requirements validation. It occurs at all command levels; the command determines which commodities are reported and how frequently. Materiel management branches in the ESC and sustainment brigade, the SPO in the CSSB, and supply support organizations and activities execute this task.

SUPPLY

3-146. Supply consists of providing supplies to a unit in order to equip, maintain, and operate. It involves requesting, receiving, storing, issuing, maintaining, and establishing accountability of all classes of supplies required to execute a unit's assigned mission. Supply support organizations and activities execute this task.

TRANSPORTATION MANAGEMENT FUNCTIONS

3-147. The transportation operations branch supports the higher headquarters G-4 or S-4 by significantly contributing to the development of the movement plan. This branch assesses the transportation system to determine the workload capacity of each route by mode and the capabilities at each node. Information on transportation capabilities at each node must include available transportation assets, loading and unloading capability (materials handling equipment, container handling equipment, ramps), storage capability, and any other factors that affect transportation services. As required, this branch produces transportation overlays that display the transportation nodes and routes by mode available to support transportation requirements. The transportation operations branch updates the transportation assessment provided in the OPORD with new information (if available) prior to developing the next movement plan. If required, the branch will recommend additional checkpoints and critical points be added to main supply routes and alternate supply routes if they are necessary to execute movements. These additions should be coordinated up the chain of command all the way to the theater Army to maintain a common list of all checkpoints along all main supply routes and alternate supply routes. This branch determines transportation capabilities available at each node, to operate by each mode for each applicable planning horizon. Transportation capabilities may include Army trucks, aircraft, and watercraft as well as available joint, HN, multinational partner, and contracted transportation platforms (to include rail) that are tasked or contracted to support division operations. Transportation managers use the information provided by the distribution integration or SPO staff to coordinate for and allocate modes by commodity, quantity, and priority to ensure timely distribution of the materiel. The transportation component of the distribution process—

- Is executed in the ESC DMC transportation operations branch.
- Is executed by the sustainment brigade SPO transportation operations branch.
- Is executed in the CSSB SPO.
- Is executed by transportation organizations.

3-148. Transportation management is comprised of seven functions. These functions are discussed in the following paragraphs.

THEATER DISTRIBUTION

3-149. This function involves the flow of personnel, equipment, and materiel within a theater to meet the CCDR's missions. At the corps echelon, theater distribution transitions to corps-wide distribution. Transportation operations branches in the ESC and sustainment brigade plan this activity. CSSBs oversee the execution of the activity.

TRANSPORTATION PLANNING

3-150. This function ensures the proper allocation of transportation assets to fulfill mission requirements based on command priorities and to identify and mitigate shortfalls. When planning motor transportation operations, managers should compare capabilities versus requirements and identify excesses or shortfalls. When excess or shortfalls exist, planners can mitigate existing excesses and shortfalls by changing vehicle

types to maximize carrying capacity. Transportation operations branches in the ESC and sustainment brigade and the SPO in the CSSB execute this task.

IN-TRANSIT VISIBILITY

3-151. This function involves the ability to track the identity, status, and location of materiel, equipment, personnel, and forces from origin to either consignee or destination. This includes force tracking and status of convoys, unit cargo and equipment, containers and pallets, and transportation assets. In-transit visibility provides transportation planners and executors with the capability to anticipate and manage transportation flow over LOCs. Transportation operations branches in the ESC and sustainment brigade and the SPO in the CSSB execute this task.

MOVEMENT OF FORCES

3-152. This function includes the operational movement of units within an operations area to quickly and efficiently shift forces and deliver them in a high state of readiness to the desired destination. Transport units move units in an operational area as far forward as mission and operational variables permit. Transportation operations branches in the ESC and sustainment brigade and the SPO in the CSSB plan this task. Transportation units execute the task.

INTERMODAL OPERATIONS

3-153. This function is the process of using multiple modes and conveyances to move troops, supplies, and equipment through expeditionary entry points and the network of specialized transportation nodes to sustain land forces. Transportation operations branches in the ESC and sustainment brigade and the SPO in the CSSB plan this task. Transportation organizations execute the task.

MODE OPERATIONS

3-154. This function is the execution of movements using various conveyances (truck, railcar, aircraft, and watercraft) to transport materiel, equipment, personnel, and forces. Transportation operations branches in the ESC and sustainment brigade and the SPO in the CSSB plan this task. Transportation organizations execute the task.

MOVEMENT CONTROL

3-155. Movement control is the dual process of committing allocated transportation assets and regulating movements according to command priorities to synchronize distribution over LOCs to sustain land forces. Movement control organizations plan and execute the movement control tasks of—

- Allocate. This is the identification and commitment of specific transportation modes to meet specific distribution requirements based on commodity and priority.
- Coordinate. This includes interfacing with other components of the distribution management process to ensure the commodities, modes, routes, and times are brought together to ensure effective and timely distribution.
- Routing. This is the planning, routing, and scheduling of movements on supply routes that provides order, prevents congestion, and enforces movement priorities in the operational area.

DISTRIBUTION INTEGRATION FUNCTION

3-156. Distribution integration aligns personnel, equipment, and materiel requiring distribution (in terms of commodity, quantity, and priority) with adequate transportation capabilities to synchronize distribution to support the concept of operations. Distribution integrators in the various SPO staffs develop distribution plans for inclusion in G-3 or S-3 OPORDs. Distribution planning includes but is not limited to assistance with course of action development and analysis. This function queues the materiel to be moved by priority and ensures transportation modes with adequate haul capacity are allocated to distribute the materiel. Distribution integration efforts provide the transportation planners with commodity, quantity, priority, and recommended mode.

3-157. The DIB develops the distribution plan for the supported higher headquarters and contributes information towards the development of the headquarters movement plan. The DIB integrates the transportation assets anticipated to be available (by mode and node provided by the transportation operations branch) with the forecasted materiel and service requirements (provided by the materiel management branch). By integrating available transportation assets with forecasted materiel, service, and movement requirements, the DIB can develop a distribution plan that 1) satisfies the future requirements by priority, 2) identifies shortfalls, and 3) informs the supported headquarters G-4 or S-4 of the risk associated with the shortfalls. This enables the G-4 or S-4 to justify requesting additional transportation while in the mid-range planning horizon. The DIB supports the G-4 or S-4 by significantly contributing to the development of the division movement plan. This branch receives all transportation requirements for prioritization and integration into a movement plan. The DIB must receive all transportation requirements for personnel, equipment, unit movement, or resupply in order to determine all movement requirements for the next planning horizon and to begin forecasting movement requirements for a future planning horizon.

3-158. Effective distribution integration synchronizes materiel management and transportation operations by maximizing containerization, increasing standardized transportation and materials handling equipment, integrating aerial resupply as a routine method of delivery, synchronizing and integrating retrograde operations across all available transportation modes, reducing storage, reducing transportation mode transfer handling requirements, and increasing in-transit visibility. The distribution integration component of the distribution process—

- Is executed in the ESC DMC DIB,
- Is executed by the sustainment brigade SPO DIB.
- Is executed in the CSSB SPO.
- Is executed by transportation organizations.

3-159. Distribution integration is comprised of seven functions that shape allocation decisions. These functions are discussed in the following paragraphs.

PRIORITIZATION

3-160. This function ensures commodities to be distributed are organized and queued in order of priority as determined by the command. Priority is expressed as both commodity and unit priority.

MITIGATION OF SHORTFALLS

3-161. This function links materiel management to transportation in terms of commodity, quantity, and priority. It ensures that adequate transportation assets are identified and obtained against the requirement deficiency.

SYNCHRONIZATION

3-162. This function ensures that distribution is synchronized with transportation operation cycles to ensure modes with sufficient capacity are available when commodities are positioned for movement. It also synchronizes distribution with operational tasks, phases, and objectives

FEASIBILITY DETERMINATION

3-163. This consideration determines whether the capability exists to move forces, equipment, and supplies from the point of origin to the final destination within the time required. If transportation is not feasible, this fact is reported from the DIB to the materiel management branch.

DISTRIBUTION

3-164. The function integrates the logistics functions of transportation and supply. Distribution is dependent on materiel management and movement control. Distribution is the operational process of synchronizing all elements of the logistics system to deliver the right things to the right place at the right time to support the commander.

REDISTRIBUTION

3-165. Redistribution is reallocating excess materiel to other locations in theater using all transportation assets available. Managers may use excess materiel in theater to fill shortages and meet operational requirements.

VISIBILITY

3-166. Visibility provides materiel managers the current status of commodities that are queued, prioritized, and have transportation allocated for movement.

DISTRIBUTION MANAGEMENT AND MATERIEL MANAGEMENT

3-167. The ESC SPO and G-3 use the distribution management and materiel management process to determine supply requirements. The ESC SPO and G-3 then use outputs from the distribution management and materiel management process to develop OPORDs to task subordinate units to execute supply distribution. Generally, the ESC uses an assortment of supply companies and transportation companies to execute its supply distribution mission depending on its task organization. The remainder of this section discusses these units.

QUARTERMASTER SUPPLY COMPANY

3-168. Quartermaster supply companies typically provide area support for units at EAB. They may also provide back-up support for BCTs and support brigades. The quartermaster supply company operates as far forward as the brigade support area. Planners should allocate one quartermaster supply company per 12,000 troops or as required based on the capabilities of subordinate platoons. The quartermaster supply company consists of—

- A company headquarters section that provides command and control, unit level administration, supply support, and CBRN defense support.
- A maintenance section that provides limited field maintenance on organic equipment and vehicle recovery.
- An operations section that plans and coordinates company operations.
- Three supply platoons, each with a headquarters element that provides command and control and technical guidance. Each of the three supply platoons provides:
  - GS or DS of class I resupply, not to exceed 53.48 short tons per day.
  - GS or DS of class II, III (packaged), IV, VII, IX, maps, and bottled water not to exceed 51.6 short tons per day.
- For additional information on the quartermaster supply company see ATP 4-43.

QUARTERMASTER COMPOSITE SUPPLY COMPANY

3-169. The composite supply company provides GS to units within the AO. The company operates in the theater, corps, or division rear area depending on its allocation. Elements from the company may operate as far forward as the brigade support areas. The composite supply company consists of—

- A company headquarters that provides command and control, unit level administration, unit supply, and CBRN defense support to unit personnel.
- A maintenance section that performs field-level maintenance on organic unit vehicles and equipment.
- The supply platoon receives, store, issues, and retrogrades materiel, to include class I (perishable and semi-perishable), class II, III (packaged), IV, VII and IX, maps and bottled water:.
- A petroleum platoon that receives, stores, and issues bulk petroleum. The petroleum platoon performs quality surveillance by monitoring the condition of fuel until it is issued to the supported unit.
- A water purification platoon that supports water production, storage, and local distribution.
- For additional information on the quartermaster composite supply company see ATP 4-43.

MODULAR AMMUNITION COMPANY

3-170. Modular ammunition companies received, store, and issue munitions. They operate ammunition supply areas at theater, corps, and other levels as required by the tactical situation. Ammunition companies normally operate in the division or corps areas, but platoons or sections may operate as far forward as the brigade support areas. They are normally attached to a CSSB and provide support on an area basis. Generally, one modular ammunition company is required to support a division.

3-171. Modular ammunition companies resupply the headquarters support company and monitor the CSR for critically managed munitions. The company receives munitions; maintains theater, corps, and division stocks; conducts operational-level reconfiguration; and distributes munitions throughout the theater. The design of the modular ammunition company permits assignment of modular platoons tailored for specific functions to support forces or other munitions units as required.

3-172. Modular ammunition companies consist of a headquarters platoon and three ammunition platoons. Each platoon can receive, configure, inspect, manage, issue, ship, and retrograde class V stocks. For additional information on the modular ammunition company see ATP 4-43.

QUARTERMASTERS PETROLEUM SUPPORT COMPANY

3-173. Petroleum support units are typically attached to a petroleum support battalion but may be attached to a CSSB. The petroleum support company is a modular unit responsible for receiving, storing, and distributing bulk fuels in a theater of operations in support of BCTs and EAB organizations. The petroleum company receives, stores, and transfers bulk petroleum, providing wholesale and area support, and limited distribution. The petroleum support company can be comprised of petroleum support platoons, an assault hoseline augmentation team, and a pipeline-operating platoon. Elements of the company may operate in the brigade support area and can be attached to any of the companies of the CSSB with a sustainment brigade for tailored support. The petroleum support platoons can be configured with 50,000 gallon or 210,000-gallon bags. For additional information on the petroleum support company see ATP 4-43.

QUARTERMASTER WATER SUPPORT COMPANY

3-174. The quartermaster water support company is normally attached to a CSSB or petroleum support battalion. It has a GS relationship with supported units. The company has three platoons, each capable of producing potable water (maximum of 150,000 gallons per day from fresh water source and 100,000 gallons per day from a brackish or contaminated source) with organic water systems (two reverse osmosis water purification units and one tactical water purification system per platoon). Currently, each platoon can store a maximum of 40,000 gallons with two 20,000-gallon bags or the future modernized 100,000 gallons system with two 50,000-gallon bags with organic water storage systems. The organic distribution capability for each platoon is 20,000 gallons per day (or 40,000 gallons with two turns). Water support companies are designed to expand capabilities by drawing additional potable water storage and distribution systems from operational project stocks requested and assigned to specific combatant commands.

3-175. In addition to the three platoons, a water support company may have command and control of a tactical water distribution system detachment. The tactical water distribution system detachment provides additional potable water distribution by establishing, maintaining, and operating up to 10 miles of hoseline up to the corps rear. The tactical water distribution system is designed to move large volumes of water from a water treatment area to a storage or distribution point. Most water support companies are assigned to the Army National Guard and Army Reserve. For additional information on the quartermaster water support company see ATP 4-43.

MEDIUM TRUCK COMPANY (CARGO) (EAB LINE HAUL)

3-176. The medium truck company (cargo) (echelon above brigade) line haul provides GS within the corps AO. The medium truck company (cargo) (EAB) line haul is equipped with the M915 series tractor truck that tows the M872 40ft 34T semi-trailer. The unit typically conducts line haul operations but can also support local hauls. The M915 series is a 14-ton, three axle, six wheel, four drive (6x4) tractor with a 52,000lbs gross vehicle weight rating and a 105,000lbs combined gross vehicle weight. The M872 trailer is a platform style,

three axle, dual-purpose semi-trailer with a rated payload of 68,000 pounds. The 34T capacity can support 40 feet of containerized or non-containerized cargo, including two twenty-foot equivalent unit containers or one forty-foot equivalent unit container on its open deck. The trailer can be equipped with a 5K semi-trailer mounted fabric tank and can provide transportation capabilities for 4,750 gallons of bulk water. It could also be equipped with a HIPPO, which is a 2,000-gallon potable water tank with an integrated pump, engine, alternator, filling stand, and a 70-foot hose reel with bulk suction and discharge hoses. The HIPPO is equivalent to one twenty-foot equivalent unit; one M872 trailer can accommodate two HIPPOs. A trailer mounted with a semi-trailer mounted fabric tank cannot haul any other commodity. The unit is equipped with 60 M915s and 120 M872 trailers but can only provide lift capabilities for 60 trailers at one given time.

3-177. Assuming a 100% total vehicle availability rate, the medium truck company cargo (cargo) (EAB) line haul provides 60 vehicles and trailers for mission operations and has a one-time lift capability indicated in table 3-1.

Table 3-1. Medium truck company (cargo) (EAB line haul) one-time lift capability

Type	*100% Total Vehicle Availability Rate*
Breakbulk General Cargo	447 short tons
Breakbulk Ammunition	803 short tons
Pallets	1080
463L Pallets	240
Container, Twenty Foot (or twenty-foot equivalent unit)	120
Container, Forty Foot (or forty-foot equivalent unit)	60
Water (SMFT)	247,200 gallons
Water (HIPPO)	240,000 gallons
HIPPO load handling system compatible (2,000 gallons) water tank rack SMFT semi-trailer mounted fabric tank	

MEDIUM TRUCK COMPANY (CARGO) (EAB TACTICAL)

3-178. The medium truck company (EAB) tactical provides GS to the corps AO. The medium truck company (EAB) tactical is equipped with the M1088 medium tactical vehicle tractor that tows the M871 30ft 22.5T trailer. The M1088 medium tactical vehicles tractor truck is the same vehicle authorized in the light-medium truck company. The M871 trailer is similar to the M872 trailer but is shorter and has less payload capacity (45,000 pounds). The trailer can be equipped with the 3K semi-trailer mounted fabric tank that provides transportation capabilities for 3,000 gallons of bulk water. It can also be equipped with the HIPPO (2,000 gallons), which is equivalent to one twenty-foot equivalent unit and still have remaining cargo space. The unit is equipped with 60 M1088 medium tactical vehicles tractors and 120 M871 trailers but can only provide lift capabilities for 60 trailers at one time.

3-179. Assuming a 100% total vehicle availability rate, the medium truck company (EAB) tactical provides 60 vehicles and trailers for mission operations and has a one-time lift capability as indicated in table 3-2.

Table 3-2. Medium truck company (cargo) (EAB tactical) one-time lift capability

Type	*100% Total Vehicle Availability Rate*
Breakbulk General Cargo	288 short tons
Breakbulk Ammunition	517 short tons
Pallets	840
463L Pallets	180
Container, Twenty Foot (or twenty-foot equivalent unit)	60
Container, Forty Foot (or forty-foot equivalent unit)	0
Water (SMFT)	180,000 gallons
Water (HIPPO)	120,000 gallons
HIPPO load handling system compatible (2,000 gallons) water tank rack SMFT semi-trailer mounted fabric tank	

MEDIUM TRUCK COMPANY (POL 5K) (EAB TACTICAL)

3-180. The medium truck company POL (5k) provides transportation for the movement of bulk petroleum products through the utilization of the family of medium tactical vehicles tractor with associated semi-trailer tanks. The medium truck company is employed in both local and line haul operations. The medium truck company POL is authorized 60 M1088 tractors and 60 M967 5k tankers. Assuming the medium truck company POL (5k) has a total vehicle availability rate of 100% (60 vehicle platforms) and utilizing the 5k trailers to max capacity (5,000 gallons), the unit can provide a onetime lift capability for bulk fuel of 300,000 gallons.

MEDIUM TRUCK COMPANY (POL 7.5K) (EAB LINE HAUL)

3-181. The medium POL (7.5k) provides motor transport (semi-trailer) capability to move bulk fuel to EAB units. The medium truck company POL (7.5k) is authorized 60 M915 trucks and 60 7.5k tankers. Assuming the medium truck company POL (7.5k) has a total vehicle availability rate of 100% (60 vehicle platforms) and utilizing the 7.5k trailers to max capacity (7,500 gallons), the unit can provide a onetime lift capability for bulk fuel of 450,000 gallons.

SECTION IV – COMMAND POSTS

3-182. A CP is a unit headquarters where the commander and staff perform their activities. There are three types of CPs: main CP, tactical CP, and early-entry CP. The *main command post* is a facility containing the majority of the staff designed to control current operations, conduct detailed analysis, and plan future operations (FM 6-0). The t*actical command post* is a facility containing a tailored portion of a unit headquarters designed to control portions of an operation for a limited time (FM 6-0). An *early-entry command post* is a lead element of a headquarters designed to control operations until the remaining portions of the headquarters are deployed and operational (FM 6-0).

SUSTAINMENT ORGANIZATION COMMAND POSTS

3-183. Each sustainment organization staff supporting CP operations conducts sustainment tasks, commander-assigned tasks, and common CP tasks. The ESC, sustainment brigade, and CSSB organizational design all support a main CP with the deputy commander (executive officer) establishing and leading CP operations.

EARLY-ENTRY COMMAND POST AND TACTICAL COMMAND POST

3-184. The ESC is the only sustainment headquartered unit with an organizational design that supports an early-entry CP. The early-entry CP is an ad hoc organization of equipment and personnel drawn from the staffs of the tactical, main, and rear CP. The tactical CP usually provides the base for the early-entry CP.

3-185. An ESC early-entry CP facilitates the ESC requirement to establish and occupy an area or to establish a base camp. A base camp is nonpermanent, and ESCs may use a base camp as part of a larger geographic area that is controlled by a BCT, MEB, or a joint or multinational force.

MAIN COMMAND POST

3-186. ESC and subordinate main CPs control sustainment forces involved in operations and training exercises. Main CP staffs are responsible for the sustained conduct of current operations, mid-range planning, analysis for current and future operations throughout the AO, sustainment coordination, and other staff functions. The staff includes representation from all integrating and functional cells, other special staff sections, and coordinating elements. Main CP staffs operate under the general supervision of the chief of staff (executive officer). The main CP is capable of conducting the full array of coordination functions.

3-187. The ESC and subordinate commanders organize their CPs based on the mission, the threat, and the commander's desires. Each CP throughout the JOA will differ due to varying requirements. The unit's requirements documents identify the personnel and equipment authorized according to the organizational

design. Commanders often reorganize the headquarters to develop a CP configuration that aligns tasks and works best for the unit, mission, and location.

3-188. ESC and subordinate unit main CPs include representatives of all staff sections and a full suite of information systems to monitor and assess operations. The functional structure of the staff allows the commander and chief of staff (executive officer) considerable flexibility to shift expertise among functional cells, integrating cells, centers, and temporary teams (such as working groups). The commander considers the size, location, and mobility requirements of the CP and then configures the CP.

3-189. ESCs and subordinate commanders must identify the responsibilities and authorities for each subordinate element. The assigned responsibilities and authorities provide clarity and direction with respect to the exercise of authority and continuity in the conduct of on-going operations.

3-190. The CP layout has a significant impact on its functionality. A layout contributes to how efficiently information is passed from one staff element to another and how easily sections communicate with one another. User interface with communication systems and positioning of information displays are important considerations. It is also important to provide adequate workspace for group collaboration and briefing areas.

3-191. Commanders vet the layout or design of their CPs during exercises and training events. CP layouts, including individual positions, information systems and displays, equipment, network cabling, and electricity requirements, are tested and adjusted as required and captured in the unit SOP. Commanders and staffs adjust from the unit SOP based on the operational situation. The CP design should also include a packing and load plan. The following considerations aid in designing the physical layout of a CP:

- Staff integration and crosstalk.
- COP visibility.
- Lighting and climate control.
- Adequate workspace for the staff and commander.
- User interface with communications systems.

COMMUNICATIONS

3-192. Maintaining communications is especially important to the ESC, sustainment brigade, and CSSB CP as their supporting and supported organizations may not be in the same operational area. Commanders and staffs determine the communication capabilities and requirements. Each G-6 or S-6 determines the appropriate mix of communications systems to be employed.

3-193. At the field army and corps echelons, sustainment units receive signal support from pooled assets such as an expeditionary signal battalion. The supporting signal unit will be defined in the OPORD. The ESC G-6s and subordinate unit S-6s define signal support requirements based on the mission, size of the operation, the number of personnel and systems and services needed. When defining requirements, the requesting unit describes—

- The unit requiring service and the number of connections needed for each requested service.
- The services required.
- The date-time group for required services.
- The location for required services.
- The supported unit battle rhythm for communications services.

3-194. The ESC G-6s and subordinate unit S-6s coordinate with the supporting signal unit providing connection to the Defense Information Systems Network services. Supporting signal assets may be OPCON or TACON to the supported unit. The supported unit may assume responsibility to provide logistics, financial management support, personnel services, and HSS based on the command relationship established in the deployment order. See FM 6-02 for more information about the process for requesting signal support.

3-195. Each sustainment organization's G-6 or S-6 assists the staff in developing and rehearsing the CP's PACE plan. Each warfighting cell should have a PACE plan. Establishing a PACE plan requires care that an alternate or contingency method of communications does not rely on the primary method. For example, having voice over internet protocol as an alternate method of communications would be a poor choice if the primary were network data, because when a primary is down the alternate may be as well. The ESC and its

subordinate sustainment command headquarters will have multiple PACE plans: one for communications to higher echelon headquarters, one for subordinate units and supporting units, and at least one to communicate with strategic sustainment partners. See ATP 6-0.5 for more details about CP communications.

SECURITY

3-196. At the field army and corps echelons, the unit assigned the terrain provides the ESC and subordinate sustainment commanders a proposed geographic area in which to locate their units. ESC and subordinate commanders along with their staffs consider proposed sites to determine the best location from which to support the force and in which to defend themselves. The commander considers all factors and determines where to accept risk. Questions that sustainment commanders should consider when establishing a site include—

- How large is the anticipated size of the location and is the proposed site defensible?
- Is the proposed site near the main supply routes to supported and supporting units?
- Does the proposed site include the resources the headquarters requires?

3-197. To nullify or reduce the effectiveness of enemy attack, the support area commander assigns all units located in the support area that are not actively involved in operations to an established base or directs them to establish their own perimeter security. When bases are located close enough to one another, the commander of that AO typically further organizes them into a base cluster and designates a base cluster commander.

3-198. Effective CP security and defense SOPs integrate many security measures that ensure personnel, information, infrastructure, and facilities are protected from enemy attack. Security and defensive measures must be established based on an assessment of the full range of threats. Establishing a CP within a base camp can be an effective security and defense technique. Base camps and CPs are very similar in terms of basic characteristics, functions, and operations. See ATP 3-37.10/MCRP 3-40D.13 for techniques and principles that have proven successful to securing and defending base camps and CP operations.

3-199. ESCs should coordinate for base camp and base cluster defense with the MEB if it is present. The MEB is a multifunctional headquarters assigned to conduct support area operations. Higher commands base the brigade's task-organization on identified mission requirements. When present, the MEB is typically responsible for support area security, terrain management, and control of movement.

SURVIVABILITY

3-200. CPs are normally considered critical assets and require special care when planning, coordinating, and synchronizing protection capabilities. The size and electronic and physical signatures of a sustainment CP may affect both its mobility and survivability. CPs generate physical, thermal, and communications signatures. Physical signatures include vehicle traffic, equipment such as generators, and disruptions to natural terrain patterns, including security emplacements. Equipment and groups of people produce heat signatures. Communications equipment creates a wide range of frequencies from radio waves to microwaves, visible light, and visible light. Communications equipment also produce electromagnetic signatures.

3-201. Enemies often target logistics forces for early destruction in combat. To counter this threat, commanders should consider traditional survivability methods such as cover and concealment or shielding by terrain features or urban structures. Earth berms, sandbags, soil-filled containers, and concrete barriers can provide protection. CPs may also use existing hardened facilities or other constructed shelters. When available, supporting engineer units may use berms or defilade positions to increase CP survivability.

3-202. Commanders must establish a succession of command and a contingency plan. These contingencies should be identified prior to deployment. If sustainment units are overwhelmed and cannot meet demand, supporting units should be aware of contingency plans for sustainment support. Maneuver units must anticipate impact to delivery of requested supplies, which may in-turn affect their tactical operations. See ATP 3-37.34/MCTP 3-34C, for more information about CP survivability considerations.

3-203. Operationally, ESCs, sustainment brigades, and CSSBs may have to reduce the size of the deployed CP and sacrifice staff efficiency to increase survivability. One option would be to not staff all cells in the CP for 24-hour operations. Sustainment personnel must also be prepared to work in a communications-degraded environment where enemies and adversaries are likely to use technological advances in cyberspace and

vulnerabilities in the EMS to conduct their own cyberspace operations. See FM 3-0 for additional discussion of operations with degraded communications.

3-204. Other methods to be considered when improving CP survivability are listed below. Commanders may—

- Disperse units.
- Implement graphic control measures, bandwidth management, operational tempo, and centralization or decentralization of critical assets as required.
- Maintain redundant communication assets.
- Develop procedures to transfer data and information both manually and verbally.
- Perform critical command and control and warfighting tasks through analog or manual operations.
- Establish "push versus pull" procedures to anticipate requirements when normal reporting is constrained.
- Utilize supporting engineer units, when available, to erect berms or dig defilade positions to increase CP survivability.

FUNCTIONAL CELLS

3-205. Functional cells coordinate and synchronize forces and activities by warfighting function. The functional cells provide a standardized method of vertically integrating closely related tasks. The ESC, sustainment brigade, and CSSB are not resourced for all functional cells. However, commanders must either ensure all functions are executed by the staff or coordinated with higher or adjacent units. The warfighting functions include command and control, intelligence, movement and maneuver, fires, protection, and sustainment. The command and control warfighting functional cell consists of the command group and staff. The entire CP assists the commander in the exercise of command and control.

INTELLIGENCE CELL

3-206. The ESC, sustainment brigade, and CSSB intelligence cells coordinate activities and systems that facilitate understanding of the threat, terrain and weather, and other relevant aspects of the OE. Each intelligence cell requests, receives, and analyzes information from multiple sources to produce and distribute intelligence products. Weather information, for example, is based on data provided through satellite imagery, meteorological forecasts, and human intelligence. The ESC, sustainment brigade, and CSSB CP intelligence cells are comprised of their respective G-2 or S-2 section with the G-2 or S-2 officer leading the cell.

MOVEMENT AND MANEUVER CELL

3-207. The ESC, sustainment brigade, and CSSB movement and maneuver cells coordinate activities and systems that move sustainment forces to achieve the required mission support. Maneuver is the movement or relocation of units around the AO in support of multidomain operations, whereas distribution, coordinated and synchronized by the SPO officer, is the synchronization of transportation assets, materials, and personnel to supported units. The ESC current operations section forms the core of the movement and maneuver cell, with the G-3 leading the cell. The sustainment brigade and CSSB operations sections form the core of the movement and maneuver cell, with the S-3 leading the cell.

FIRES CELL

3-208. The ESC, sustainment brigade, and CSSB G-3 or S-3 coordinates, plans, integrates, and synchronizes sustainment operations with the employment and assessment of fires in support of current and future operations. The fires cell may need augmentation to accomplish these tasks. At a minimum, the fires cell must understand the fires annex and have the fires overlay for its AO and the areas subordinate units traverse. This cell may also propose targets. The G-3 or S-3 coordinates activities and systems that provide collective and coordinated use of electromagnetic warfare capability to support sustainment operations. The fires cell also coordinates for nonlethal fires with the higher command G-3 or S-3 for capability support or the G-4 or S-4 for equipment or supplies.

PROTECTION

3-209. The ESC, sustainment brigade, and CSSB protection cells integrate and synchronize protection tasks and systems for each phase of an operation or major activity. The protection cell does not require representatives from every functional element of protection. However, dedicated members should coordinate with other personnel and special staff elements as required. The primary members of the protection cell at the ESC and sustainment brigade typically include a military police officer, CBRN officer, and an engineer officer. Commanders augment the team with other unit specialties and unified action partners depending on the OE and the unit mission. These may include a personnel recovery officer, EOD officer, and an antiterrorism officer. At the CSSB, the primary members of the protective cell include members from the S-3 operations section. The CSSB protection cell focuses tasks associated with protecting personnel, physical assets, and information.

3-210. The protection cell generally—

- Determines likely threats and hazards from updated enemy tactics, the environment, and accidents.
- Determines vulnerabilities as assessed by the vulnerability assessment team.
- Establishes and recommends protection priorities.
- Reviews and coordinates unit protection measures.
- Recommends force protection conditions and random antiterrorism measures.
- Makes recommendations to commanders on protection issues that require a decision.
- Assesses assets and infrastructure designated as critical by higher headquarters.
- Synchronizes, coordinates, and integrates sustainment support for protection and contamination mitigation in CBRN environments.
- Synchronizes, coordinates, and integrates sustainment support for personnel recovery throughout the AO.
- Coordinates and integrates base camp protection with the units assigned.
- Integrates personnel recovery requirements into plans, orders, SOPs, and staff products.

SUSTAINMENT CELL

3-211. The ESC, sustainment brigade, and CSSB CPs have two sustainment functional cells: sustainment 1 and sustainment 2. At the ESC and the sustainment brigade, the sustainment 1 cell is comprised of the G-1 or S-1, G-4 or S-4, G-8 or S-8, and surgeon sections. The CSSB sustainment 1 cell generally includes the S-1, S-4, and UMT. Based on its composition, the cell is responsible for coordinating activities and systems that provide personnel management, logistics support, financial management, religious support, and HSS for units within the command headquarters task organization.

3-212. At the ESC and subordinate sustainment command headquarters, the sustainment 2 functional cell is comprised of the SPO section. This cell is responsible for coordinating activities and systems that provide support and services to the supported units to ensure operational reach, freedom of action, and prolong endurance of supported maneuver forces.

INTEGRATING CELLS

3-213. The integrating cells are organized by planning horizon. They coordinate and synchronize forces and warfighting functions within a specified planning horizon and include the plans, future operations, and current operations integrating cells. Not all echelons and types of units are resourced for all three integrating cells. The staff must consider the tempo and lethality of large-scale combat operations throughout each planning horizon. It must consider mission variables and conduct timely transitions between planning horizons to effectively synchronize sustainment operations across their assigned AO.

3-214. The planning horizons are short, mid, and long-range and correspond to the integrating cells within a headquarters. The integrating cells are current operations, future operations, and plans elements. The timelines associated with planning horizons depend on the unit and operational and mission variables. For example, the long-range planning horizon for an ESC is different from that of a company. Sustainment organizations typically assign the windows for planning horizons and provide guidance.

PLANS CELL

3-215. Plans cells are responsible for planning operations for the long-range planning horizon. The plans cell prepares for operations beyond the scope of the current order by developing plans and orders that include branches and sequels. The ESC and subordinate sustainment command SPO DIBs develop plans for future operations. All staff sections of the sustainment brigade balance their efforts between the current operations and plans cells. The ESC and subordinate sustainment SPOs develop the concept of support, which is included in plans and orders. The SPO DIB is the SPO integrator within the plans cell, which includes HR planning for casualty, personnel accountability, and postal operations. It also includes the financial management SPO for finance support planning. The plans cell also incorporates logistics estimates for sustainment operations supporting decisive action tasks.

FUTURE OPERATIONS CELL

3-216. The future operations cell is responsible for planning operations in the mid-range planning horizon. The ESC and subordinate sustainment command headquarters staffs must execute mid-range planning tasks. These includes considering the requirement for convoy support centers, centralized receiving and shipping points, and other tasks that facilitate the continuation of the current operation. The future operations cell serves as a fusion element between the plans and current operations integrating cells. The future operations cell monitors current operations and determines implications for operations within the mid-range planning horizon. In coordination with the current operations integrating cell, the future operations cell assesses whether the ongoing operation must be modified to achieve the current phase's objectives.

3-217. The ESC and subordinate sustainment headquarters SPO DIBs update and add details to the distribution plan supporting the current operation. The ESC and subordinate sustainment command headquarters G-3 or S-3 operations personnel within the future operations cell update and add details to branch and sequel plans foreseen in the current operation and prepare any orders necessary to implement a branch or sequel to the current operation. The current operations integrating cell develops the fragmentary order necessary to implement the change.

CURRENT OPERATIONS CELL

3-218. The ESC and subordinate sustainment command headquarters CP current operations cells are the focal points for operations execution. This responsibility involves assessing the current situation while regulating forces and warfighting functions in accordance with the mission, commander's intent, and concept of operations. The current operations cell displays the COP and conducts shift changes, assessments, and other briefings as required. It provides information on the status of operations to all staff members and to higher, subordinate, and adjacent units. The operations synchronization meeting is the most important event in the battle rhythm in support of the current operation. The ESC G-3 and subordinate sustainment command headquarters S-3 sections form the core of the current operations integrating cell. Elements or watch officers from each staff section and liaison officers from subordinate and adjacent units form the remainder of the cell. All staff sections are represented in the current operations cell, either permanently or on call.

COMMAND POST OPERATIONS

3-219. Sustainment organizations must man, equip, and organize CPs to control operations for extended periods. Effective CPs use information systems and equipment to support 24-hour operations while continuously communicating with all subordinate, higher, and adjacent units. Commanders arrange CP personnel and equipment to facilitate internal coordination, information sharing, and rapid decision making. Commanders use the battle rhythm, SOPs, and meetings to assist them with effective CP operations. See FM 6-0 and ADP 5-0 for more information on CP operations.

INFORMATION SYSTEMS

3-220. Army sustainment units such as the ESC, sustainment brigade, and CSSB use Army command and control and logistics information systems to gather and manage information. Commanders determine their information requirements and focus their staffs and organizations on using automated systems to meet these

requirements. Automated systems include computer hardware and software and communications, as well as policies and procedures for their use. These systems enable the information sharing, collaborative planning, execution, and assessment that promote shared understanding. These capabilities relieve the staff of handling routine data. The core systems include—

- GCSS-Army.
- Distributed Common Ground System-Army.
- Joint Capabilities Release and Joint Capabilities Release-Logistics transitioning to Joint Battle Command Platform and Joint Battle Command Platform-Logistics.
- Digital Topographic Support System.
- Standard Army Ammunition System.
- Transportation Coordinators' Automated Information for Movement System II.
- Medical Communications for Combat Casualty Care, also called MC4.
- Defense Medical Logistics Standard Support customer assistance module (DCAM).

KNOWLEDGE MANAGEMENT AND INFORMATION MANAGEMENT

3-221. Knowledge management facilitates the transfer of knowledge between staffs, commanders, and forces. It aligns people, processes, and tools within an organization to distribute knowledge and promote understanding. Commanders apply judgment to the information and knowledge provided to understand their OE and discern operational advantages. All staff officers are responsible for knowledge management and ensure representation on the knowledge management working group for knowledge transfer and knowledge management procedures.

3-222. A sustainment units' chief of staff (executive officer) is the senior knowledge management officer and advises the commander on knowledge management policy. The chief of staff (executive officer) is responsible for directing the activities of each staff section and subordinate units to capture and disseminate organizational knowledge. The G-6 or S-6 enables knowledge management by providing network architecture and the technological tools necessary to support content management and knowledge sharing. See ATP 6-01.1 for more information regarding knowledge management.

3-223. Generally, the knowledge management cell includes an information systems officer and a knowledge manager. This cell supports command and control by enhancing shared understanding, collaboration, and knowledge amongst the staff using both digital and analog platforms. The cell also supports the G-3 or S-3 and operations centers to ensure command and control systems support knowledge management. The section links operational language and technical language and is the bridge between the G-3 or S-3 and G-6 or S-6.

PROCESSES AND PROCEDURES

3-224. Processes are a series of actions directed to an end state. Examples of the processes conducted by sustainment unit commanders and staffs are the operations process, the problem-solving process, the IPB process, the knowledge management process, and sustainment preparation of the OE. See FM 4-0 for additional information on the sustainment preparation of the OE.

3-225. The ESC and subordinate command headquarters staffs develop standardized procedures to govern actions within the command and control system to prioritize, direct, redirect, integrate, and coordinate sustainment functions effectively and efficiently. The use of standardized procedures and reporting processes reduces decision action cycle time and enables the efficient use of constrained resources in support of rapidly changing operational requirements. Processes and procedures can increase organizational competence by improving a staff's efficiency or by increasing the tempo.

3-226. Procedures are standard, detailed steps often used by staffs to describe how to perform tasks to achieve the desired end state. An example of standardized procedures is a CP SOP. Topics often addressed in CP SOPs are—

- Communications.
- Reporting procedures.
- Report formats.

3-227. Each sustainment command headquarters should have SOPs to provide to task-organized units. Each command headquarters may provide SOPs to deploying subordinate units once the command is notified or activated for deployment and its subordinate units are identified. The most successful units follow and revise SOPs throughout training and mission execution. ATP 3-90.90 provides techniques for developing unit tactical SOPs.

BATTLE DRILLS

3-228. Effective CP operations require frequent training that includes establishing and practicing staff battle drills. A battle drill is a collective action, rapidly executed without applying a deliberate decision-making process. CP battle drills are very similar to SOPs; however, there is a key difference in that battle drills require an immediate response when the trigger is initiated for a given stimulus. For example, a CP will have an SOP that guides the execution of CP security operations. *Security operations* are those operations performed by commanders to provide early and accurate warning of enemy operations, to provide the forces being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow commanders to effectively use their protected forces (ADP 3-90). A battle drill will address the immediate actions required when reacting to an enemy attack when conducting security operations. See ATP 6-0.5 for examples of CP battle drills development and formats.

BATTLE RHYTHM

3-229. Generally, sustainment units' battle rhythm and work schedule conform to mission requirements and are coordinated with the supported command headquarters. As directed by the commander, the chief of staff (executive officer) may extend or modify the battle rhythm and work schedule of the staff in accordance with operational requirements. Commanders and staffs integrate and synchronize numerous activities, meetings, and reports within their headquarters, with their higher headquarters, and with subordinate and supported units. These activities may be daily, weekly, monthly, or quarterly. An effective battle rhythm—

- Establishes a routine for staff interaction and coordination.
- Facilitates interaction between the commander, staff, and subordinate units.
- Facilitates planning by the staff and decision making by the commander.

REPORTS

3-230. Each sustainment command headquarters requires reports from subordinate units and in turn submits reports to higher and adjacent headquarters. FM 6-99 includes standardized report and message formats. The formats in the field manual are for manual and voice use but are an excellent tool for staffs developing a report or SOP. Each format provides an organized template to record, pass, and store information. All the formats list the applicable doctrinal publication as a reference. The report and message formats in FM 6-99 help users prepare and manually transmit written and voice reports and messages. All sustainment organizations should maintain manual reporting skills in the event of power interruption during operations.

3-231. The ESC and subordinate command headquarters staffs use LOGSTAT reports to identify logistics requirements to support decisive action. The LOGSTAT report informs the COP, running estimates, and logistics synchronization. The LOGSTAT report is a compilation of data that requires analysis before action. It is a snapshot of current stock status, on-hand quantities, and future requirements. Some common logistics reports include the LOGSTAT report, bulk petroleum report, and maintenance status report.

3-232. Staff focus on the integrity and usability of information systems data. The value of automated logistics information systems and command and control systems is that everyone on the network can see and use the reported information. The data requested and subsequently analyzed should be linked to the commander's critical information requirements.

3-233. Each sustainment organization's battle rhythm is critical when considering cut-off times, as of times, and reporting times. Staff sections should allocate enough time to analyze data when received and provide the commander with a considered recommendation on future courses of action. The staff balances timeliness of reporting and amount of time needed to analyze the report.

3-234. It is important to focus on only collecting data that can be turned into information for a decision. Below are possible categories of information to consider when analyzing LOGSTATs:

- Status of classes of supply.
- Multinational partner supply status.
- Changes to anticipated expenditure rates.
- Any incident having significant impact on the operational capability of a logistics unit.
- Any incident having significant impact on logistical posture of any tactical unit.
- Critical low-density equipment.
- Logistics information system connectivity status.
- Logistics information system connectivity to multinational partners.
- Route and transportation node status.

3-235. LOGSTATs are often posted to a shared communications platform so everyone is able to access the most current status. For example, the corps sustainment staff establishes sustainment status reporting parameters to maintain a current readiness status of the corps formation. The ESC and subordinate command headquarters staffs contribute to this sustainment status and enable the corps staff to identify readiness shortfalls, functional problems, and trends.

MEETINGS

3-236. The number of meetings and the subjects addressed depend on the situation and echelon. Many informal meetings occur daily within a headquarters. Examples of meetings within the battle rhythm of sustainment organizations at the field army and corps echelons include the following—

- Operations synchronization meeting.
- Sustainment synchronization meeting.
- Commander's update brief.
- Operations update and assessment.
- Sustainment working groups.

COMMON OPERATIONAL PICTURE

3-237. The COP is a single display of relevant information within a commander's area of interest, tailored to the user's requirements and based on common data and information shared by more than one command. Ideally, the COP is automated, requiring minimal manipulation by CPs.

3-238. A sustainment unit's COP helps the commander and staff understand the boundaries and focus of supported units. For example, the ESC supporting the corps maintains a COP that includes maneuver graphics and control measures specific to the corps to synchronize support. The ESC would then work with the corps G-4 to overlay the maneuver COP with specific logistics information. Using doctrinal graphics ensures sustainment and maneuver units have COPs that encompass all of the warfighting functions and are understood across the force.

LOGISTICS SYNCHRONIZATION MATRIX

3-239. Synchronization matrices assist commanders and staffs with ensuring assets are at the right place at the right time and that sustainment plans nest with the scheme of maneuver and provide the desired effects to support the supported forces' mission. The logistics synchronization matrix provides key times, locations, and methods of executing logistics. The logistics synchronization matrix is a tool that assists logisticians with coordinating and synchronizing logistics operations.

3-240. A logistics synchronization matrix tells supported units what will arrive, when it will arrive, and the method of delivery. The matrix also enables sustainment unit commanders, SPO officers, and staffs to identify and deconflict potential problems. As a practice, the synchronization matrix changes as requirements and operations change and must be shared every time it is updated.

3-241. The format of the logistics synchronization matrix is the commander's preference. However, it must be simple enough so the commander can review and understand it immediately and sophisticated enough for SPO officers to use as a planning and synchronization tool.

REHEARSALS

3-242. A rehearsal is a session in which the commander and staff or unit practices expected actions to improve performance during execution. Commanders use this tool to ensure staffs and subordinates understand the concept of operations and commander's intent. Rehearsals also allow leaders to practice synchronizing operations at times and places critical to mission accomplishment. Effective rehearsals imprint a mental picture of the sequence of the operation's key actions and improve mutual understanding.

3-243. Rehearsals occur at every echelon. The ESC and subordinate command headquarters staffs should participate in rehearsals conducted by their higher headquarters and conduct rehearsals for planned sustainment operations. A support rehearsal may include all warfighting functions or a single warfighting function and helps synchronize each warfighting function with the overall operation. Although these rehearsals differ slightly by warfighting function, the achieved results are the same.

3-244. Sustainment rehearsals verify synchronization of the sustainment plan with the scheme of maneuver. This is an opportunity to assess logistics synchronization. Sustainers may use this rehearsal prior to the combined arms rehearsal as a preparation tool, or after the combined arms rehearsal to reinforce previous rehearsals, or to address weaknesses and changes identified during the rehearsal. See FM 6-0 for details about rehearsals.

Chapter 4
Sustainment During Offensive and Defensive Operations

This chapter provides an overview of sustainment support during large-scale offensive operations and the planning factors unique to offensive operations. The chapter also describes sustainment support during large-scale defensive operations and the planning considerations for defensive operations.

LARGE-SCALE COMBAT OPERATIONS

4-1. During large-scale combat operations, a corps operates as a tactical echelon exercising OPCON over two to five divisions and a variety of supporting brigades or battalions. The corps performing this role will require significantly more reinforcements, materiel, and equipment than it would for other types of operations because of the higher operating tempo, greater lethality, and significantly increased consumption rates. The lethal nature of large-scale combat operations increases the propensity for mass casualties, requirements for mortuary affairs and a robust medical architecture, and large-scale personnel and equipment replacements. Large-scale combat operations will require the distribution system to move a greater volume of personnel and equipment than in other types of operations. Increased velocity and precision will be required to sustain corps operations.

SUSTAINMENT SUPPORT DURING OFFENSIVE OPERATIONS

4-2. An *offensive operation* is an operation to defeat or destroy enemy forces and gain control of terrain, resources, and population centers (ADP 3-0). Offensive tasks enable commanders to impose their will on the enemy and deprive the enemy of resources, seize decisive terrain, deceive or divert the enemy, develop intelligence, or hold an enemy position.

4-3. There are four offensive tasks executed during large-scale combat operations: movement to contact, attack, exploitation, and pursuit. A *movement to contact* is a type of offensive operation designed to develop the situation and establish or regain contact (ADP 3-90). An *attack* is an offensive task that destroys or defeats enemy forces, seizes, and secures terrain, or both (ADP 3-90). Exploitation and pursuit are planned as sequels to an attack. Exploitation is the bold continuation of an attack to maximize success, and pursuit is the relentless destruction of retreating enemy forces who have lost capability to effectively resist.

4-4. Sustainment units supporting these offensive tasks are focused on sustaining and maintaining the combat power necessary to defeat, destroy, or dislocate enemy forces. During the offense, LOCs lengthen and requirements for personnel replacements and many classes of supply increase. Successful sustainment commanders and planners act rather than react during offensive operations. Sustainment planners anticipate that the fast pace of the offense generally requires ground or air resupply and may, at times, create a need for emergency resupply. To support offensive operations, sustainment forces at all echelons consider echeloning support assets to expedite replenishment of critical support.

PLANNING CONSIDERATIONS DURING OFFENSIVE TASKS

4-5. The sustainment-focused planning considerations listed below are examples of what planners at the field army and corps echelons take into account during offensive operations:

- Plan for execution of all sustainment functions within the ESC; personnel services, financial management, HSS, and logistics. These include personnel replacement, casualty reporting, medical treatment, MEDEVAC, MEDLOG, and all logistics functions.

- Forecast expected number of casualties and prepare appropriate medical treatment, surgical, and evacuation capabilities. Planners must also assess the best positioning of medical units to ensure support to offensive operations.
- Anticipate conducting large-scale personnel replacement operations in support of units with high casualties.
- Anticipate supporting reconstitution operations for maneuver units experiencing high casualties and loss or damage of equipment.
- Understand unit reorganization as a routine process that occurs on an objective. Reorganization activities should include the integration of replacement personnel when able.
- Provide guidance to commanders, staffs, and SPOs at all echelons concerning the importance of cross-leveling sustainment and logistics assets. This includes maintenance and recovery capabilities.
- Plan for all sustainment functions required to build combat power: personnel, supply, maintenance, and medical. Preposition supply classes I, water, IIIB/P, IV, V, VIII, and IX as far forward as the tactical situation permits. Consider the use of combat configured loads. Balance forward positioning of resupply and rapid mobility.
- Expect high demand for classes III, V, and IX to support offensive preparation efforts. Ensure adequate transportation assets are available to move the required tonnage.
- Plan for heavy equipment transportation assets to move main battle tanks, infantry or cavalry fighting vehicles, Stryker systems, and other heavy equipment forward to support the offensive. They will also be required for retrograde of damaged equipment to maintenance collection points.
- Ensure field maintenance capability is adequate to repair or evacuate damaged equipment to meet readiness requirements and the maneuver commander's intent. This capability requires planned coordination between maintenance and transportation units and likely requires movement control points along routes.
- Anticipate time needed to execute logistics as distances increase.
- Anticipate requirements to provide subsistence, medical support, transportation, and shelter to enemy prisoners of war, detainees, and dislocated civilians.
- Ensure financial managers at each echelon are responsible for capturing increased costs, applying available resources to validate requirements, identifying unfunded requirements, and securing funding for reconstitution requirements.
- Plan for increased consumption of ammunition by the combat aviation brigades.
- Forecast for placement of HR assets to support numerous functions, to include intertheater transient personnel accountability, casualty tracking at Role 3 medical treatment facilities (MTFs), and postal operations where the OE allows.
- Plan for the appropriate type of water distribution. During large-scale combat, sustainment planners should expect to distribute only bulk water from the corps rear boundary forward to the forward line of own troops. Bottled water requires contracted support and, if used, should only be planned for the joint security area.
- Plan for the execution of mortuary affairs operations for fatalities as a result of large-scale combat operations. Planners should also prepare for temporary interment when directed by the CCDR.

Additional planning considerations are listed in table 4-1.

Table 4-1. Sustainment planning considerations for offensive operations

Plan for Class I requirements	Plan for adequate food and water to support the force to include allied forces, humanitarian requirements, prisoners of war, CBRN decontamination, medical, laundry, and showers.
Plan for Class III requirements	Army mechanized forces consume large quantities of petroleum products. Planners must estimate requirements and synchronize deliveries to ensure mobility.
Plan for Class IV requirements	Barrier and building materials are often required during offensive operations in order to conduct defensive positions to consolidate gains or to improve routes to enhance movement. Class IV is also required for detainee collection sites.
Plan for Class V requirements	Anticipate increased expenditures of munitions. The TSC and ESC DMC must monitor expenditure rates in relation to stockage levels. This includes forecasting expenditure rates in current and future operations as well as, monitoring supply stocks and recommend controlled supply rates to the CCDR.
Plan for Class VII requirements	Factor in major end item projected battle loss attrition and cross walk with CONUS-based depots ability to provide required class IX. Movement of Class VII major end items may further stress transportation assets, especially rail and HET.
Plan for Class VIII and medical requirements	Medical formations may be overwhelmed by the scale of casualties. While mobile, medical formations cannot move themselves and require a considerable number of trucks to move. Tear-down and reset are lengthy processes during which they are non-operational. Distribution of Class VIII may require special considerations including temperature-controlled and secure containers.
Plan for Class IX and maintenance requirements	Heavy attrition of combat and logistical vehicles will stress the ability to recover and repair equipment. Maintenance units will require a wide range of Class IX repair parts. Units will also need permission to conduct BDAR.
Anticipate transportation requirements	The tempo of sustainment operations will tax transportation assets. Planners will have to account for diverse requirements to move items such as mail and medical units and to assist allied forces. Sustainers should only commit what is essential to accomplish the mission. Coordination for a movement corridor may also be necessary.
Anticipate CBRN requirements	Planners should anticipate the effects of CBRN conditions on sustainment operations. These include impacts to supply routes, time for decontamination, and increased amounts of non-potable water for decontamination operations.
Anticipate replacement operations	Replacement operations include planning for higher casualties, requirements for additional units, and individual replacements. TSCs, ESCs, corps, and divisions must coordinate with the ASCC G-1 for replacement flow into theater. The HROB is the key integrator between the G-1 and AG at echelon and the sustainment enterprise.
Plan for increased fatalities	Fatalities may exceed the capacity of mortuary affairs units to process remains. Additional cold storage platforms may be required to temporarily hold remains or if necessary, temporary internment may be required. Plan for special handling of contaminated remains.
Coordinate for additional support	Plan for utilization of contracted assets, host-nation support, and acquisition and cross-service agreements to maximize sustainment. This may include LOGCAP, contracted transportation, local purchase, and service agreements.

AG	adjutant general	ESC	expeditionary sustainment command
ASCC	Army service component command	G-1	assistant chief of staff, personnel
BDAR	battle damage assessment and repair	HET	heavy equipment transport
CBRN	chemical, biological, radiological, nuclear	HROB	human resources operations branch
CCDR	combatant commander	LOGCAP	logistics civil augmentation program
CONUS	continental United States	TSC	theater sustainment command
DMC	distribution management center		

SUSTAINMENT SUPPORT DURING MOVEMENT TO CONTACT

4-6. Sustainment planners recognize that sustainment support requirements may change rapidly during movement to contact. Once forces make contact, the commander makes the decision to attack, defend, bypass, delay, or withdraw. Changes in priority of support should be weighted towards the security force to continue to provide protection and be able to shift quickly to a new mission.

4-7. Operational and tactical sustainment support must be tailored to support the mission and task-organized appropriately. The ESC assigned to the corps (with inputs from supported unit S-4s and S-3s and the corps G-4 and G-3) anticipates requirements and consumption rates for fuel and ammunition at the tactical level. The sustainment brigade and CSSB SPOs synchronize sustainment support with supported units for unit distribution. *Unit distribution* is a method of distributing supplies by which the receiving unit is issued supplies in its own area, with transportation furnished by the issuing agency (FM 4-40). Supplies pre-positioned along supply routes provide options and flexibility to decrease the distance for echeloning sustainment support. Aviation support and reconnaissance are essential to large-scale movements to contact and require more aviation fuel, ammunition, and maintenance. Sustainment planners must understand the tactical situation and position critical support assets in accordance with the corps scheme of maneuver for movement to contact. Table 4-2 lists sustainment considerations.

Table 4-2. Sustainment considerations during movement to contact

Weight the force	Security and main body are weighted for priority of sustainment support.
Push logistics packages	Supporting units push pre-planned logistics packages. Special logistics packages can also be dispatched as required.
Pre-position supplies	Pre-positioned supplies along supply routes will provide options and flexibility to decrease the distance echeloning sustainment support.
Increased requirements for Class III, V, VIII, and IX	Combat trains containing Class III, V, VIII, and IX stocks move with their supported battalion. Battalion field trains typically move with the brigade support battalion.

SUSTAINMENT SUPPORT DURING ATTACK

4-8. Sustainment planners at the field army and corps echelon must understand that attacking forces place large demands on BCT and EAB sustainment. Sustainment units locate as far forward as prudence allows. From these forward locations, sustainment units can sustain the attacking force and provide priority of support to the units conducting the main effort.

4-9. Sustainment planners must understand how a corps will conduct an attack to include who will be the main effort, the supporting effort, and reserve. The operations may utilize capabilities ranging from long-range precision fire systems to attack helicopters and will employ the majority of available combat power. Maintenance requirements and equipment readiness should be addressed prior to beginning an attack. Sustainment planners should anticipate placing fuel, ammunition, and repair parts as far forward as possible to support forces in an attack. As the attacking force advances, sustainment units and capabilities displace forward as required to shorten supply lines, using displacement techniques designed to ensure uninterrupted support to maneuver units. The size of the force a command devotes to the echelon support area security mission depends on the threat to the attacking force's support area. Table 4-3 lists sustainment considerations.

Table 4-3. Sustainment considerations during attack

Plan to locate sustainment forces forward	Forward-located sustainment units sustain the attacking force and provide priority support to units conducting the main effort.
Plan maximum maintenance effort	All maintenance requirements and equipment readiness issues should be addressed prior to the attack to maximize combat power.

Table 4-3. Sustainment considerations during attack (continued)

Plan to pre-position Class III, V, VIII, and IX stocks	Sustainment stocks of Class III, V, VIII, and IX stocks should be positioned as far forward as possible to support forces in the attack.
Plan to displace	Sustainment forces should be prepared to displace forward to shorten supply lines. Displacing units should plan for uninterrupted supply to the maneuver units while they displace.

SUSTAINMENT SUPPORT DURING EXPLOITATION AND PURSUIT

4-10. An *exploitation* is a type of offensive operation that usually follows a successful attack and is designed to disorganize the enemy in depth (ADP 3-90). Sustainment planners at the field army and corps echelons must understand exploitation forces require large amount of sustainment support. Maneuver commanders maintain control of forces during exploitation to avoid the overextension of forces, which in turn, may be limited more by vehicle failures and the need for fuel than by combat losses and ammunition.

4-11. Transportation assets and supplies are necessary to sustain maneuver forces and become increasingly important as an exploitation progresses. As supply lines lengthen, route security will also become a problem. The largest possible stocks of fuel, spare parts, and ammunition should accompany the exploiting force so that momentum does not slow for lack of support. When possible, sustainment assets should follow an exploiting force along LOCs for distribution. Organic maintenance teams within the attacking BCTs repair disabled vehicles or send them to collection points along designated main supply routes for evacuation and repair.

4-12. A *pursuit* is a type of offensive operation designed to catch or cut off a hostile force attempting to escape, with the aim of destroying it (ADP 3-90). Sustainment planners at the field army and corps echelons must understand that pursuit requires increased consumption of fuel and ammunition. Equipment failures and increased maintenance requirements may also occur during pursuit. Sustainment planners must anticipate these requirements and be prepared to push packages of fuel, ammunition, and repair parts to corps and division forces in the pursuit. Sustainment planners must also be prepared to support the direct-pressure force and encircling force during the pursuit. Sustainment commanders must keep the G-4 apprised of the status of supplies to ensure the maneuver forces do not out run their support.

4-13. The direct-pressure force conducts hasty attacks to maintain enemy contact and its forward momentum until the complete destruction of the retreating enemy force. In the pursuit, the direct-pressure force usually conducts the main attack until the enemy force has been destroyed or encircled. The direct-pressure force consists of armor units and requires increased amounts of fuel and ammunition. An enveloping force moves to the enemy rear area as swiftly as possible by the most advantageous routes to cut off the enemy's retreat and block the enemy's escape. The encircling force requires mobility to cut off the enemy's retreat. The encircling force require increased amounts of fuel and repair parts. Table 4-4 lists sustainment considerations.

Table 4-4. Sustainment considerations during exploitations and pursuit

Exploitation	
Plan to provide Class III, V, and IX to maneuver force	Maximize stocks of key supplies to help maintain momentum.
Plan to provide recovery and maintenance assistance	Organic maintenance elements should repair disabled vehicles or move them to a maintenance collection point. Request EAB transportation assets to evacuate vehicles that cannot be repaired to sustainment-level maintenance.
Plan to displace EAB sustainment assets	EAB sustainment assets should follow the exploiting forces for distribution.
Pursuit	
Plan for increased consumption of Class III, V, and IX	Push packages of fuel, ammunition, and repair parts to the direct-pressure and enveloping forces to maximize combat power.
Plan for additional security for field and combat trains	Logistics resupply missions may encounter resistance from bypassed enemy forces.

EAB echelons above brigade

SUSTAINMENT SUPPORT DURING DEFENSIVE OPERATIONS

4-14. Defensive tasks are conducted to defeat an enemy attack, gain time, economize force, and develop conditions favorable for offensive or stability tasks. As one of the four decisive action tasks, the defense is a major, complex operation conducted to defeat an enemy attack. Defensive tasks set the conditions necessary to regain the initiative through counterattacks.

4-15. There are three defensive tasks executed during large-scale combat operations: mobile defense, area defense, and retrograde. A mobile defense defeats the attacking forces by permitting the enemy to advance into a position that exposes them to counterattack. An *area defense* is a type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright (ADP 3-90). The retrograde moves friendly forces away from the enemy to gain time, preserve forces, place the enemy in unfavorable positions, or avoid combat under undesirable conditions.

4-16. During defensive operations, sustainment commanders and staffs anticipate increased requirements in class IV, V, and IX items to support the defensive effort and build class III (bulk and package) stocks to prepare to transition to offensive operations. Sustainment planners anticipate where the greatest need might occur during operations and consider pre-positioning sustainment stocks far forward to reduce response times for critical support. Planners also consider alternative methods for delivering sustainment in emergencies. Sustainment of defensive tasks requires a coordinated planning effort designed to maximize synchronization, integration, and continuity of support at all echelons. Commanders and staffs at every echelon must anticipate operational requirements, be responsive in requisitioning and distributing resources, and be prepared to improvise tactics and techniques for execution that ensure responsiveness even in unexpected situations.

PLANNING CONSIDERATIONS DURING DEFENSIVE OPERATIONS

4-17. The sustainment planning considerations listed below are examples of what sustainment planners at the field army and corps echelon may consider during defensive operations. The ESC and subordinate sustainment brigades and CSSBs planners must also—

- Plan for execution of all sustainment functions and associated sub-functions of supported units at all echelons: personnel services, financial management, HSS, and logistics. These include personnel replacement, casualty reporting, medical treatment, MEDEVAC, MEDLOG, and all logistics functions.
- Understand that resupply and support elements may have to operate outside the unit boundaries and beyond the forward line of own troops while supporting covering, guard, screening, and counter and spoiling attack forces. Sustainment units must understand tactical enabling tasks and OPCON measures used by maneuver forces in perimeter defense.
- Plan for all sustainment functions required to build combat power: personnel, supply, maintenance, and medical. Ensure adequate transportation for classes I, water, IIIB/P, IV, V, VIII, and IX. Also consider the use of mission configured loads.
- Balance forward positioning of supplies with the requirement for rapid mobility.
- Ensure that proper handling and storage requirements are addressed for temperature-sensitive medical products.
- Expect high demand for classes IV and V to support defense preparation efforts. Ensure adequate transportation assets are available to move the required tonnage.
- Plan for heavy equipment transportation assets to support the retrograde defense task. This transportation is required to move serviceable and unserviceable main battle tanks, infantry or cavalry fighting vehicles, Stryker systems, and other heavy equipment away from the enemy.
- Plan for the appropriate type of water distribution. During large-scale combat, sustainment planners should expect to distribute only bulk water from the corps rear boundary forward to the forward line of own troops. Bottled water requires contracted support and, if used, should only be planned for the joint security area.
- Expect competition between the need to support unit mobility and the need to conduct distribution operations. Plan for mobility and transportation support to units fighting over a dispersed area in a static area defense and in a dynamic mobile or retrograde defense.

- Plan for troop transportation assets to support the retrograde defense task. This is required to move large numbers of personnel during the retrograde.
- Plan for back-haul of equipment and supplies during the retrograde. This is for serviceable and unserviceable equipment and repairable class IX items.
- Echelon support for the retrograde task to ensure seamless movement from the main battle area to the support areas.
- Coordinate with the supporting units to provide support to corps units when conducting retrograde movement.
- Expect an increase in demand for class VIII (medical materiel and blood products).
- Plan for limited visibility and limited distribution routes.
- Plan for maximum use of unit distribution.
- Plan for reinforcing support to aviation brigades for downed aircraft recovery operations.
- Expect increase in aerial delivery operations.
- Anticipate mass casualties and large-scale personnel replacements to include potential reconstitution of severely degraded units.
- Plan for continuous replacement operations, specifically the transportation and integration of replacement personnel into units in the tactical close area.
- Plan to use PACE communications plans to maintain personnel asset visibility and LOGSTAT reporting.

Table 4-5 lists additional sustainment planning considerations.

Table 4-5. Sustainment planning considerations for defensive operations

Plan Class I bulk water distribution	During large-scale combat, sustainment planners should expect to distribute only bulk water from the corps' rear boundary forward to the forward line of own troops.
Plan Class IV for transition from offensive to defensive	Units will require barrier material for defensive works. Ensure transportation is available to move required tonnage.
Plan for increased Class V	Ensure transportation is available to move required tonnage.
Plan to pre-position supplies	Preposition supply Class I, III (bulk and packaged), IV, V, VIII, and IX centrally and well forward. Consider the use of mission-configured loads. Balance forward positioning of resupply and rapid mobility.
Plan to retrograde support	Plan for heavy equipment transportation assets to move serviceable and unserviceable vehicles to the rear. Utilize back haul to move equipment and supplies to the rear. Plan for troop transportation assets to move large numbers of personnel.
Plan for increased demand for Class VIII	Ensure proper handling and storage requirements are addressed for prepositioned temperature sensitive medical products.
Plan for mass casualties	Expect an increase in demand for Class VIII (medical materiel and blood products).
Plan for large-scale personnel replacement in a short time.	Plan for personnel replacements to include potential reconstitution of severely degraded units. Anticipate continuous replacement operations, specifically the transportation and integration of replacement personnel into units in the tactical close area.

SUSTAINMENT DURING MOBILE DEFENSE

4-18. Sustaining a mobile defense requires sustainment planners to look beyond the fixing force's supporting effort to support the striking force's counterattack. The greater the distance the striking force must cover when moving from its assembly area to its final objective, the greater the amount of supplies needed to support that move. The mobile defense typically requires more fuel, provides less time for maintenance repairs, and requires more complex casualty evacuation procedures due to the dynamic nature of this defense.

4-19. Commanders establish casualty evacuation procedures for both the fixing force and the striking force and ensure that all unit personnel are trained in first aid procedures (self-aid, buddy-aid, and combat

lifesaver), evacuation of the sick and wounded, and medical aspects of injury prevention. The fixing force will likely suffer a higher percentage of casualties than the striking force as it absorbs the enemy's attack. When the striking force must move a considerable distance from its sustaining base, the commander should consider establishing a forward logistics element. See ATP 4-02.13 for more information on casualty evacuation. Table 4-6 lists additional sustainment considerations.

Table 4-6. Sustainment considerations during a mobile defense

Preposition tailored packages of Class V	Pre-positioning materiel to expedite the construction of countermobility and survivability positions.
Forward position recovery and maintenance assets	Recover and return key weapons systems to combat through repair or battle damage assessment and repair.
Push supplies	Deliver mission-essential tailored supplies to the fixing force on a regular basis as far forward as possible.
Forward Logistics Element	The forward logistics element is task organized and prepared to rapidly replenish the striking force prior to commitment. During combat, it evacuates personnel and systems and replenishes the striking force. It must be prepared to support the transition to a spoiling attack with refueling, rearming, and casualty evacuation.

SUSTAINMENT DURING AREA DEFENSE

4-20. The sustainment mission in an area defense requires a careful balance between forward positioning of supplies and maintaining the responsiveness and rapid mobility necessary to ensure survivability of sustainment assets. The area defense typically consumes less fuel, provides more time for maintenance repairs, and requires less complex casualty evacuation procedures due to the static nature of this defense.

4-21. Priorities for replenishment are normally ammunition and materials to construct obstacles and defensive positions. Maintenance and medical support, with their associated repair parts and medical supplies, are located as far forward on the battlefield as possible. There may be an increased demand for decontaminants and CBRN collective and personal protective equipment. The commander considers stockpiling or caching ammunition and limited amounts of petroleum products centrally within the main operational area. Table 4-7 lists sustainment considerations.

Table 4-7. Sustainment considerations during an area defense

Sustainment Leaders	Maintain balance between forward positioning of supplies and maintaining the responsiveness and rapid mobility necessary to ensure survivability of sustainment assets.
Replenishment priorities	Sustainers pre-position ammunition and barrier materials in the battle positions of defending forces.
Position maintenance as far forward as possible	Maintainers quickly return unit equipment to combat-ready condition to prepare the defensive force to go on the attack.
Position medical as far forward as possible	Anticipating heavy casualties, medical formations position assets to best support the flow of casualties without impeding movement.
Plan for CBRN	Potential need for decontamination equipment and supplies as well as personal protective gear.
Push Supplies	Configured loads are pushed to the defensive force on a regular basis to ensure sufficient supplies are on hand.
CBRN chemical, biological, radiological, nuclear	

4-22. The supply of obstacle materials in an area defense poses a significant challenge that requires detailed coordination and involves long lead times. Push packages of these supplies ensure units engaged in defensive operations receive needed supplies. The commander plans for the transportation and manpower required in obtaining, moving, and uncrating barrier material and associated obstacles-creating munitions such as demolition charges and mines.

4-23. The use of echeloned support also enhances sustainment capabilities during the area defense. Supported commanders must ensure that their sustainment staff officers and supporting sustainment commanders understand their tactical intent. These officers and commanders can then establish support priorities in accordance with the commander's intent and plan sustainment operations to ensure the supportability of the operations.

SUSTAINMENT DURING RETROGRADE

4-24. Sustainment support of a retrograde typically requires the sustainment of forces engaging the enemy, the organized movement away from the enemy, and the protection of sustainment capabilities and resources in echeloned support. Regardless of the type of retrograde, all echelons of sustainment need to prepare contingency plans to ensure an uninterrupted flow of support to the maneuver units tactically employed in defensive combat while at the same time displacing or preparing to displace supporting units. Planners should incorporate heavy equipment transportation assets to support the retrograde defense task.

4-25. During retrograde operations, sustainment units echelon their movements to maintain adequate support to the committed force. Sustainment units also maintain maximum dispersion consistent with control and local security. Their goal is to provide uninterrupted support and maximum protection during the time it takes to conduct the retrograde operation. By echeloning support, the commander reduces the amount of time each sustainment unit spends moving, preventing it from performing its primary support tasks. To reduce congestion and interference with the operations of other units, the commander should displace supporting sustainment assets as early as possible, normally during periods of limited visibility. The early displacement of sustainment units can also conceal friendly future operations from the enemy.

4-26. Commanders anticipate the effects of retrograde movements on sustainment elements to ensure adequate support for the operation and the prompt evacuation of casualties. Retrograde movements generally result in increased distances between sustainment and combat units, which make providing retrograde operations support more difficult. Retrograde operations generally require more class III and possibly more class V supplies than other defensive tasks. Increased supply of bulk fuel and ammunition combine to increase the demand for transportation assets and space on main supply routes. This, in turn, increases the need for movement control and pre-positioned services and supplies. Sustainment units carry and cache necessary fuel and ammunition stocks as required by the specific situation. Table 4-8 provides additional sustainment considerations.

Table 4-8. Sustainment considerations during a retrograde

Plan for increased usage of Class III and V	Distribution of these supplies may require additional transportation assets.
Preposition Class III and V	Pre-position ammunition and barrier materials to enable defending forces to construct battle positions.
Casualty evacuation	Position medical formations to support the evacuation of casualties without impeding operations.
Maintain support	Units must maintain responsive support to maneuver formations while simultaneously moving to the rear.
Position maintenance assets as far forward as possible	Maintainers need to recover and repair equipment as far forward as possible to maintain combat power.
Push supplies	Push configured loads to the defensive force to ensure sufficient supplies are on hand when needed.
Plan for CBRN	Potential need for decontamination equipment and supplies as well as personal protective gear.
CBRN chemical, biological, radiological, nuclear	

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Chapter 5
Support Area Operations

Chapter 5 describes the support area at the field army and corps echelons and includes discussions on the rear area. This discussion includes considerations for site selection, establishment, occupation, and protection. The ESC and subordinate units must be able to rapidly displace to increase their survivability.

AREA OF OPERATIONS

5-1. Army commanders typically designate support areas within their assigned AO. Unit locations in the rear area generally shift as unit boundaries change at the direction of a higher headquarters. The ESC and subordinate units supporting the field army and corps echelons conduct operations in the designated support areas within the field army and corps rear areas.

REAR AREA

5-2. The rear area is the area within a unit AO extending forward from the rear boundary to the rear boundary of the area assigned to the next lower level of command. It is the area where most forces and assets that support and sustain forces in the close area are located. Rear area operations are focused on ensuring freedom of action and operational reach in current and future operations. These operations sustain the tempo of combat and ensure that commanders have the agility to exploit opportunities without hesitation or delay. These operations are numerous, complex, and continuous. Four activities that occur in the rear area are—

- Assembly and movement of reserves.
- Redeployment of fire support.
- Movement of tactical units through the area.
- Maintenance and security of sustainment and command and control.

CORPS REAR COMMAND POST

5-3. Corps commanders may employ a rear CP depending on the situation, threat, size of the support area, and number of units within the support area. The rear CP enables corps commanders to exercise command and control over disparate functionally focused elements operating within the support areas that may exceed the effective span of control of the MEB or corps main CPs.

5-4. The primary role of the rear CP is to provide command authority and general officer oversight of corps support area operations, sustainment, and other corps support activities. The rear CP is not a separate section in the corps' table of organization and equipment. When a rear CP is required, it is formed from equipment and personnel from the main and tactical CPs. Normally, the deputy corps commander leads the corps rear CP.

SUPPORT AREA

5-5. A *support area* is the portion of the commander's AO that is designated to facilitate the positioning, employment, and protection of base sustainment assets required to sustain, enable, and control operations (ADP 3-0). The support area is a designated portion of the rear area where sustainment operations generally occur. The geographic size of a support area is based on mission and operational variables and is difficult to quantify. These variables include the number of units assigned to the support area, the existing threat, and the amount of terrain that can be influenced by the unit assigned support area responsibility.

5-6. For the corps support area, a MEB is normally designated to control the area with the MEB commander designated the commander of the support area. If a MEB is not available, a corps military police brigade with augmentation or a BCT can control the corps support area. This allows sustainment units to focus on their primary mission. Support area responsibilities include the following—

- Terrain management.
- Information collection, integration, and synchronization.
- Civil-military operations.
- Air and ground movement control.
- Security.
- Mobility and countermobility support.
- Clearance of fires.
- Personnel recovery.
- Airspace control.
- Minimum-essential stability tasks.
- Rear CP integration as required.

5-7. The field army support area is usually in the joint security area. The joint security area is a specific area, designated by the JFC, to facilitate protection of joint bases and their connecting LOCs that support joint operations. *Joint operations* are military actions conducted by joint forces and those Service forces employed in specified command relationships with each other, which of themselves, do not establish joint forces (JP 3-0). The joint security area performs the same functions as the other support areas; the main difference is that Army forces may only be tenants instead of controlling it. The field army may not have a command or support relationship with the unit tasked to command and control the joint security area. Field army planning in the joint security area largely influences current and future operations in its deep area. The *deep area* is where the commander sets conditions for future success in close combat (ADP 3-0). It also influences the conduct of corps operations in the close and rear areas through the allocation of resources. The field army sustainment planning horizon is from 96 hours out to nine days in large-scale combat operations.

5-8. Corps rear areas often contain subordinate division support areas that have not yet displaced forward during offensive operations. Division support areas are positioned around the corps support area and normally within the corps rear area until offensive operations begin. This reduces the challenges associated with transportation and distribution while keeping corps units dispersed enough to mitigate the effects of enemy long-range fires. Some corps-controlled activities co-locate in subordinate division AOs to facilitate division operations and enable freedom of movement. Corps planning in the support area largely influences current and future operations in the deep, close, and rear areas. The corps sustainment planning horizon is from 72 hours out to six days in large-scale combat operations. See ATP 3-92 for additional information on corps activities in the support area.

5-9. Corps-supporting sustainment units such as sustainment brigades and CSSBs are likely to position assets in forward support areas to facilitate operations and enable freedom of action. For example, a sustainment brigade supporting a corps may position assets in the division support area to facilitate division operations. This positioning of capability enables the sustainment brigade to control sustainment activities short of division boundaries and allocate resources to support the corps concept of the operation.

5-10. Each ESC and subordinate sustainment unit assigned to the field army and corps may establish a base within its assigned support area to provide centralized control of operations. Decentralized execution of operations may be conducted within the base or at designated locations within its support area. ESC and subordinate sustainment units will relocate capabilities constantly as supported units relocate in the AO. ESC and subordinate sustainment units' assigned support areas are determined by the physical array of forces, support requirements during progressive phases, proximity of sustainment capabilities, natural land boundaries, available road networks, and other considerations.

SITE SELECTION

5-11. Site selection requires careful consideration because the location of personnel and equipment can eliminate or reduce recognition factors by the enemy. Sustainment organizations must select sites that provide

the greatest cover and concealment possible without hindering operations. Factors that staffs should consider when determining a site for operations include—

- Threat order of battle and activity in the area.
- Camouflage.
- Concealment.
- Survivability.
- Dispersion requirements.
- Internal road network.
- Access to main and alternate supply routes.
- Terrain features.

5-12. Throughout operations, the commander and staff consider the proximity of sustainment assets in relation to supported units. This proximity affects timely support and must be considered in terms of both time and distance. Many aspects of the OE affect decisions on where to position units. Mission analysis is required to make prudent decisions on both the number and placement of sustainment units in relation to the supported organizations.

5-13. As supported units move within the AO, the ESC may direct its sustainment brigades or other subordinate units to relocate in order to maintain proximity. The time it takes for support to reach the supported unit given the operational conditions at that time is the primary consideration for placement. Generally, the support battalions should be able to distribute commodities to supported units and return the same day.

5-14. Continuous and effective threat activity may cause an inordinate increase in the time required to cover a relatively short distance over good roads. Conversely, a much greater distance may be covered over poor roads in a stable area with little to no threat activity. The distance between the ESC's subordinate supporting units and the supported units will vary greatly because of mission variables. Consider the following factors when determining proximity to supported units:

- Threat order of battle and activity.
- Available road network and condition.
- Fuel consumption and in transit fuel capability.
- Frequency of support missions.
- Close air support.
- MEDEVAC support.
- Route clearance support.
- Route security support.
- Weather.

ESTABLISHMENT AND OCCUPATION

5-15. Sustainment planners must deliberately plan the occupation and establishment of a new location for each sustainment command base. That process begins with the quartering party, which establishes an initial CP, verifies the site selection of the support area, and makes limited preparations for receiving the rest of the organization. Each quartering party is task-organized from sections of its respective sustainment command headquarters staff as well as elements from other units that will occupy the new base of operation. The quartering party is typically only a small portion of each unit to represent its parent commander in the establishment of initial positions in a new support area.

5-16. Upon arrival to a new location for the support area, each quartering party begins performing its priorities of work. The quartering party establishes security and initial communications to begin the transfer of command and control from an intermediate staging base or previous base of operation to a new base of operations. An *intermediate staging base* is a tailorable, temporary location used for staging forces, sustainment, and/or extraction into and out of an operational area (JP 3-35). The quartering party establishes a tactical CP.

5-17. The organizational designs for the ESC, sustainment brigade, or CSSB do not include requirements for a dedicated tactical CP. Commanders and staffs must be aware that personnel and equipment organized to create the quartering party degrade operations of the main CP. Commanders employ the tactical CP as an extension of the main CP. The functions of a tactical CP typically include—

- Controlling unit operations for a limited time when the main CP is displacing or otherwise not available.
- Controlling a specific task within larger operations such as the establishment of a base of operations.
- Providing a forward location for issuing orders.
- Performing short-range planning.
- Providing input to future operations planning.

5-18. The sequence of units occupying a new sustainment command base is fluid. The sequence is established based on operational requirements, requirements to establish local security, and adjustments to the site layout.

SINGLE BASE OPERATIONS

5-19. If a large single base is used, the unit designated to control the support area will control the base. While a single base is advantageous in terms of simplified command and control and perimeter security, a single base is disadvantageous to sustainment organizations. A single base containing multiple support area units is very large and easily detected by enemy reconnaissance. A single base masses a large number of units in a single location and simplifies targeting and attack by enemy artillery, attack aircraft, and ground forces. It also puts a significant portion of the sustainment and support structure at risk from a single attack.

BASE CLUSTER OPERATIONS

5-20. At the field army and corps echelons, each ESC and its subordinate sustainment units require large acreage to support sustainment personnel and assets. When support areas are too large or terrain is limited, higher command headquarters may determine that subordinate commanders should establish separate bases to form a base cluster. A base cluster, in base defense operations, is a collection of bases, geographically grouped for mutual protection and ease of command and control. Security, communications capability, proximity to road network, and other factors influence unit placement.

5-21. A base cluster often lacks a well-defined perimeter or established access points to the cluster as a whole. Although individual bases within the cluster maintain perimeter security, entry, and access control, the security posture may be more limited with base clusters than that of a single, larger base. Within base clusters, base commanders or senior leaders will implement base defense plans for their individual bases. All base defense plans within the cluster must be coordinated and synchronized to ensure mutual support for all locations within the cluster. See ATP 3-92 for more information on base clusters.

PROTECTION

5-22. *Protection* is the preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or located within or outside the boundaries of a given operational area. (JP 3-0) Field army and corps commanders may designate a division headquarters, a MEB, or BCT to control and manage security operations in the support areas. Sustainment brigades remain responsible for the security of their base or base clusters within the support area. Sustainment brigade commanders integrate protection tasks into all aspects of operations to safeguard personnel, systems, and physical assets. Commanders and staffs synchronize, integrate, and organize capabilities and resources throughout the operations process in order to preserve combat power and mitigate the effects of threats and hazards. See JP 3-0 and ADP 3-37 for more information about protection.

5-23. ESC, sustainment brigade, and subordinate commanders and staffs plan for all the supporting tasks of the protection warfighting function, but often focus on coordinating security operations conducted to protect friendly forces, installations, and routes in their assigned support area. Criticality, vulnerability, and

recoverability are some of the most significant considerations in determining protection priorities. Activities considered as protection priorities include—

- Base and base cluster defense.
- Critical asset security.
- Node protection.
- Response force operations. The sustainment brigade establishes a response force to protect the base it is occupying and coordinates for additional security.
- LOC security. The sustainment brigade coordinates with the unit assigned the terrain.
- Convoy security.

Support Area Security

5-24. Security includes measures undertaken by a military unit, activity, or installation to protect itself against all acts designed to, or which may, impair its effectiveness. The unit uses this information to react to the enemy and to develop the situation to allow the commander to use all defenses. In a support area, units execute local and area security.

5-25. Area security neutralizes or defeats enemy operations in a specified area. It includes reconnaissance and security of personnel, airfields, landing zones, facilities, main supply routes, LOCs, equipment, and critical points.

5-26. Local security actions are an inherent part of self-protection and mission assurance measures. Local security consists of base perimeter security, manning observation and listening posts, local security patrols, access control, barriers, a reserve of personnel to augment perimeter security, and other measures to provide security for a base. Every unit assigned a base or collocated on a base with another unit has local security responsibility.

Base Security

5-27. The higher headquarters command is responsible for its assigned base security. Commanders are responsible for securing the base (or bases if a base cluster is used) to which their units are assigned. Area security measures are necessary for convoys and other logistics sites and actions that occur outside the base, including Army pre-positioned stock operations. Leaders must balance security with mission accomplishment.

5-28. As the threat increases, sustainment organization commanders may stop sustainment support activities to adequately protect personnel and equipment. Failure to provide adequate protection may cause personnel and equipment losses so significant that they prevent sustainment support to supported units. The supported and supporting unit commanders must discuss what risks are reasonable to accept and what risk mitigation measures to implement based on requirements and priorities. Table 5-1 identifies the three threat levels.

Table 5-1. Enemy threat levels

Level of threat	***Definition***
Level I	A small enemy force that can be defeated by those units normally operating in the echelon support area or by the perimeter defenses established by friendly bases and base clusters.
Level II	An enemy force or activities that can be defeated by a base or base cluster's defensive capabilities when augmented by a response force.
Level III	An enemy force or activities beyond the defensive capability of both the base and base cluster and any local reserve or response force.

5-29. Commanders ensure logistics missions and associated activities continue without restriction and that all sustainment units can perform protection operations against a level I threat. A level I threat is a small enemy force that can be defeated by those units normally operating in the echelon support area or by the perimeter defenses established by friendly bases and base clusters.

5-30. A level II threat is an enemy force or activities that can be defeated by a base or base cluster's defensive capabilities when augmented by a response force. A typical response force is a military police platoon with appropriate supporting fires or a larger combined arms maneuver element. Level II threats consist of enemy special operations teams, long-range reconnaissance units, mounted or dismounted units, and bypassed combat units. Typical objectives for a level II threat include the destruction and disruption of friendly C2 nodes, logistics facilities, and interdiction of friendly LOCs. A level II threat may have a measurable effect on sustainment mission accomplishment.

5-31. A level III threat is an enemy force or activities beyond the defensive capability of both the base and base cluster and any local reserve or response force. Possible objectives for a level III threat include seizing key terrain, interfering with the movement and commitment of reserves and artillery, and destroying friendly combat forces. Its objectives include destroying friendly sustainment facilities, supply points, CP facilities, airfields, aviation assembly areas, or arming and refueling points and interdicting LOC and major supply routes. A level III threat is capable of causing sustainment mission failure.

5-32. Although the threat is described by levels as a planning guide, these threat levels do not restrict responses. Threat levels are simply a framework for base defense. Each sustainment headquarters commander from the ESC to subordinate battalions (and their respective G-3s or S-3s) analyze the terrain in detail from all perspectives; they then verify their analysis on the ground to select engagement areas and positions that allow for the massing of fires and the concentration of forces on likely enemy avenues of approach. Emphasis is on preparing and concealing positions, routes, obstacles, sustainment support, and C2 facilities and networks. Each sustainment commander plans, coordinates, and uses rehearsals to ensure subordinates understand the base defense concept of operations. To be effective, a support area defensive plan must include protect the base, detect the enemy, disrupt the enemy, and facilitate destruction of the enemy.

Chapter 6

Health Service Support

The Health Service Support mission and medical functions are an integral part of the field army and corps. The HSS medical functions are critical capabilities embedded within formations across all warfighting functions. This chapter discusses the HSS mission and medical functions, the command and support relationships required to effectively execute HSS, and the roles and responsibilities of key medical personnel inherent in their success. See FM 4-02, the medical functions aligned with it, and how to employ them utilizing the six AHS principles.

HEALTH SERVICE SUPPORT MISSION

6-1. Army *health service support* is support and services performed, provided, and arranged by the Army Medicine department to promote, improve, conserve, or restore the behavioral and physical well-being of personnel by providing direct patient care that includes medical treatment (organic and area support) and hospitalization, medical evacuation to include medical regulating, and MEDLOG to include blood management (FM 4-02). The Army additionally provides HSS to other Services, agencies, and organizations as directed. HSS also consists of the treatment of CBRN patients.

6-2. The field army and corps surgeon are members of the commander's personal and special staff and provide medical control for the commander as it relates to HSS that includes clinical, medical, and technical consultative services for assigned or attached medical units. The surgeon provides medical information, recommendations, and professional HSS advice to the commander and to other staff and functional cells. The surgeon, in coordination with the supporting TMC (OCP)or MEDBDE (SPT), are responsible for maintaining current data on the status and capabilities of and requirements for force health protection and HSS in the theater army or corps AO. The surgeon also plans, coordinates, and develops the corps AHS plan and policies for the force health protection and HSS missions. The bulk of HSS medical units are within the corps AO and are the responsibility of the corps commander. These EAB HSS units are modular in design to facilitate their support to corps and divisions.

6-3. HSS to the field army or corps faces several operational and ethical challenges that include—

- MTF mobility.
- Finite MEDEVAC capacity.
- Prolonged care.
- Distribution of class VII.

6-4. Difficult decisions regarding patient care may be required. The decisions are based on the tactical situation, availability of MEDEVAC, access to medical supplies, and force protection considerations.

6-5. Field army and corps medical personnel provide en route medical care; however, current medical capabilities are not designed to hold or treat non-stabilized patients on the move. Continued treatment and holding of high priority patients (for example, surgical cases) is necessary until they are stabilized for movement. Once treatment of high priority patients begins, it must be continued until completed to reduce the risk of loss of life, limb, or eyesight.

HSS MEDICAL FUNCTIONS

6-6. HSS pertains to the treatment and MEDEVAC of patients from the battlefield and the MEDLOG in support of them. HSS includes four of the ten medical functions:

- Medical treatment (organic and area support), which includes CBRN patients.
- Hospitalization.
- MEDEVAC (to include medical regulating) and the provision of en route care to patients being transported.
- MEDLOG (to include blood management) inclusive of all Class VIII supplies, equipment, and services necessary to sustain these operations.

6-7. The following paragraphs provide a brief description of each HSS medical function in support of the field army or corps. For more information on each medical function, refer to FM 4-02, ATP 4-02.1, ATP 4-02.2, ATP 4-02.4, ATP 4-02.6, and ATP 4-02.10.

MEDICAL TREATMENT (ORGANIC AND AREA SUPPORT)

6-8. The medical treatment function within the field army or corps encompasses Roles 1 and 2 medical treatment support and includes the treatment of CBRN patients. For more information on medical treatment, refer to FM 4-02, ATP 4-02.4, and ATP 4-02.6.

Medical Treatment Primary Tasks

6-9. The medical treatment medical function is responsible for the following tasks:

- Provide first aid.
- Provide tactical combat casualty care.
- Provide forward resuscitative surgery.
- Conduct routine sick call.
- Provide patient holding.
- Promote casualty prevention measures.
- Provide MEDEVAC.
- Provide physical therapy.

Field Army or Corps-Level Medical Treatment Capabilities

6-10. Role 1 medical treatment is provided by an organic medical treatment team or by the MCAS on an area support basis for units without organic medical assets. Role 2 medical care provides greater resuscitative capability than is available at Role 1 and is provided by the MCAS. Refer to FM 4-02 and ATP 4-02.6 for additional information.

6-11. Role 2 medical treatment support is provided on an area support basis from supporting medical companies or detachments. The MCAS provides this support at EAB. This function encompasses combat and operational stress control, emergency dental care, operational public health, routine sick call, and tactical combat casualty care. The MCAS may be augmented with a forward resuscitative and surgical detachment (FRSD) depending on mission variables.

6-12. Forward resuscitative surgery is also a primary task of medical treatment, which provides damage control surgery capability close to the point of injury or wounding. This care is provided by the FRSD or forward surgical team when collocated with a Role 2 MTF. The FRSD is assigned to the TMC or MEDBDE (SPT) and attached to a Role 3 hospital when not deployed forward to support a Role 2 MTF. When not deployed forward, the FRSD can also augment the surgical capability of Role 3 hospitals.

Field Army or Corps Treatment of Chemical, Biological, Radiological, and Nuclear Patients

6-13. HSS operations in a CBRN environment are complex. At the field army or corps level, medical personnel may be required to treat CBRN injured and contaminated patients from multiple divisions. Medical treatment is provided in protected environments, and medical personnel must wear personal protective equipment. Movement of CBRN casualties can spread contamination to clean areas. All casualties should be decontaminated as far forward as the situation permits and are decontaminated at the patient decontamination site before being admitted into a clean MTF. The admission of one contaminated casualty into a clean MTF will contaminate the facility, medical staff, and the medical equipment, thereby reducing treatment

capabilities in the facility. Refer to ATP 4-02.7/MCRP 4-11.1F/NTTP 4-02.7/AFTTP 3-42.3 for additional information.

HOSPITALIZATION

6-14. The field army or corps is normally augmented with Role 3 hospital centers. A *medical treatment facility* is a facility established for the purpose of furnishing medical and/or dental care to eligible individuals (JP 4-02). A hospital is an MTF capable of providing inpatient care. *Inpatient* refers to a person admitted to and treated within a Role 3 or 4 hospital and who cannot be returned to duty within the same calendar day (ATP 4-02.10). It is staffed and equipped to provide diagnostic and therapeutic services, as well as the necessary supporting services required to perform its assigned mission and functions. In addition, a hospital may discharge the functions of a clinic. The terms hospital and MTF are often misused interchangeably. Though Roles 1-3 are considered MTFs, a Role 3 hospital provides hospitalization while Roles 1 and 2 MTFs do not provide all of the capabilities included in hospitalization; therefore, Roles 1 and 2 MTFs are not hospitals. For more information on hospitalization, refer to FM 4-02 and ATP 4-02.10.

6-15. The Army's hospitalization capability consists of Role 3 hospitals purposely positioned to provide support in the AO. Role 3 hospitals expand the support provided at Role 2 and are staffed and equipped to provide care for all categories of patients to include resuscitation, initial wound surgery, damage control surgery, and postoperative treatment. The Role 3 hospital provides essential care on an area support basis to treat and return to duty (RTD) patients who can be treated in accordance with the theater patient movement policy, or to stabilize patients who require evacuation out of the field army or corps AO for further definitive, convalescent, or rehabilitative care. Essential care is the absolutely necessary initial, en route, resuscitative, and surgical care provided to save, stabilize, and return as many Soldiers to duty as quickly as possible. It includes first responder care, initial resuscitation and stabilization, and treatment and hospitalization. Forward care may include stabilizing surgery to ensure the patient can tolerate further evacuation as well as en route care during evacuation. The objective is to either return the patient to duty within the theater evacuation policy or to begin initial treatment required for optimization of outcome (FM 4-02). *Return to duty* is a patient disposition which, after medical evaluation and treatment when necessary, returns a Soldier for duty (FM 4-02).

6-16. Hospitalization within the field army or corps provides essential care within the theater evacuation policy to either return a patient to duty or stabilize a patient for evacuation to a definitive care facility outside the AO. These highly robust services encompass primary inpatient and outpatient care, emergent care, and enhanced medical, surgical, and ancillary capabilities. An *outpatient* is a person receiving medical/dental examination and/or treatment from medical personnel and in a status other than being admitted to a hospital. Included in this category is the person who is treated and retained (held) in a medical treatment facility (such as a Role 2 facility) other than a hospital (ATP 4-02.10). The modular design of the Role 3 hospital provides the capability for medical planners to tailor and deploy capabilities as modules or multiple individual capabilities that provide incrementally increased medical services. The Role 3 hospital may be augmented by one or more medical detachments, hospital augmentation teams, or medical teams designed to enhance its capabilities to provide HSS within the field army or corps AO. Medical planners should consider establishing the minimum amount of hospital modules necessary to accomplish the hospitalization mission in order to retain hospitalization assets available to immediately move and establish Role 3 capabilities at another location. This will ensure hospitalization is continuously provided and allows the established Role 3 to tear down and move to the new location.

Hospitalization Primary Tasks

6-17. A Role 3 hospital performs several tasks that are either not possible at a Role 1 or 2 MTF or are significantly more robust than Role 1 or 2 medical unit capabilities.

Field Army or Corps-Level Hospitalization Capabilities

6-18. Hospitalization consists of essential care to all patients who are evacuated out of theater and definitive care to those Soldiers capable of returning to duty within the theater evacuation policy. Hospitalization support is provided by the Role 3 hospital center.

6-19. The Role 3 hospital is assigned to the MEDBDE (SPT) or TMC. Hospital capabilities include triage or emergency care, outpatient services, inpatient care, pharmacy, clinical laboratory, blood banking, radiology, physical therapy, MEDLOG, operational dental care (emergency and essential dental care), oral and maxillofacial surgery, nutrition care, and patient administration services. Triage is the process of sorting casualties based on need for treatment, evacuation, and available resources. Triage consists of the immediate sorting of patients according to type and seriousness of injury and likelihood of survival and establishing priority for treatment and evacuation to assure medical care of the greatest benefit to the largest number.

MEDICAL EVACUATION (INCLUDING MEDICAL REGULATING)

6-20. *Medical evacuation* is the timely and effective movement of the wounded, injured, or ill to and between medical treatment facilities on dedicated and properly marked medical platforms with en route care provided by medical personnel (ATP 4-02.2). The provision of en route care on medically equipped vehicles or aircraft enhances the patient's potential for survival and recovery and may reduce long-term disability. For more information on MEDEVAC, refer to ATP 4-02.2.

6-21. Army MEDEVAC is a multifaceted mission accomplished by a combination of dedicated ground and air evacuation platforms synchronized to provide DS, GS, and area support within the AO. At the operational level, organic or DS MEDEVAC resources acquire and locate, treat and stabilize, and conduct intratheater MEDEVAC of Soldiers from the point of injury or wounding to an MTF staffed and equipped to provide essential care within the AO. Soldiers are then stabilized, prioritized, and prepared for further evacuation (if required) to provide definitive, rehabilitative, and convalescent care in the continental United States (CONUS). Essential care focuses on saving life, limb, and eyesight and returning as many Soldiers to duty as quickly as possible within the theater evacuation policy or beginning initial treatment required for optimization of outcome and stabilization to ensure the patient can endure evacuation.

6-22. The appropriate roles of medical care must be maintained throughout the continuum of care. A patient who has received complex care such as damage control resuscitation or damage control surgery requires continuous maintenance of the critical care support that was initiated at the forward MTF. To avoid the risk that these patients will deteriorate during transport, the level of care should not be decremented during en route care. Based on the appropriate level of care, the medical personnel providing en route care may be paramedics, other properly trained medical specialists, or nurses. When possible, this en route care should be used as far forward as mission variables allow.

Medical Regulating

6-23. *Medical regulating* refers to the actions and coordination necessary to arrange for the movement of patients through the roles of care and to match patients with a medical treatment facility that has the necessary health service support capabilities and available bed space (JP 4-02). This system is designed to ensure the efficient and safe movement of patients. For more information on medical regulating, refer to ATP 4-02.2.

6-24. Medical regulating entails identifying patients awaiting evacuation, locating available beds, and coordinating transportation for movement. Careful control of patient evacuation to appropriate hospitals is necessary to—

- Effect an even distribution of cases.
- Ensure adequate beds are available for current and anticipated needs.
- Route patients requiring specialized treatment to the appropriate MTF.

6-25. The following factors influence the scheduling of patient movement:

- Patient's medical condition (stabilized to withstand evacuation).
- Operational situation.
- Availability of evacuation means.
- Locations of MTFs with special capabilities or resources.
- Current bed status of MTFs.
- Surgical backlogs.
- Number and location of patients by diagnostic category.

- Location of airfields, seaports, and other transportation hubs.
- Communications capabilities (to include radio silence procedures).

Medical Evacuation Primary Tasks

6-26. The MEDEVAC medical function is responsible for the following tasks:

- Acquire and locate.
- Treat and stabilize.
- Provide intratheater MEDEVAC.
- Provide emergency movement of medical personnel, equipment, and supplies.

Field Army or Corps-Level Medical Evacuation Capabilities

6-27. MEDEVAC employs standardized air and ground MEDEVAC units and resources and provides en route medical care to patients being evacuated. Evacuation from Roles 1 and 2 is the patient's unit responsibility. Army MEDEVAC is provided by—

- Organic MEDEVAC platoons, squads, and teams.
- Medical company (ground ambulance).
- Medical company (air ambulance).
- Medical company, area support (ambulance platoon).

MEDICAL LOGISTICS (INCLUDING BLOOD MANAGEMENT)

6-28. The MEDLOG function encompasses a system for planning and executing all Class VIII supply support. The system is anticipatory with select units capable of operating in a split-based mode. For more information on MEDLOG, refer to FM 4-02 and ATP 4-02.1.

6-29. The MEDLOG system (including blood management) provides intensive management of medical products and services critical for the HSS mission. The MEDLOG system anticipates the needs of the customer to continuously provide end-to-end sustainment of the HSS mission throughout the competition continuum. Medical units are the predominant driver of MEDLOG demands within the field army and corps as AHS priorities drive MEDLOG priorities for support. Providing timely and effective HSS requires a team effort that integrates the clinical and operational aspects of the mission.

Medical Logistics Primary Tasks

6-30. The MEDLOG medical function is responsible for the following tasks:

- Execute medical materiel procurement.
- Conduct class VIII management and coordinate distribution.
- Perform medical equipment maintenance and repair.
- Conduct optical fabrication and repair.
- Provide blood management (and coordination for distribution).
- Perform centralized management of patient movement items.
- Conduct health facilities planning and management.
- Provide medical contracting support.
- Ensure hazardous medical waste management and disposal.
- Ensure production and distribution of medical gases.

Field Army or Corps-Level Medical Logistics Capabilities

6-31. MEDLOG (including blood management) encompasses management of the above mentioned MEDLOG primary tasks. The Army class VIII management and distribution process is described in greater detail in subsequent paragraphs. Operational MEDLOG support is provided by—

- Field army, corps, and sustainment brigade MEDLOG officer.

- MLMC.
- Medical company (logistics) (MLC).
- Medical detachment (blood support) (MDBS).
- Medical detachment (optometry).

Field Army or Corps Medical Logistics Systems

6-32. The bulk of MEDLOG support (medical supplies and equipment, medical equipment maintenance and repair, and optical fabrication and repair) is provided to the field army and corps by EAB assets within the MEDBDE (SPT) and TMC and is an integral part of HSS. Medical planners within the field army or corps should consider MEDLOG activity locations along patient evacuation routes to facilitate backhaul of medical materiel by returning ambulances in their planning considerations.

6-33. The field army or corps surgeon, in coordination with the supporting MEDBDE (SPT) and TMC (OCP), advises the field army or corps commander in the development of the MEDLOG support requirements to subordinate units. The surgeon recommends echelon-level policies, establishes priorities, plans MEDLOG support, determines MEDLOG requirements, provides technical oversight, and exercises staff supervision over the medical supply and distribution system.

6-34. The field army or corps may be required to support other components in a joint service operation. In these circumstances, Army medical units will normally provide support on an area support basis.

Field Army or Corps Class VIII Management and Distribution Process

6-35. Command headquarters surgeons oversee MEDLOG support within their respective echelons in coordination with the supporting MEDBDE (SPT) or TMC (OCP). The surgeons coordinate through the ESC DIB and liaise with the supporting MEDBDE (SPT) or TMC (OCP)if needed. The MEDBDE (SPT) plans, coordinates, and supervises class VIII supply and resupply within the field army or corps AO and can serve as the single integrated MEDLOG manager when designated by the GCC. The MEDBDE (SPT) also coordinates with the echelon sustainment staff and the sustainment brigade SPO section for class VIII distribution.

6-36. Effective field army or corps sustainment planning and execution requires collaboration among the supporting TMC (OCP), MEDBDE (SPT), the surgeons, G-4 or S-4, rear area CP, functional cells and staff, SPOs, and their respective sustainment units' G-3 or S-3. Given that the G-3s or S-3s can shift sustainment capabilities, collaboration between the surgeon's cell, G-3s or S-3s, G-4s or S-4s, and SPOs also assists in determining the amount of MEDLOG support required to ensure mission success.

6-37. The MMB plans and supervises class VIII supply and resupply within the unit AO. MEDLOG elements within the MMB can also assist the MEDBDE (SPT) by performing portions of the single integrated MEDLOG management mission when designated by the GCC. The MLC provides DS for medical materiel, medical equipment maintenance and repair, and single and multi-vision optical lens fabrication and repair to supported units at brigade and below and EAB medical units. The brigade medical supply office (BMSO) in the BSMC provides organic class VIII and medical equipment maintenance and repair support to medical elements of the BCT. The MEDLOG capabilities of Army medical units at EAB are limited and are dependent upon the MLC, Army medical materiel center, or supporting theater lead agent for medical materiel (known as TLAMM) for class VIII resupply and medical equipment maintenance support. The Army medical materiel centers also support the execution of the responsibilities assigned to the ASCC. For additional information on MEDLOG management and distribution of class VIII supply and resupply, see ATP 4-02.1.

Medical Logistics Support for Role 3 Hospitals

6-38. The class VIII supply functions for Role 3 hospitals are primarily the management of medical equipment sets, basic ordering for replenishment, and field-level medical equipment maintenance and repair support. Organic personnel perform these functions. For MEDLOG support outside the parameters of the unit, the Role 3 hospital works with the MLC. Like all EAB medical units, the MEDLOG capabilities of the Role 3 MTFs are also limited and are dependent upon the MLC, Army medical materiel center, or supporting

theater lead agent for medical materiel for class VIII resupply and medical equipment maintenance and repair support. For more information on MEDLOG within the Role 3 hospital, refer to ATP 4-02.1 and ATP 4-02.10.

Adherence to the Law of Armed Conflict Concerning Class VIII

6-39. The law of armed conflict relevant to class VIII derives from two sources, custom and lawmaking treaties such as the Geneva and Hague Conventions. The following ethical considerations apply to the conduct of the MEDLOG function of HSS:

- Class VIII supplies and equipment are afforded protected status under the Geneva Conventions.
  - Vehicles transporting only casualties or medical supplies and marked with a red cross are afforded protected status. Carrying medical supplies intermixed with other classes of supply does not confer protected status.
  - Class VIII stored in a separate area or building away from other supplies and marked with a red cross is required for protected status. Storage of class VIII with other classes of supplies (such as food or ammunition) negates their protected status.
- Captured medical supplies and equipment are protected from intentional destruction. Units having custody of enemy supplies and equipment will turn them over to the supporting medical facility. Local or captured class VIII materiel will only be used to support enemy prisoners of war or civilian detained or retained personnel. For more information on the law of land conflict, refer to FM 4-0, FM 4-02, and FM 6-27/MCTP 11-10C.

HSS COMMAND AND SUPPORT RELATIONSHIPS

6-40. All command and control headquarters perform the same basic military tasks. Command and control is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. However, medical command and control is not just the exercise of command and control over assigned or attached medical units. It is an overarching function including the medical, clinical, and technical control of all force health protection (FHP) and HSS. Successful accomplishment of the HSS mission within the field army and corps echelons requires the synchronization of health care activities and the surgeon's clinical, medical, and technical supervision of ongoing medical and clinical operations at echelon.

6-41. Command and support relationships provide the basis for unity of command and unity of effort in operations. Establishing clear command and support relationships of organic and EAB medical units operating within the field army or corps is a key aspect of any operation that includes medical command and control. These relationships establish responsibilities and authorities between subordinate and supporting units. For more information on command and support relationships, refer to FM 3-0 and FM 4-02.

COMMAND AND CONTROL OF MEDICAL UNITS IN THE FIELD ARMY AND CORPS

6-42. Within the field army, a TMC (OCP)may be attached to coordinate HSS operations for multiple corps. At the corps echelon, EAB medical units are organic to a MEDBDE (SPT) or MMB. Based on the field army or corps OPLAN, these EAB medical units are either attached, OPCON, or TACON to the field army or corps. The MEDBDE (SPT) is normally OPCON to the division while its parent medical organization retains administrative control. This provides the flexibility (through medical command and control) to shift medical assets to support additional division buildups, reallocate medical assets to accommodate patient workload, and reinforce or reconstitute maneuver brigade medical units. For more information on command and control of medical units, refer to JP 1, Volume 1; JP 3-0; JP 4-02; and FM 4-02.

6-43. Medical command and control is a function within the command and control system. Medical command and control consists of coordinating, synchronizing, integrating, and planning FHP and HSS across echelons of command, physical domains, and joint warfighting functions. The medical C2 function includes the medical chain of command that provides command and control of operational health and medical forces and includes the surgeon's "clinical, medical, and technical control" at echelon of coordinating, synchronizing, integrating, and planning FHP and HSS on behalf of the commander. Medical commanders and surgeons at the field army and corps echelons utilize medical command and control to tie both force

health protection and HSS together within their echelons as they work within their staffs to coordinate, synchronize, integrate, and plan AHS support. This ensures all ten medical functions are included in all running estimates, OPLANS, and OPORDs.

SUPPORT RELATIONSHIPS OF MEDICAL UNITS IN THE FIELD ARMY AND CORPS

6-44. Commanders assign EAB medical units to a support relationship for a variety of reasons. These reasons may include the following:

- The support is more effective if a commander with the requisite technical and tactical expertise controls the supporting unit rather than the supported commander.
- The echelon of the supporting unit is the same as or higher than that of the supported unit.
- The supporting unit supports several units simultaneously. The requirement to set support priorities to allocate resources to supported units exists. Assigning support relationships is one aspect of command and control.

6-45. The field army or corps surgeon, in coordination with either a supporting MEDBDE (SPT) or TMC (OCP), is integral in developing the HSS plan. EAB medical units may be assigned to perform one of four support relationships, DS, GS, reinforcing, or GSR. For more information on support relationships, refer to FM 3-0.

***Note*:** Medical units are modularly designed to provide HSS in their area of expertise on an area support basis within a specified AO.

HEALTH SERVICE SUPPORT TO THE FIELD ARMY AND CORPS

6-46. HSS is a foundational capability that supports field army or corps commander efforts to shape the OE. Army medical forces within these echelons participate in expeditionary operations, integrate with other Services, and support unified action partners. Medical command and control organizations and the surgeon's medical control facilitate the coordination, synchronization, integration, and planning of FHP and HSS throughout each echelon. This ensures the interoperability of all medical assets and optimize the effective functioning of the entire system. Briefly discussed below are the EAB medical units normally associated with supporting the field army or corps: TMC (OCP) (attached to a field army), MEDBDE (SPT), MMB, Role 3 hospital center, Role 2 MCAS, MLMC, MLC, MDBS, and medical detachment (optometry). For more information on medical units that support the field army and corps, refer to FM 4-02, ATP 4-02.1, ATP 4-02.2, ATP 4-02.6, and ATP 4-02.10.

THEATER MEDICAL COMMAND OPERATIONAL COMMAND POST

6-47. The TMC (OCP)is assigned to the TMC. The mission of the TMC (OCP)is to provide command and control of assigned and attached medical units (including joint and multinational forces) providing HSS to a field army AO. It further provides appropriate medical command and control and planning capabilities for the field army commander as it relates to AHS support for the FRP and HSS missions; to include administrative assistance, staff, and clinical, medical, and technical consultative services for assigned or attached medical units. The operational CP can be deployed early as the medical element of the TMC. The operational CP provides connectivity between the main CP and the medical units in the theater. For a complete overview of the composition and capabilities of the TMC (OCP), refer to FM 4-02. See figure 6-1 for a graphic representation of a deployed TMC (OCP) and figure 6-2 for a depiction of the TMC (OCP) staff.

6-48. The TMC (OCP) ensures the right mixture of medical professional (operational, technical, and clinical) expertise to synchronize the complex system of medical functions required to maintain the health of the force. These functions include preventing casualties from disease and non-battle injury, veterinary services, promptly treating and evacuating those injured on the battlefield, and ensuring the identification and countermeasures required to address any health threats in the AO.

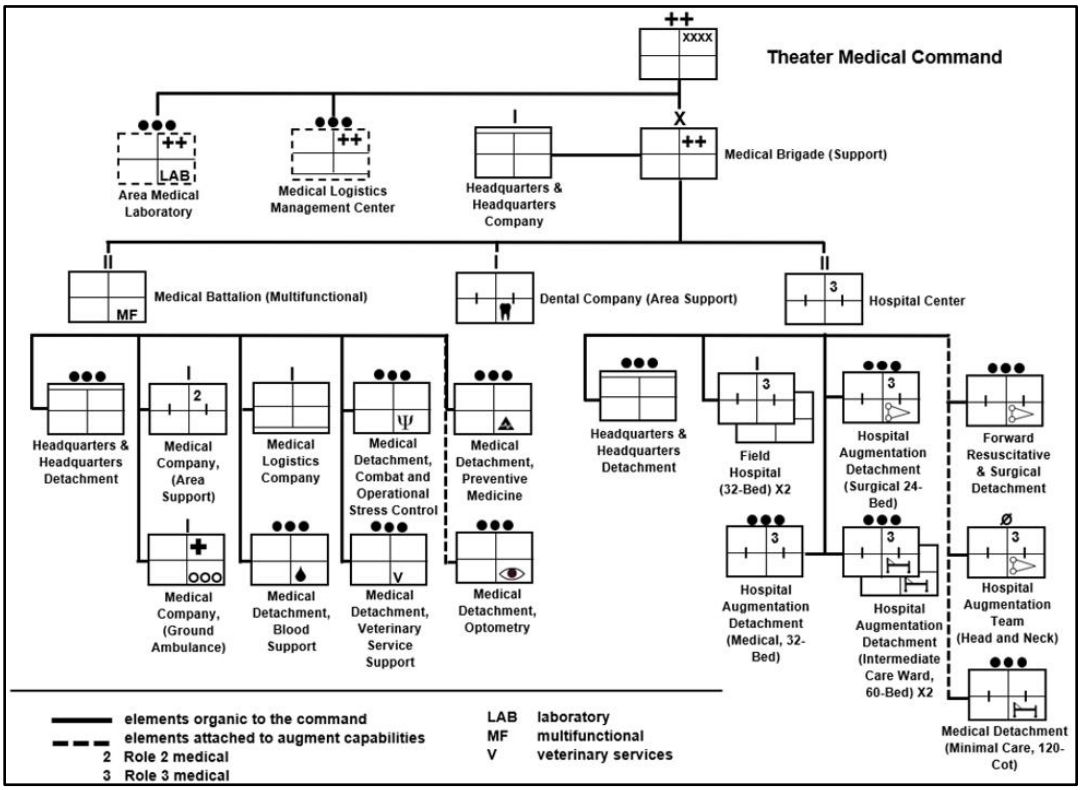

Figure 6-1. Notional theater medical command operational command post

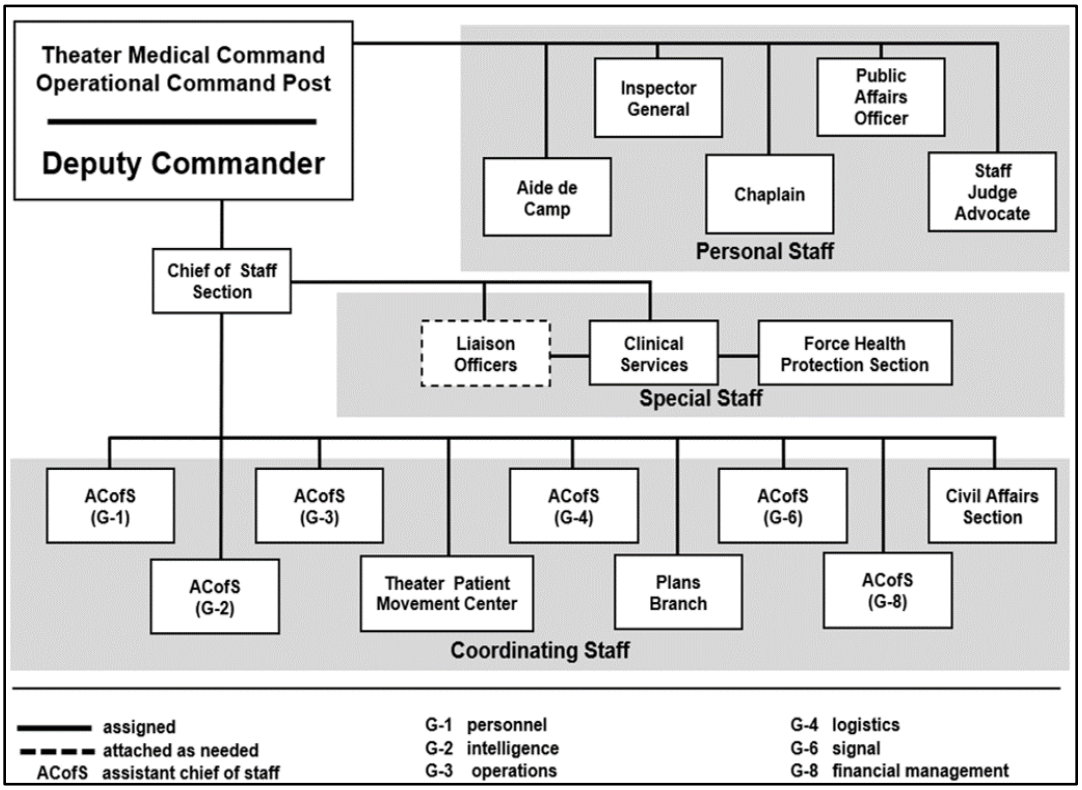

Figure 6-2. Theater medical command operational command post staff

MEDICAL BRIGADE (SUPPORT)

6-49. The MEDBDE (SPT) provides the appropriate medical command and control and planning capabilities necessary to deliver responsive and effective HSS to a corps (or a field army when a TMC (OCP) is not attached). The MEDBDE (SPT) acts on behalf of the TMC to ensure the right mixture of medical professional (operational, technical, and clinical) expertise to synchronize medical functions required to maintain the health of the force. These consists of preventing casualties from disease and non-battle injury, promoting fitness, promptly treating and evacuating those injured on the battlefield, and ensuring the identification and countermeasures required to address any health threats in the AO. Synchronization enables the MEDBDE (SPT) to transition from expeditionary health care support operations to providing quality HSS in the AO. The MEDBDE (SPT), in coordination with the TMC, also provides health facility planning support within the echelon AO. Refer to Figure 6-3 for graphic representation of the MEDBDE (SPT) staff.

6-50. The mission of the MEDBDE (SPT) is to provide command and control of assigned and attached medical units (including joint and multinational forces) providing HSS to a corps or division AO. It further provides medical command and control for the corps or division commander as it relates to AHS support for the FHP and HSS missions, to include administrative assistance, staff, and clinical, medical, and technical consultative services for assigned or attached medical units. To accomplish its roles and functions, the MEDBDE (SPT) is organized with two CPs:

- Tactical CP (referred to as a TAC) - Provides the MEDBDE (SPT) commander with a deployable CP that can forward deploy the early entry module and elements of the expansion module with a corps or division tactical CP.
- Main CP - Performs the HSS roles and functions in support of a corps or division main CP with the campaign module and elements of the expansion module.

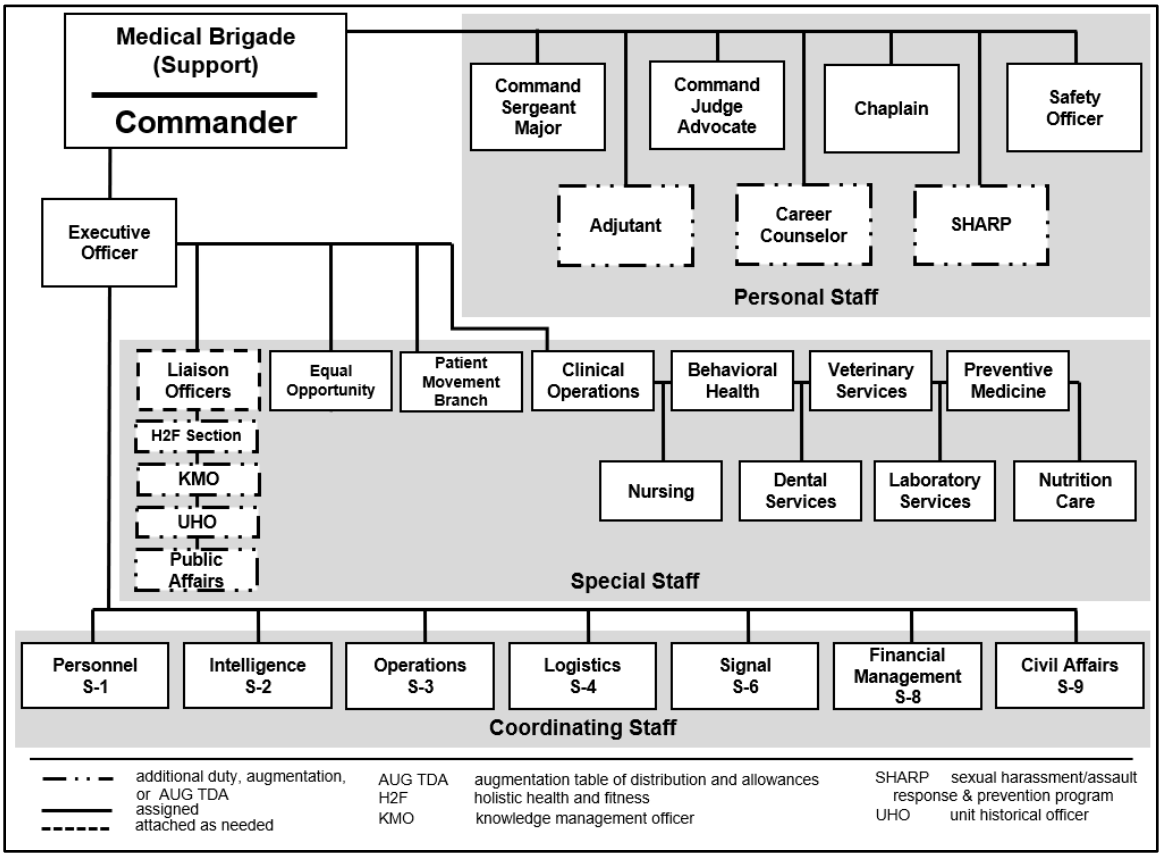

Figure 6-3. Medical brigade (support)

6-51. The MEDBDE (SPT) is assigned to the TMC. The basis of allocation for the MEDBDE (SPT) is one per two to six subordinate battalion-sized organizations. The combinations of the early entry, campaign, and expansion modules form the nucleus of the MEDBDE (SPT).

6-52. The MEDBDE (SPT) in support of corps MEDLOG operations plans, coordinates, and supervises EAB class VIII supply and resupply (including blood management) within the supported AO. The MEDBDE (SPT) can also provide support as the single integrated MEDLOG manager when designated by the CCDR. Refer to ATP 4-02.1 for information related to the role of the single integrated MEDLOG manager within each echelon.

MEDICAL BATTALION (MULTIFUNCTIONAL)

6-53. The MMB is an EAB headquarters. Its mission is to provide command and control and logistical support for assigned and attached medical organizations (companies, detachments, and teams) task-organized for providing HSS to a corps or division. It further provides medical command and control for AHS support for the FHP and HSS missions, administrative assistance, staff, and technical or consultative services for assigned or attached medical units. To accomplish its roles and functions, the MMB is organized with two elements:

- Early entry element - Provides the MMB commander with a deployable CP that can forward deploy within a corps or division AO.
- Campaign support element - Performs the MMB HSS roles and functions in support of a corps or division.

6-54. The MMB can be deployed to provide command and control of medical forces during early entry operations and facilitate the reception, staging, onward movement, and integration of medical forces. All EAB medical companies, detachments, and teams in the corps or division are assigned, attached, or placed under OPCON of an MMB. This unit will be assigned to the MEDBDE (SPT) or the TMC. An MMB is allocated at one per combination of three to six subordinate medical companies or medical detachment-size units. Refer to FM 4-02 for a complete overview of the composition and capabilities of the MMB. Refer to figure 6-4 on page 6-12 for a graphic representation of the MMB staff.

6-55. Based upon requirements, the MMB deploys several medical functions and capabilities specifically geared to support a field army or corps. For more information on the MMB and the units assigned, refer to FM 4-02, ATP 4-02.1, ATP 4-02.2, ATP 4-02.6, and ATP 4-02.19. Based on mission variables, the MMB can provide any combination of the following:

- Role 2 medical care in the form of the MCAS.
- Additional ground MEDEVAC capabilities with the medical company (ground ambulance).
- Army MEDLOG support with the MLC.
- Dental services with elements from the dental company (area support).
- Combat and operational stress control support from elements of the medical detachment.
- Veterinary services with elements of the medical detachment (veterinary services).
- Operational public health support from the medical detachment (preventive medicine).
- Blood support from elements of the MDBS.
- Ophthalmic support from a team from the medical detachment (optometry).

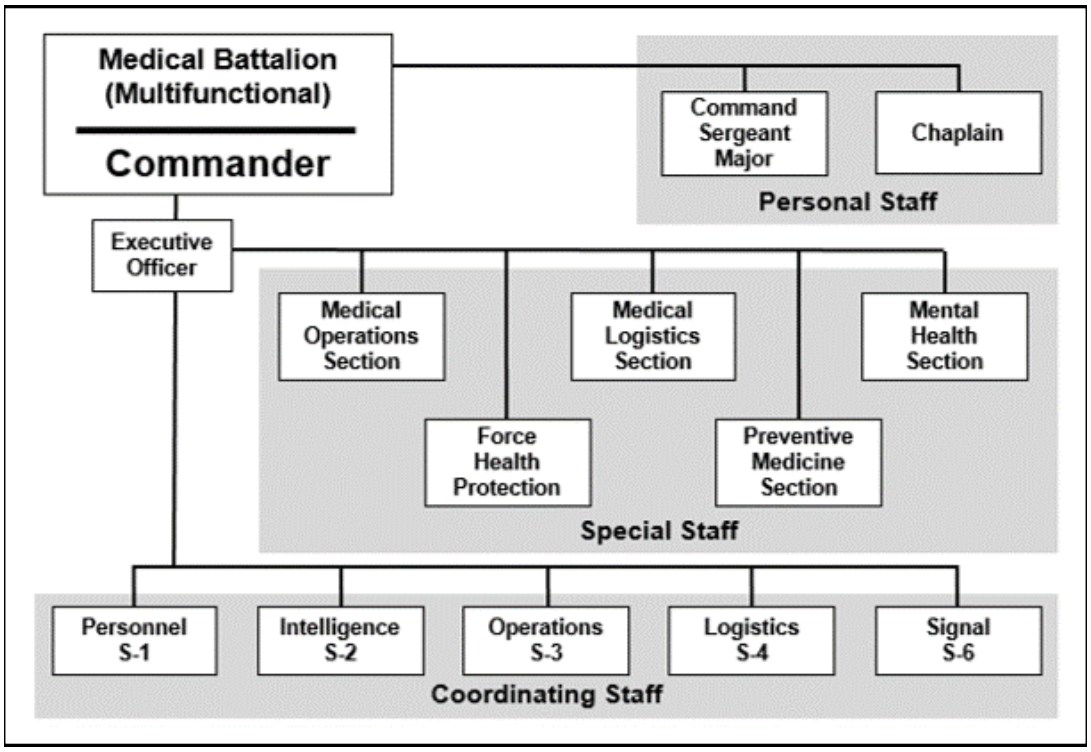

Figure 6-4. Medical battalion (multifunctional) staff

ROLE 3 HOSPITAL

6-56. The Role 3 hospital's assigned medical personnel, facilities, equipment, and materials provide the requisite capabilities to render significant preventive and curative health care. The modular design of the hospital provides the capability to tailor and deploy capabilities either as modules or as multiple individual capabilities that provide incrementally increased medical services. The hospital center is composed of five distinct elements with associated tables of organization and equipment:

- A headquarters and headquarters detachment (HHD).
- Up to two field hospitals (32 bed).
- The hospital augmentation detachment (surgical 24 bed).
- The hospital augmentation detachment (medical 32 bed).
- Up to two hospital augmentation detachments (intermediate care ward 60 bed).

6-57. When referring to the organization as a whole (or at least the HHD and one or more of the subordinate units), it is generally called the hospital center (not field hospital). The field hospital is the 32-bed subordinate unit that is only one component within the hospital center.

6-58. The hospital center is a modular MTF designed to provide Role 3 medical capability in a tailored organizational structure to support the Army's varied multidomain operation missions. The hospital center may be augmented by one or more hospital augmentation detachments, other medical detachments, or smaller medical teams designed to enhance its capabilities to provide HSS to multidomain operations within the AO. These augmentation detachments or teams should normally be assigned or attached to the field hospital (32 bed) and absorbed into sections with like functions.

6-59. Other augmentation organizations aligned with the hospital center include—

- The FRSD.
- The medical detachment, minimal care (120 bed).
- The medical team, head and neck.

6-60. The HHD and field hospital (32 bed) comprise the core and lowest denominator of the hospital center. The field hospital (32 bed) is the only company-sized unit that provides the complete clinical capabilities and staffing required to be designated as a Role 3 hospital. This hospital is deliberately designed to be self-supporting while remaining light, transportable, and expandable. However, once set up and full of patients, the hospital cannot not quickly displace to a new location. The HHD, hospital center and field hospital (32 bed) are designed as the first increments to be deployed in support of an expeditionary force and can be expanded incrementally to a maximum of a 240-bed hospital by adding augmentation detachments. The HHD, hospital center can command up to two field hospitals (32 bed) with requisite augmentation detachments and teams, in one or separate locations (dual-based operations). Refer to ATP 4-02.10 for more information related to the task organizations of the hospital center and types of units that can augment the Role 3 hospital.

MEDICAL LOGISTICS MANAGEMENT CENTER

6-61. The mission of the MLMC is to provide centralized, theater Army-level inventory management of class VIII materiel in accordance with the theater Army surgeon's policy. The MLMC maintains operations within CONUS to provide centralized, strategic-level management of critical class VIII materiel, patient movement items, optical fabrication, and medical maintenance for multiple theater Army operations. The MLMC contains a non-deploying headquarters section, two early entry support teams, and follow-on support teams. One early entry support team and one follow-on support team combine to make one complete MLMC forward support team. For more information on the MLMC, refer to FM 4-02 and ATP 4-02.1.

MEDICAL COMPANY (LOGISTICS)

6-62. The MLC provides class VIII support, optical lens fabrication and repair, and medical equipment maintenance and repair for BCT and EAB units and augmented support to Role 3 hospitals. The MLC is assigned to a higher-level medical element, normally under the command and control of the MMB. For more information on the MLC, refer to ATP 4-02.1. Figure 6-5 on page 6-14 depicts the MLC organization. The MLC has an early entry team, three contact repair teams (CRTs), and three forward distribution teams (FDTs), which are discussed briefly below. Organizational capabilities include—

- Providing 220 hours per day of field-level medical equipment maintenance and repair.
- Providing class VIII support, optical lens fabrication and repair, and medical equipment maintenance and repair support.
- Processing up to 13 short tons of class VIII supplies per day with its receive/storage section, shipping section, and stock control section.
- Coordinating for emergency delivery of class VIII supplies.
- Building and positioning pre-configured push packages as required in support of units in the theater.
- Providing single and multi-vision optical lens fabrication and repair to support a maximum force of 22,000 troops with the optical section.
- Providing the distribution capability for a theater lead agent for medical materiel when required.
- Providing one early entry team, CRTs, and three FDTs, who can process up to 4 short tons of class VIII per day.

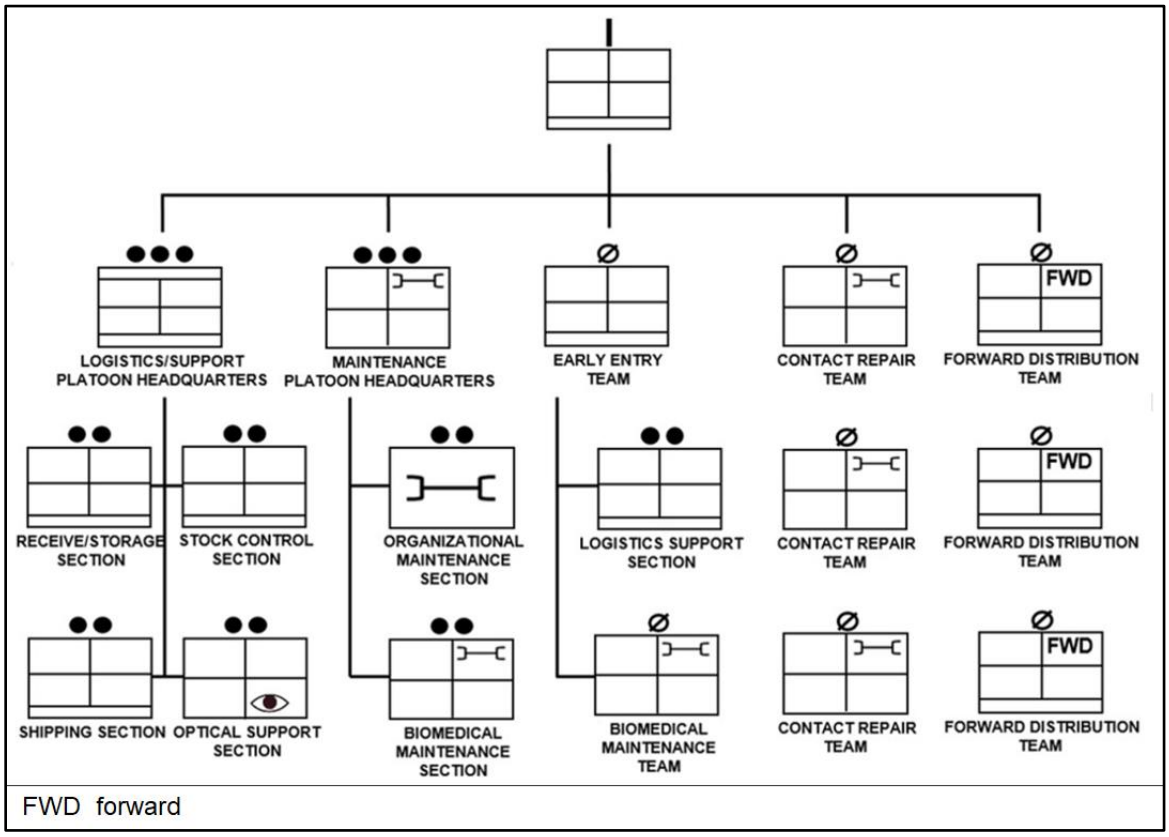

Figure 6-5. Medical company (logistics) task organization

Early Entry Team

6-63. The early entry team is split into two elements, the logistics support section and the biomedical maintenance team. The logistics support section receives and positions pre-configured push packages until normal automated requisition flow is established. This team will have the ability to handle higher priority resupply for specific line-item requisitioning of medical supplies and equipment (as required) out of its authorized stockage list in support of medical units deployed to the AOR. The team will provide in-transit visibility of class VIII supplies. The biomedical maintenance team establishes and tracks medical equipment density and service schedule information from the Army Enterprise Systems Integration Program for all medical units during theater opening operations. The biomedical maintenance team will provide limited medical standby equipment utilizing regeneration enablers and perform field-level repair upon request. When this team is not forward deployed, the early entry logistics support personnel are integrated with the receive/storage section, and the medical maintenance personnel are integrated with the biomedical maintenance section of the MLC. The early entry team provides class VIII and medical equipment maintenance to early entry BCTs and is capable of the following:

- Providing class VIII support, optical lens fabrication and repair, and medical equipment maintenance and repair support.
- Providing field and limited sustainment-level medical equipment maintenance support.
- Providing field and limited sustainment medical equipment maintenance and repair, scheduled services support, repair parts, and medical standby equipment program items for medical units operating within the supported AOR (including joint, multinational, and HN forces).
- Coordinating for higher priority delivery of class VIII supplies.
- Processing up to 1.95 short tons of class VIII supplies per day when deployed separately.

Contact Repair Team

6-64. The CRTs may be rapidly deployed from home station or from the MLC once in theater. The MLC has three CRTs that can deploy rapidly to provide medical equipment maintenance and repair. The CRTs can augment any medical organization (including joint or multinational partners) and can collocate with the BSMC if that medical company has an FRSD collocated with it. The CRTs are designed to operate at EAB and go far forward into the brigade area. These teams provide field-level maintenance and repair support to all medical units within their operational area. The CRTs are employed by the MMB based on mission variables or by the request of the brigade surgeon. The CRTs deploy to BCT and EAB medical units with medical equipment. The CRTs bring limited repair parts and medical maintenance regeneration enablers. While CRTs are employed forward, they perform technical inspection of all medical equipment within their area as a proactive maintenance measure. The CRTs collocate with the BMSO, providing field-level medical equipment maintenance and repair to the BMSO, FRSD, and all units without organic medical equipment maintenance support operating in a specific geographic area. Each CRT can—

- Provide up to 31 man-hours of medical equipment maintenance and repair services per day.
- Provide field-level medical equipment maintenance and repair support to BCT and EAB units.

Forward Distribution Team

6-65. The FDT receives and processes class VIII supplies at strategic air and sea hubs in theater and facilitates medical materiel movement. The FDTs will assist customers in their AO with MEDLOG automated information systems and provide in-transit visibility.

6-66. There are three FDTs in the MLC. Each team is capable of processing up to 1.33 short tons of class VIII per day (per FDT) or 4 short tons of class VIII supplies per day with all three FDTs combined.

MEDICAL DETACHMENT (BLOOD SUPPORT)

6-67. The MDBS provides collection, manufacturing, storage, and distribution of blood and blood products to BCTs, EAB medical units, and other Services as required. The MDBS is normally under the command and control of an MMB. The detachment has the capability for 72-hours of limited self-sustainment during initial operations. The detachment can independently deploy a collection, storage, and distribution team; a collection, manufacturing, and distribution team; or a distribution team. The headquarters may forward deploy with any of these teams as required. For more information on the MDBS and its teams, refer to ATP 4-02.1.

MEDICAL DETACHMENT (OPTOMETRY)

6-68. The medical detachment (optometry) provides optometry care and optical fabrication to units on an area support basis within an assigned AO. The detachment provides limited optometry services. These include routine eye examinations and refractions and spectacle frame assembly. The detachment is assigned to a higher-level medical element, normally under the command and control of the MMB. This detachment can be divided into two optometry teams. Each team has the capability to provide optometry support limited to eye examination, spectacle fabrication, frame assembly, and repair services to brigade and EAB units in the AO as far forward as possible. For more information on the medical detachment (optometry), refer to ATP 4-02.1.

ROLES AND RESPONSIBILITIES OF KEY MEDICAL PERSONNEL

6-69. The six AHS principles apply across all medical functions and are synchronized through medical command and control and close coordination and synchronization of all deployed medical assets through medical technical channels. The principles guide medical planners in developing OPLANs that are effective, efficient, flexible, and executable. HSS plans are designed to support the operational commander's scheme of maneuver while still retaining a focus on the delivery of health care. For more information on medical functions, AHS principles, the medical commander, the surgeon, surgeon element, surgeon section roles and responsibilities, and surgeon staff coordination, refer to FM 4-02. For more information on HSS planning, refer to ATP 4-02.55.

6-70. Medical commanders and surgeons utilize the medical command and control function to coordinate and synchronize the remaining nine medical functions. These functions are split between the protection and sustainment warfighting functions. Surgeons at echelon further serve as a link between the varied commands and staffs they operate within in providing supervision over medical, clinical, and technical support. The following paragraphs provide more detail on the roles of several key field army and corps medical personnel.

FIELD ARMY SURGEON

6-71. The field army surgeon is a member of the commander's personal and special staff. The field army surgeon normally works under the staff supervision of the chief of staff. The surgeon is the principal advisor to the commander on the health status within the field army and advises the commander and staff on medical capabilities, capacities, and all medical or medical-related issues necessary to support plans. The surgeon interfaces with all coordinating, special, and personal staffs to coordinate HSS across the warfighting functions. The surgeon coordinates EAB medical support and ensures information is integrated into the commander's ground tactical plan. As the chief of the field army surgeon section, the surgeon is able to contribute to the field army's warfighting capability by providing timely and effective HSS planning (to include developing patient estimates) for inclusion in operational planning and execution of large-scale combat operations. The surgeon works closely with the MEDLOG officers in the supporting sustainment brigade surgeon section, supporting MEDBDE (SPT), and the corps surgeon section in overseeing the class VIII distribution plan for the field army. The field army surgeon is also responsible for the clinical, medical, and technical oversight of all medical activities in the command. The surgeon ensure the field army's current and future operations and plans are coordinated with the supporting TMC (OCP) or MEDBDE (SPT). For more information on an ASCC surgeon section filling the role of the field army surgeon section refer to FM 4-02.

Surgeon Medical Operations Element

6-72. The surgeon medical operations element is responsible for the coordination of patient evacuation from theater. It manages movement of patients within and from theater. The element manages flow of casualties within the AOR and monitors the flow of patients to medical facilities within the combatant command AOR or for intertheater evacuation. The element communicates with the theater patient movement requirements center (known as PMRC) and the Global Patient Movement Requirement Center. The element is responsible for developing mass casualty plans and determines the medical workload requirements based upon the casualty estimate. The element recommends MEDEVAC policies, procedures, and changes to the theater evacuation policy and provides input to the theater patient movement requirements center. It monitors medical regulating and patient tracking operations.

Surgeon Support Operations Element

6-73. The surgeon support operations element is responsible for the management of health services resources in the AOR to provide effective and consistent treatment of wounded, injured, or sick personnel to return to full duty or evacuate from the theater. This element monitors policies, protocols, and procedures pertaining to the medical and dental treatment of sick, injured, and wounded personnel. The element determines requirements and priorities for MEDLOG. It also evaluates and interprets medical statistical data.

CORPS SURGEON

6-74. The corps surgeon is a member of the commander's personal and special staff and normally works under the staff supervision of the corps chief of staff. The corps surgeon is charged with leading the coordination, synchronization, integration, and planning of the HSS mission within the corps. The corps surgeon is also responsible for Appendix 9 (FHP) of Annex E (Protection) and Appendix 3 (HSS) of Annex F (Sustainment) of the OPORD. However, as personal staff, the corps surgeon is the principal advisor to the commander on the health status of the corps and has direct access to the corps commander on all HSS or medical-related issues. The corps surgeon is responsible for the technical oversight of all medical activities in the command. The corps surgeon oversees and coordinates HSS activities through the corps surgeon section. The corps surgeon also monitors, prioritizes, synchronizes, and assesses HSS; serves as medical

contract officer for the corps; and provides an analysis of the health threat. For more information on the corps surgeon section, refer to FM 4-02.

ESC SURGEON

6-75. The ESC surgeon is a member of both the ESC commander's personal and special staff. The surgeon monitors the health of subordinate units and ensures OPLANs and OPORDs include all HSS functions. The surgeon retains technical supervision of AHS support operations within subordinate levels of command. The surgeon has a small staff to assist in coordinating, synchronizing, integrating, and planning AHS efforts within the ESC. See chapter 2 for additional discussion of the ESC surgeon.

SUSTAINMENT BRIGADE SURGEON

6-76. The sustainment brigade surgeon is a member of the commander's personal and special staff. The surgeon is assigned to the headquarters and headquarters company of a sustainment brigade and normally works under the staff supervision of the executive officer. The surgeon plans and coordinates brigade HSS activities with the brigade's personal, special, and coordinating staffs and is responsible for the clinical, medical, and technical control of all medical activities in the command. The surgeon oversees and coordinates HSS activities through the brigade S-3 and advises the commander on the health of sustainment brigade units. The surgeon ensures all HSS functions are considered and included in OPLANs and OPORDs and is responsible for Appendix 9 (FHP) of Annex E (Protection) and Appendix 3 (HSS) of Annex F (Sustainment) of the OPORD. The surgeon keeps the brigade commander informed on the status of HSS for brigade operations and, in coordination with the corps surgeon, oversees the class VIII distribution plan for the corps.

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Appendix A

Sustainment Support to Key Operations

Appendix A discusses sustainment support to joint operations, retrograde operations, and reconstitution operations.

JOINT OPERATIONS

A-1. Joint operations are the primary way that the DOD employs two or more Services in a single operation, particularly in combat. Logistics support to other Services operating at the field army or corps echelon require authority, coordination, and collaboration. The following are the logistics authorities used in joint operations:

- Directive Authority for Logistics: The legal authority of a CCDR to organize and execute logistics in assigned AOR as deemed necessary.
- *Executive Agent*: The delegation of authority by the Secretary of Defense or Deputy Secretary of Defense to a subordinate to act on behalf of the Secretary of Defense (JP 1, Volume 2).
- Lead Service: A Service component or DOD agency that is responsible for execution of common-user item or service support in a specific unified combatant command or multinational operation as defined in the combatant or subordinate JFC's OPLAN, OPORD and directives.

A-2. While logistics remains a Service responsibility, Services are often precluded from deploying the capabilities necessary to provide 100 percent dedicated Service support. Most Services depend on common-user logistics support for support of one or more major services or supplies. *Common-user logistics* is materiel or service support shared with or provided by two or more Services, Department of Defense agencies, or multinational partners to another Service, Department of Defense agency, non-Department of Defense agency, and/or multinational partner in an operation (JP 4-09).

A-3. At the field army and corps echelons, sustainment planners face many challenges with coordinating, integrating, and synchronizing capabilities from multiple providers to logistically support a joint operation. At the operational level, the ESC staff supporting the field army or corps echelons must be ready to integrate and coordinate national, DOD, Service, and HN capabilities with field army or corps tactical requirements.

RETROGRADE OPERATIONS

A-4. *Retrograde* is a type of defensive operation that involves organized movement away from the enemy (ADP 3-90). During retrograde operations, the ESC and its subordinate sustainment units supporting the field army and corps echelons continue to provide uninterrupted flow of support to maneuver units tactically employed in defensive combat while at the same time displacing or preparing to displace supporting units.

A-5. The ESC supporting the corps echelon works to integrate and synchronize retrograde operations across all available transportation modes to reduce storage and transportation mode transfer handling requirements and increase in-transit visibility across the AOR. Sustainment brigades focused on distribution missions during retrograde operations plan and coordinate for heavy equipment transportation assets to support the retrograde of material.

RECONSTITUTION OPERATIONS

A-6. Reconstitution operations consist of two elements, reorganization and regeneration. Reorganization involves the cross-leveling of forces and resources following combat operations to increase combat effectiveness of an attrited unit. Regeneration involves the large-scale replacement of personnel, weapon platforms, equipment, and supplies; the reestablishment and replacement of the chain of command; and the conduct of mission-essential training. Regeneration operations take place at EAB using corps, theater, and

strategic capabilities and resources to enable restoration of combat power. Reconstitution requires advanced planning and resources.

REORGANIZATION

A-7. Commanders of all types of units at each echelon may conduct reorganization. Reorganization may be conducted when the operating tempo is such that the risk for removing a unit from the operation may jeopardize the mission. There are two types of reorganization operations—immediate and deliberate. Commanders use mission variables to determine the type of reorganization operation to execute. Reorganization involves activities internal to the unit that include—

- Cross-leveling equipment and personnel.
- Matching operational weapon systems with crews.
- Forming composite units (joining two or more attrited units to form a single mission-capable unit).

Immediate Reorganization

A-8. Immediate reorganization is the rapid and usually temporary restoring of attrited units to minimum levels of effectiveness. Normally, the commander implements immediate reorganization in the combat position or as close to that site as possible to meet near-term needs.

Deliberate Reorganization

A-9. Deliberate reorganization is conducted when more time and resources are available. It usually occurs farther away from hostile activity than immediate reorganization. Activities are similar to those for reorganization listed above. However, some replacement resources may be available. Equipment repair may be more intensive requiring more extensive cross-leveling.

REGENERATION

A-10. Regeneration is normally approved two command levels up. At the division level, the division commander determines candidates for reconstitution within the BCTs and brigade-level enabler formations. The corps commander approves the plan. During large-scale combat operations, regeneration operations are resource intensive and depend on mission variables. Designation of a specialized regeneration task force allows for the rapid (days to weeks) execution of large-scale replacement operations. At the corps echelon, the regeneration task force synchronizes command and control, security, and sustainment support activities at a specified location within the corps support area to rebuild a degraded unit's combat power.

A-11. All sustainment functions (logistics, financial management, personnel services, and HSS) must be provided to effectively regenerate a unit. ESC and subordinate sustainment planners supporting the corps must consider that using sustainment assets to support regeneration operations may affect the execution of distribution operations of classes I, III, and V supplies. See ATP 3-94.4 for sustainment planning considerations during regeneration.

A-12. The sustainment element directs damaged repairable equipment to the maintenance collection point. It directs operable equipment and usable supplies to a marshaling, storage, or staging area with the regeneration task force supply unit. The sustainment element also begins providing essential support services to surviving personnel. Support may include (but is not limited to) the following:

- Hot meals and subsistence support.
- Sundries issue or distribution.
- Bulk fuel and water replenishment.
- Issue of class V for training and combat load replacement.
- HSS (to include, medical treatment, organic and area support, hospitalization, MEDEVAC, and MEDLOG, to include blood management).
- Laundry and shower support.
- Individual equipment replacements.
- Chaplain support.

- Morale, welfare, and recreation activities.

A-13. As the task force works to reestablish the command and control structure of the unit, the enabling sustainment element begins support operations. These additional sustainment activities during reconstitution operations include financial management, personnel service support, HSS, maintenance support, and transportation support.

SUSTAINMENT SUPPORT FOR THE PROTECTION OF CIVILIANS

A-14. Protection of civilians must be considered and integrated during operations in all of the Army's operational contexts. Protection of civilians refers to efforts that reduce civilian risks from physical violence, secure their rights to access essential services and resources, and contribute to a secure, stable, and just environment for civilians over the long-term.

PROTECTION OF CIVILIANS

A-15. Under international law, all parties in a conflict have a legal obligation to protect civilians from the conflict's effects. Military forces act in accordance with the law of armed conflict and other relevant bodies of law to minimize civilian harm. A civilian is any person who is not a combatant. If there is any doubt about a person being a civilian, that person will be considered a civilian. Communities on the ground and around the world expect uniformed personnel to protect the population. Civilian populations may be dislocated during conflict, producing refugees and internally displaced persons. Failure to protect civilians jeopardizes the credibility and legitimacy of the operation and can undermine other objectives. Military forces may play a partial role in guaranteeing protection to civilians. In many cases, the military will support police and other civilian organizations that ultimately ensure that protection of civilians is effective and lasting. Civilians should be protected from imminent violence and provided basic necessities. Sustainment will seldom be specifically related to the protection of civilians. However, inadequate sustainment could critically impair the ability of Army units to provide protection of civilians. For an overview of protection of civilians see ATP 3-07.6.

FIELD ARMY OR CORPS SUSTAINMENT SUPPORT

A-16. A field army or corps may be tasked to assist in the protection of civilians. This effort will likely involve the entire staff. The ESC typically provides or contracts for logistical support within this effort. Coordination with HN and non-governmental organizations is critical to identify requirements. Army logistics resources may be used to support other actors (such as nongovernmental organizations) in providing essential goods and services to needy civilians. Protection of civilians may impose other sustainment requirements such as transportation and medical treatment for large numbers of dislocated civilians.

A-17. The CA officer in the field army or corps headquarters plays a key role in the planning and execution of missions involving protection of civilians. The CA officer conducts analysis and evaluation of civil considerations during military operations. CA officers with HN governments, non-governmental organizations, and the private sector to identify existing channels for logistics support for displaced civilians. For more information on CA core competencies see FM 3-57.

A-18. The following CA doctrine provides important planning factors and considerations related to protection of civilians:

- ATP 3-57.10 identifies techniques used in dislocated civilian operations and noncombatant evacuation operations.
- ATP 3-57.20/MCRP 3-33.1C provides funding sources and considerations for foreign humanitarian assistance.
- ATP 3-57.30 provides information on OPORD Annex K (Civil Affairs Operations) that includes the dislocated civilian plan.

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Appendix B

Synchronizing Class III, Class V, Maintenance, and Medical

This appendix further discusses the synchronization of sustainment in support of large-scale combat operations. The primary focus is on class III, class V, maintenance, and medical functions and synchronization of sustainment support through the use of boards and working groups.

SECTION I – STAFF COORDINATION

B-1. The ESC commander serves as the senior sustainment leader and lead integrator for sustainment in the field army or corps. The ESC commander is responsible for integrating all sustainment functions (logistics, HSS, personnel services, and financial management) with the scheme of maneuver in accordance with the commander's priorities.

B-2. The ESC staff supports field army and corps staff planning while conducting its own parallel planning for support requirements. This involves ensuring information sharing and coordination among the higher headquarters staff and the supporting medical command. The ESC commander leverages several sustainment-related boards, comprised of members drawn from its higher command, the supporting medical command, and the ESC staff.

B-3. Sustainment-focused boards must be linked to the operations cycle at each echelon. Sustainment planning is vital to the plans process, as the feasibility of plans is intrinsically linked to sustainment. Table B-1 shows typical planning horizons for large-scale combat operations and the sustainment horizons for each.

Table B-1. Sustainment planning horizon

	Maneuver Horizons			***Sustainment Horizons***	
	Current Operations	***Future Operations***	***Plans***	***Sustainment on-hand (including en route)***	***Sustainment Planned***
Brigade Combat Team	0–12 hours	–	12–48 hours	3 combat loads of all supplies	Continuous replenishment
Division	0–24 hours	24–72 hours	72–96 hours	3 days	48–96 hours
Corps	0–48 hours	48–96 hours	96 hours–7 days	5 days	72 hours–6 days
Field Army	0–3 days	3–7 days	7–10 days	7 days	96 hours–9 days
Theater	–	–	–	15–30 days	30–90 days
Note 1: At each echelon, sustainment planners must plan concurrently with their supported headquarters. The time and distances that comprise large complex supply chains required to sustain large scale combat operations limit their responsiveness. As commanders determine future courses of action, sustainers will have to anticipate requirements and acquire the supplies necessary to support the operation.					
Note 2: A brigade combat team is designed to carry approximately three basic loads for classes I, III, and V. Planners at the division level should continually replenish the brigade combat teams as supplies are consumed. At the division level and above, sustainment planners must plan out to the plans section planning horizon to ensure freedom of action for their command. At any given time, an echelon should have sufficient quantities of class I, III, and V on-hand or en route to support all future plans (the current plan plus anticipated branches and sequels).					

B-4. Some of the boards typically managed by the ESC to synchronize and prioritize sustainment for the field army and corps include—

- Sustainment boards.
- Distribution management boards.
- Movement boards.
- Requirements review boards.
- Fuel requirements boards.

B-5. Boards should typically follow an approach similar to the targeting cycle (situation development, target development, collection management). This allows time to develop concepts in working groups prior to their approval in boards and maintains synchronization with operations. Commanders must ensure a balance between staff participation in working groups and boards to allow time for working staff actions. An example of how boards are synchronized and the focus area for each board are provided in table B-2 below.

Table B-2. Board synchronization

D-4	*D-3*	*D-2*	*D-1*	*D*	*D+1*	*D+2*	*D+3*	*D+4*	*D+5*
					Sust. Bd.	DM Bd.	Mvmt. Bd.	Synch. & Prep.	Execute
				Sust. Bd.	DM Bd.	Mvmt. Bd.	Synch. & Prep.	Execute	
			Sust. Bd.	DM Bd.	Mvmt. Bd.	Synch. & Prep.	Execute		
		Sust. Bd.	DM Bd.	Mvmt. Bd.	Synch. & Prep.	Execute			
	Sust. Bd.	DM Bd.	Mvmt. Bd.	Synch. & Prep.	Execute				
Sust. Bd.	DM Bd.	Mvmt. Bd.	Synch. & Prep	Execute					

DM BD	distribution movement board	Sust. Bd.	sustainment board
Mvmt. Bd.	movement board	Synch. & Prep.	synchronize and prepare

CORPS SUSTAINMENT BOARD

B-6. The corps sustainment board is the corps commander's primary tool to prioritize and allocate sustainment resources for the corps. The board is chaired by the corps deputy commander or ESC commander. The sustainment board provides oversight of broad sustainment functions. These functions include obtaining approval, guidance, and establishing sustainment priorities in accordance with the commander’s intent and concept of operations. The board approves recommendations from the sustainment working group as well as other sustainment-related working groups that include movement, fuel, and maintenance. Table B-3 provides a sample of a corps-level sustainment board agenda.

B-7. The sustainment board focuses on reviewing requirements for the subordinate units, identifying current corps capabilities, and identifying shortfalls. Working groups validate the details prior to the board commencing. This step allows the ESC commander and deputy corps commander to focus on issues requiring mitigation of shortfalls or allocation of scarce resources in accordance with the commander's intent.

B-8. The board uses current sustainment estimates, targeting guidance from the targeting board, and future operations plans from the G-35. The board's main output is an approved allocation of resources to support future operations. The allocation of these resources enables the ESC's distribution management working group and board to plan and approve the distribution plan. The approved distribution plan informs the corps movement board and the G-3’s operations synchronization.

Table B-3. Corps-level sustainment board

General Information	*Participants*
Title: Sustainment Board **Purpose:** Prioritize and allocate sustainment resources for future operations. Identify capability and requirement shortfalls for action at corps level and above **Frequency:** Daily (OPTEMPO dependent) **Duration:** One hour **Location:** Rear command post **Medium:** Face-to-face, defense collaboration services	**Staff Lead:** ESC SPO **Chair**: Corps deputy commanding general or ESC commander **Members:** G-1, G-2, G-3, G-4, G-6, G-8, surgeon, transportation officer, provost marshal, chaplain, staff judge advocate, ESC DMC branch chiefs, AFSB and contracting support brigade representatives, FSE targeting representative, Defense Logistics Agency representative, petroleum liaison detachment representatives, supported joint force and allied elements, other liaison officers as required.
Inputs and Outputs	***Agenda***
Inputs: • Targeting guidance for D+4. • Updated running estimates. • Current distribution plan. • Recommendations from sustainment-related working groups. • Higher and sustainment organization plans, orders, directives, and policies. • Current and projected resource or capability shortfalls. **Outputs**: • Decisions approved to mitigate capabilities and requirements shortfalls. • Decisions approved on prioritization of resources. • Updates to Annex F (Sustainment). • Approved or changes to sustainment policy and priorities. • Approved allocations for D+3.	Roll Call Current LOGSTAT (Corps G-4) Current slant of critical combat and sustainment platforms (Corps G-4 Mx) Current slant of sustainment platforms (ESC G-4) Current operational shortfalls (Corps G-4 or ESC SPO) <u>Next 72 hours</u> Projected operations (Corps G-33) Anticipated resupply to corps (ESC DMC) Planned sustainment (ESC DMC) <u>72-96 hours</u> Projected operations(G-33 or ESC SPO Plans) Anticipated resupply to corps (Corps G-4) Projected LOGSTAT (G-4) Planned sustainment operations and decision support matrix (ESC) <u>96-120 hours</u> Projected operations(G-33 or ESC SPO Plans) Anticipated resupply to corps (ESC DMC) Projected LOGSTAT (Corps G-4) Planned sustainment operations and decision support matrix (ESC) <u>Commander's guidance</u>

AFSB	Army field support brigade	G-4	assistant chief of staff, logistics
DMC	distribution management center	G-4 Mx	assistant chief of staff, maintenance
ESC	expeditionary sustainment command	G-6	assistant chief of staff, signal
FSE	fire support element	G-8	assistant chief of staff, financial management
G-1	assistant chief of staff, personnel	LOGSTAT	logistics status report
G-2	assistant chief of staff, intelligence	OPTEMPO	operating tempo
G-3	assistant chief of staff, operations	SPO	support operations officer
G-33	assistant chief of staff, current operations		

DISTRIBUTION MANAGEMENT BOARD

B-9. The ESC distribution management board builds upon the sustainment board's output. Once the field army or corps approves the prioritization and allocation of resources, the ESC conducts the distribution management working group to create the distribution plan. The distribution management working group's

plan is reviewed by the distribution management board for the ESC commander's approval. Once the distribution plan is approved, it is sent to the field army, TSC, and corps movement working groups. The working groups are where the DMC transportation branch and the movement control board integrate unit movements. The output of the movement working group is provided to the field army or corps G-3, who uses the information to prepare an overall movement schedule. The movement schedule is a prime input for the field army, TSC, and corps movement board. Table B-4 provides an example of an agenda for a distribution management board.

Table B-4. Distribution management board

General Information	*Participants*
Title: Distribution Management Board **Purpose:** Approve the sustainment distribution plan for D+3 **Frequency:** Daily (OPTEMPO dependent) **Duration:** One hour **Location:** ESC command post **Medium:** Face-to-face, defense collaboration services	Staff lead: ESC SPO Chair: ESC commander Members: G-1, G-2, G-3, G-4, G-6, G-8, and surgeon, transportation officer, provost marshal, chaplain, staff judge advocate, ESC DMC branch chiefs, AFSB and contracting support brigade representatives, TSC deputy SPO, Defense Logistics Agency representative, petroleum liaison detachment representatives, supported joint force and allied elements, and other liaison officers as required.
Inputs and Outputs	***Agenda***
Inputs: • Updated running estimates. • Current distribution plan. • Future changes to distribution plans and requirements. • Recommendations from sustainment-related working groups. • Higher and sustainment organization plans, orders, directives, and policy. **Outputs:** • Decisions approved that mitigate capabilities and requirements shortfalls. • Decisions approved on prioritization of resources. • Updates to Annex F (Sustainment). • Approved or changes to sustainment policy and priorities. • Approved allocations for D+3.	Roll Call Current LOGSTAT and requirements (Corps G-4) Current and projected slant of sustainment platforms (ESC SPO) Current operational shortfalls (Corps G4 or ESC SPO) Next 72 hours Projected operations (G-33 or ESC DMC Plans) Anticipated resupply to corps (G-4) Planned sustainment operations (ESC) 72-96 hours Projected operations (G-33) Anticipated resupply to corps (G-4) Projected LOGSTAT (G-4) Planned sustainment operations and decision support Matrix (ESC DMC plans) 96-120 hours Projected operations (G-33 or ESC SPO plans) Anticipated resupply to corps (ESC DMC) Projected LOGSTAT (G-4) Planned sustainment operations & decision support matrix (ESC DMC plans) Commander's guidance

AFSB	Army field support brigade	G-4	assistant chief of staff, logistics
DMC	distribution management center	G-6	assistant chief of staff, signal
ESC	expeditionary sustainment command	G-8	assistant chief of staff, financial management
G-1	assistant chief of staff, personnel	LOGSTAT	logistics status report
G-2	assistant chief of staff, intelligence	OPTEMPO	operating tempo
G-3	assistant chief of staff, operations	SPO	support operations officer
G-33	assistant chief of staff, current operations	TSC	theater sustainment command

MOVEMENT BOARDS

B-10. The field army or corps movement board synchronizes the distribution plan with protection and operations. The movement board is chaired by the ESC commander or deputy commanding general, with the ESC SPO as the staff lead. The board addresses any short-term issues with currently approved movement plans for the next 48 hours and approves the movement plan for D+3. This approved movement plan is vital to the G-3 synchronization board, as it ensures movements are both deconflicted and support the commander's intent. See table B-5 on page B-6.

Table B-5. Movement boards

General Information	*Participants*
Title: Movement Board **Purpose:** Approve the movement plan for D+3 **Frequency:** Daily (OPTEMPO dependent) **Duration:** One hour **Location:** Rear command post **Medium:** Face-to-face, defense collaboration services	Staff lead: ESC SPO Chair: ESC Commander or DCG Members: G-1, G-2, G-3, G-4, G-6, G-8, surgeon, transportation officer, provost marshal, chaplain, staff judge advocate, ESC DMC branch chiefs, AFSB and contracting support brigade representatives, FSE targeting representative, theater and corps movement control representatives, Defense Logistics Agency representative, supported joint force and allied elements, and other liaison officers as required.
Inputs and Outputs	***Agenda***
Inputs: • Updated running estimates. • Current distribution plan. • Recommendations from sustainment related working groups. • Higher and sustainment organization plans, orders, directives, and policy. **Outputs:** • Decisions approved that mitigate capabilities and requirements shortfalls • Decisions approved on prioritization of resources • Updates to movement control plan. • Approved or changes to sustainment policy and priorities. • Approved allocations for D+3.	Roll Call Current movement requirements (Corps G-4) Current slant of sustainment platforms (ESC G-4 Mx) Next 72 hours Projected Operations (Corps G-33) Planned movements (ESC SPO) 72-120 Hours Projected Ops (Corps G-33 or ESC DMC plans) Planned movements (ESC SPO) Decision support matrix (ESC DMC) Commander's guidance

AFSB	Army field support brigade	G-33	assistant chief of staff, current operations
DCG	deputy commanding general	G-4	assistant chief of staff, logistics
DMC	distribution management center	G-4 Mx	assistant chief of staff, maintenance
ESC	expeditionary sustainment command	G-6	assistant chief of staff, signal
FSE	fire support element	G-8	assistant chief of staff, financial management
G-1	assistant chief of staff, personnel	OPTEMPO	operating tempo
G-2	assistant chief of staff, intelligence	SPO	support operations officer
G-3	assistant chief of staff, operations		

B-11. The ESC DMC is the center of most sustainment activity. The DMC takes the requirements and priorities of the command and develops detailed plans to sustain the force. Each of the DMC branches (distribution integration, financial operations, OCS, HR operations, transportation operations, and materiel management—which includes the supply, munitions, fuel and water, maintenance, and field services divisions) is responsible for planning a portion of the corps' sustainment mission. The DIB then integrates the medical portions of the plan for execution.

SECTION II – FUELING THE CORPS

B-12. The corps force can move only as long as vehicles and aircraft receive fuel. While mission variables affect daily fuel consumption, the ESC may need to supply over 1.8 to 2.2 million gallons of fuel per day to multiple divisional and corps units within its AO. The ESC may also be responsible for supporting joint and allied partners requiring fuel support in the corps AO. Bulk fuel planning and operations at the ESC entails simultaneously executing support for the division and corps area customers while building the corps stockage

objective, preparing for future operations, and setting conditions for long-term sustainment. An agile adaptive, and synchronized plan that provides bulk fuel at the point of need without putting resources and assets at unnecessary risk is the goal for bulk fuel planning.

PLANNING FUEL

B-13. To support the movement and momentum of corps operations and provide freedom of maneuver, the ESC develops an adaptable plan. The plan must conform to the requirements of the maneuver commander while safeguarding assets for future operations. The DMC is responsible for sustaining the force through its three branches: the DIB, materiel management branch and transportation operations branch. The DMC staff focuses on detailed planning for operational area opening, distribution, sustainment, and operational area closing operations. The ESC DMC is supported by attached organizations and personnel that enable bulk petroleum operations and planning. Each ESC is authorized an attached ten-man petroleum liaison detachment to support long range bulk fuel planning efforts. In some instances, the ESC may also have a DLA representative who assists in bulk fuel support when the ESC is a direct supported customer of DLA-Energy. In most instances, the ESC conducts the planning and provides the requirements to DLA.

B-14. Generally, the ESC fuel and water branch staff offices track the current bulk fuel COP and plan bulk fuel resupply through D+5. The petroleum liaison detachment plans bulk fuel resupply through D+10 and beyond based on planning horizon requirements. All plans must support joint and combined operational forces as required by the combatant command or theater Army. The ESC is responsible for ensuring the class III bulk distribution plan is nested with the theater Army inland distribution plan for bulk fuel.

SUSTAINMENT PREPARATION OF THE OPERATIONAL ENVIRONMENT

B-15. Bulk fuel planning cannot happen in a vacuum. From the CCDR level to the corps, coordinated and synchronized efforts across the services and partners are critical to mission success. During the initial planning stages, ESC fuel and water branch personnel coordinate with the TSC G-2 and G-3 staffs to collect and assess data that impacts planning for bulk fuel and potable water support operations. Partners in the planning process are the TSC, theater petroleum center, the quartermaster petroleum group, and the petroleum liaison detachments. They create and share their COPs of their AOs, de-conflict the use of resources, and coordinate responsibilities and mission sets that allow the ESC planners to focus on the responsibilities and assets they will have to execute the mission.

B-16. Knowledge of the AO and organic capabilities help planners project petroleum and water requirements and plan efficient support operations. Fuel and water branch personnel help develop and work with information from IPB products including—

- Threat weapon system ranges.
- Locations of threat fuel resources.
- Threat air and ground named areas of interest.
- Types of industrial fuel resources in the area.
- Area port facilities and discharge capacities.
- Bulk fuel storage and commercial pipeline locations.
- Highway and rail networks and capacities (verified by the transportation branch).
- Projected areas to conduct refuel on the move operations.
- Projected convoy support centers.
- Potential bulk fuel storage sites.
- Potential areas suitable to conduct forward arming and refueling points.
- Locations for future logistics release points.
- Primary and secondary fuel and throughput movement corridors within the corps area.

B-17. Plans officers use IPB to recommend the number and placement of sustainment units and petroleum units on the time-phased deployment lists. IPB products help petroleum officers plan the type and quantity of bulk fuels and packaged products required to support initial operations and help them plan ways to protect

class III points and distribution systems. See Appendix C for additional information on sustainment preparation of the OE.

DISTRIBUTION INTEGRATION BRANCH

B-18. DIB personnel ensure fuel support annexes are nested with the OPLANs. The staff coordinates with fuel and water branch personnel in planning ways to distribute or shift the flow of bulk fuel to support the main effort. They coordinate with staff assigned to the other branches of the SPO in determining the best way to synchronize resources in accordance with priorities. They prepare the support operations estimate and annex to the ESC's OPLANs and OPORDs. In planning fuel support, they need to consider the following:

- Mission, size, and composition of the force to be supported.
- Corps commander's intent.
- Battlefield terrain.
- Fuel distribution resources available.
- Fuel distribution system or method (transportation mode).
- Petroleum supply or DS units and the capabilities they provide and systems they operate.
- Seasonal requirements such as antifreeze, fuel additives, and oil weight.
- Methods of resupply from theater.
- Gap determination for bulk fuel storage or distribution assets.

FUEL AND WATER BRANCH

B-19. Fuel and water branch personnel assigned to the ESC SPO section manage petroleum support planning. They also develop plans, policies, and procedures involving the receipt, storage, and distribution of bulk fuels. Critical fuel planning tasks include—

- Cross-referencing the supporting unit structure and mission versus usage data.
- Maintaining awareness of adjustments to the time-phased force deployment data.
- Consulting the operational logistics planner and reviewing historical data to forecast consumption rates. The operational logistics planner is the Army system of record for determining consumption factors for units.
- Determining the capabilities required to fulfill the identified requirements. Force Management System Web provides unit capability data.
- Building the concept of support.

B-20. The following are other fuel related fuel and water branch tasks:

- Build the bulk fuel concept of support.
- Develop and maintain the corps-level bulk fuel COP.
- Receive each division's consolidated fuel reports, known as a REPOL, that provide anticipated fuel requirements for the next 120 hours.
- Assess petroleum requirements and consumption factors and recommend changes to storage requirements for each day over the next five days.
- Project fuel requirements by type of fuel based on the quantity of fuel-consuming equipment and vehicles.
- Track the shelf-life and service-life of elastomeric components for fuel systems to include fuel bladders, blivets, and hoses.
- Establish policies on fuel quality surveillance based on theater guidance.
- Establish procedures for collecting and reporting petroleum management information.
- Coordinate with the transportation branch and DIB to identify class III movement requirements as part of movement programming.
- Coordinate with Service partners, special operations, and allies operating within or transiting through the corps AO for fuel support requirements.

- Coordinate with Service partners and allies to identify interoperability equipment and adaptors. Identify procurement channels for this equipment and ensure stock is available to meet anticipated requirements.
- Ensure policies and procedures are in place to oversee subordinate unit petroleum operations and accountability. Include the use of officer inspection programs and command supply discipline programs.

B-21. Fuel and water branch personnel should consider—

- Number and types of fuel-consuming equipment and vehicles that use each type and quantity of bulk fuel product.
- Requirements and capabilities based on OPLOG planner and FMS web.
- Impact of deployment timelines on requirements and capabilities in theater.
- Coordination with the supporting petroleum liaison detachment for responsibilities and tasks division of labor.
- Availability and capability of subordinate units to provide the required support.
- Number and location of class III points, to include throughput distribution.
- Serviceability of organic ground fuel distribution and storage means.

SUSTAINMENT FUEL REPORTS

B-22. Fuel and water branch personnel plan fuel support for operations 120 hours in the future. The attached petroleum liaison detachment works as the future plans and coordination cell for bulk fuel alongside the fuel and water branch. Ideally, the POL liaison detachment hands the fuel and water branch a plan that is ready for D+5. The plan should be fully coordinated with the TSC, theater petroleum center, and the quartermaster petroleum group to ensure synchronization of movement and distribution and incorporate all Service partner and allied considerations. The fuel and water branch verifies the requirement and makes adjustment as necessary.

B-23. Fuel and water branch personnel use LOGSTATs and GCSS-Army data to assess the current and projected availability of class III assets for the corps. They evaluate class III storage and distribution requirements against capabilities of units to support various tactical operations. Based on projected requirements, the fuel and water branch provides this information to the TSC and the ESC POL liaison detachment. The detachment incorporates these requirements into the plan they are building to support beyond 120 hours out.

FUEL CONSUMPTION FACTORS

B-24. ESC petroleum officers use fuel consumption factors listed in ATP 5-0.2-2 to develop support plans for the corps. For NATO operations, STANAG 2115 provides factor percentages used to adjust fuel consumption estimates to the type of combat, terrain, and climate expected in the AO.

FUEL FORECASTS

B-25. The ESC distributes bulk fuel forward in response to requirements. Forecasts vary depending upon the probable level of activity. G-4 LOGSTATs forecast requirements based on usage and fuel consumption data for operations. The ESC SPO, in coordination with the DMC's fuel and water branch staff, addresses fuel forecasts to modify distribution plans and makes changes based on sustainment stock status, corps commander priorities of support, and the tactical situation. The DMC fuel and water branch keeps the SPO informed of forecasted workloads.

PLANNING CONSIDERATIONS

B-26. Supported units conduct operations in great depth and across wide fronts. Increased dispersion of forces, increased movement of maneuver units, and stock losses result in increased fuel requirements. To ensure availability of adequate fuel support, the bulk fuel supply system needs redundancy. Bulk fuel storage

sites must be dispersed and camouflaged to avoid presenting a lucrative target. As appropriate, ESC fuel and water branch personnel recommend the steps in table B-6 to offset shortfalls in ESC fuel support capability.

Table B-6. Steps to offset fuel support capabilities

Equipment Shortfalls
Cross-level equipment (tankers, pumps, storage).
Revise maintenance priorities on fuel support equipment.
Request support from higher headquarters or from host-nation sources.
Distribution Shortfalls
Pre-position fuel forward if the risk analysis supports that decision.
Distribute fuel in 55-gallon drums.
Restrict unit distribution temporarily.
Increase throughput.
Implement fuel allocations.
Change tankers from one fuel type to another.
Utilize an assault hoseline or pipeline.
Seek assistance from supported units.
Request host-nation support.
Storage Shortfalls
Keep equipment tanks full.
Change containers from one fuel type to another.
Contract for host-nation support.
Request use of host-nation fixed facilities.

MANAGING FUEL SUPPORT OPERATIONS

B-27. The ESC SPO is responsible for centralized control of bulk petroleum allocation and distribution within the corps and determines allocation according to priorities set by the corps. The DMC fuel and water branch implements plans based on these priorities.

FUEL AND WATER BRANCH

B-28. ESC fuel and water branch personnel recommend stockage requirements and distribution priorities. They keep the ESC SPO and G-4 informed of changes in petroleum stocks and distribution capabilities. Branch personnel compare petroleum requirements to capabilities and make recommendations on use of petroleum resources. They establish the frequency for submitting petroleum forecasts. They also establish procedures and standards for petroleum inspections. As required, they provide guidance on containment and cleanup of spills or leaks.

B-29. The DMC fuel and water branch performs integrated materiel management for bulk and packaged petroleum fuels, packaged petroleum products, containers and accessories. It consolidates requirements and performs centralized management of bulk petroleum distribution to the corps.

B-30. The DMC fuel and water branch manages the supply of petroleum fuels and products to the corps force. Branch personnel—

- Lead the corps fuel working group.
- Participate in the theater joint petroleum working group.
- Build and maintain the commander's bulk fuels logistics COP for resources, production capability, mission readiness, quantities on hand, quantities due in, and mission gaps or projected shortfalls.
- Receive and coordinate requirements from divisions, separate brigades, and non-divisional units in the corps AO.

- Consolidate requirements and submit totals to the field army, corps, or TSC.
- Direct the issue of bulk petroleum stocks.
- Provide prioritized shipping instructions to petroleum units.
- Exercise surveillance over the availability and condition of petroleum handling and distribution support equipment.

FUEL ALLOCATION

B-31. The commander establishes an allocation system when fuel demands exceed availability. The ESC SPO receives allocation instructions from the corps G-4. The DMC fuel and water branch implements those instructions.

ESC FUEL ORGANIZATION

B-32. The ESC's fuel organization depends upon the type and level of conflict, type and size of supported forces and their missions, existence of HN petroleum assets, and estimated length of the operation. It also depends upon the corps reserve policy, availability of bulk fuels in underdeveloped theaters, and the requirement for petroleum quality surveillance. Allocation of supporting medium truck companies (petroleum) depends on the corps commander's priorities, road conditions, and throughput distances.

FUEL SUPPORT ORGANIZATION

B-33. While there is no set organization for fuel at the corps level, the fuel network is based on two principal capabilities: storage and distribution. Most fuel units focus primarily on one or the other, while the composite supply company provides both limited storage and limited distribution. Typical units found in the fuel network may include—

- Composite supply company (fuel and water platoon).
- Petroleum support company.
- Medium truck companies (petroleum).
- Theater petroleum center.
- Theater petroleum lab teams (mobile).
- Petroleum liaison detachment.
- Assault hose team (if attached).
- Petroleum pipeline and terminal operating company, if attached from echelons above corps.

B-34. For further information on fuel units and capabilities, refer to ATP 4-43.

SAMPLE BATTLEFIELD EMPLOYMENT

B-35. The ESC attaches a composite supply company to each of the DSBs. Each composite supply company establishes a class III supply point near the division boundary. Each company provides GS bulk fuel to supported non-divisional units and reinforcing support to the divisions as required.

B-36. The corps also attaches a petroleum support platoon to each DSB to both increase capacity within each division and provide the means to establish redundant storage sites within the division AO.

B-37. A petroleum liaison detachment can be assigned to an ESC to support the planning requirements for five days out and beyond. ESCs need the ability to plan for fuel and water operational requirements beyond 120 hours. The POL liaison detachment fills that role. The fuel and water branch concentrates on maintaining the fuel and water COP, validates the next five days of corps requirements, and makes daily adjustments along the five-day horizon as needed. The POL liaison detachment plans, coordinates, and synchronizes all requirements beyond the five-day horizon.

B-38. In the corps rear, a petroleum support company with an attached pipeline section gives the corps the ability to receive fuel by pipeline from the joint security area. The ESC task-organizes two transportation battalions (each with four 5K tactical POL transportation companies) to provide the necessary forward

distribution capability. Additional POL transportation platoons could be added to each forward-deployed sustainment brigade, providing twice daily local haul distribution over shorter LOCs.

B-39. Depending upon the availability of rail, the assault hoselines of the petroleum support company may be used to move fuel from railheads to class III supply points or from collapsible storage tanks to rail cars. Hoselines could also be used to move fuel to an airfield.

CORPS FUEL DISTRIBUTION

B-40. The fuel distribution system is a push system based on fuel forecasts and status reports. It relies on the routine rapid push of bulk fuel, with distribution both lateral and forward. The goal of a class III resupply mission should always be to leave the forward unit at full capacity whenever possible.

HABITUAL SUPPORT REQUIREMENT

B-41. Bulk fuel distribution relies upon the habitual support relationship between POL supply units and truck companies (petroleum). Task organizing CSSBs with both fuel and transportation units enables each to control the fuel distribution system, supporting daily operational requirements for bulk fuel in the AO.

B-42. When priorities warrant or maintenance and battle losses leave petroleum supply units with insufficient truck tractor support, the ESC SPO may direct reallocation of truck tractors to petroleum supply units.

BULK FUEL DISTRIBUTION SYSTEM

B-43. Figure B-1 depicts theater fuel distribution. Requirements flow from divisions, separate brigades, and class III supply points. S-4s forecast requirements for the next 96-hour period in the corps fuel working group. The output from the fuel working group is then incorporated into the ESC distribution management board so it can be prioritized with other sustainment requirements according to the corps priorities. They base their forecasts on projected consumption data. The frequency of submitting forecasts varies depending upon operations.

B-44. DMC fuel and water branch personnel compare bulk requirements against capabilities. As appropriate, the DMC submits consolidated requirements to either the field army, corps, or TSC.

B-45. The theater Army petroleum group distributes bulk fuel, either by pipeline or bulk carriers, as far forward as practicable in the corps. Medium truck companies (petroleum) transport fuel from tanks in the corps rear area to class III supply points operated by petroleum support companies and composite supply companies. For additional information see JP 4-02, and ATP 4-43.

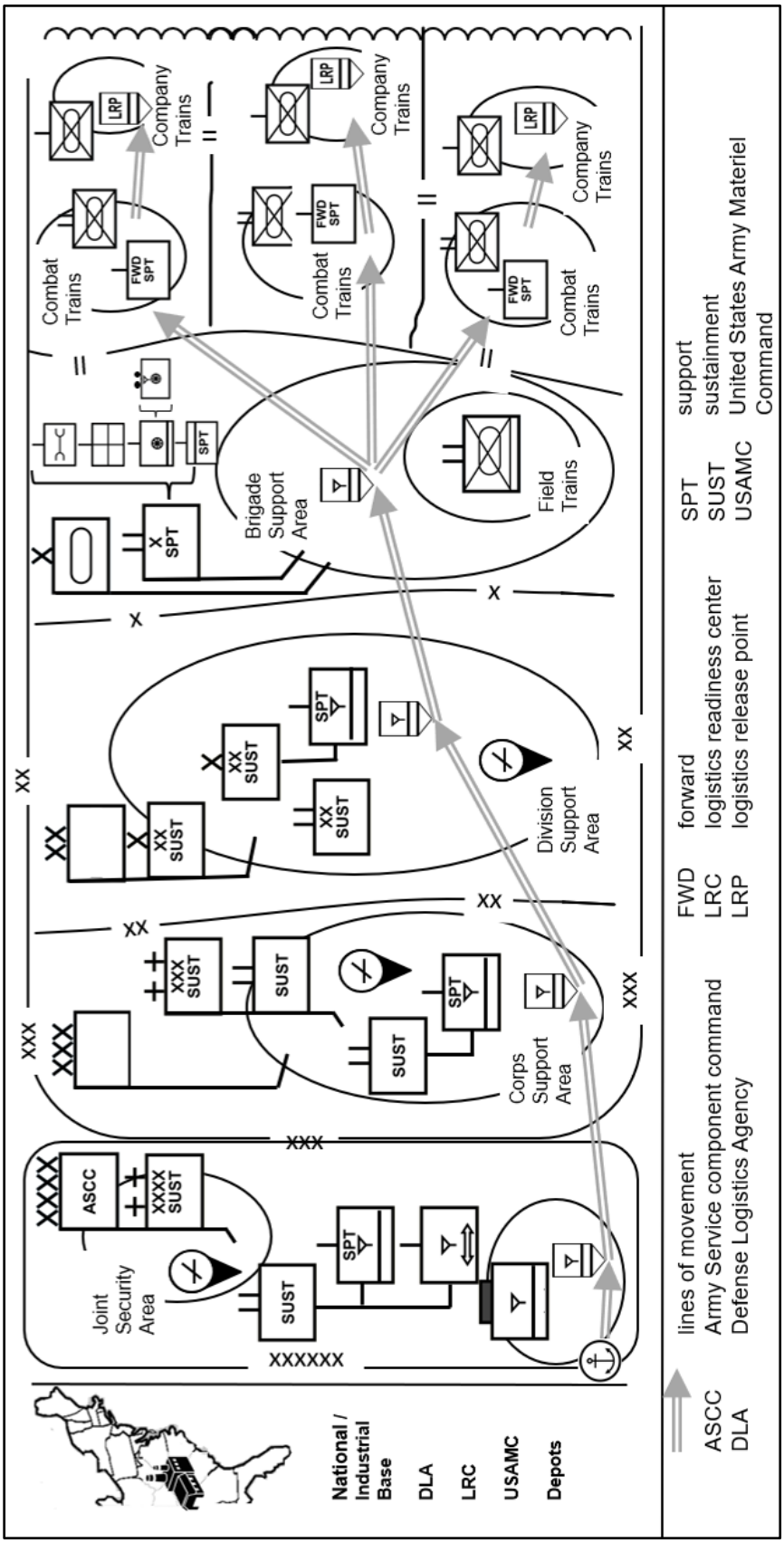


Figure B-1. Notional theater-wide fuel distribution units

SECTION III – ARMING THE CORPS

B-46. Large-scale combat operations have the potential to place unprecedented demands on the munitions distribution system to provide the right types and quantities of munitions at the decisive time and place.

PLANNING MUNITIONS SUPPORT

B-47. Detailed staff planning helps ensure field army and corps units receive the correct mix and quantity of munitions. Munitions directly influence the success of tactical operations. The field army or corps G-4 and ESC are responsible for overseeing most ammunition activities. ESC munitions branch personnel coordinate with their ESC G-2 and G-3 on collecting and assessing data relative to arming the corps force for specific contingency areas or theaters of operations.

B-48. The ESC and subordinate sustainment brigades employ ammunition units to best support the operational plans of the field army or corps commander. The ESC tailors munitions resources, realigns priorities, and synchronizes support assets to meet changing tactical situations. Tactical commanders should plan their operations and commit their forces only after a full awareness of the support capabilities of the ESC's munitions support structure.

B-49. During initial planning stages, ESC personnel use IPB products to assess and recommend the number and placement of ammunition units on time-phased deployment lists. IPB threat evaluation products can help munitions support branch personnel estimate the type and quantity of munitions required to support tactical displacements. Munitions support branch personnel use IPB terrain analysis products and threat integration products to plan how to employ ammunition units.

B-50. IPB products aid munitions support branch personnel in estimating the workload that captured munitions place on the force structure. Staff estimates should include the impact of the receipt, storage, safeguarding, control, and movement of captured ammunition.

B-51. Munitions officers assigned to the ESC munitions branch develop operating procedures and plans to implement class V supply policies according to the commander's priorities.

REQUIRED SUPPLY RATE

B-52. The *required supply rate* (RSR) is the amount of ammunition expressed in terms of rounds per weapon per day for ammunition items fired by weapons, in terms of other units of measure per day for bulk allotment, and other items estimated to be required to sustain operations of any designated force without restriction for a specified period. (ATP 3-09.23) A combat commander identifies the RSR by estimating the quantity of ammunition needed to support tactical operations for a specified time without ammunition expenditure restrictions. The RSR changes based on the type of operation, the overall objective, enemy capability, and revised ammunition forecasts.

B-53. Each S-3 develops an RSR estimate in coordination with S-4 and S-2 staffs. ATP 5-0.2-1 provides gross planning factors for ammunition consumption estimates when enemy assessments and actual use factors have not been developed. RSR reports list the rounds per weapon per day or a bulk allotment per day or per mission. The S-3 submits the RSR through command channels to the next higher headquarters.

B-54. Unit S-3 staff officers review, consolidate, and forward their subordinate units' RSRs to the next higher-level operations staff officer. Division and separate brigade headquarters pass RSR data through operations channels to the corps G-3. The consolidated corps RSR is passed to the corps G-4. The corps G-4 then coordinates with the ESC SPO to assess whether munitions stocks can support requirements. The DMC determines current stock status and restrictions on availability. The ESC SPO staff prepares a supportability assessment for the corps G-4. The corps G-4 then recommends munitions distribution to support G-3 plans for current and future operations.

CONTROLLED SUPPLY RATE

B-55. The CSR is the amount of ammunition that can be allocated over a specific time. It depends on the availability of ammunition and the ability to move the ammunition as required within the required time frame.

B-56. The corps G-4, in concert with the corps G-3, establishes the CSR for corps major subordinate commands. Typically, the corps commander approves the CSR recommended by the corps G-3 following discussions with the corps G-4. The corps commander is the approval authority for the CSR.

B-57. Combat commanders publish the CSR in mission orders within the sustainment, fires, and engineer annexes of OPORDs or fragmentary orders. CSRs are expressed as the number of rounds per weapon per day, or rounds per specific operation, mission, or period. The CSR is a guiding principle in determining the average amount of a particular munition that can sustain the unit for a specified period of time.

B-58. At each level, G-3s or S-3s work with G-4s or S-4s to better allocate ammunition assets according to priorities. G-4s or S-4s ensure that unit requirements do not exceed the CSR. The DMC enforces the CSR. The ESC SPO establishes procedures through the DMC to monitor that units are adhering to the CSR.

B-59. The corps G-4 is responsible for advising the corps commander of the risks associated with expenditure rates exceeding the CSR. The corps commander should exercise discretion when employing capabilities requiring munitions identified in the CSR.

B-60. The ESC must establish and maintain a munitions support system that responds quickly to the demands of the tactical situation. The ESC SPO and the DMC plan and synchronize munitions support.

HOST-NATION SUPPORT

B-61. Support agreements identify dedicated sources of HN support. During joint operations, HN support organizations can augment ESC conventional ammunition support organizations. National agreements define the interaction between HN and US units. The concept of obligatory cooperation is initiated after mobilization of HN units. Depending on the support agreements for the theater of operations, HNs could provide ammunition supply units to augment ammunition operations.

MANAGING MUNITIONS SUPPORT OPERATIONS

B-62. Munitions management focuses on the requirement to supply large quantities of diverse types of munitions to widely dispersed units. This task is complicated as units move every few days. The ESC coordinates replenishment and delivery of ammunition to users in the corps area. Based on mission and operational variables, the ESC and DMC may shift the flow of class V or redistribute class V stocks from less affected areas to support high priority operations.

DMC, MATERIEL MANAGEMENT BRANCH, MUNITIONS

B-63. The DMC provides class V management and control. It manages the distribution of munitions, to include chemical munitions. The DMC also manages stocks within ESC subordinate units. It reviews and analyzes demands and computes field army or corps requirements for ammunition. When on-hand balances are compared to unit requests in the field army or corps munitions board, the board can make appropriate recommendations to the ESC commander and corps deputy commanding general based on the commander's priorities. The DMC also monitors the flow of munitions into and within the field army or corps in order to maintain visibility of the ability of ESC units to receive stocks.

B-64. The ESC SPO and corps G-4 recommend class V distribution priorities and meet with the corps G-3 on problems that significantly affect support of tactical operations. The ESC munitions support branch provides technical staff control and supervision through the ESC SPO to the DMC's missile munitions division office. This office reports materiel problem areas to the ESC munitions support branch.

B-65. The munitions support branch exercises staff supervision over class V support operations. These include supply and maintenance operations relating to ammunition, missiles, special weapons, and associated repair parts, special tools, and test equipment. The munitions branch chief—

- Validates requisitions from the DSB munitions section to ensure requested quantities meet established CSRs.
- Provides the DMC DIB with each of the assigned or task-organized division’s munitions requirements for the next 120 hours.
- Develops plans and policies involving munitions supply and maintenance.
- Assists in the development of the CSR based on unit RSR and corps priorities.
- Provides staff input for munitions planning to the DMC staff.

- Develops policies concerning surveillance of munitions.
- Maintains a running estimate of munitions requirements.
- Coordinates munitions requirements with corps G-3 and G-4 staffs.
- Coordinates munitions support to corps units operating out of sector and to other Services or allies.
- Establishes ammunition supply levels based on corps directives.
- Establishes and maintains an ammunition surveillance program as prescribed by DA PAM 742-1.
- Recommends ammunition supply and storage site locations at or in proximity to the corps rear area.

B-66. The munitions branch performs the following tasks:

- Review the corps-directed CSR and forward distribution recommendations to the corps G-4 and G-3 based on ammunition status.
- Assess recommended locations for ammunition supply points (ASPs) in relation to the transportation network.
- Monitor reports on the supply status of class V items and assess the impact of critical theater-wide shortages and theater suspensions.
- Review Standard Army Ammunition System output reports of assets in transit between storage points to ensure timely supply support to customer units.
- Monitor stockage and distribution of munitions, missiles, special weapons, and associated test equipment.
- Evaluate and analyze data from the DMC for trends and potential support problem areas.
- Recommend ways to resolve munitions support problems to the ESC SPO.
- Coordinate the redistribution and realignment of class V resources with the DMC and sustainment brigades.
- Help resolve corps-wide distribution problems by recommending courses of action such as relocating ASPs or operating an ammunition company from multiple locations.
- Recommend displacement or relocation of ASPs as the situation dictates.
- Provide advice on the adequate dispersal of munitions to prevent or reduce losses by enemy action or accident.
- Ensure the ammunition company and BSB have established explosive safety site plans and conduct continuous risk management for their ammunition operations locations.
- Monitor munitions malfunctions throughout the corps AO.
- Develop procedures for the receipt, storage, and maintenance of munitions; the renovation of salvageable munitions; and the destruction of condemned stocks.
- Monitor movement of chemical or contaminated munitions through the corps AO in coordination with ESC transportation support branch staff.

B-67. Munitions officers and staff recommend ways to offset shortfalls in the ESC's ability to arm the force. Some recommendations are listed in table B-7.

Table B-7. Steps to offset munitions support capabilities

Ammunition Shortfalls
Substitute with like Department of Defense identification codes.
Redistribute between ammunition storage areas.
Reduce combat loads.
Distribution Shortfalls
Preposition ammunition forward if the risk analysis supports that decision.
Reprioritize transportation assets.
Task-organize supported units for tailored mission sets.
Increase throughput, optimize infrastructure and distribution methods (rail and inland waterways).

Table B-7. Steps to offset munitions support capabilities (*continued*)

Distribution Shortfalls continued
Review and revise movement priorities.
Request host-nation support.
MHE Shortfalls
Redistribute and realign assets between storage areas.
Task units to provide support.
Review and revise materials handling equipment maintenance priorities
Request use of host-nation support

ESC DISTRIBUTION INTEGRATION BRANCH

B-68. DIB personnel monitor corps operations in order to better anticipate changes in munitions requirements resulting from changes in the tactical situation and the corps commander's intent. They perform the following tasks:

- Coordinate with corps G-3 staff officers to balance requirements against ammunition controls.
- Synchronize support recommendations from the support branches on how to most effectively arm the corps to support corps tactical plans.
- Recommend ways to allocate ESC resources to support or weight the main effort.
- Provide the corps G-4 with recommended policies and related information on controlled items.
- Revise ESC OPLANs and OPORDs to reprioritize munitions support according to the supported commander's priorities.

LOGISTICS INFORMATION SYSTEMS

B-69. The munitions branch tracks critical munitions items. The branch utilizes the Standard Army Ammunition System, National Level Ammunition Capability, Commander’s Actionable Readiness Dashboard (also known as CaRD), and Army Readiness-Common Operating Picture (also known as AR-COP). These systems provide the status of class V assets within the strategic support and corps areas. Ammunition stockage data flows from corps support areas and ASPs to the tactical retail locations (ASP and ATHP). This data also flows to the corps and ESC. Ammunition asset displays report assets for the force. These systems also list assets located in supply points and all the DOD activity address codes or weapon categories on hand in subordinate units.

B-70. ESC munitions support branch officers use Army Readiness-Common Operating Picture, National Level Ammunition Capability, Munitions Transportation Management System, and related systems to assess the current or projected availability of ammunition assets for the force. They assess the unique situation or status at a particular corps support area, ASP, or ATHP. This allows them to better tailor stockage levels to support requirements. In-transit visibility of class V assets may also be obtained from the joint deployment distribution operation center, known as JDDOC.

B-71. The ESC SPO uses Army Readiness-Common Operating Picture and related logistics systems to recommend adjustments to distribution plans, allowing additional supply of ammunition to committed units.

AMMUNITION SUPPORT ACTIVITIES BY ECHELON

B-72. Ammunition support activities are locations that are designated to receive, store, maintain, and provide munitions support to Army forces. There are two types of ammunition support activities in a theater, the modular ammunition transfer point (MATP) and the ATHP.

B-73. The ASP is the primary ammunition supply activity at EAB. ASPs may be located throughout a JOA to include ports of debarkation, at inland locations providing theater distribution, or in close proximity to supported BCTs. The ASP provides support to tactical brigade ATHPs and units not supported by an ATHP. Each ASP is operated by one or more modular ammunition company platoons.

B-74. The largest munitions storage facility is typically designated the theater ASP. The theater ASP is located near a port of debarkation with ready access to highway, rail, and air transportation assets for distribution. The theater ASP can be run by one or more modular ammunition companies, HN personnel, or a combination. A theater ASP receives ammunition as determined by the TSC or ESC.

B-75. ASPs are also found at the corps and division level. They are typically located in or adjacent to the corps or division support area.

B-76. ASPs at the corps level provide DS to subordinate units and on order provide GS to other units in the corps area. They serve as the primary source of high-tonnage ammunition for the divisions. Corps ASPs also provide support for reconstitution operations.

B-77. ASPs in a division area provide DS to subordinate brigades and on order to other units operating in the area. Based on corps and divisional forecasted needs, ASP personnel prepare combat configured loads and ship ammunition to ASPs and ATHPs. The ASPs in the corps and division areas are typically run by a platoon from a modular ammunition company.

MODULAR AMMUNITION TRANSFER POINT AND AMMUNITION TRANSFER AND HOLDING POINT

B-78. Stryker, infantry, and armored BCTs have MATPs within their BSB distribution companies for ammunition support. The MATP has multiple lift teams that allow the BSB to surge lift capabilities forward to transload class V quickly between supporting and supported units.

B-79. Other types of multifunctional brigades or combat aviation brigades receive ammunition support through the ATHP. ATHPs are established and operated by the BSB distribution company. The ATHP is an operation established to facilitate the receipt and transfer of all types of ammunition from EAB ammunition storage activities to units within a brigade. Under most circumstances the ATHP is a temporary operation located in the brigade support area to facilitate rapid receipt and issue of ammunition to the users

MODULAR AMMUNITION ORDNANCE COMPANY

B-80. Modular ammunition companies provide direct ammunition support to the units to which they are attached and GS to units operating in their area of operation. Typically, the company is attached to an ordnance battalion (ammunition) or CSSB. Each company normally commands three ammunition platoons. These modular ammunition platoons can establish and man ASPs in the division rear area to support BSB ATHPs. The ASPs provide continuous resupply to the ATHPs. Stockage levels at the ASPs vary based on tactical plans, availability of ammunition, and vulnerability of LOCs to interdiction. Stockage levels are intended to cover surge and emergency requirements as well as normal operations.

B-81. When available, one modular ammunition company is allocated per division. The CSSB or DSSB provides command and control for attached ammunition companies. Modular ammunition companies may establish an ASP in the corps rear area and one behind each committed division. Allocation depends upon mission variables and the size of the corps stockage objective. See ATP 4-35 for more information on ammunition operations.

BRIGADE SUPPORT BATTALION, DISTRIBUTION COMPANY, MODULAR AMMUNITION TRANSFER POINT

B-82. The ATHP section is organic to the BSB distribution company in a BCT. The section consists of three teams each of which can run an ATHP, or simultaneously set up and run a forward logistic element. Figure B-2 depicts a notional array of ammunition distribution units on a conventional battlefield.

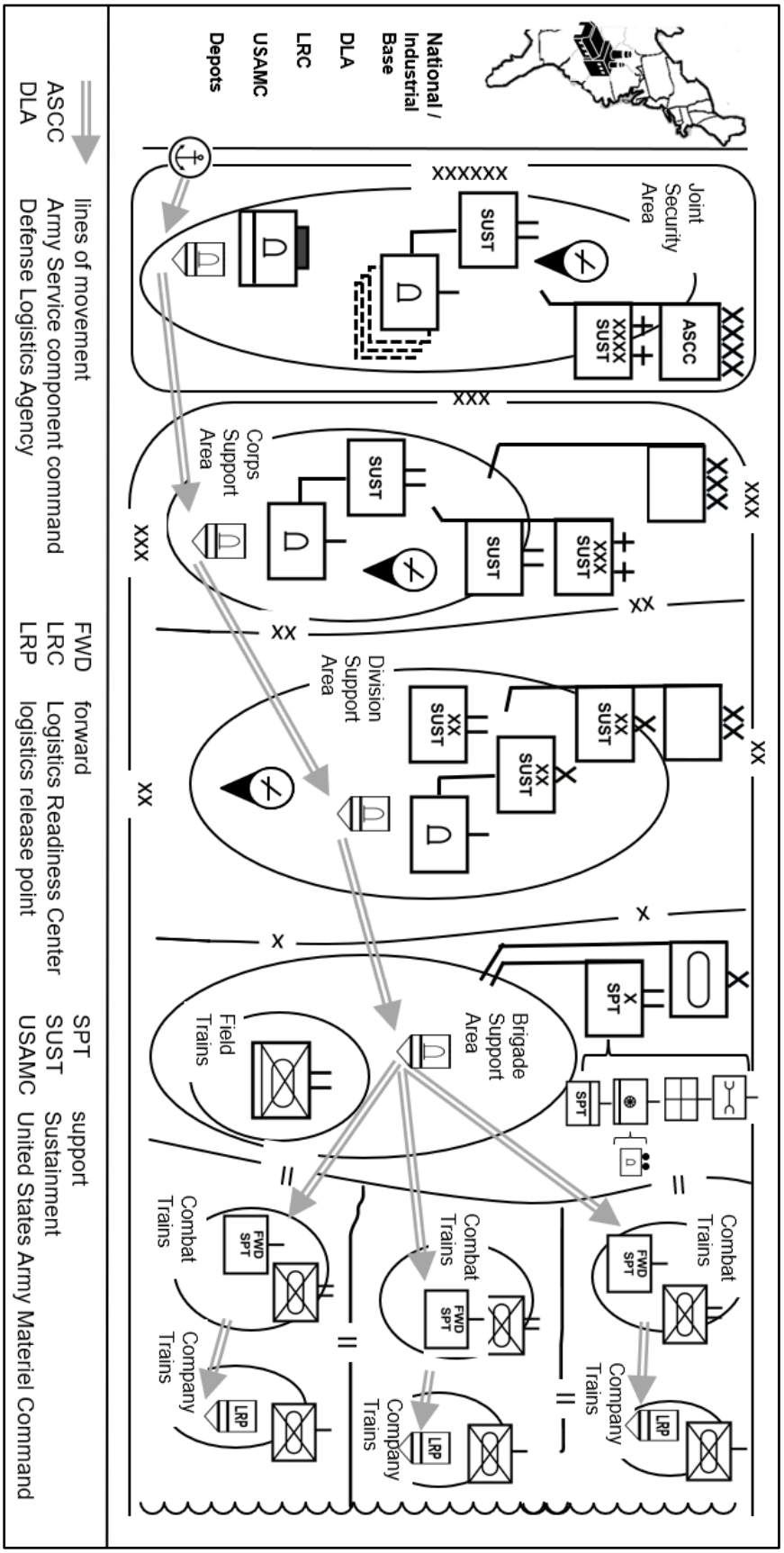


Figure B-2. Notional theater-wide munitions distribution units

MUNITIONS DISTRIBUTION SYSTEM

B-83. To support generation of combat power by maneuver units, the ESC designs its munitions distribution system to provide the right types and quantities of munitions at the decisive time and place. Heavy threat activity in the corps rear support area could place unprecedented demands on that distribution system. Ammunition supply units push high tonnages of ammunition forward while at the same time maintaining minimum essential stocks to support future combat operations.

HABITUAL SUPPORT

B-84. The ESC allocates and may assign medium truck or palletized load system truck companies to sustainment brigades to provide habitual transportation support to ammunition supply companies and ensure continuous, responsive munitions support. The truck units support routine, recurring daily movement of ammunition from the ASP in the corps rear support area to forward ASPs or ATHPs. Trailer transfer points and staging points for convoys of throughput vehicles are set up at each ASP in the corps support area.

B-85. Distribution of ammunition from an ASP in the corps area to division ASPs or brigade ATHPs occurs on a routine basis. This requires the supporting MCTs to pre-assign a block of transportation movement requests committing the trucks. The ammunition storage site, supporting medium truck unit, and the tasking DSB, sustainment brigade, DSB, or CSSB must maintain close coordination. The respective transportation branch tasks the truck unit to move the munitions. The truck company requests convoy clearance from the MCT and picks up shipments at the corps ASP.

B-86. When higher priorities emerge, the movement control board (through its MCTs) recommits truck assets. The MCT then rescinds its transportation movement requests and commits the CSSB's truck assets to higher priority missions.

AMMUNITION REQUIREMENTS

B-87. The conventional ammunition support system depends on continuous fill and refill. Maneuver and maneuver support units submit ammunition requirements. Units in the corps rear area pass their requirements through their higher headquarters to the ESC DMC. The DMC consolidates requirements and requests replenishment stocks through the TSC or directly from CONUS. DMC commodity managers make allowances for order-ship time to assure supplies arrive on time.

STATUS REPORTS

B-88. Ammunition support activities submit daily transaction reports to provide ammunition status to the respective DSB, CSSB, or ammunition battalion. Information copies of status reports are sent to the DSB or sustainment brigade and then on to the ESC. These reports include data on ammunition issues, receipts, condition code changes, and losses. Critical ammunition status is reported in the class V asset report. The ESC DMC prepares a corps-wide or field army-wide ammunition status report to inform the ESC SPO and corps G-4 of the formation’s ammunition stockage posture.

COMBAT CONFIGURED LOADS

B-89. Combat configured loads consist of preplanned packages of high-density ammunition tailored to support a type of unit, task force, or weapon system. Combat configured loads facilitate loading mission support vehicles with a minimum breakdown of ammunition. Instead of preparing unique mixed loads for each DOD identification code requested, ammunition units configure and load complete sets of combat configured loads for shipment when directed by the sustainment command DMC. EAB ASPs construct combat configured loads for shipment to ATHPs.

B-90. Combat configured loads simplify ammunition resupply planning and coordination between the DSB and DMC. The DSB reviews proposed combat configured load configurations submitted by S-4s. The DSB then submits a consolidated division combat configured load requirement to the sustainment command DMC. Division staffs should develop multiple combat configured loads for each existing OPLAN. These plans are shared with the corps and theater Army staffs.

B-91. Combat configured load sets also help speed transmission of ammunition resupply requirements. Instead of ordering ammunition by each single DOD identification code, the brigade requests combat configured loads by their identifier. The DSB coordinates with the supporting sustainment command DMC to ensure that combat configured loads are distributed to the right ATHP at the right time.

AMMUNITION DISTRIBUTION

B-92. The TSC DMC transmits a copy of the manifest or manifest data to the corps ESC DMC prior to shipment arrival. This allows the ESC DMC time to review stock status and determine if a change of consignee is required. Priority of resupply is to ASPs identified for buildup to support tactical plans.

B-93. The ESC DMC notifies the movement control board after receiving notice of incoming shipment. The DMC informs the movement control board of relevant information including the type, compatibility, weight, cube, quantity, and destinations of the shipment. The movement control board and MCT then coordinate movements.

B-94. Corps support areas and EAB ASPs configure ammunition into combat configured loads for shipment to ATHPs. Replenishment shipments to ATHPs flow from one or multiple EAB ASPs, with backup supply provided by a designated ASP. To reduce handling time, the EAB ASPs configure and ship combat configured loads to the ATHPs, bypassing the ASPs whenever possible.

B-95. To reduce the burden on the distribution system and to maximize the availability of transportation assets to distribute ammunition to forward units, the corps OPORD may direct that certain units (particularly those operating in the corps rear consolidation area) conduct supply point distribution from an ammunition supply activity within proximity to their location.

B-96. Corps aviation units provide emergency rapid resupply of low-density, high-value aviation class V to an ATHP in the corps rear area. As required, supporting ASPs and corps ASPs provide a sling-load pad for aerial resupply.

MINES, EXPLOSIVES DEMOLITIONS, AND BREACHING CHARGES

B-97. Mines and explosive demolitions help delay, disrupt, or channel enemy movement and halt or slow the enemy's offensive or counterattack. Utilization of mines during defensive operations helps stop enemy advances and enable offensive and counterattacking forces to maneuver.

B-98. Threat forces employ mines and obstacles in depth. Enemy artillery or air strikes on bridges, airfields, roads, and urban areas also create obstacles to maneuver. Maneuver forces maintain momentum by conducting hasty breaches using available countermine assets. Mines and explosives provide a way to quickly breach wire obstacles, destroy log obstacles, and clear debris to reopen routes.

B-99. During the offense, maneuver units breach minefields and obstacles to regain the full use of routes and terrain. During the defense, defending forces emplace obstacles quickly to counter enemy movement. They need to be kept supplied with ground-delivered scatterable mines, cratering devices, and hasty bridge demolition materials.

B-100. Deliberate breaches require combat engineer support and mines or explosives as well as organic engineer equipment. Engineers use mines and obstacles in countermobility operations, to include closing the most probable avenues of approach, destroying bridges, and creating obstacles at critical areas along the flanks of advancing forces. Engineers coordinate breaching materiel requirements with the DMC.

SAMPLE BATTLEFIELD EMPLOYMENT

B-101. Ammunition in theater flows from the theater level down to the battalion level. From the Theater ASP down to the BSB distribution company ammunition supplies are moved forward as rapidly as possible.

THEATER AMMUNITION SUPPLY POINT

B-102. One or more theater ammunition supply points will be established near ports of debarkation that have access to highway, rail, air, or port facilities to facilitate distribution. The theater ASP or ASPs are

operated by an ammunition company attached to a sustainment brigade, which is in turn attached to an ESC serving the TSC. Theater ammunition stocks are normally stored and distributed from this facility. During combat operations, the theater ASP may reconfigure sustainment loads into combat configured loads for distribution.

B-103. The ESC assigned to the TSC may assign multiple modular ammunition companies for theater opening and theater sustainment operations to include port operations, Army prepositioned stocks, and theater distribution. With any of these operations, transportation support is provided by a CSSB medium truck company.

THEATER ARMY OR CORPS AMMUNITION SUPPLY POINT

B-104. At the theater Army or corps level an ESC will typically attach an ordnance battalion (ammunition) to a sustainment brigade or DSB to provide oversite of modular ammunition companies and below. Modular ammunition companies may be assigned to an ordnance battalion (ammunition), CSSB, or DSSB. The modular ammunition companies or ammunition platoons operate ASPs providing receipt, storage, issue, and reconfiguration of ammunition items.

B-105. ASPs in the corps area prepare ammunition for ground or aerial transport to the ASPs in the division rear area, or for throughput to MATPs or ATHPs in the brigade support area. ASPs receive their mission workloads and priorities of issue from the DMC. The ESC SPO sets ASP stockage objective based upon—

- Theater Army or corps tactical plans and projected battle intensity.
- Types of units supported.
- Availability of ammunition and LOC vulnerabilities.
- Threat disruption of resupply operations.

B-106. The ESC may have a CSSB attached for ammunition distribution. If so, it may allocate three palletized load system truck companies to the rear theater distribution sustainment brigade's transportation battalion to support ammunition distribution. These truck companies move munitions from the corps support area to the ammunition support activities in the division support area. The corps support area provides the surge reserve which enables the corps commander to weight the main effort. It also provides support for units in the corps rear area.

DIVISION AMMUNITION SUPPLY POINTS

B-107. An ammunition platoon will operate an ASP in the division area. The division-level ASP provides support to units operating in the division area as well as prepares ammunition for shipment to the brigade-level MATPs or ATHPs. Corps artillery and aviation units and other consumers of high tonnage munitions typically draw their munitions from division-level ASPs. The ESC SPO munitions warrant officer provides mission guidance and shipment priorities for this ASP.

BRIGADE MATPS AND ATHPS

B-108. Munitions support in the brigade support area is dependent upon the type of BCT. BSBs in a Stryker, infantry and armored BCT are supported by an MATP. Other brigades, such as the combat aviation brigade, are supported by an ATHP. In either case, a section of the BSB's distribution company supply platoon is responsible for operating the ammunition support area. These sections provide munitions support to battalions and units operating in the brigade area. The DSB SPO munitions section coordinates with the ESC and division G-4 for corps elements in the brigade area to obtain ammunition from an ammunition support area operating in the brigade support area.

BATTALION-LEVEL DISTRIBUTION

B-109. BSB FSCs are the forward most units responsible for the distribution and supply of ammunition to maneuver units. FSC commanders coordinate with the supported battalion S-4 and executive officer and the BSB SPO. The distribution platoon in the FSC of a maneuver battalion provides direct transportation support for munitions to the supported battalion. The distribution platoon is responsible for transporting munitions from the BSB's distribution company supply platoon ammunition section to the supported battalion and

supported units as appropriate. A CSSB or DSSB can, on order, supply a battalion using throughput distribution.

SECTION IV – MAINTAINING THE FORCE

B-110. The Army's maintenance system ensures that friendly forces remain operationally ready by repairing and returning weapon systems and equipment to battle as soon as possible. Maintenance enables commanders to maintain the tempo of operations.

B-111. Army maintenance is divided into field level and sustainment level. Field-level maintenance is conducted as close to the front as possible with the intent of repairing and returning equipment to the unit as quickly as possible. Sustainment-level maintenance is for equipment requiring extensive repair work, typically off the platform. In most instances, the equipment repaired at the sustainment level is returned to the supply system. Units turning in equipment for sustainment-level maintenance remove the equipment from their property books and request new equipment. The maintainers for the primary weapons systems, tanks, artillery, Stryker combat systems, and armored personnel carriers are all in the FSC. There are no higher levels of maintenance available to pass equipment back beyond the maintenance collection point. The Army has a small number of maintenance surge teams who are normally attached to support maintenance companies at EAB. These teams provide targeted reinforcement but are not a separate level of maintenance.

B-112. Sustainment-level maintenance is normally conducted outside the theater. USAMC can project a variety of small teams and forward repair activities into a theater to perform limited sustainment maintenance. If they are available, they can work on some equipment that is coded for sustainment-level maintenance. However, this equipment is not typically returned to the losing unit. The equipment is placed back into the supply system. See ATP 4-33 for more information on these USAMC formations.

B-113. The field army and corps have only the minimum units required to maintain headquarters equipment. The staff's primary maintenance-related duties include monitoring subordinate unit requirements, facilitating resource procurement and delivery, and identifying maintenance impacts on current and future operations.

PLANNING MAINTENANCE SUPPORT

B-114. The staff within the ESC DMC forecasts maintenance workloads for future operations. It also organizes, coordinates, and controls ESC maintenance resources to ensure timely support.

DISTRIBUTION INTEGRATION BRANCH

B-115. DIB personnel assigned to the ESC SPO section prepare support operations estimates and external mission support portions of corps service support orders and ESC OPLANs or OPORDs. Using sustainment preparation of the OE products, they plan in conjunction with the maintenance section how ESC maintenance units support corps forces in accordance with the corps commander's intent and priorities. Based on coordination with the corps G-3, they synchronize maintenance support with tactical requirements. They update plans based on estimates and recommendations from subordinate unit maintenance section staffs. As required, they plan how to allocate maintenance resources to support regeneration.

MAINTENANCE SECTION

B-116. The ESC SPO maintenance section establishes maintenance support policies, plans, and procedures for the maintenance support provided by subordinate maintenance units. This responsibility includes development of plans and procedures to meet class IX repair parts requirements.

Maintenance Support Branch Chief

B-117. The maintenance section chief serves as the maintenance staff advisor to the ESC SPO. The section chief exercises staff supervision over ESC maintenance support operations. The maintenance section chief—

- Recommends maintenance support policies, plans, and procedures for external maintenance support.
- Provides recommendations on maintenance unit allocations and priorities to the ESC SPO.

- Provides policy and procedural guidance to DMC maintenance-related commodity divisions.
- Provides advice to the ESC G-3 on maintenance unit troop listings.
- Establishes maintenance data collection and staff analysis procedures.
- Assesses repair parts stockage requirements (authorized stockage list range and depth).
- Establishes maintenance procedures.
- Helps develop corps policy on cannibalization and controlled exchange.
- Develops a salvage policy.

Maintenance Section Staff

B-118. To support the corps force, maintenance support staff need to understand maintenance requirements. This includes the type of equipment requiring repair and the current capability of subordinate unit maintenance forces. The staff recommends how to tailor corps maintenance organizations to offset deficiencies. It uses GCSS-Army maintenance reports to monitor projected maintenance of critical equipment.

B-119. Maintenance support branch personnel perform the deployment planning tasks listed in table B-8. Other staff areas of responsibility include—

- Developing maintenance portions of service support plans and orders.
- Recommending maintenance priorities.
- Establishing repair time guidelines.

B-120. Maintenance section personnel continually coordinate with transportation branch personnel on the recovery and evacuation of unserviceable items to maintenance collection points. Maintenance section personnel continually coordinate with their staff counterparts in the DMC relative to maintenance work loads, repair time limits, and repair priorities.

Table B-8. Maintenance deployment planning

Pre-Deployment
Provide input to the maintenance portions of corps sustainment plans and orders.
Recommend serviceability standards for repairs.
Compile force equipment density data (including substitute items) using supported unit MTOEs.
Determine the requirements for maintenance units based on the materiel density across the corps.
Monitor the equipment readiness status of subordinate units selected to deploy.
Monitor the availability of replacement items in subordinate maintenance units.
Assess the maintenance workload requirements of units to be supported.
Develop priorities for maintenance repairs.
Establish maintenance support priorities.
Determine special maintenance requirements such as missile systems, MI systems, & TMDE.
Deployment
Provide technical advice and assistance to subordinate deploying maintenance units.
Ensure all deploying maintenance units possess their full authorization of equipment and supplies.
Coordinate with ESC G-3 staff on location and facility requirements for maintenance units.
Staging
Coordinate the processing of incoming maintenance units.

ESC	expeditionary sustainment command	MTOE	modified table of organization and equipment
G-3	assistant chief of staff, operations	TMDE	test, measurement, and diagnostic equipment
MI	military intelligence		

B-121. Maintenance section personnel assigned to the SPO section ensure mission-critical items are maintained to meet current and future operational requirements. The maintenance section chief monitors the readiness status of command-controlled items. The maintenance section chief recommends allocations and criteria for controlled items.

SUSTAINMENT PREPARATION OF THE OPERATIONAL ENVIRONMENT

B-122. Prior to deployment, ESC maintenance personnel ensure that ESC G-2 and G-3 staff are aware of maintenance priority intelligence requirements. They coordinate with the G-2 and G-3 staff relative to IPB products which impact on planning, execution, and protection of maintenance support operations.

B-123. Maintenance personnel use IPB area evaluation products that describe the AO and friendly forces to assess maintenance work loads and recommend the number and placement of maintenance units on time phased deployment lists. They use IPB threat evaluation and threat integration products to help plan how to employ maintenance organizations.

ASSESSMENT, RECOVERY, AND EVACUATION SUPPORT

B-124. When opposing forces possess parity in the number and destructive capability of weapon systems, the side which can assess, recover, evacuate, repair, and return disabled weapon systems to battle the fastest gains a decided edge. The corps' ability to perform these maintenance functions could become a decisive combat multiplier.

BATTLEFIELD DAMAGE ASSESSMENT AND REPAIR

B-125. Battlefield damage assessment and repair, also known as BDAR, includes any expedient action that returns a damaged item or assembly to a mission capable or limited mission capable condition. Repairs are often temporary. They may not restore full system capability.

B-126. The objective is to return disabled combat equipment for support of a specific combat mission or to enable self-recovery. Maintenance personnel assess whether repairing the disabled item significantly impacts the outcome of a combat mission. Operator, crew, and maintainers perform battlefield damage assessment and repair by—

- Using shortcuts in parts removal or installation.
- Fabricating parts.
- Installing components from other vehicles.
- Bypassing noncritical components.
- Cannibalizing equipment.
- Using substitute fuels, fluids, or lubricants.

B-127. Battlefield damage assessment and repair manuals have been developed for major weapon systems. They are issued with the technical manual set for the weapon system.

CANNIBALIZATION AND CONTROLLED EXCHANGE

B-128. Battalion commanders (lieutenant colonel level) determine whether to utilize battle damage assessment and repair on battle damaged equipment when standard maintenance repairs are not practical. The commander may also approve the use of controlled exchange or cannibalization to meet repair parts requirements. Cannibalization is only utilized during combat operations. Commanders must clearly communicate the authority to use battlefield damage assessment and repair, controlled exchange, and cannibalization in the OPORD.

B-129. Cannibalization is the authorized removal of components from materiel designated for disposal. Extensively damaged equipment that is not economically repairable is usually designated as salvage. In spite of the damage, many serviceable parts and components may be recoverable. Controlled exchange is the removal of serviceable components from unserviceable but economically repairable equipment for immediate reuse in restoring another like item of equipment to combat serviceable condition. Controlled exchange requires the owning battalion commander’s authorization in accordance with AR 750-1.

B-130. Table B-9 lists options to offset maintenance capability shortfalls. AR 710-2 prescribes reparable management procedures.

Table B-9. Offsetting maintenance shortfalls

Major Component Shortages
Implement selected piece part repair.
Search for substitution items.
Establish collection and classification operations.
Authorize controlled exchange.
Delegate cannibalization to lower levels.
Move critical components by air.
Maintenance Personnel Availability
Cross-level workloads between units.
Task other maintenance units to provide contact teams.
Seek host-nation support.
Movement (Class IX or Equipment)
Cross-level transportation assets.
Fix forward to reduce evacuation requirements.
Divert assets from less critical missions.
Seek assistance from supported units.
Increase throughput.
Request host-nation support.

RECOVERY AND EVACUATION

B-131. Owning units recover unserviceable equipment to the maintenance collection point established by their supporting FSC or SMC. Recovery operations are often centrally managed at the battalion level. Based on mission variables, division and corps maintenance units provide recovery assistance on an area basis to units lacking recovery capability.

B-132. Aircraft recovery by air involves attaching the airframe to airlift recovery equipment, connecting it to the lifting helicopter, and flying it to a maintenance collection point. Aircraft which cannot be repaired and flown out under their own power may need to be disassembled or modified for surface recovery. Aviation units use the organic lift capability of their aviation unit maintenance element. The aviation brigade tactical operations center has overall control of aircraft recovery.

B-133. Evacuation begins at the maintenance collection point. Evacuation needs to be coordinated among maintenance, supply, and transportation elements. As appropriate, the DSB SPO section and the DMC coordinate transportation required to support evacuation operations.

B-134. The ESC may evacuate items not repairable at the field maintenance level to sustainment maintenance forward repair activities units in the joint security area if available.

MANAGING MAINTENANCE OPERATIONS

B-135. The ESC SPO oversees corps maintenance operations. The SPO uses the maintenance section and the materiel management branch to synchronize parts and repair efforts to restore combat power. Maintenance Section

B-136. The ESC SPO manages maintenance operations in the corps. The maintenance section in the DMC provides technical staff control and supervision through its interface with subordinate sustainment brigade maintenance staffs and the DMC's commodity divisions. ESC maintenance management officers implement

priorities established for maintenance of critical weapon systems. They monitor maintenance status of command-controlled items. Maintenance personnel monitor equipment status reports and data on Class IX stocks. As necessary, they redirect the maintenance efforts of subordinate brigades. They indirectly manage maintenance by—

- Providing policy and procedural guidance to maintenance managers in conjunction with the corps G-4.
- Coordinating the activities of maintenance managers.
- Recommending changes in mission assignment and allocation of maintenance surge teams.
- Recommending redistribution of maintenance support capability in response to changing tactical requirements.
- Coordinating with the transportation branch to prioritize critical class IX and maintenance-related class II movements in the corps movement program.
- Recommending changes in evacuation policies.
- Developing instructions for maintenance units relative to evacuation of unserviceable equipment requiring sustainment-level maintenance.
- Developing instructions on evacuation of unserviceable materiel and scrap.
- Authorizing repair of specific end items.
- Monitoring backlogs of critical items awaiting repair.
- Recommending tailoring of units and the forming of like sections from several units for high-priority maintenance to support regeneration operations.
- Recommending augmentation for maintenance units.
- Coordinating the evacuation of unserviceable end items, assemblies, and components to rear maintenance units.

DMC MAINTENANCE MANAGEMENT MISSION

B-137. The DMC provides routine day-to-day maintenance management, following guidance and direction furnished by the ESC SPO. ESC maintenance and materiel branch personnel focus maintenance and repair parts resources on the repair and return of critical weapon systems.

B-138. Personnel assigned to the DMC commodity divisions implement the policies and plans of the ESC SPO. Depending on branch assignment, personnel—

- Collect and analyze maintenance and materiel status data.
- Analyze supply and maintenance support operations and apply corrective actions directed by the ESC SPO or subordinate branch chief.
- Coordinate and perform liaison functions with DSBs, BSBs, and forward repair activities.
- Maintain liaison with counterparts at supported non-division maintenance units and supply support activities.
- Direct the storage and distribution of stocks.
- Identify items which require intensive management.
- Review authorized stockage lists received from corps maintenance units.
- Take action to satisfy authorized stockage list zero balance lines.
- Monitor the materiel readiness status of the command.
- Forecast maintenance requirements.
- Establish and coordinate repair priorities.
- Coordinate maintenance support to the corps.
- Initiate actions to meet stockage objectives within guidelines from the corps G-4.
- Perform inventory management functions for commodity items stored and distributed by applicable units.
- Evaluate on-hand supply assets to determine if they are sufficient to accomplish the corps' support mission.
- Maintain the stock record account.

- Cross-level workloads and resources.
- Coordinate movement requirements with the movement control battalion as required.
- Inform supply units of in-transit assets.

GROUND MAINTENANCE SUPPORT ORGANIZATIONS

B-139. Figure B-3 depicts ground maintenance organizations on a notional battlefield. Maintenance organizations include—

- DSSBs (with organic SMC and composite truck company).
- SMCs.
- Field maintenance companies.
- FSC maintenance platoons.
- FSC field maintenance teams.
- Maintenance surge teams.

For more information on these units refer to ATP 4-33 and FM 4-0.

B-140. Anticipating the need to evacuate significant numbers of non-mission capable equipment, the ESC commander may resource each DSB with a composite truck company to provide the heavy equipment transport support required. This composite truck company also provides vital support to class III and class V operations from these two forward nodes.

B-141. USAMC may position sustainment maintenance forward repair activities in the joint security area to reduce the turn-around time for systems and components not repairable at the field level. USAMC may also provide an aviation forward repair activity to perform sustainment maintenance activities on air and missile items.

B-142. Maintenance surge teams deploy into a theater to provide additional EAB maintenance capacity. Teams can be attached to a corps headquarters with an attached armor BCT or Stryker BCT or to a division with armor BCT or Stryker BCTs. The maintenance surge team can be attached to any company-sized unit but will normally be attached to the SMC in a DSSB or CSSB. The maintenance surge team can either return the equipment it fixes back into stock or return it to the original owning unit based on the corps commander's direction. See ATP 4-31/MCRP 3-40E.1 for additional information.

REPAIR PARTS AND REPLACEMENT ITEMS DISTRIBUTION SYSTEMS

B-143. Repair parts and replacement items are essential to returning weapon systems and damaged or inoperable major items to battle. To reduce the inventory of lines of repair parts, a large percent of class IX and maintenance-related class II items are flown from CONUS. Army aviation assets routinely move high-cost, low-density critical repair parts as a part of the intratheater distribution system.

B-144. Class IX support for all ground and aviation maintenance comes through existing supply channels. Units order required class IX through GCSS-Army or Aircraft Notebook, also known as ACN. Sustainment units at echelon conduct distribution operations to deliver required parts to fulfill these requisitions.

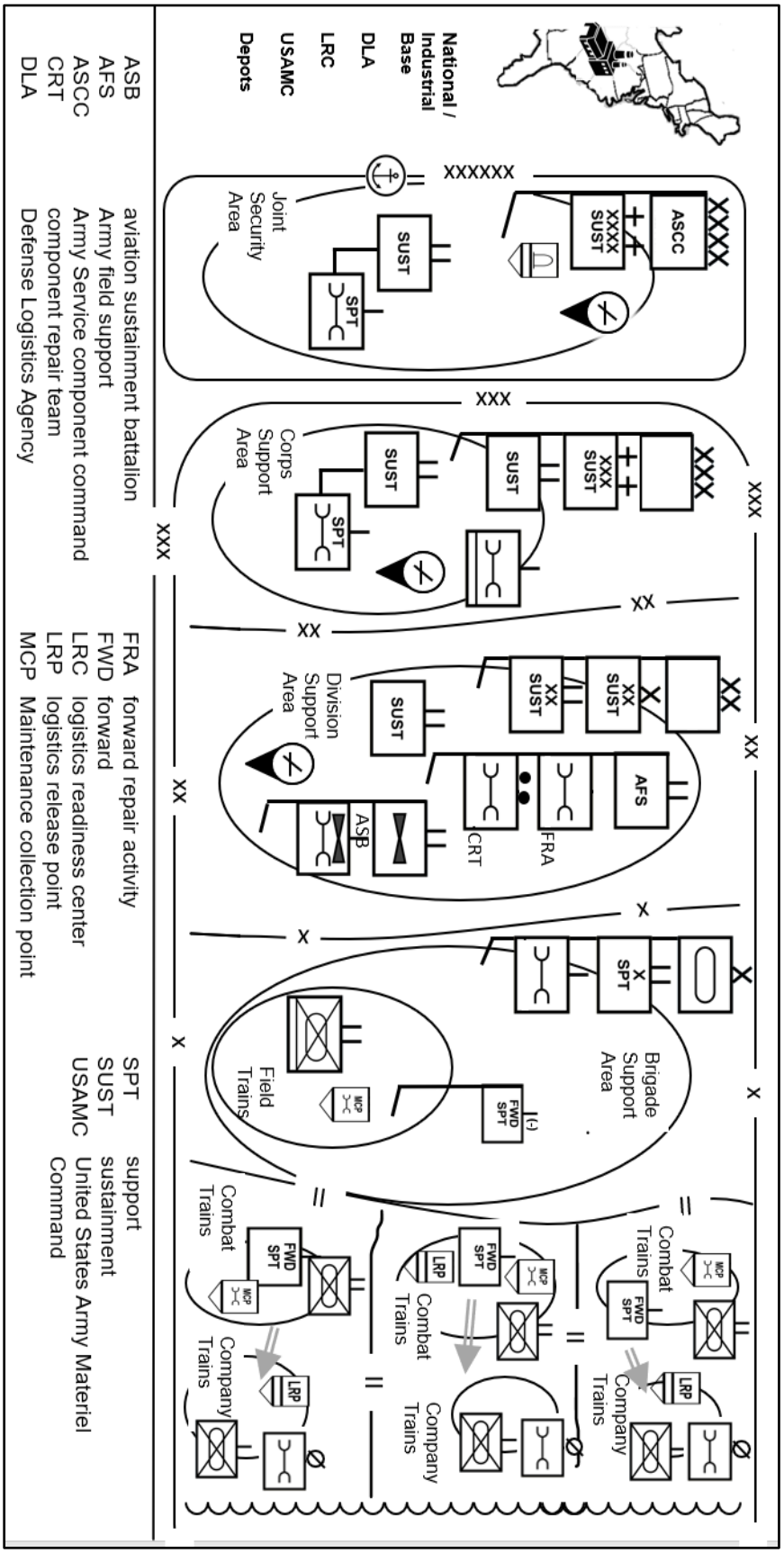


Figure B-3. Notional theater-wide ground maintenance organizations

SECTION V – HEALTH SERVICE SUPPORT TO THE FORCE

B-145. The bulk of EAB HSS assets reside in the corps. HSS encompasses four medical functions: direct patient care, which includes medical treatment (organic and area support); hospitalization; MEDEVAC (including medical regulating); and MEDLOG (including blood management).

HEALTH SERVICE SUPPORT IN THE CORPS

B-146. HSS in the corps includes organic Role 1 and EAB Role 2 medical units. It also includes EAB Role 3 direct patient care organizations, MEDEVAC units, and MEDLOG and blood support units. This section briefly describes how HSS operational medicine formations are arrayed within the corps. It goes on to describes how each HSS medical function is conducted in support of the corps as it pertains to medical treatment, MEDEVAC of patients from the battlefield, and required Class VIII supplies, equipment, and services; and blood support necessary to sustain these operations.

DIRECT PATIENT CARE

B-147. Direct patient care consists of the medical treatment (organic and area support, to include the treatment of CBRN patients) and hospitalization medical functions. Although these medical functions are aligned with specific tasks, the execution of the individual functions are interrelated, interconnected, and independent. Close coordination and integration from medical command and control elements and surgeons at echelon are necessary to facilitate the effective and efficient provision of the entire HSS. Refer to FM 4-02, ATP 4-02.6, ATP 4-02.10, and ATP 4-02.25 for a more detailed description of direct patient care and the units responsible for executing it.

MEDICAL EVACUATION

B-148. Intratheater MEDEVAC includes evacuation from point of injury or wounding to an MTF, enables the cross leveling of patients within theater hospitals, and transports patients being evacuated out of theater to staging facilities prior to departure. Refer to ATP 4-02.2 for a more detailed description of the Army MEDEVAC system and the units responsible for executing it.

MEDICAL LOGISTICS

B-149. The Army's MEDLOG system (including blood management) is an integral part of HSS that provides intensive management of medical products and services. The delivery of a MEDLOG capability that anticipates the needs of the customer and that is tailored to continuously provide end-to-end sustainment is also key to the success of the HSS mission. Refer to ATP 4-02.1 for a more detailed description of the Army MEDLOG system and the units responsible for executing it.

PLANNING HEALTH SERVICE SUPPORT

B-150. The six principles of the AHS (flexibility, conformity, mobility, continuity, proximity, and control) are the (foundation-enduring) fundamentals upon which the delivery of HSS is founded. The principles guide medical planners in developing OPLANs that are effective, efficient, flexible, and executable. The AHS principles apply across all medical functions, including the four medical functions within HSS, and are coordinated, synchronized, and integrated through medical command and control and medical control channels.

B-151. The HSS plan in Annex F (Sustainment) Appendix 3 (HSS) integrates the delivery of healthcare into the operational commander's scheme of maneuver. HSS principles are explained in detail in FM 4-02.

B-152. Commanders and medical planners should apply the following Army medical operational planning factors for establishing HSS priorities in support of operations:

- Be there-maintain a medical presence with the Soldier.
- Maintain the health of the command.
- Save lives.

- Clear the battlefield of casualties.
- Provide appropriate medical care.
- Ensure early RTD.
- Facilitate joint health services capability integration.

B-153. These medical operational planning factors are established to guide commanders and medical planners in designing HSS for the tactical commander. Refer to ATP 4-02.55 for more information on HSS planning.

SAMPLE CORPS HEALTH SERVICE SUPPORT BATTLEFIELD EMPLOYMENT

B-154. Medical commanders supporting the corps provide appropriate medical command and control of HSS while the corps surgeon plays a key role in providing medical, technical, and clinical control on behalf of the corps commander in planning HSS. Figure B-4 on page B-32 depicts HSS at each echelon within the corps and the types of medical units and capabilities (assigned and proposed) within each medical function and role of care.

Direct Patient Care (Medical Treatment and Hospitalization) Within the Corps

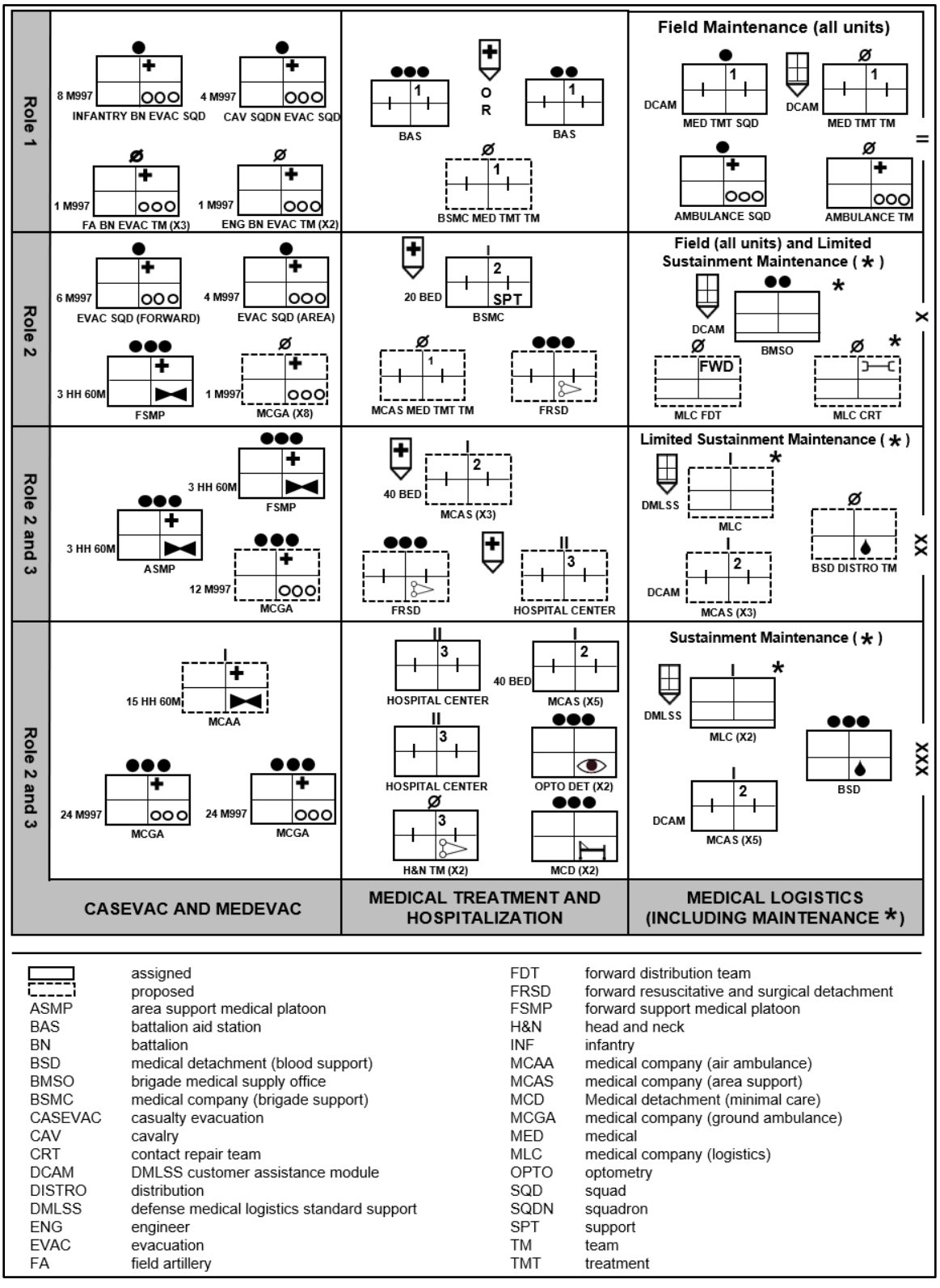
B-155. Direct patient care occurs at all echelons within the corps. Roles 1 and 2 are normally associated with brigade and below, but units such as the division and corps headquarters have medical treatment teams and sections assigned that are considered Role 1. In the corps rear area there are EAB Role 2 MCAS, Role 3 hospitals, FRSD, and optometry detachments. Even in the corps, casualty care begins with nonmedical personnel treating a casualty by applying tactical combat casualty care (also called TCCC) Tier 1 and 2 skills at point of injury. Direct patient care begins when a combat medic or medical provider treats the patient by utilizing tactical combat casualty care Tier 3 or 4 skills. The patient then follows the continuum of care through the corps. At each role of care, the patient may receive damage control resuscitation and surgery (beginning at Role 2 with an attached FRSD), emergency medical treatment, and definitive care.

Medical Evacuation Within the Corps

B-156. A Soldier is first evacuated as a casualty from point of injury using casualty evacuation (also called CASEVAC). Once medical personnel treat a casualty, the casualty becomes a patient and is medically evacuated through the continuum of care all the way to the role of care supporting the corps support area, if necessary.

Medical Logistics (Including Blood Management) Within the Corps

B-157. The MEDLOG function within the corps starts with the consumption of class VIII and blood from the point of injury through the resupply process all the way to the corps support area and the distribution flow back to the end user. The medical equipment maintenance system embedded within the corps identifies non-mission capable medical equipment through the corps medical maintenance system and repairs or replaces that equipment at the end user's location.



	assigned
	proposed
ASMP	area support medical platoon
BAS	battalion aid station
BN	battalion
BSD	medical detachment (blood support)
BMSO	brigade medical supply office
BSMC	medical company (brigade support)
CASEVAC	casualty evacuation
CAV	cavalry
CRT	contact repair team
DCAM	DMLSS customer assistance module
DISTRO	distribution
DMLSS	defense medical logistics standard support
ENG	engineer
EVAC	evacuation
FA	field artillery
FDT	forward distribution team
FRSD	forward resuscitative and surgical detachment
FSMP	forward support medical platoon
H&N	head and neck
INF	infantry
MCAA	medical company (air ambulance)
MCAS	medical company (area support)
MCD	Medical detachment (minimal care)
MCGA	medical company (ground ambulance)
MED	medical
MLC	medical company (logistics)
OPTO	optometry
SQD	squad
SQDN	squadron
SPT	support
TM	team
TMT	treatment

Figure B-4. Health service support at echelon within the corps

DIRECT PATIENT CARE

B-158. Direct patient care in the corps includes the medical treatment and hospitalization medical functions. Role 1 medical treatment is provided by medical platoons, sections, and teams assigned at all corps echelons. Role 2 medical care provides greater resuscitative capability than is available at Role 1 and is rendered by the BSMC in the BSB or by the MCAS, which is an EAB asset. The hospitalization medical function is centered on the Role 3 hospital and the surgical, medical, and medical holding detachments and teams that augment it. For additional information on direct patient care, refer to FM 4-02, ATP 4-02.4, ATP 4-02.6, ATP 4-02.10, and ATP 4-02.25.

DIRECT PATIENT CARE ORGANIZATIONS

B-159. Direct patient care within the corps can be located in the following echelons:

- Brigade-level care is typically provided by a Role 2 hospital. Other medical elements include:
  - Medical treatment squad (area).
  - Area treatment squad.
  - Patient holding squad of the BSMC.
  - Medical treatment team from the MCAS.
  - FRSD may be collocated with the BSMC.
- Division-level care is typically provided by Role 2 or Role 3 hospitals. Other medical elements include:
  - EAB MCAS.
  - Elements of a Role 3 hospital.
  - FRSD when not forward deployed with a Role 2.
- Corps-level care is typically provided by Role 2 and Role 3 hospitals. Other medical elements include:
  - EAB MCAS.
  - Role 3 hospital.
  - FRSD when not forward deployed with a Role 2.
  - Head and neck teams.
  - Minimal care detachments.
  - Optometry detachments.

SAMPLE DIRECT PATIENT CARE BATTLEFIELD EMPLOYMENT

B-160. Direct patient care within the corps starts at point of injury and ends with the patient either being RTD somewhere along the continuum of care or being medically evacuated out of the corps AO. Direct Patient Care at Role 1

B-161. At Role 1, patients are triaged and receive emergency medical treatment from tactical combat casualty care Tier 3 skills (combat medics) or tactical combat casualty care Tier 4 skills (medical providers) assigned to medical platoons, sections, or teams. Once a patient is stabilized an evacuation determination is made and the patient is then prepared for evacuation to Role 2.

Direct Patient Care at Role 2

B-162. Role 2 care provides a greater capability to resuscitate trauma patients than is available at Role 1. Patients are received from the Role 1 where they are triaged, examined, and their wounds and general medical condition are evaluated to determine their treatment and evacuation precedence. Medical treatment including trauma management and beginning resuscitation is continued. If necessary, additional emergency measures are instituted, but they do not exceed measures dictated by immediate necessities. The BSMC patient holding squad performs direct patient care for up to 20 patients, while the MCAS can hold and treat up to 40 patients. Those patients who can RTD within 72 hours are held for treatment in the patient holding squad. A medical

treatment team from a supporting EAB MCAS may be collocated with a BSMC if required. An FRSD may also be collocated with the BSMC to provide damage control resuscitation or surgery.

DIRECT PATIENT CARE AT DIVISION LEVEL (ROLES 1 THROUGH 3)

B-163. Direct patient care at the division is mainly focused on Roles 1 and 2. A Role 3 may be attached to the division depending on mission variables.

B-164. **Role 1**. In the division rear area, the Role 1 is mainly in battalion-sized organizations, sustainment and maneuver support headquarters throughout the division support area, and within the division headquarters. Role 1 performs triage and emergency medical treatment to patients. A determination is made if the patient will be RTD or MEDEVAC to the supporting Role 2 medical company.

B-165. **Role 2**. In the division rear area, EAB Role 2 MCAS are proposed according to their basis of allocation. The MCAS is task-organized similar to the BSMC Role 2 minus the BMSO and physical therapy sections. It provides Role 1 care to units without assigned medical assets and Role 2 care on an area basis within the corps rear area. On order, it may provide medical treatment and evacuation capabilities to the division and, depending on mission variables, the BCT.

B-166. **Role 3**. This role of care expands the support provided at Role 2. In the Role 3 hospital supporting the division, the patient is treated in a hospital staffed and equipped to provide care to all categories of patients, to include resuscitation, initial wound surgery, damage control surgery, and postoperative treatment. Patients who are unable to tolerate and survive movement over long distances receive surgical care in a hospital as close to the supported unit as the tactical situation allows.

B-167. Role 3 includes provisions for—

- Providing care for all categories of patients in an MTF with the proper staff and equipment.
- Providing support on an area basis to units without organic medical assets.

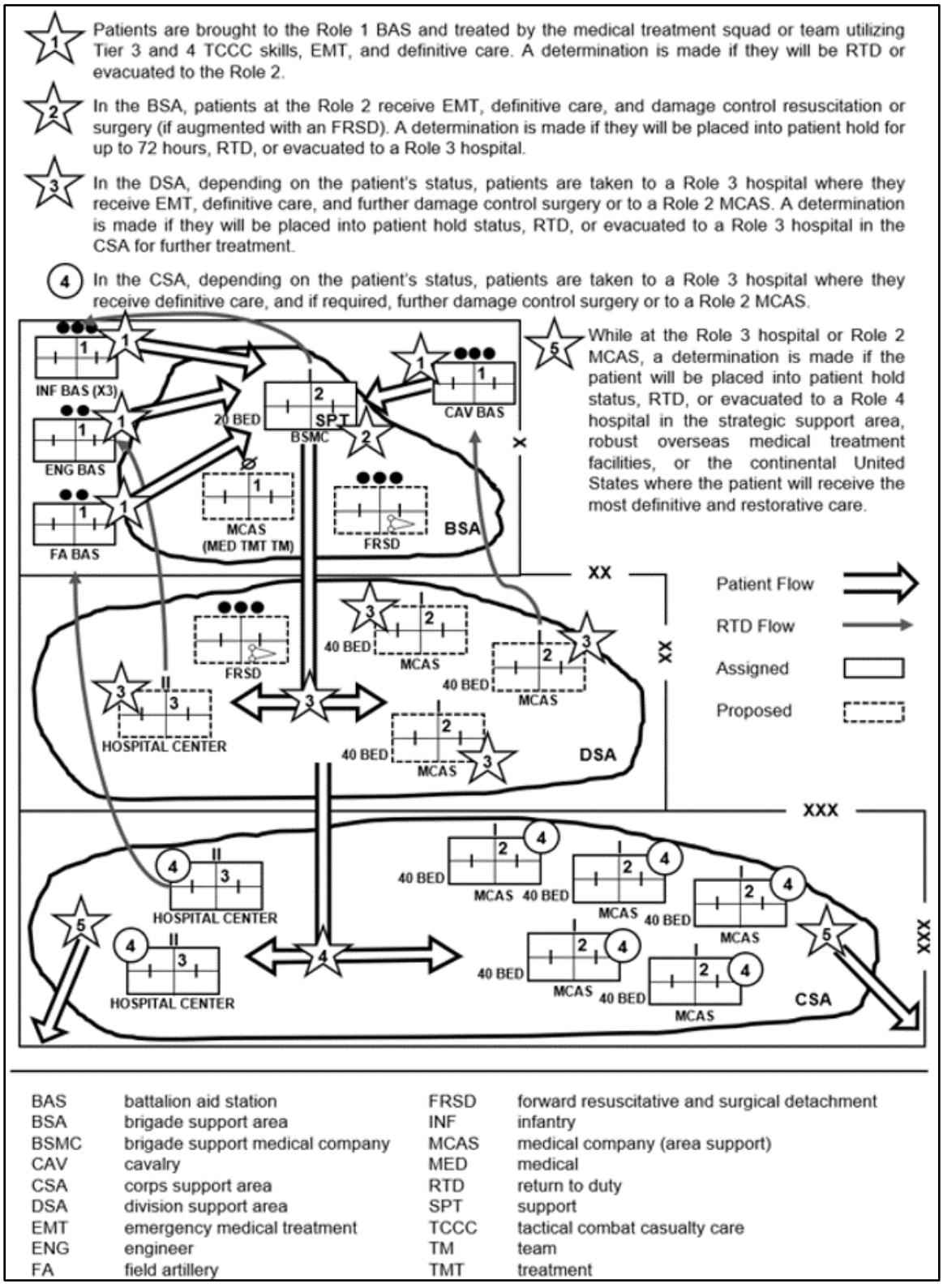
DIRECT PATIENT CARE AT CORPS LEVEL (ROLES 2 AND 3)

B-168. Direct patient care at the corps is mainly focused on the Role 3 hospital. Role 2 capabilities still play a part and are scattered throughout the corps support area to provide medical support. The Role 1 is mainly in battalion-sized organizations, brigade-level sustainment and maneuver support headquarters throughout the corps support area, and within the division and corps headquarters.

B-169. **Role 2**. In the corps rear area, EAB Role 2 MCAS are recommended according to their basis of allocation to provide Role 1 care to units without assigned medical assets and Role 2 care on an area basis within the corps rear area. On order, they may provide medical treatment and evacuation capabilities to the division.

B-170. **Role 3** expands the support provided at Role 2. In the Role 3 hospital supporting the corps, the patient is treated in a hospital fully staffed and equipped to provide care to all categories of patients to include resuscitation, initial wound surgery, damage control surgery, and postoperative treatment. Patients who are unable to tolerate and survive movement over long distances receive surgical care in a Role 3 hospital as close to the supported unit as the tactical situation allows. The Role 3 hospital may also provide support on an area basis to units without organic medical assets.

B-171. Figure B-5 depicts an operational overview of how direct patient care is arrayed within the corps and then subsequently breaks down at echelon to illustrate patient movement through the corps from point of injury to the corps support area.



BAS	battalion aid station	FRSD	forward resuscitative and surgical detachment
BSA	brigade support area	INF	infantry
BSMC	brigade support medical company	MCAS	medical company (area support)
CAV	cavalry	MED	medical
CSA	corps support area	RTD	return to duty
DSA	division support area	SPT	support
EMT	emergency medical treatment	TCCC	tactical combat casualty care
ENG	engineer	TM	team
FA	field artillery	TMT	treatment

Figure B-5. Direct patient care within the corps

MEDICAL EVACUATION (INCLUDING MEDICAL REGULATING)

B-172. MEDEVAC is provided on a DS and area support basis. The provision of en route care on medically equipped vehicles or aircraft enhances the patient's potential for survival and recovery and may reduce long-term disability. For more information on MEDEVAC, refer to ATP 4-02.2. MEDEVAC supports the theater evacuation policy and is an integral part of medical regulating.

MEDICAL EVACUATION ORGANIZATIONS

B-173. Casualty evacuation and MEDEVAC within the corps can be located at the following echelons:

- Evacuation at the brigade level is normally conducted by the assigned BSMC evacuation platoon. The evacuation platoon may consist of elements from the following:
  - Evacuation squad (forward).
  - Evacuation squad (area).
  - Attached forward support medical platoon (also called FSMP) from the medical company (air ambulance).
  - Four ambulance squads from the supporting EAB medical company (ground ambulance).
- Evacuation at the division level is conducted by an ambulance platoon from the supporting medical company (ground ambulance), MCAS ambulance platoons, and two air ambulance platoons from the medical company (air ambulance).
- Evacuation at the corps level is conducted by ambulances from the EAB medical company (ground ambulance) and MCAS ambulance platoons. They may also be supported by air ambulances from the medical company (air ambulance) if attached.

SAMPLE MEDICAL EVACUATION BATTLEFIELD EMPLOYMENT

B-174. The MEDEVAC function within the corps starts at point of injury and ends with the patient either being RTD somewhere along the continuum of care or being medically evacuated out of the corps AO. Figure B-6 depicts an operational overview of how the MEDEVAC function is arrayed within the corps and at echelon. It shows a patient's movement through the corps AO from point of injury to the corps support area.

MEDICAL EVACUATION SUPPORT FROM ROLE 1 TO ROLE 2

B-175. Evacuation from the Role 1 is normally provided by the ground ambulances of the BSMC evacuation platoon and air ambulances from the medical company (air ambulance). The evacuation platoon's evacuation squad (forward) should collocate these ambulances at the Role 1 and utilize an ambulance shuttle system incorporating ambulance exchange points to conduct ground MEDEVAC from Role 1 to Role 2. A forward support medical platoon from the medical company (air ambulance) may be attached to the brigade and be collocated with the Role 2 to perform area support aeromedical evacuation in the brigade AO. Ground ambulances from the evacuation squad (area) and collocated EAB ambulances from the supporting medical company (ground ambulance) provide ground MEDEVAC support on an area basis to other units in the brigade AO as required.

Medical Evacuation Support from Role 2 to Role 3 in the Division

B-176. Evacuation from the brigade support area to the division support area is provided by ground ambulances from the supporting EAB medical company (ground ambulance), MCAS, or from air ambulances from the medical company (air ambulance) area support medical platoon or forward support medical platoon. The medical companies (ground ambulance) provide support to the BSMCs and medical elements in EAB. They usually evacuate only those patients who will not RTD within 72 hours. The division surgeon section coordinates evacuation.

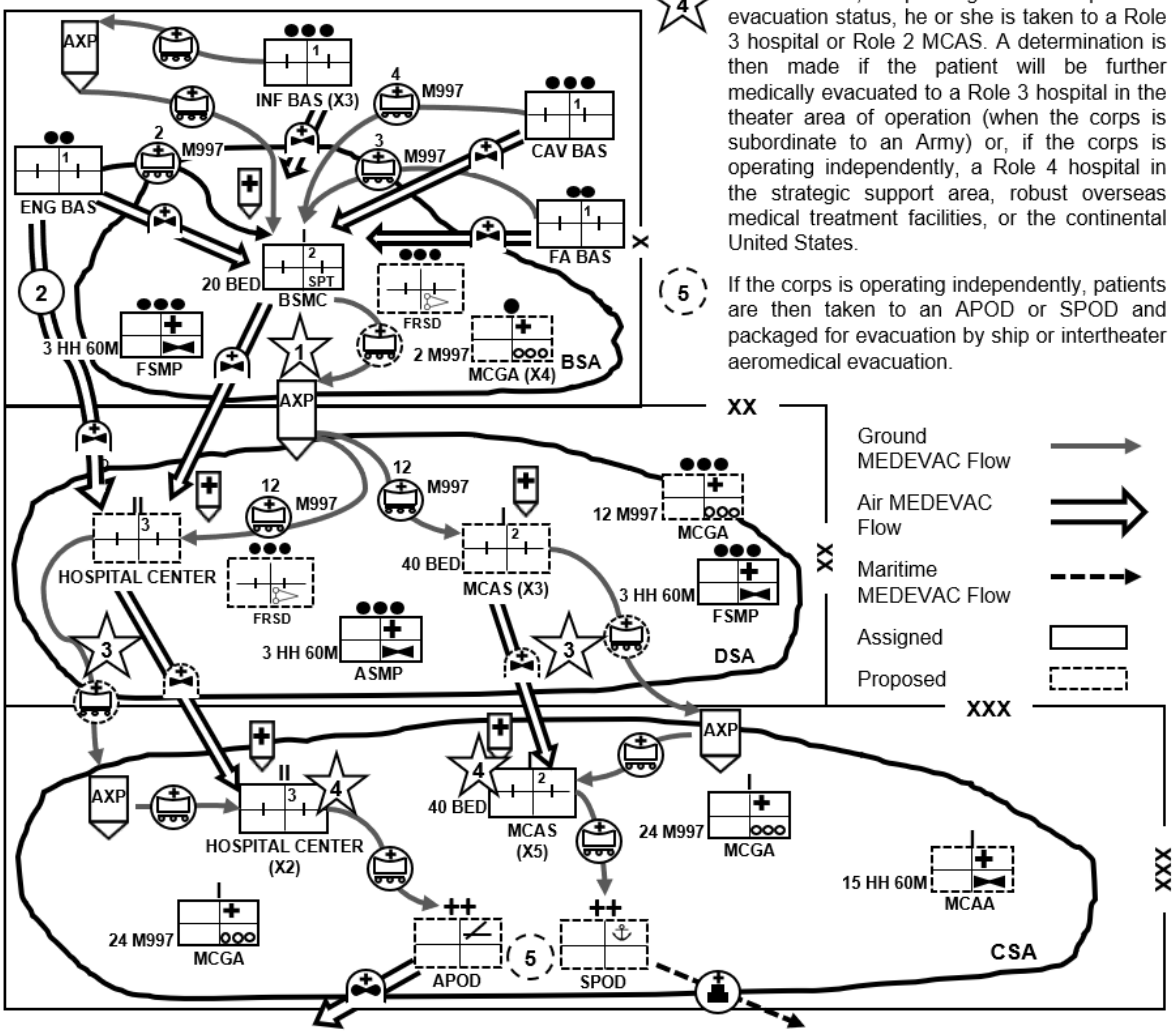
1 Patients are received at the Role 2 via CASEVAC, medical ground ambulance, or aeromedical evacuation. At the Role 2 a determination is made if they will be further medically evacuated (ground or air) to a Role 3 hospital. Patients are evacuated utilizing aeromedical evacuation or EAB ambulances collocated at the Role 2. If by ground MEDEVAC, an ambulance shuttle system is used where a patient transfer is conducted between EAB ambulances.

2 It may be necessary to skip (bypass) roles of care when a patient's condition would benefit from going directly to a Role 3 hospital if the tactical situation permits.

3 In the DSA, depending on the patient's evacuation status, he or she is taken to a Role 3 hospital or Role 2 MCAS. A determination is then made if the patient will be further medically evacuated to a Role 3 hospital or Role 2 MCAS using air and ground ambulances from the CSA.

4 In the CSA, depending on the patient's evacuation status, he or she is taken to a Role 3 hospital or Role 2 MCAS. A determination is then made if the patient will be further medically evacuated to a Role 3 hospital in the theater area of operation (when the corps is subordinate to an Army) or, if the corps is operating independently, a Role 4 hospital in the strategic support area, robust overseas medical treatment facilities, or the continental United States.

5 If the corps is operating independently, patients are then taken to an APOD or SPOD and packaged for evacuation by ship or intertheater aeromedical evacuation.



APOD	aerial port of debarkation	FA	field artillery
ASMP	area support medical platoon	FRSD	forward resuscitative and surgical detachment
AXP	ambulance exchange point	FSMP	forward support medical platoon
BAS	battalion aid station	INF	infantry
BSA	brigade support area	MCAA	medical company (air ambulance)
BSMC	brigade support medical company	MCAS	medical company (area support)
CASEVAC	casualty evacuation	MCGA	medical company (ground ambulance)
CAV	cavalry	MEDEVAC	medical evacuation
CSA	corps support area	MEDLOG	medical logistics
DSA	division support area	SPOD	sea port of debarkation
EAB	echelon above brigade	SPT	support
ENG	engineer	TM	team

Figure B-6. The medical evacuation function within the corps

Medical Evacuation Support from Corps to Army

B-177. Evacuation from the corps support area depends on whether the corps is operating independently. If so, the corps surgeon section coordinates with the supporting MEDBDE (SPT) S-3 patient movement branch to MEDEVAC patients to the air or seaport of embarkation for evacuation out of theater. The corps provides MEDEVAC assets to the port of embarkation from units operating in the corps support area. These supporting EAB MEDEVAC assets come from ground ambulances assigned to the medical company (ground ambulance) and from air ambulances assigned to the medical company (air ambulance) in support of a corps. If the corps is not operating independently, the corps surgeon section coordinates with the theater surgeon and the TMC's patient movement center to coordinate MEDEVAC out of the corps to theater.

MEDICAL LOGISTICS (INCLUDING BLOOD MANAGEMENT)

B-178. The MEDLOG function encompasses a system for planning and executing all class VIII supply support to the corps. The system is anticipatory with units capable of operating in a split-based mode. For more information on MEDLOG and the MLC, refer to FM 4-02 and ATP 4-02.1.

MEDICAL LOGISTICS ORGANIZATIONS

B-179. MEDLOG assets within the corps are located in the following echelons:

- Brigade level. The BSB SPO section has an assigned MEDLOG officer who manages class VIII for the brigade. The BSMC's BMSO maintains and distributes class VIII in the brigade. An FDT from the supporting MLC may be attached to the BSMC.
- Division level.
  - The DSB and division headquarters have assigned MEDLOG officers who manage class VIII for the division.
  - A division may have a MEDBDE (SPT), MMB, and MLCs in support depending on mission variables.
  - If an FRSD or Role 3 is in support of the division, a blood distribution team from the corps MDBS may be in support.
- Corps level. A supporting MEDBDE (SPT), MMB, MLC, and MDBS.

SAMPLE MEDICAL LOGISTICS BATTLEFIELD EMPLOYMENT

B-180. The MEDLOG function within the corps starts with the consumption of class VIII and extends through the resupply process to the corps support area and the distribution network back to the end user. The MEDLOG function is subsequently depicted at echelon to show class VIII resupply and distribution from end user to the supporting MLCs in the corps support area.

Class VIII Supply Operations at Role 1

B-181. The medical platoons and sections of a BCT operating Role 1 battalion aid stations request their class VIII supplies from the BMSO of the BSMC. The medical platoons and sections have limited capability for internal MEDLOG management and are primarily customers of the BMSO. Routine requisitions are sent by the Role 1 battalion aid stations via digital request to the supporting BMSO utilizing DCAM. If a high priority request cannot be filled by the BMSO, it is sent to the next higher MEDLOG SSA that can fill the requisition and meet the requirement. Emergency requisition of class VIII supplies for the BCT is completed in accordance with the theater and unit tactical SOP.

B-182. Class VIII materiel is packed and configured for shipment to the requesting unit through available distribution channels. Class VIII is then brought forward by a DSSB or CSSB assets, or by air or ground ambulance back haul. Ambulance back haul is a technique used to transport class VIII using empty ambulances moving forward to evacuate patients to the rear. The class VIII is exchanged at the ambulance exchange point or helicopter landing zone and patients are then loaded and evacuated to Role 2.

Class VIII Supply Operations at Role 2

B-183. The BSMC's medical supply element is the BMSO. The BMSO serves as the forward distribution point responsible for facilitating the resupply and distribution of all class VIII materiel for the brigade in accordance with AR 40-61. The BMSO maintains a small safety level of critical class VIII materiel (100 to 300 critical line items) for emergency release to support Role 1 and 2 medical elements within the brigade when routine replenishment operations do not meet mission requirements. The medical equipment sets organic to the treatment and ambulance platoons in the BSMC are a backup source of supply for emergency resupply to the medical platoons operating Role 1 BASs.

B-184. Upon arrival into the theater, the BMSO will be resupplied by medical resupply sets or preconfigured push-packages until line-item requisitioning is established. Once the automated ordering system is implemented in DCAM, the BMSO will begin the immediate requisition of materiel to replace consumed line items. These orders will be routed to the supporting MLC. Upon receipt of a requisition, the supporting MLC or SSA will fill and package the items for distribution to the requesting unit. The BMSO receives and accounts for this materiel upon arrival to the distribution control point located in the support area. The BMSO will then integrate the materiel with other critical class VIII supply items and nonmedical materiel and forward it (via the established battlefield distribution flow of materiel) to the battalions. When forward deployed, the FRSD is dependent on its supporting Role 2 medical company for class VIII resupply, medical equipment maintenance and repair, and blood distribution support.

Class VIII Supply Operations at Role 3

B-185. Class VIII support for the Role 3 hospital is a vital part of the HSS mission. It includes management of a commodity that must be adapted to specific theater health care requirements, distribution plans, and capabilities provided by theater sustainment organizations.

B-186. Class VIII sustainment of Role 3 hospitals presents complex medical materiel requirements and may consume materiel at a tremendous rate when providing trauma care in support of combat operations. Specialty care for burn injuries, orthopedic injuries and surgeries, and neurosurgery often require materiel and equipment that is not standard and may not have been anticipated or stocked in sufficient quantities prior to deployment. Role 3 hospitals are typically made direct customers of an MLC capable of meeting the unit's mission requirements, and these Role 3 hospitals utilize Defense Medical Logistics Standard Support to requisition class VIII from the MLC. FRSDs utilize DCAM to order class VIII.

Class VIII Requisition Visibility

B-187. Brigade and below medical units (Role 1 and 2) use DCAM to requisition class VIII. EAB medical units (Role 3) and MLCs use Defense Medical Logistics Standard Support to requisition class VIII. In-transit visibility of medical materiel moving through the distribution pipeline is provided through the global transportation network and the Army in-transit visibility system.

Blood Support to the Corps

B-188. The MDBSD provides collection, manufacturing, storage, and distribution of blood and blood products to corps medical units at Role 2 and Role 3, FRSDs, and other services as required. The detachment has the capability for 72 hours of limited self-sustainment during initial operations. The detachment can receive and store up to 5,100 refrigerated or frozen blood products and distribute these blood products to supported MTFs and medical units within the corps. Refer to ATP 4-02.1 for more information on blood support.

B-189. Teams within the MDBSD are task-organized to forward deploy and operate as a single unit in up to three distinct geographic locations to support missions that do not need a complete detachment to perform blood distribution and collection activities as required. Supported medical units communicate directly with the MDBS for blood resupply by submission of daily blood reports (refer to FM 6-99 for blood reports).

B-190. Figure B-7 on page B-40 depicts an operational overview of class VIII consumption, resupply, and distribution flows arrayed within the corps.

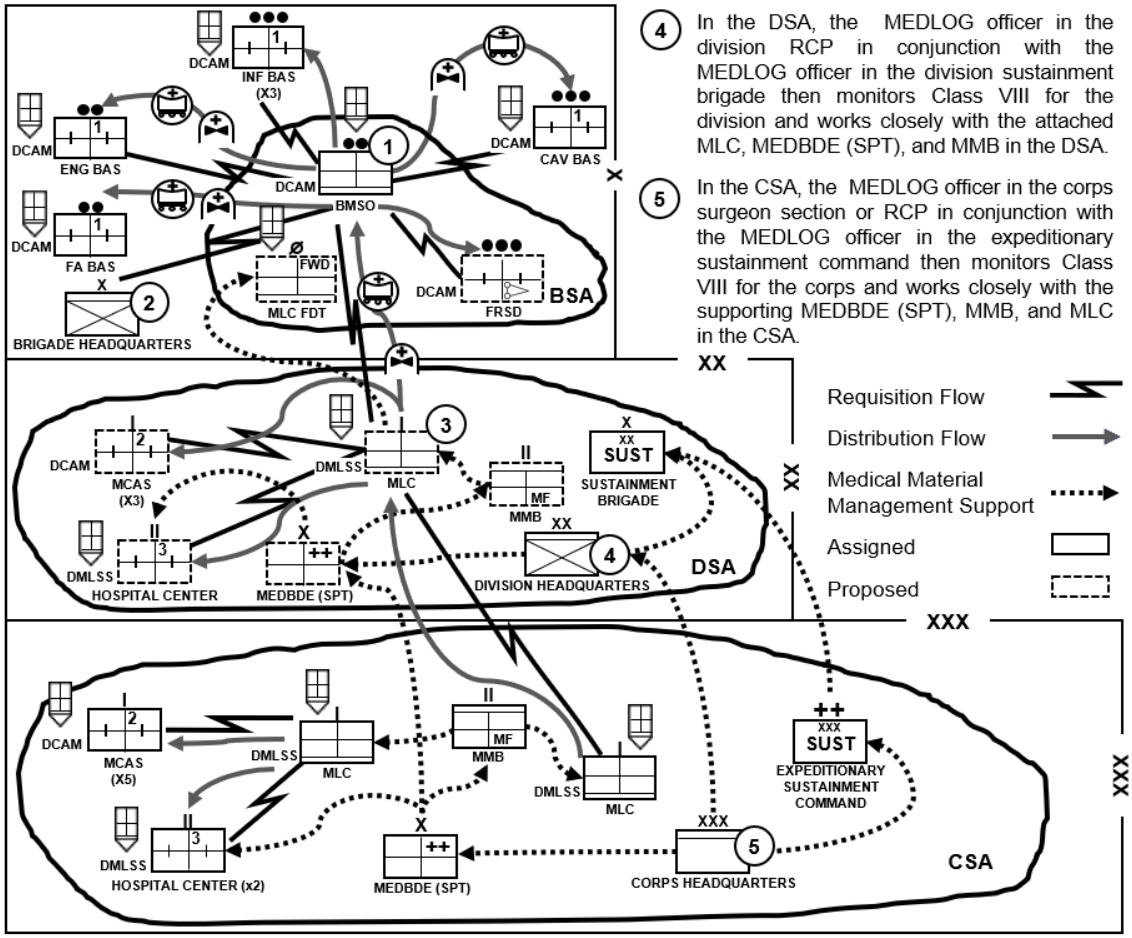
1. The BMSO, which normally maintains 100-300 critical lines items of Class VIII, receives the resupply request from the Role 1 BAS and utilizes DCAM to order the Class VIII from the MLC supporting the division. A FDT from the MLC may be attached to Role 2 BSMC to augment medical logistics operations within the brigade combat team. Class VIII is then brought forward by DSSB CLPs or ambulance back haul.

2. In the BSA, the brigade surgeon determines the critical Class VIII line items maintained by the BMSOs based on the mission and the MESs assigned to each unit.

3. The supporting MLC in the DSA utilizes DMLSS to requisition Class VIII from the corps. Class VIII is brought forward from the corps utilizing CSSB CLPs or ambulance back haul.

4. In the DSA, the MEDLOG officer in the division RCP in conjunction with the MEDLOG officer in the division sustainment brigade then monitors Class VIII for the division and works closely with the attached MLC, MEDBDE (SPT), and MMB in the DSA.

5. In the CSA, the MEDLOG officer in the corps surgeon section or RCP in conjunction with the MEDLOG officer in the expeditionary sustainment command then monitors Class VIII for the corps and works closely with the supporting MEDBDE (SPT), MMB, and MLC in the CSA.



BAS	battalion aid station	FDT	forward distribution team
BMSO	brigade medical supply office	FRSD	forward resuscitative and surgical detachment
BSA	brigade support area	FSC	forward support company
BSMC	brigade support medical company	FWD	forward
CAV	cavalry	INF	infantry
CLP	combat logistics patrol	MCAS	medical company (area support)
CSSB	combat support sustainment battalion	MEDBDE (SPT)	medical brigade (support)
CRT	contact repair team	MEDLOG	medical logistics
CSA	corps support area	MES	medical equipment set
DCAM	DMLSS customer assistance module	MF	multifunctional
DMLSS	defense medical logistics standard support	MLC	medical company (logistics)
DSA	division support area	MMB	medical battalion (multifunctional)
DSSB	division support sustainment battalion	RCP	rear command post
ENG	engineer	SUST	sustainment
FA	field artillery		

Figure B-7. The medical logistics function within the corps

MEDICAL MAINTENANCE

B-191. Medical maintenance is a subcomponent of the MEDLOG function. For more information on medical maintenance and the MLC, refer to FM 4-02 and ATP 4-02.1.

MEDICAL MAINTENANCE ORGANIZATIONS

B-192. Medical maintenance assets within the corps are located in the following echelons:

- Brigade level. A biomedical maintenance specialist in the BMSO. A CRT may be attached when an FRSD is collocated with a Role 2 medical company.
- Division level. An MLC from the supporting MEDBDE (SPT).
- Corps level. An MLC from the MEDBDE (SPT).

SAMPLE MEDICAL MAINTENANCE BATTLEFIELD EMPLOYMENT

B-193. Once a piece of medical equipment has been verified as non-mission capable (NMC) it is documented and repaired at the unit, repaired at a higher level of maintenance, or replaced at the corps support area. Medical Maintenance at Role 1

B-194. At Role 1, operator maintenance is performed on assigned equipment a4nd a medical maintenance support plan is established and coordinated with the Role 2. The Role 1 is authorized several types of medical equipment sets that contain multiple maintenance significant items. When a repair is needed, the Role 1 reports the equipment status immediately to the Role 2 or MLC. The medical equipment is then transported to the Role 2 or MLC via DSSB assets or ambulance back haul, if available. If the medical equipment cannot be evacuated to the Role 2, a CRT from the MLC may be dispatched to diagnose and remedy the fault through on-system repair or by issuing a medical maintenance regeneration enabler. For more information on medical maintenance at Role 1, refer to ATP 4-02.4.

Medical Maintenance at Role 2

B-195. The BSMC's BMSO provides primary field maintenance for the company and utilizes GCSS-Army to track medical equipment readiness. The MCAS performs medical maintenance in the same manner on an area support basis. The Role 2 provides medical equipment maintenance, reporting, and oversight for all medical equipment within the brigade or assigned AO.

B-196. The biomedical equipment specialist at Role 2 is responsible for field maintenance (scheduled and unscheduled) on medical equipment within the brigade or assigned AO, as well as the following:

- Troubleshooting equipment in accordance with the maintenance allocation chart or the original equipment manufacturer's service literature or technical manuals.
- Repairing and returning the equipment if the repair is within the scope of field maintenance and the parts are on hand.
- Turning the equipment in to the battalion or brigade S-4 for evacuation to the MLC if the repair exceeds field-level capabilities.
- Coordinating with the supporting MLC for medical maintenance regeneration enablers if the equipment is a critical item.
- Generating a parts requisition through MEDLOG channels if a part is needed and the equipment is not a critical item.
- Ensuring medical equipment faults and services are entered into GCSS-Army.

B-197. When the Role 2 is deployed and an FRSD is attached, a CRT may be dispatched from the MLC to the Role 2 location to assist the unit biomedical equipment specialist in providing the necessary medical equipment maintenance and repair support. The CRT may remain with the Role 2 as long as the FRSD is forward engaged to provide the necessary medical equipment maintenance and repair support to all units in the BCT or assigned AO. The CRT can also be called forward of the Role 2 BSMC to support MEDEVAC platforms and other medical assets, then return to the Role 2 BSMC location once repairs are made. For more information on medical maintenance at Role 2, refer to ATP 4-02.6.

Medical Maintenance at Role 3

B-198. The biomedical equipment specialists and the health services maintenance technician at the Role 3 hospital are responsible for field maintenance for medical equipment assigned or attached to the Role 3 (including the FRSD collocated with the Role 3 when it is not deployed to supported units). When deployed, the FRSD is collocated with a Role 2 and receives medical maintenance support through that Role 2 medical company and the MLC covering that supported area. The Role 3 hospital provides limited field maintenance for its assigned or attached medical elements. The MLC provides augmentation support for sustainment maintenance and biomedical equipment specialists at the Role 3. For more information on medical maintenance at Role 3, refer to ATP 4-02.6.

Medical Logistics Company

B-199. The MLC is responsible for maintaining medical maintenance regeneration enablers, deploying CRTs, and providing field and limited sustainment maintenance to units within the BCT and EAB areas (including blood support detachments) and to units operating within the area without organic biomedical equipment specialists. Equipment is evacuated through logistics or ambulance back haul channels to the MLC if repairs exceed the field and sustainment maintenance level in accordance with the maintenance allocation chart or as defined in AR 750-1 or AR 40-61. Parts are requisitioned through MEDLOG channels.

Medical Material Management Support Elements

B-200. Medical material management support elements are a key component to coordinating and synchronizing MEDLOG and medical maintenance within the corps. Listed below are the duties and responsibilities of medical command and control elements responsible for providing medical materiel support normally found in the corps. Figure B-8 depicts an operational overview of medical maintenance within the corps and subsequently depicts the maintenance request and equipment flow from end user to MLCs in the corps support area.

Medical Battalion (Multifunctional)

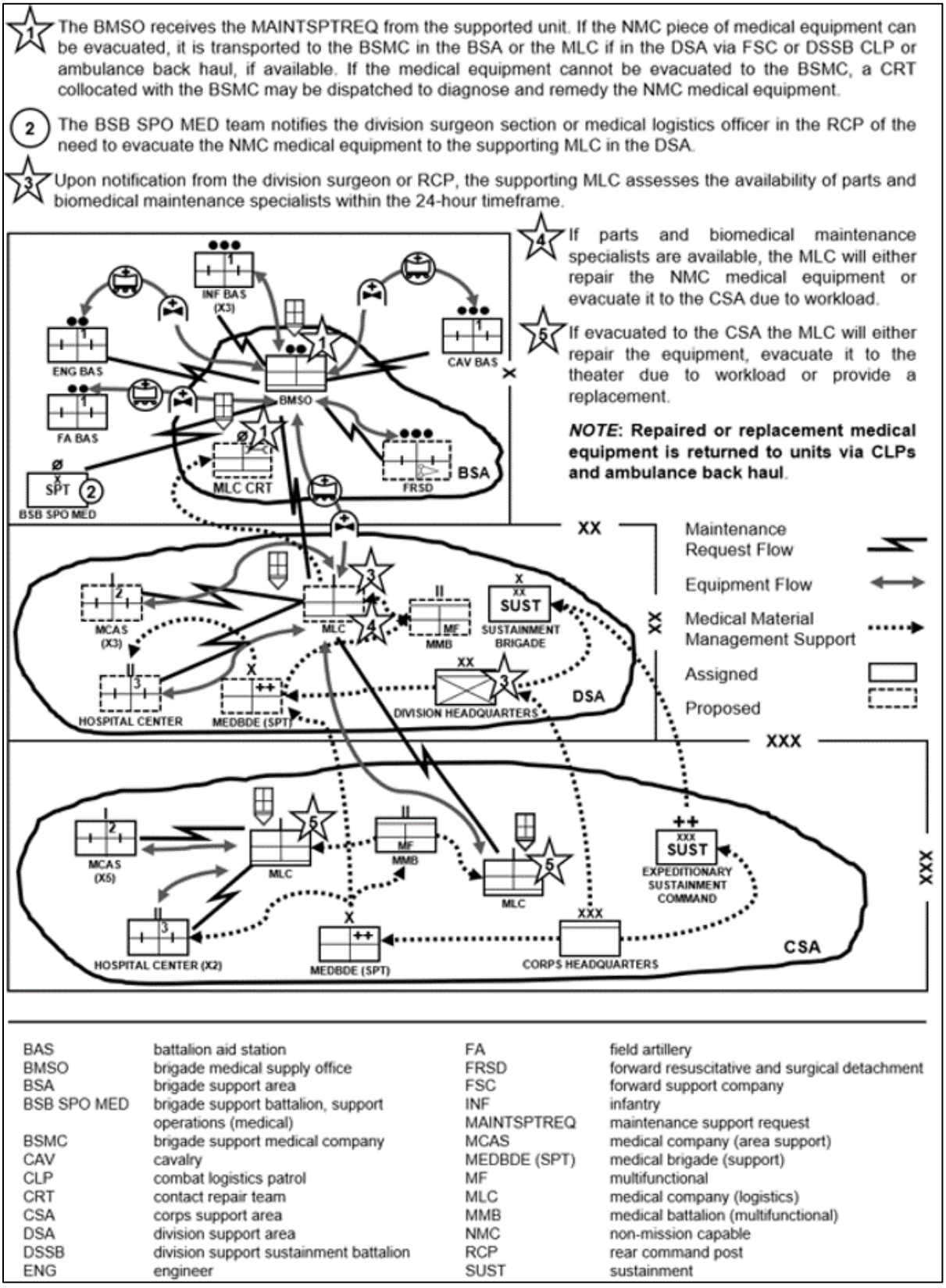
B-201. The MMB provides MEDLOG oversight and medical command and control to include—

- Providing transportation.
- Facilitating in-transit visibility of class VIII repair parts and equipment.
- Providing medical CRTs.
- Ensuring medical equipment quality control for units task-organized under the MMB.
- Establishing medical maintenance priorities for equipment repair or exchange.
- Monitoring maintenance distribution flow for supported units.
- Coordinating electronics, calibration, and automotive maintenance operations.
- Directing the cross-leveling of medical assets (parts or equipment).
- Contracting medical maintenance support and integrating HN support as required.
- Assisting in medical equipment readiness sustainment and reporting.
- Ensuring viable medical equipment maintenance.
- Ensuring biomedical equipment specialist training programs are in place.

Medical Brigade (Support)

B-202. The medical equipment maintenance personnel in the MEDBDE (SPT)—

- Conduct planning and provide direction and guidance for medical equipment maintenance and unit maintenance programs for the MEDBDE (SPT).
- Develop and evaluate brigade maintenance policies, training, and maintenance support resources in support of the theater mission plan.
- Manage repair parts and maintenance for all medical equipment within the MEDBDE (SPT).
- Compile operational status reports and direct the disposition of unserviceable medical equipment.



BAS	battalion aid station	FA	field artillery
BMSO	brigade medical supply office	FRSD	forward resuscitative and surgical detachment
BSA	brigade support area	FSC	forward support company
BSB SPO MED	brigade support battalion, support operations (medical)	INF	infantry
		MAINTSPTREQ	maintenance support request
BSMC	brigade support medical company	MCAS	medical company (area support)
CAV	cavalry	MEDBDE (SPT)	medical brigade (support)
CLP	combat logistics patrol	MF	multifunctional
CRT	contact repair team	MLC	medical company (logistics)
CSA	corps support area	MMB	medical battalion (multifunctional)
DSA	division support area	NMC	non-mission capable
DSSB	division support sustainment battalion	RCP	rear command post
ENG	engineer	SUST	sustainment

Figure B-8. Medical maintenance within the corps

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Appendix C

Sustainment Preparation of the Operational Environment Process

Sustainment preparation of the OE is executed by sustainment planners and staffs to provide a basis for developing sound sustainable plans. This analysis allows the commander and staff to better visualize the OE and see how conducive the OE is to sustaining military operations.

OVERVIEW

C-1. Sustainment preparation of the OE is a continuous shaping activity. TSC and ESC sustainment planners analyze the OE to refine or update sustainment estimates and minimize impacts on the Army's ability to sustain a commander's operations plan. It identifies friendly resources (HN support and accessible commercial assets) or environmental factors (endemic diseases, climate) that could impact sustainment. The process is generally conducted in parallel with IPB.

C-2. Sustainment planners' analysis products cover such topics as selection of LOCs, determination of operational stock assets, and design of a distribution network and information technology infrastructure for the theater area or JOA.

C-3. The sustainment preparation of the OE process consists of three steps. Each step of the process has inputs, sub-steps, and outputs that eventually lead to a better understanding of the situation and facilitate the next step. The three steps of the process are:

- Define the operating environment.
- Describe the physical environmental impacts on operations.
- Evaluate resources available.

These steps are synchronized with IPB and are part of mission analysis in MDMP (this is shown in figure C-1).

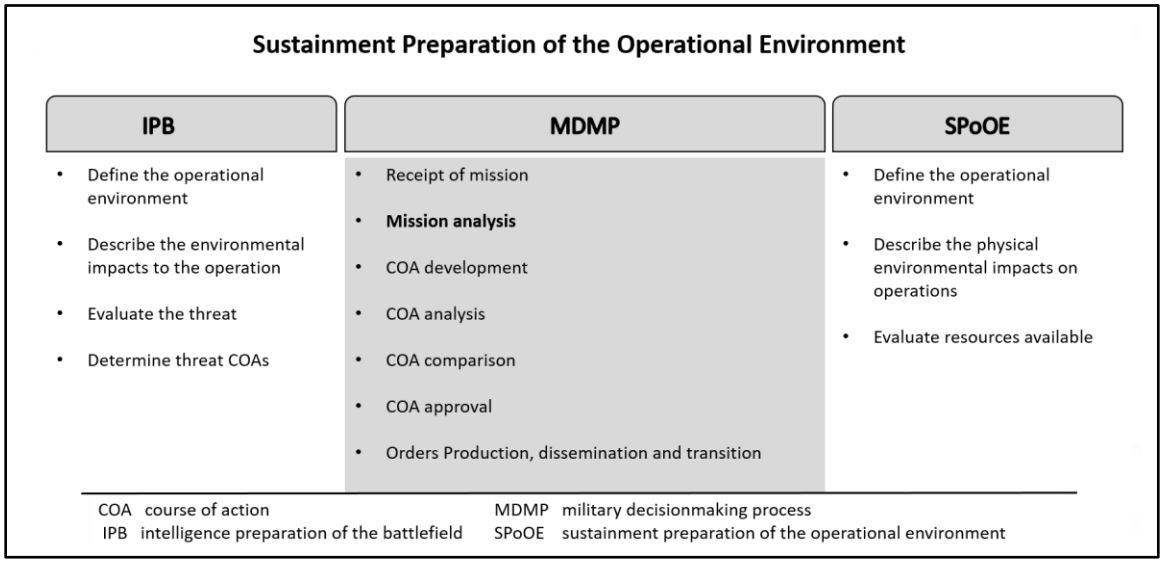

Figure C-1. Process overview

STEP 1: DEFINE THE OPERATING ENVIRONMENT

C-4. During step 1 of the sustainment preparation of the OE process, sustainment planners identify for further analysis the characteristics and activities within the OE that may impact sustainment operations. The OE is a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. Commanders at all levels have their own OEs for their particular operations. An OE for any specific operation comprises more than the interacting variables that exist within a specific physical area. It also involves interconnected influences from the global or regional perspective (for example, politics and economics) that impact conditions and operations. Thus, each commander's OE is part of a higher commander's OE.

C-5. Understanding the specific OE in each situation is essential to the successful execution of deployment and sustainment operations conducted in support of GCC objectives. Analysis of a particular OE is framed in the context of political, military, economic, social, information, infrastructure, physical environment, and time relationships (known as PMESII-PT) across the air, land, maritime, space, and cyberspace domains. These operational variables provide relevant information essential to understanding any given OE. For more information on political, military, economic, social, information, infrastructure, physical environment, and time considerations, see FM 5-0.

C-6. Defining the OE identifies significant characteristics that can affect friendly and threat operations and gaps in current sustainment capabilities. Each step of the sustainment preparation of the OE has inputs, sub-steps, and outputs. The outputs lead to an increased understanding of the situation and facilitate the next step of the sustainment preparation of the OE process. See figure C-2.

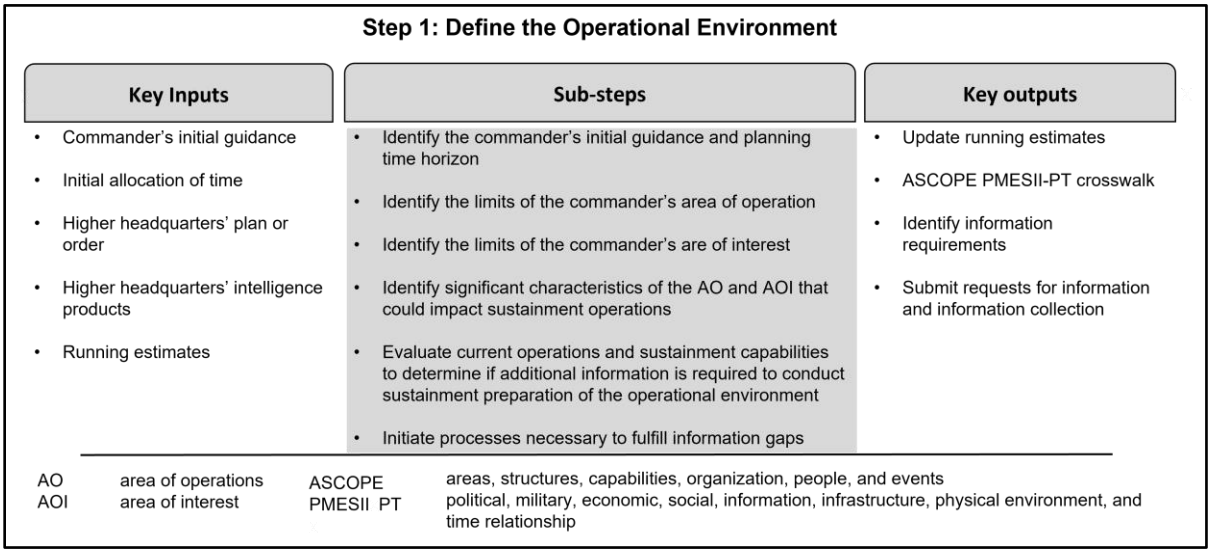

Figure C-2. Define the operational environment

C-7. Sustainment planners identify the significant characteristics of the OE by conducting a crosswalk of civil considerations (area, structures, capabilities, organization, people, and events [known as ASCOPE]) with operational variables (political, military, economic, social, information, infrastructure, physical environment, and time). This facilitates the categorization of information associated with the OE that is relevant to sustainment operations. The following factors of the OE should be considered when conducting the process: geography and environment, supply and services, transportation, maintenance, HSS, personnel services, general skills, Army pre-positioned stocks, banking and economy, OCS, facilities, and agreements with other nations.

OUTPUTS FROM STEP 1 OF THE PROCESS

C-8. The following sustainment preparation of the OE process products are developed or updated based on defining the OE:

- Civil considerations to operational variables crosswalk.
  - Area, structures, capabilities, organization, people, and events.
  - Political, military, economic, social, information, infrastructure, physical environment, and time.
- Updated running estimates.
- Information requirements.
- Request for information.

STEP 2: DESCRIBE THE PHYSICAL ENVIRONMENTAL IMPACTS ON SUSTAINMENT OPERATIONS

C-9. Environmental conditions contribute greatly to the fog and friction of war and can be equally as devastating to operations as enemy activities. Environmental conditions can disrupt the flow of sustainment and significantly degrade the ability to conduct and sustain operations. In some instances, resupply and combat operations can be halted all together. Although many environmental conditions are unavoidable, thorough planning and the consideration of contingency and branch plans can improve flexibility and lessen the impact on operations. Sustainment planners utilize environmental planning factors in conjunction with consumption rates to determine how the significant characteristics of the OE impact each sustainment function and class of supply. Sustainment planners may need to modify standard planning factors based on unique conditions associated with a specific operation or AO. Figure C-3 depicts the second step in the process.

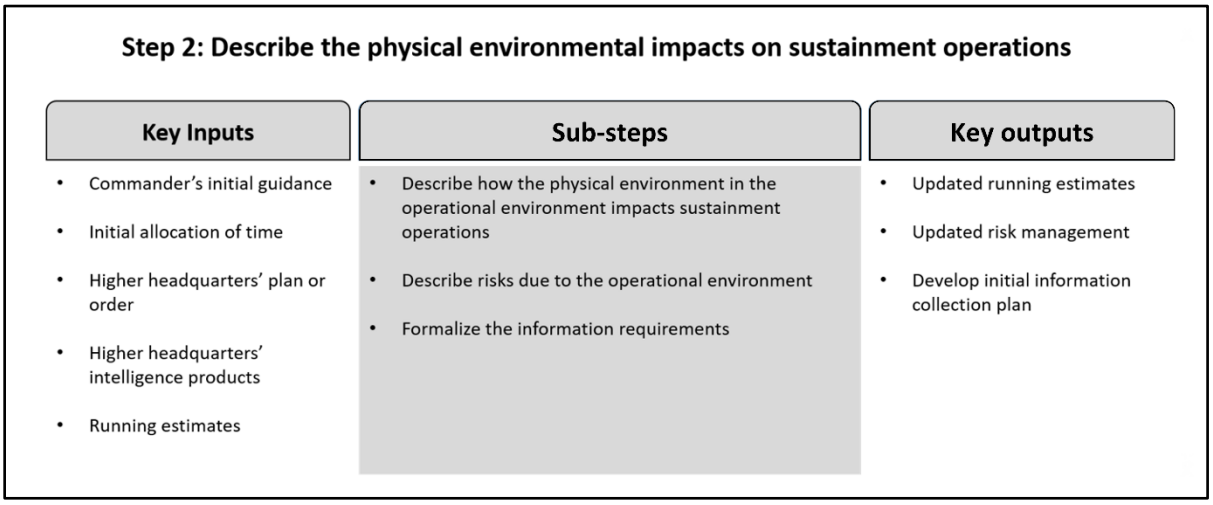

Figure C-3. Describe how the operational environment impacts operations

OUTPUTS FROM STEP 2 OF THE PROCESS

C-10. The following sustainment preparation of the OE process products are updated and developed based on the analysis of the OE:

- Updated running estimates.
- Updated risk management.
- Develop initial information collection plan.

STEP 3 EVALUATE RESOURCES AVAILABLE

C-11. Sustainment planners must have detailed knowledge of resources available within the OE in order to plan for and successfully execute sustainment operations. During step 3, sustainment planners evaluate these resources to assess their capability, capacity, and limitations to provide sustainment support. The resources

available in the OE are broken down into two primary categories: available support from unified action partners and infrastructure. Figure C-4 depicts the third step in the process.

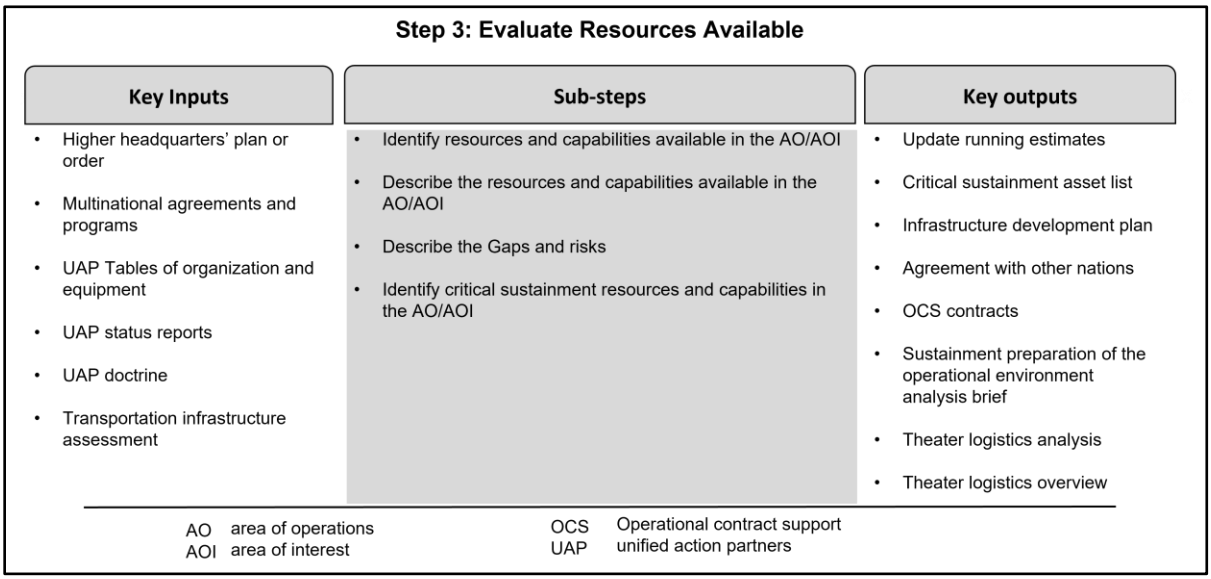

Figure C-4. Evaluate resources available

C-12. To understand the capability and capacity of unified action partners to provide sustainment support, sustainment planners analyze their organizational structure and characteristics such as composition, disposition, strength, combat effectiveness, doctrine and tactics, command and support relationships, electronic technical data, capabilities and limitations, historical data, and current operations.

C-13. Sustainment planners evaluate the infrastructure in the OE to determine distribution capabilities, capacities, and limitations. Sustainment planners conduct infrastructure analysis of transportation nodes and the transportation networks linking them with each other and to the interior. Sustainment planners must assess the characteristics of transportation nodes to determine their capacity and if that capacity is capable of supporting the estimated workload required to support military operations. Infrastructure characteristics such as the number and size of berths at a seaport, water depth, size of staging areas, the number of aircraft on the ground at one time, personnel and materials handling equipment for terminal control, loading and unloading, and commercial utilization drive infrastructure assessments that identify throughput capacity.

OUTPUTS FROM STEP 3 OF THE PROCESS

C-14. The following products are developed or updated based on the evaluation of friendly forces.

- Updated running estimates.
- Critical sustainment asset list.
- Infrastructure development plan.
- Agreements with other nations.
- OCS requirements.
- Sustainment preparation of the OE analysis brief.
- Theater logistics analysis.
- Theater logistics overview.

Appendix D

Functional and Multi-Functional Logistics Units

Functional and multi-functional logistics companies, detachments, and teams are normally assigned or attached to CSSBs and DSSBs to enable them to provide mission-tailored support. The CSSB and DSSB are multifunctional logistics headquarters that are task organized to support specified mission requirements. CSSBs support operations from the theater to brigade echelon and can command and control up to seven companies, detachments, or teams. The DSSB is organic to the DSB in support of a division. It has three organic companies that provide supply, transportation, and maintenance support and can command and control up to three additional logistics companies, detachments, or teams.

D-1. Functional and multi-functional logistics units (companies, detachments, and teams) depend on other higher headquarters units to enable them to function efficiently. The DSSB and CSSB SPO officer and the battalion S-3 must understand and consider these dependencies when reviewing proposed battalion task organization changes. For example, all the logistics units attached to the CSSB or DSSB will depend on that battalion's support maintenance company for field maintenance support. They will also rely on the battalion headquarters for administrative support and mission tasking. Functional or multi-functional logistics platoons may be deployed independent of their parent company headquarters, but they have dependencies that require support from another logistics battalion and company headquarters. Generally, task organizing capabilities below the company level creates a degree of risk to mission that must be considered based on the design.

D-2. Functional and multi-functional units can be employed throughout the AO. Most units are tailored to fit a specific operation based on the designed capabilities and supported populations. For example, a composite supply company provides similar capabilities as a quartermaster supply company, a water support company, a petroleum support company, and a field services company together (although with less capacity). A DSSB or CSSB providing support to all forces in a large geographic area may require more capacity and capability and would likely be task organized with several separate functional logistics companies or units. A DSSB or CSSB supporting a smaller force capability may be task organized with a single composite supply company.

D-3. Table D-1 on page D-2 provides a list of functional and multifunctional companies, detachments, and teams that may be attached to a CSSB or DSSB along with their associated doctrinal references that provide more details on the units. Additional information about these units' capabilities and dependencies is available in the narratives found in the respective unit tables of organization and equipment.

Table D-1. Functional and multi-functional logistics units

Unit	*Related Doctrinal Publications*
TRANSPORTATION UNITS[1,2]	
Inland Cargo Transfer Company	ATP 4-0.1, *Army Theater Distribution* ATP 4-12, *Army Container Operations* ATP 4-13, *Army Expeditionary Intermodal Operations*
Combat Heavy Equipment Transporter System Company	FM 4-01, *Army Transportation Operations* ATP 4-11, *Army Motor Transport Operations*
Transportation Medium Truck Company (POL 5K) (EAB Tactical)	ATP 4-16, *Movement Control*
Transportation Medium Truck Company (PLS) (EAB Tactical)	ATP 4-11, *Army Motor Transport Operations* ATP 4-16, *Movement Control*
Transportation Medium Truck Company (Cargo) (EAB Line Haul)	ATP 4-16, *Movement Control* ATP 4-01.45, *Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations*
Transportation Medium Truck Company (POL 5K) (EAB Line Haul)	FM 4-01, *Army Transportation Operations* ATP 4-01.45, *Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations* ATP 4-11, *Army Motor Transport Operations* ATP 4-16, *Movement Control*
Inland Cargo Transfer Company	FM 4-01, *Army Transportation Operations* ATP 4-11, *Army Transport Operations* ATP 4-12, *Army Container Operations* ATP 4-13, *Army Expeditionary Intermodal Operations*
Combat Heavy Equipment Transporter System Company	FM 4-01, *Army Transportation Operations* ATP 4-0.1. *Army Theater Distribution*
Transportation Light/Medium Truck Company	ATP 4-01.45, *Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations* ATP 4-11, *Army Motor Transport Operations* ATP 4-16, *Movement Control*
Transportation Medium Truck Company (Cargo) (EAB Tactical)	
Transportation Medium Truck Company (POL 5K) (EAB Tactical)	FM 4-01, *Army Transportation Operations* ATP 4-11, *Army Motor Transport Operations* ATP 4-16, *Movement Control*
Transportation Medium Truck Company (PLS) (EAB Tactical)	ATP 4-01.45, *Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations* ATP 4-11, *Army Motor Transport Operations* ATP 4-16, *Movement Control*
Transportation Medium Truck Company (POL 5K) (EAB Line Haul)	
SUPPLY UNITS	
Quartermaster Supply Company	ADP 4-0, *Sustainment* ATP 4-0.1, *Army Theater Distribution* ATP 4-41, *Army Field Feeding and Class I Operations* ATP 4-42, *Materiel Management, Supply, and Field Services Operations*
Composite Supply Company	ADP 4-0, *Sustainment* ATP 4-11, *Army Motor Transport Operations* ATP 4-41, *Field Feeding and Class I Operations* ATP 4-42, *Materiel Management, Supply, and Field Services Operations* ATP 4-42.2, *Supply Support Activity Operations* ATP 4-43, *Petroleum Supply Operations*
Composite Supply Company (Corps)	
Composite Supply Company (Division)	
Petroleum Support Company	ATP 4-43, *Petroleum Supply Operations*
POL Pipeline and Terminal Operating Company	

Table D-1. Functional and multi-functional logistics units (*continued*)

SUPPLY UNITS (continued)	
Water Support Company	ATP 4-44, *Water Support Operations*
Classification and Inspection Company	ATP 4-42, *Materiel Management, Supply, and Field Services Operations* ATP 4-33, *Maintenance Operations*
MUNITIONS	
Modular Ammunition Company	ATP 4-35, *Munitions Operations*
AERIAL DELIVERY	
Theater Aerial Delivery Company	ATP 4-48, *Aerial Delivery*
Corps Aerial Delivery Company	
Division Aerial Delivery Company (Airborne)	
Division Personnel Pack Company (Airborne)	
Corps Parachute Office (Airborne)	
Division Parachute Office (Airborne)	
Rigger Support team	
FIELD SERVICES	
QM Field Service Company	ATP 4-41, *Army Field Feeding and Class I Operations* ATP 4-42, *Materiel Management, Supply, and Field Services Operations* ATP 4-42.2, *Supply Support Activity Operations* ATP 4-44, *Water Support Operations*
Field Feeding Company (EAB)	ATP 4-41, *Army Field Feeding and Class I Operations*
Mortuary Affairs Company	ATP 4-46/ MCRP 3-40G.3/NTTP 4-06/AFTTP 3-2.51, *Multi-Service Tactics, Techniques, and Procedures for Mortuary Affairs in Theaters of Operations*
MAINTENANCE[3]	
Support Maintenance Company	ATP 4-33, *Maintenance Operations*
Support Maintenance Company w/ TMDE.	
COMMAND AND CONTROL/ADMINISTRATIVE	
HHC, CSSB	Multiple references including: FM 6-0, *Commander and Staff Organization and Operations* FM 6-02, *Signal Support to Operations*
Human Resources Company	FM 1-0, *Human Resources Support* ATP 1-0.2, *Theater-Level Human Resources Support*

Notes:

1. A transportation company (POL 7.5K) (EAB Line Haul) is normally attached to a petroleum supply battalion.
2. A transportation modular causeway company is normally attached to a transportation terminal battalion
3. A maintenance surge team is normally attached to the support maintenance company within the CSSB.

5K	five thousand	HHC	headquarters and headquarters company
ADP	Army doctrine publication	PLS	palletized load system
ATP	Army techniques publication	POL	petroleum, oils, and lubricants
CSSB	combat sustainment support battalion	QM	quartermaster
EAB	echelons above brigade	TMDE	test, measurement, and diagnostic equipment
FM	field manual		

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Glossary

The glossary lists acronyms and terms with Army or joint definitions. Where Army and joint definitions differ, (Army) precedes the definition. The glossary lists terms for which ATP 4-92 is the proponent with an asterisk (*) before the term. For other terms, it lists the proponent publication in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

ADP	Army doctrine publication
AFSB	Army field support brigade
AHS	Army Health System
AO	area of operations
AOR	area of responsibility
AR	Army regulation
ASCC	Army Service component command
ASP	ammunition supply point
ATHP	ammunition transfer holding point
ATP	Army techniques publication
BCT	brigade combat team
BMSO	brigade medical supply office
BSB	brigade support battalion
BSMC	medical company (brigade support)
CA	civil affairs
CBRN	chemical, biological, radiological, and nuclear
CCDR	combatant commander
COMSEC	communications security
CONUS	continental United States
COP	common operational picture
CP	command post
CRT	contact repair team
CSR	controlled supply rate
CSSB	combat sustainment support battalion
CULT	common-user land transportation
DA	Department of the Army
DCAM	Defense Medical Logistics Standard Support customer assistance module
DIB	distribution integration branch
DLA	Defense Logistics Agency
DMC	distribution management center
DOD	Department of Defense

DS	direct support
DSB	division sustainment brigade
DSSB	division sustainment support battalion
EAB	echelons above brigade
E-MIB	expeditionary military intelligence brigade
EMS	electromagnetic spectrum
EOD	explosive ordnance disposal
ESC	expeditionary sustainment command
FDT	forward distribution team
FHP	force health protection
FM	field manual
FRSD	forward resuscitative and surgical detachment
FSC	forward support company
G-1	assistant chief of staff, personnel
G-2	assistant chief of staff, intelligence
G-3	assistant chief of staff, operations
G-4	assistant chief of staff, logistics
G-6	assistant chief of staff, signal
G-8	assistant chief of staff, financial management
GCC	geographic combatant commander
GCSS-Army	Global Combat Support System-Army
GS	general support
GSR	general support-reinforcing
HHD	headquarters and headquarters detachment
HN	host nation
HR	human resources
HSS	health service support
IPB	intelligence preparation of the battlefield
JFC	joint force commander
JFLCC	joint force land component commander
JOA	joint operations area
JP	joint publication
JTF	joint task force
LOC	line of communications
LOGCAP	Logistics Civil Augmentation Program
LOGSTAT	logistics status
MATP	modular ammunition transfer point
MCAS	medical company (area support)
MCT	movement control team
MDBS	medical detachment (blood support)
MDMP	military decision-making process

MEB	maneuver enhancement brigade
MEDBDE (SPT)	medical brigade (support)
MEDEVAC	medical evacuation
MEDLOG	medical logistics
MLC	medical company (logistics)
MLMC	medical logistics management center
MMB	medical battalion, multifunctional
MTF	medical treatment facility
NCO	noncommissioned officer
OCS	operational contract support
OE	operational environment
OPCON	operational control
OPLAN	operation plan
OPORD	operation order
PACE	primary, alternate, contingency, and emergency
POL	petroleum, oils, and lubricants
RSR	required supply rate
RTD	return to duty
S-1	battalion or brigade personnel staff officer
S-2	battalion or brigade intelligence staff officer
S-3	battalion or brigade operations staff officer
S-4	battalion or brigade logistics staff officer
S-6	battalion or brigade signal staff officer
S-8	battalion or brigade financial management staff officer
SASMO	sustainment automation support management office
SMC	support maintenance company
SOP	standard operating procedure
SPO	support operations
SSA	supply support activity
TACON	tactical control
TMC	theater medical command
TMC (OCP)	theater medical command operational command post
TSC	theater sustainment command
UMT	unit ministry team
U.S.	United States
USAMC	United States Army Materiel Command

SECTION II – TERMS

administrative control

Direction or exercise of authority over subordinate or other organizations in respect to administration and support. (JP 1, Volume 2)

adversary

A party acknowledged as potentially hostile to a friendly party and against which the use of force may be envisaged. (JP 3-0)

area defense

A type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright. (ADP 3-90)

area of interest

That area of concern to the commander, including the area of influence, areas adjacent to it, and extending into enemy territory. (JP 3-0)

area of operations

An operational area defined by a commander for the land or maritime force commander to accomplish their missions and protect their forces. (JP 3-0)

area of responsibility

The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. (JP 1, Volume 1)

area security

A type of security operation conducted to protect friendly forces, lines of communications, and activities within a specific area. (ADP 3-90)

area support

Method of logistics, medical support, and personnel services in which support relationships are determined by the location of the units requiring support. Sustainment units provide support to units located in or passing through their assigned areas. (ATP 4-90)

ARFOR

The Army component and senior Army headquarters of all Army forces assigned or attached to a combatant command, subordinate joint force command, joint functional command, or multinational command. (FM 3-94)

assign

To place units or personnel in an organization where such placement is relatively permanent, and/or where such organization controls and administers the units or personnel for the primary function, or greater portion of the functions, of the unit or personnel. (JP 3-0)

attach

The placement of units or personnel in an organization where such placement is relatively temporary. (JP 3-0)

attack

A type of offensive operation that destroys or defeats enemy forces, seizes and secures terrain, or both. (ADP 3-90)

backbrief

A briefing by subordinates to the commander to review how subordinates intend to accomplish their mission. (FM 6-0)

base camp

An evolving military facility that supports the military operations of a deployed unit and provides the necessary support and services for sustained operations. (ATP 3-37.10/MCRP 3-40D.13)

base cluster

A collection of bases, geographically grouped for mutual protection and ease of command and control. (JP 3-10)

campaign

A series of related operations aimed at achieving strategic and operational objectives within a given time and space. (JP 5-0)

close area

The portion of the commander's area of operations where the majority of subordinate maneuver forces conduct close combat. (ADP 3-0)

combat power

(Army) The total means of destructive, constructive, and information capabilities that a military unit or formation can apply at a given time. (ADP 3-0)

command group

The commander and selected staff members who assist the commander in controlling operations away from a command post. (FM 6-0)

common-user land transportation

Point-to-point land transportation service operated by a single Service for common use by two or more Services. (JP 4-01.5)

common-user logistics

Materiel or service support shared with or provided by two or more Services, Department of Defense agencies, or multinational partners to another Service, Department of Defense agency, non-Department of Defense agency, and/or multinational partner in an operation. (JP 4-09)

confirmation brief

A brief that subordinate leaders give to the higher commander immediately after the operation order is given to confirm understanding. (ADP 5-0)

controlled supply rate

The rate of ammunition consumption that can be supported, considering availability, facilities, and transportation. It is expressed in rounds per unit, individual, or vehicle per day. (ATP 3-09.23)

core competency

An essential and enduring capability that a branch or an organization provides to Army operations. (ADP 1-01)

corps

An echelon of command and tactical formation that employs divisions, multi-functional brigades, and functional brigades to achieve objectives on land. (ADP 3-90)

decisive action

The continuous, simultaneous execution of offensive, defensive, and stability operations or defense support of civil authorities tasks. (ADP 3-0)

deep area

Where the commander sets conditions for future success in close combat. (ADP 3-0)

defensive operation

An operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations. (ADP 3-0)

deterrence

The prevention of action by the existence of a credible threat of unacceptable counteraction and/or belief that the cost of action outweighs the perceived benefits. (JP 3-0)

direct liaison authorized

That authority granted by a commander (any level) to a subordinate to directly consult or coordinate an action with a command or agency within or outside of the granting command. (JP 1, Volume 2)

distribution

The operational process of synchronizing all elements of the logistic system to deliver the "right things" to the "right place" at the "right time" to support the geographic combatant commander. (JP 4-0)

distribution management

Synchronizes and optimizes transportation, its networks, and materiel management with the warfighting functions to move personnel and materiel from origins to the point of need in accordance with the supported commander's priorities. (ADP 4-0)

distribution system

That complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military materiel between the point of receipt into the military system and the point of issue to using activities and units. (JP 4-09)

early-entry command post

A lead element of a headquarters designed to control operations until the remaining portions of the headquarters are deployed and operational. (FM 6-0)

electromagnetic spectrum operations

Coordinated military actions to exploit, attack, protect, and manage the electromagnetic environment. (JP 3-85)

electromagnetic warfare

Military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. (JP 3-85)

executive agent

A delegation of authority by the Secretary of Defense or Deputy Secretary of Defense to a subordinate to act on behalf of the Secretary of Defense. (JP 1, Volume 2)

exploitation

(Army) A type of offensive operation that usually follows a successful attack and is designed to disorganize the enemy in depth. (ADP 3-90)

field army

An echelon of command that employs multiple corps, divisions, multi-functional brigades, and functional brigades to achieve objectives on land. (ADP 3-90)

flexible deterrent option

A planning construct intended to facilitate early decision making by developing a wide range of interrelated responses that begin with deterrent-oriented actions carefully tailored to create a desired effect. (JP 5-0)

function

The broad, general, and enduring role for which an organization is designed, equipped, and trained. (JP 1, Volume 1)

health service support

Support and services performed, provided, and arranged by the Army Medicine department to promote, improve, conserve, or restore the behavioral and physical well-being of personnel by providing direct patient care that includes medical treatment (organic and area support) and hospitalization, medical evacuation to include medical regulating, and MEDLOG to include blood management (FM 4-02).

inpatient

A person admitted to and treated within a Role 3 and 4 hospital and who cannot be returned to duty within the same calendar day. (ATP 4-02.10)

intermediate staging base

A tailorable, temporary location used for staging forces, sustainment, and/or extraction into and out of an operational area. (JP 3-35)

joint operations

Military actions conducted by joint forces and those Service forces employed in specified command relationships with each other, which, of themselves, do not establish joint forces. (JP 3-0)

joint operations area

The airspace, land area, and maritime area defined by a combatant commander or subordinate unified commander, in which a joint force commander directs military operations to accomplish a specific mission. (JP 3-0)

large-scale combat operations

Extensive joint combat operations in terms of scope and size of forces committed, conducted as a campaign aimed at achieving operational and strategic objectives. (ADP 3-0)

logistics

(Army) Planning and executing the movement and support of forces. It includes those aspects of military operations that deal with: design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel; acquisition or construction, maintenance, operation, and disposition of facilities; and acquisition or furnishing of services. (ADP 4-0)

main command post

A facility containing the majority of the staff designed to control current operations, conduct detailed analysis, and plan future operations. (FM 6-0)

main effort

A designated subordinate unit whose mission at a given point in time is most critical to overall mission success. (ADP 3-0)

medical evacuation

The timely and effective movement of the wounded, injured, or ill to and between medical treatment facilities on dedicated and properly marked medical platforms with en route care provided by medical personnel. (ATP 4-02.2)

medical regulating

The actions and coordination necessary to arrange for the movement of patients through the roles of care and to match patients with a medical treatment facility that has the necessary health service support capabilities and available bed space. (JP 4-02)

medical treatment facility

A facility established for the purpose of furnishing medical and/or dental care to eligible individuals. (JP 4-02)

military decision-making process

An iterative planning methodology to understand the situation and mission, develop a course of action, and produce an operation plan or order. (ADP 5-0)

military engagement

Contact and interaction between individuals or elements of the Armed Forces of the United States and those of another nation’s armed forces, or foreign and domestic civilian authorities or agencies, to build trust and confidence, share information, coordinate mutual activities, and maintain influence. (JP 3-0)

movement control

(Army) The dual process of committing allocated transportation assets and regulating movements according to command priorities to synchronize distribution flow over lines of communications to sustain land forces. (ADP 4-0)

movement to contact

(Army) A type of offensive operation designed to develop the situation and establish or regain contact. (ADP 3-90)

offensive operation

An operation to defeat or destroy enemy forces and gain control of terrain, resources, and population centers. (ADP 3-0)

operational area

An overarching term encompassing more descriptive terms (such as area of responsibility and joint operations area) of locations for the conduct of military operations. (JP 3-0)

operational contract support

The process of planning for and obtaining supplies, services, and construction from commercial sources in support of combatant commander-directed operations. (JP 4-10)

operational environment

The aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

organic

Assigned to and forming an essential part of a military organization as listed in its table of organization for the Army, Air Force, and Marine Corps and are assigned to the operating forces for the Navy. (JP 1, vol 2)

outpatient

A person receiving medical/dental examination and/or treatment from medical personnel and in a status other than being admitted to a hospital. Included in this category is the person who is treated and retained (held) in a medical treatment facility (such as a Role 2 facility) other than a hospital. (ATP 4-02.10)

planning horizon

A point in time commanders use to focus the organization's planning efforts to shape future events. (ADP 5-0)

preparation

Those activities performed by units and Soldiers to improve their ability to execute an operation. (ADP 5-0)

protection

Preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or located within or outside the boundaries of a given operational area. (JP 3-0)

pursuit

A type of offensive operation designed to catch or cut off a hostile force attempting to escape, with the aim of destroying it. (ADP 3-90)

rehearsal

A session in which the commander and staff or unit practices expected actions to improve performance during execution. (ADP 5-0)

required supply rate

The amount of ammunition expressed in terms of rounds per weapon per day for ammunition items fired by weapons, in terms of other units of measure per day for bulk allotment, and other items estimated to be required to sustain operations of any designated force without restriction for a specified period. (ATP 3-09.23)

retrograde

(Army) A type of defensive operation that involves organized movement away from the enemy. (ADP 3-90)

retrograde of material

An Army logistics function of returning materiel from the owning or using unit back through the distribution system to the source of supply, directed ship to location, or point of disposal. (ATP 4-0.1)

return to duty

A patient disposition which, after medical evaluation and treatment when necessary, returns a Soldier for duty in his unit. (FM 4-02)

role

The broad and enduring purpose for which the organization or branch was established. (ADP 1-01)

security cooperation

All Department of Defense interactions with foreign security establishments to build security relationships that promote specific United States security interests, develop allied and partner nation military and security capabilities for self-defense and multinational operations, and provide United States forces with peacetime and contingency access to allied and partner nations. (JP 3-20)

security operations

Those operations performed by commanders to provide early and accurate warning of enemy operations, to provide the forces being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow commanders to effectively use their protected forces. (ADP 3-90)

stability operation

An operation conducted outside the United States in coordination with other instruments of national power to establish or maintain a secure environment and provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief. (ADP 3-0)

support area

The portion of the commander's area of operations that is designated to facilitate the positioning, employment, and protection of base sustainment assets required to sustain, enable, and control operations. (ADP 3-0)

***support operations**

The staff function of planning, coordinating, and synchronizing sustainment in support of units conducting decisive action in an area of operations.

sustainment preparation of the operational environment

The analysis to determine infrastructure, physical environment, and resources in the operational environment that will optimize or adversely impact friendly forces means for supporting and sustaining the commander's operations plan. (ADP 4-0)

tactical command post

A facility containing a tailored portion of a unit headquarters designed to control portions of an operation for a limited time. (FM 6-0)

tactical control

The authority over forces that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned. (JP 1, Volume 2)

terrain management

The process of allocating terrain by establishing areas of operation, designating assembly areas, and specifying locations for units and activities to deconflict activities that might interfere with each other. (ADP 3-90)

threat

Any combination of actors, entities, or forces that have the capability and intent to harm United States forces, United States national interests, or the homeland. (ADP 3-0)

***throughput distribution**

A method of distribution which bypasses one or more intermediate supply echelons in the supply system to avoid multiple handling.

unit distribution

A method of distributing supplies by which the receiving unit is issued supplies in its own area, with transportation furnished by the issuing agency. (FM 4-40)

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