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# Sustainment Operations

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Final Draft

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Headquarters, Department of the Army

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# Sustainment Operations

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## Preface

FM 4-0, *Sustainment Operations* augments the Army's principal doctrine on providing sustainment support as found in ADP 4-0, *Sustainment*. It describes how Army sustainment forces, as part of the joint team, provide support to Army and other forces with an emphasis on support to multidomain operations. This manual serves as a companion manual to FM 3-0, *Operations* and together with ADP 4-0 provides the foundation for how Army sustainment forces support multidomain operations.

The principal audience for FM 4-0 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.)

FM 4-0 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which FM 4-0 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 FM 4-0 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.

FM 4-0 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 FM 4-0 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 DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) to Commander, United States Army Combined Arms Support Command, ATTN: ATCL-TD (FM 4-0), 2221 Adams Avenue, Fort Gregg-Adams, VA 23801-1809; by e-mail to [usarmy.gregg-adams.tradoc.list.cascom-g3-5-7-tdid-doc@army.mil](mailto:usarmy.gregg-adams.tradoc.list.cascom-g3-5-7-tdid-doc@army.mil).

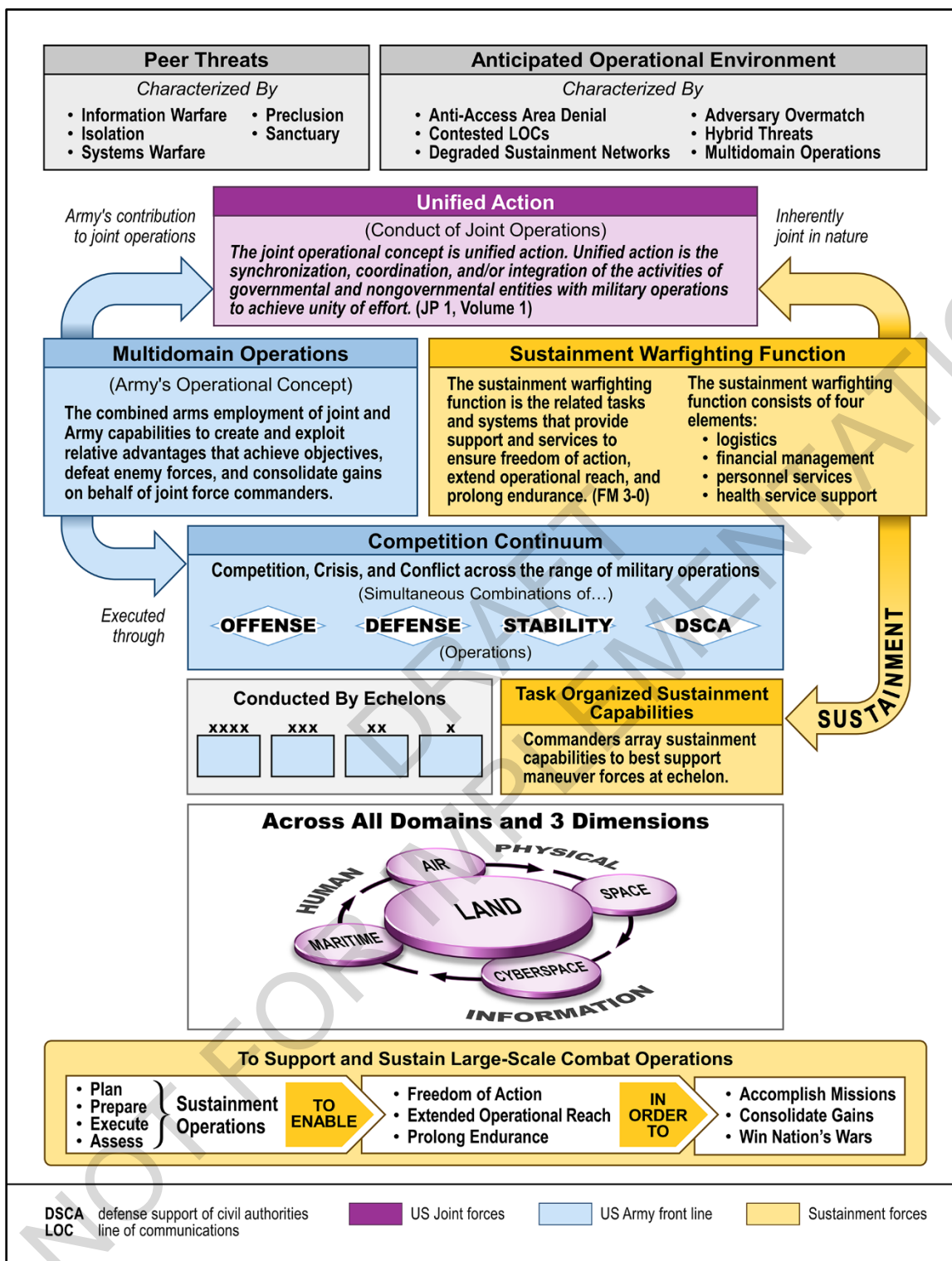
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## Introduction

The publication of FM 3-0 in October 2022 codified multidomain operations as the Army's operational concept. FM 4-0 describes sustainment operations and how the Army supports the joint force in the execution of campaigns. It is the Army's doctrine for sustainment operations across the competition continuum at the theater strategic, operational, and tactical levels of warfare. This publication emphasizes sustainment fundamentals, and tactics to provide all commanders, staffs, and Soldiers an understanding of sustainment operations. The contents of FM 4-0 are consistent with the principal sustainment doctrine contained in ADP 4-0 and serve as the doctrinal foundation for all Army sustainment operations. FM 4-0 provides tactics and procedures that addresses the four elements of the sustainment warfighting function (logistics, financial management, personnel services, and health service support) and is the capstone Army sustainment doctrine reinforced by multiple Army Techniques Publications. ATP 4-93, *Theater Sustainment Operations*, ATP 4-92, *Field Army and Corps Sustainment Operations*, and ATP 4-91, *Division Sustainment Operations* delve into the detailed techniques for conducting sustainment operations at echelon.

The doctrine discussed in this manual is nested with the FM 3-0 series doctrine. Sustainment is crucial to the success of operations. The endurance of Army forces is primarily a function of their sustainment (ADP 3-0). Sustainment determines the depth and duration of Army operations. It is essential to seizing, retaining, and exploiting the initiative. Sustainment is inherently joint and provides the joint force commander freedom of action, extended operational reach, and prolonged endurance. Sustainment must be planned, integrated, and synchronized with operations at every level of warfare. Sustainment is dependent upon joint and strategic integration and should be coordinated to ensure resources are delivered to the point of employment. The Army's sustainment capabilities assist in providing crucial operational area opening functions enabling joint forces to achieve strategic and operational reach. Army sustainment capabilities provide the bulk of Army support to other Services, common-user logistics, and other common sustainment resources in support of the combatant commander.

The logic chart in the introductory figure on page xi is better understood if read from top to bottom. The chart depicts the peer threats and methods expected to be employed and the characteristics of the anticipated operational environment. The logic chart reflects the joint operational concept of unified action and defines multidomain operations as the Army's operational concept and how the sustainment warfighting function contribute to unified action. The logic chart displays the strategic context through which forces conduct operations and how sustainment capabilities are task organized to support operational forces at echelon across all domains. The chart concludes by portraying how sustainment of large-scale combat operations requires integration into the operations process to enable freedom of action, extend operational reach, and provide the prolonged endurance necessary to accomplish missions, consolidate gains, and win our nation's wars.



Introductory figure. FM 4-0 logic chart



FM 4-0 contains seven chapters and seven appendices:

**Chapter 1** provides an overview of Army sustainment operations, introduces the four elements of the sustainment warfighting function, and discusses the principles of sustainment. It also provides an overview of Army operations and sustainment challenges presented by the spectrum of violence and describes the Army strategic context in which sustainment forces must operate. The chapter concludes describing sustainment of multidomain operations, the authorities and responsibilities vested in the combatant commander, and Title 10 sustainment requirements and various executive agent responsibilities.

**Chapter 2** provides an overview of sustainment roles, capabilities, and a general discussion of sustainment organizations at the national strategic, theater strategic, operational, and tactical levels of warfare. This chapter concludes with a discussion of joint command relationships, Army command and support relationships, and command and support relationships by echelon.

**Chapter 3** provides an overview of sustainment during competition below armed conflict. It also discusses sustainment planning considerations during competition and describes sustainment roles and responsibilities by echelon during competition.

**Chapter 4** provides an overview of Army operations during crisis. It discusses sustainment planning considerations, considerations for forcible entry operations and describes roles and responsibilities of organizations for sustainment operations by echelon during crisis.

**Chapter 5** provides an overview of sustainment operations during armed conflict. It discusses the link between sustainment organizations and their associated tasks in the strategic, operational, and tactical levels of warfare. This chapter also discusses sustainment of large-scale combat operations, sustainment of defensive operations, and sustainment of offensive operations.

**Chapter 6** describes sustainment operations in a maritime environment. It begins with a discussion on the characteristics of the maritime environment and the challenges they pose. It also discusses planning considerations for sustainment in a maritime environment.

**Chapter 7** describes the operations process and the sustainment commander's importance in driving the operations process. It describes how sustainment commanders use operational art. The chapter also discusses how sustainment commanders can adapt their formations for missions and transitions. It concludes with training considerations for sustainment units and sustainment leader development.

**Appendix A** describes considerations for conducting logistics operations contested by a peer threat.

**Appendix B** describes quartermaster operations and the functions of the Quartermaster Corps.

**Appendix C** describes transportation operations and the functions of the Transportation Corps.

**Appendix D** describes ordnance operations and the functions of the Ordnance Corps.

**Appendix E** discusses the Army sustainment information systems and the importance of linking them to command and control systems.

**Appendix F** discusses and provides examples of logistics status reports and personnel status reports.

**Appendix G** describes the sustainment symbols within FM 4-0.

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## Chapter 1

# Army Sustainment Operations

Chapter 1 introduces Army sustainment operations, presenting the four elements of the sustainment warfighting function and examining the foundational principles underpinning sustainment. Moreover, it offers insights into Army operations and the challenges pertaining to sustainment that emerge within the competition continuum, a dynamic spectrum encompassing phases from peaceful competition to potential armed conflict. The chapter delves into Army sustainment forces operations and contributions within the strategic environment. The chapter culminates by delineating the provisions for sustaining multidomain operations, outlining the scope of authority and duties delegated to combatant commanders, and explaining the requisites for Title 10 sustainment alongside the diverse responsibilities assumed by various executive agents.

## SECTION I – OVERVIEW OF ARMY SUSTAINMENT

1-1. For the Army, *sustainment* is the provision of logistics, financial management, personnel services, and health service support necessary to maintain operations until successful mission completion (ADP 4-0). Sustainment is accomplished through the integration and synchronization of national and global resources and ensures Army forces are physically available and properly equipped, at the right place and time, to support the combatant commander (CCDR). The sustainment warfighting function leverages joint, interagency, intergovernmental, multinational, and other available capabilities to provide sustainment support to the force.

1-2. Sustainment improves force readiness and maintains Army forces by manning them with trained Soldiers and leaders; funding them with required resources; equipping them with materiel (individual and unit); maintaining Soldier and Family readiness; and enabling Army forces to conduct operations. Army sustainment is based on and enabled by an integrated process (people, systems, materiel, health service support [HSS], and other support), inextricably linking sustainment to operations. Sustainment operations focus on building an operationally ready Army, delivering it to the CCDR as part of the joint force, and sustaining its combat power across the depth of the operational area.

## SUSTAINMENT WARFIGHTING FUNCTION

1-3. The *sustainment warfighting function* is the related tasks and systems that provide support and services to ensure freedom of action, extended operational reach, and prolong endurance (ADP 3-0). A collection of select primary related tasks that are embedded in the sustainment warfighting function are described in chapter 2. Systems consist of personnel, networks, information systems, processes and procedures, and facilities and equipment that enable sustainment commanders to support operations. The sustainment warfighting function consists of four elements: logistics, financial management, personnel services, and HSS, each of which must be integrated and synchronized across all warfighting functions to ensure the appropriate level of support. For additional information see ADP 3-0, ADP 4-0, and FM 3-0.

## LOGISTICS

1-4. The elements of logistics are maintenance, transportation, supply, field services, distribution, operational contract support (OCS), and general engineering. Appendix B, Quartermaster Operations describes the supply and field services elements of logistics. Appendix C, Transportation Operations

describes the transportation elements of logistics. Appendix D, Ordnance Operations describes the maintenance element of logistics and discusses ammunition and explosive ordnance disposal.

## FINANCIAL MANAGEMENT

1-5. Financial management encompasses finance operations and resource management. Financial management leverages fiscal policy and economic power across the range of military operations. For detailed information see FM 4-80.

## PERSONNEL SERVICES

1-6. *Personnel services* are sustainment functions that man the force, maintain Soldier and Family readiness, promote the moral and ethical values of the nation, and enable the fighting qualities of the Army (ADP 4-0). Personnel services include planning, coordinating, and sustaining personnel efforts at the operational and tactical levels. Personnel services include human resources (HR) support, legal support, religious support, and band support. For detailed information see ADP 4-0, ATP 1-19, FM 1-0, FM 3-84, and FM 1-05.

## HEALTH SERVICE SUPPORT

1-7. *Army health service support* is support and services performed, provided, and arranged by the U.S. Army Medical Command to promote, improve, conserve, or restore the behavioral and physical well-being of personnel that include medical treatment (organic and area support), hospitalization, medical evacuation (including medical regulating), and medical logistics (including blood management) (FM 4-02). Army HSS is a critical capability embedded within formations across all warfighting functions. For detailed information see FM 4-02.

## PRINCIPLES OF SUSTAINMENT

1-8. A *principle* is a comprehensive and fundamental rule or an assumption of central importance that guides how an organization or function approaches and thinks about the conduct of operations (ADP 1-01). Army sustainment operations are guided by fundamental principles that apply in large-scale combat operations as well as any other operation along the conflict continuum.

1-9. The eight principles of Army sustainment operations (integration, anticipation, responsiveness, simplicity, economy, survivability, continuity, and improvisation) are shown in figure 1-1. These principles are interdependent and must be synchronized in time, space, and purpose. The principles of sustainment are essential to enabling freedom of action, extending strategic and operational reach, and prolonging endurance. For additional information, see ADP 4-0. Army sustainment leaders should consider application of the principles using the following:

- Integration. Sustainment leaders must integrate sustainment with joint and multinational partners to maximize effects and resources.
- Anticipation. Sustainment leaders must visualize and prepare resources for future operations.
- Responsiveness. Sustainment leaders must be able to deliver capabilities and resources to meet a rapidly changing situation.
- Simplicity. Sustainment leaders must remove unnecessary complexity of processes and procedures to deliver effective support.
- Economy. Sustainment leaders must practice efficient management, discipline, prioritization, and allocation of resources.
- Survivability. Sustainment leaders must incorporate protective measures to increase survivability in all training and operations.
- Continuity. Sustainment leaders must strive to seek integrated and focused networks linking sustainment to operations.
- Improvisation. Sustainment leaders must be able to improvise operational and tactical actions to meet a changing operational environment.

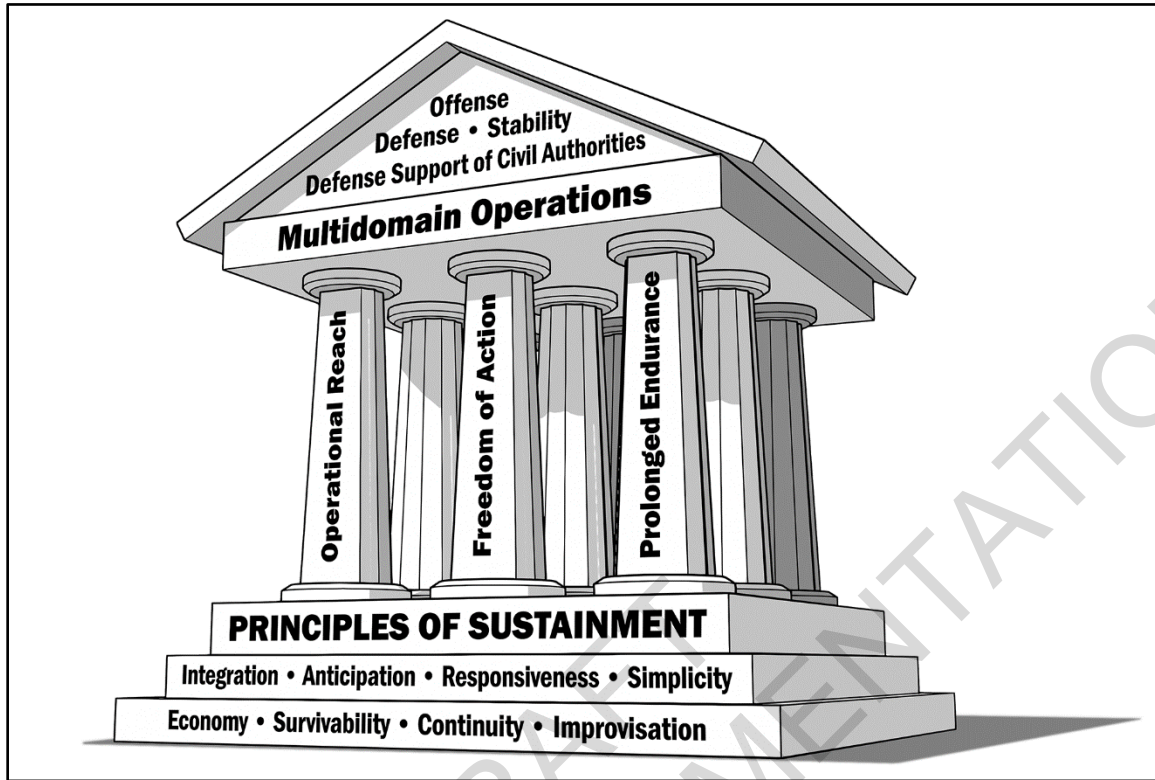


Figure 1-1. Principles of sustainment

## SECTION II – OVERVIEW OF ARMY OPERATIONS

1-10. The Army's primary mission is to organize, train, and equip its forces to conduct prompt and sustained land combat to defeat enemy ground forces and seize, occupy, and defend land areas. It supports four strategic roles for the joint force. Army forces shape operational environments, counter aggression during crisis, prevail during large-scale ground combat, and consolidate gains. The Army fulfills its strategic roles by providing forces for joint campaigns that enable integrated deterrence of adversaries outside of conflict and the defeat of enemies during conflict or war. Sustainment supports the Army in achieving its primary mission through the provision of logistics, financial management, personnel services, and health service support. The integration and synchronization of each element of the sustainment warfighting function is essential in enabling freedom of action, operational reach, and prolonged endurance. The integration and synchronization of the sustainment warfighting function with the other warfighting functions is key to success during multidomain operations.

1-11. *Multidomain operations* are the combined arms employment of joint and Army capabilities to create and exploit relative advantages to achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force commanders (FM 3-0). Multidomain operations span the competition continuum and are the Army's contribution to joint campaigns. Sustainment supports the Army's execution of multidomain operations through the provision of task organized sustainment capabilities that support maneuver forces at echelon. Task organized sustainment capabilities conduct sustainment operations across all domains to support and sustain large-scale combat operations. Below the threshold of armed conflict, multidomain operations are how Army forces accrue relative advantages and demonstrate readiness for conflict, deterring adversaries while assuring allies and partners. During conflict, multidomain operations are how Army forces close with and destroy the enemy, defeat enemy formations, seize critical terrain, and control populations and resources to deliver sustainable political outcomes (FM 3-0).

1-12. Since Army forces conduct operations in support of joint campaigns which for the most part occur as part of a larger coalition operation, leaders must understand the interdependencies between their own assigned forces and the forces or capabilities provided by others to generate the complementary and reinforcing effects of combined arms approaches. Army forces employ unified action partner capabilities to the degree they are available. Sustainment increases the effects of capabilities employed by unified action partners through efforts such as training exercises, agreements, and standard operating procedures. However, because peer threats can contest the force in all domains, sustainment forces must be prepared to conduct operations when some or all unified action partner capabilities are unavailable to support mission accomplishment.

## SPECTRUM OF VIOLENCE

1-13. Army forces must meet a diverse array of challenges and contribute to national objectives across a wide range of operational categories including security cooperation, crisis response, limited contingency operations, and large-scale combat operations. Sustainment operations shape operational environments and set conditions that are favorable for future operations. Employing sustainment capabilities at the lower end of the spectrum of violence increases cooperation between coalitions and allies and builds partner capacity. Army forces build partnerships, capabilities, and mutual trust through combined training exercises, standardization, and increasing interoperability between coalitions and allied partners.

1-14. Figure 1-2 provides an illustration of the competition continuum and range of military operations against the spectrum of violence. Combatant commands and theater Armies campaign across the competition continuum. The theater sustainment command (TSC) and task-organized elements can be simultaneously engaged in supporting competition in one operational area within the area of responsibility (AOR) while providing sustainment support to crisis in another operational area and sustainment support to armed conflict in yet another operational area within the AOR. See JP 3-0 and FM 3-0 for additional information.

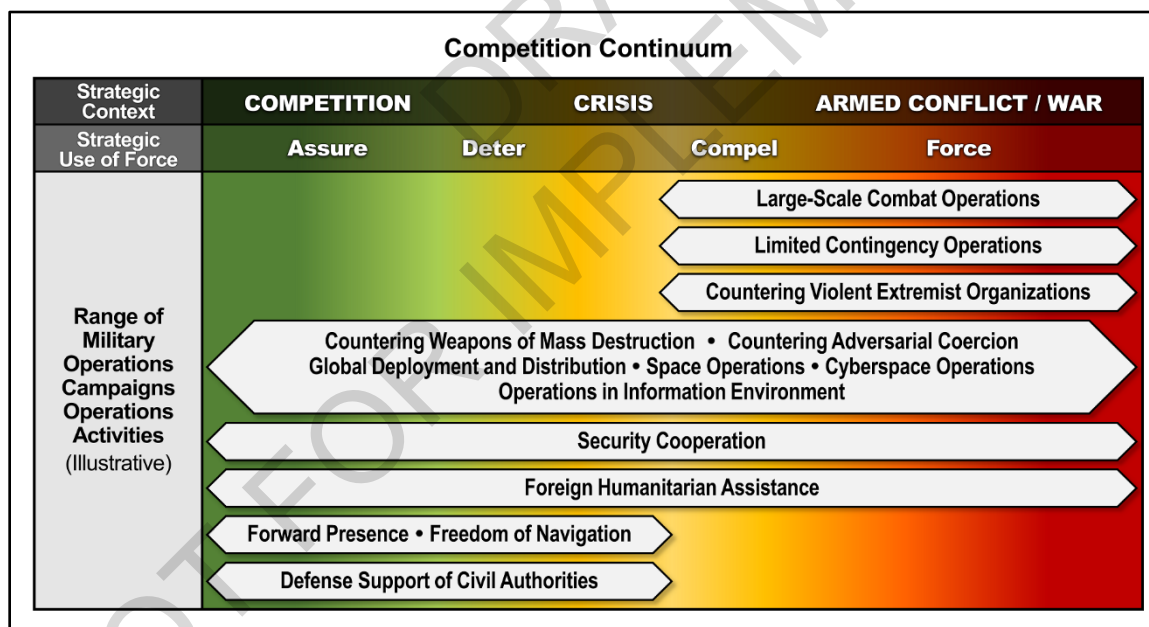


Figure 1-2. The competition continuum and range of military operations

## COMPETITION BELOW ARMED CONFLICT

1-15. Competition below armed conflict exists when two or more state or non-state adversaries have incompatible interests, but neither seeks armed conflict. Nation-states compete with each other using all instruments of national power to gain and maintain advantages that help them achieve their goals. Low levels of lethal force can be a part of competition below armed conflict. Sustainment operations in support of

competition include support to CCDR daily operational requirements, Title 10 requirements, Army support to other Services, support to military engagement, security cooperation, and set the theater tasks. These operations build trust and confidence in our allies and partners while ensuring the United States is prepared for future operations. During these operations, sustainment forces invest in facilities and infrastructure development as well as civilian engagement to build partnerships for required capabilities, capacities, and support needed during operations. For additional information see FM 3-0, ATP 3-93, and ATP 4-93.

## CRISIS

1-16. A *crisis* is an emerging incident or situation involving a possible threat to the United States, its citizens, military forces, or vital interests that develops rapidly and creates a condition of such diplomatic, economic, or military importance that commitment of military forces and resources is contemplated to achieve national and/or strategic objectives (JP 3-0). Sustainment forces must be prepared for a crisis that results from a military action of the adversary or crisis response that results from human or natural disasters. Sustainment is key to providing Army forces freedom of action, extended operational reach, and prolonged endurance to disrupt the enemy's decision cycle to deter further aggression and return to competition. Sustainment actions during crisis response can be key in stabilizing the situation and demonstrating to our adversary that our forces are prepared for any transition that may occur. For detailed information see JP 3-29, ADP 3-07, FM 3-0, ATP 4-92, and ATP 4-93.

## ARMED CONFLICT

1-17. Armed conflict occurs when a state or non-state actor uses lethal force as the primary means to satisfy its interests. Armed conflict can range from irregular warfare to conventional warfare and combinations of both. Sustainment is key to Army forces entering armed conflict as it enables freedom of action, extended operational reach, and prolong endurance for Army commanders conducting operations within armed conflict. Sustainment also provides the ability to deploy, employ, sustain, and redeploy required Army forces and materiel needed by a commander within an operational area to sustain armed conflict. For additional information see FM 3-0 and ATP 4-91, ATP 4-92, and ATP 4-93.

## CONSOLIDATING GAINS

1-18. Army commanders must exploit successful operations by continuously consolidating gains during competition, crisis, and armed conflict. *Consolidate gains* are activities to make enduring any initial operational success and to set the conditions for a sustainable security environment, allowing for a transition of control to other legitimate authorities (ADP 3-0). Sustainment forces play a key role in supporting forces as they consolidate gains made during competition, crisis, and armed conflict. Sustainment forces can assist with regenerating combat power for continued operations, restoring infrastructure and key facilities, providing governance to local populations, and providing medical support. For additional information see FM 3-0 and ATP 4-93.

## LARGE-SCALE COMBAT OPERATIONS

1-19. The focus of Army readiness is on large-scale combat operations. *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). During ground combat, they typically involve operations by multiple corps and divisions, and they typically include substantial forces from the joint and multinational team. Conflicts encompassing large-scale combat operations are more intense and destructive than limited contingencies, often rapidly amassing heavy casualties. Large-scale combat operations place a significant strain on sustainment operations and often include both conventional and irregular forces on both sides. For additional information on large-scale combat operations see FM 3-0.

1-20. During large-scale combat operations, the enemy has a wide range of capabilities to detect, identify, interdict, and destroy sustainment forces. These enemy observation capabilities can be employed to monitor sustainment forces at home station in the United States and abroad, and movements within the AOR. Sustainment forces must be prepared to counter these measures from the strategic support area through the tactical areas. Appendix A provides additional descriptions of adversary capabilities to contest logistics.

Sustainment forces use mitigation techniques such as dispersion and masking of electromagnetic signatures to mitigate adversary effects and act as sensors for targeting. Sustainment forces must also be prepared for the pace and intensity of combat operations and prepared, trained, manned, and equipped commensurate with the supported unit to match the pace of maneuver units to maintain freedom of action and operational reach. Sustainment units should be prepared for the increased casualties that can result from large-scale combat operations. The ability to deliver replacement personnel and materiel to maneuver units will be essential in large-scale combat operations in all environments.

## TENETS OF OPERATIONS

1-21. Tenets of operations are desirable attributes that should be built into all plans and operations, and they are related to how multidomain operations should be conducted. Commanders use the tenets of operations to inform and assess courses of action throughout the operations process. The tenets of operations are:

- Agility.
- Convergence.
- Endurance.
- Depth.

## AGILITY

1-22. *Agility* is the ability to move forces and adjust their dispositions and activities more rapidly than the enemy (FM 3-0). Agility is integral to survivability during large-scale combat operations. Sustainment forces will be able to rapidly displace to avoid enemy detection. Sustainment forces must train and master the ability to expediently disaggregate and aggregate to increase capabilities at echelon and facilitate greater freedom of action and endurance. Sustainment forces must also train and master the ability to quickly change direction, task, or focus, and reorganize and reintegrate as the operational situation dictates. Changes may come due to a transition between operational phases or in response to enemy action.

## CONVERGENCE

1-23. *Convergence* is an outcome created by the concerted employment of capabilities from multiple domains and echelons against combinations of decisive points in any domain to create effects against a system, formation, decision maker, or in a specific geographic area (FM 3-0). Convergence occurs when a higher echelon and its subordinate echelons create effects from and in multiple domains in ways that defeat or disrupt enemy forces long enough for friendly forces to effectively exploit the opportunity. Sustainment units support convergence by setting conditions that enable deterrence, provide options during crisis, and enable success at the outset of armed conflict. Sustainment units set the theater, position forces, and establish agreements with allies and partners that facilitate situational understanding, decision making, integration, and synchronization of capabilities during armed conflict. Sustainment commanders at all levels must understand the concept of operations to anticipate sustainment requirements on a dynamic battlefield where convergence creates exploitable opportunities that enable freedom of action and mission accomplishment. For additional information on convergence see FM 3-0.

## ENDURANCE

1-24. *Endurance* is the ability to persevere over time throughout the depth of an operational environment (FM 3-0). Endurance is key to sustaining operations for as long as necessary to achieve the desired outcome. Sustainment units must anticipate requirements and support the force for as long as necessary regardless of distance. Sustainment units must train to continuously operate and deliver sustainment using land, maritime, and air capabilities while making the most effective and efficient use of resources. When possible, sustainment units employ a space and cyberspace-enabled communications network to transmit sustainment requirements and coordinate the delivery of materiel or services. However, leaders must anticipate degraded communications and combine analog systems for communication with predictive analysis and disciplined initiative to ensure commanders can maintain acceptable tempo for as long as necessary.



## DEPTH

1-25. *Depth* is the extension of operations in time, space, or purpose to achieve definitive results (ADP 3-0). Sustainment units create depth by improving the infrastructure for force projection and by improving interoperability with multinational forces to the degree required by operation plans (OPLANs) and contingency operations. Leaders describe the depth they can achieve in terms of operational reach. *Operational reach* is the distance and duration across which a force can successfully employ military capabilities (JP 3-0). Sustainment leaders must ensure they clearly articulate their units' capabilities as sustainment determines the depth and limits on friendly operations.

## IMPERATIVES

1-26. Imperatives are actions Army forces must take to defeat enemy forces and achieve objectives at acceptable cost. They are informed by the operational environment (OE) and the characteristics of the most capable threats Army forces can encounter. Imperatives include:

- See yourself, see the enemy, and understand the OE.
- Account for being under constant observation and all forms of enemy contact.
- Create and exploit relative physical, information, and human advantages in pursuit of decision dominance.
- Make initial contact with the smallest element possible.
- Impose multiple dilemmas on the enemy.
- Anticipate, plan, and execute transitions.
- Designate, weight, and sustain the main effort.
- Consolidate gains continuously.
- Understand and manage the effects of operations on units and Soldiers.

1-27. Sustainment leaders must be familiar with the tenets of operations and imperatives. They should consider how the tenets and imperatives impact their units and how they impact the units they support when planning and executing sustainment operations. Table 1-1 on page 1-8 lists the imperatives and select sustainment considerations for each element of the sustainment warfighting function. For additional details on tenets of operations and imperatives, see FM 3-0.

**Table 1-1. Sustainment considerations for imperatives**

<i><b>Imperatives</b></i>	<i><b>Sustainment considerations</b></i>
See yourself, see the enemy, and understand the operational environment.	<ul style="list-style-type: none"> <li>• Analyze the operating environment and refine or update the sustainment estimates.</li> <li>• Describe the environmental impacts to operations.</li> <li>• Evaluate the threat and evaluate and plan for dispersed operations.</li> <li>• Analyze personnel running estimates against operational requirements.</li> <li>• Determine sustainment funding requirements against available budget.</li> <li>• Plan for central funding banking, finance plans, and operations plans and finance system support.</li> <li>• Analyze health service support across the formation in theater.</li> <li>• Analyze potential theater evacuation and hospitalization.</li> </ul>

**Table 1-1. Sustainment considerations for imperatives (continued)**

Account for being under constant observation and all forms of enemy contact.	<ul style="list-style-type: none"> <li>• Modify combined obstacle overlay.</li> <li>• Observe fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment.</li> <li>• Consider all forms of contact, including influence.</li> <li>• Understand terrain, weather, and line of sight analysis.</li> <li>• Monitor potential electromagnetic reconnaissance.</li> <li>• Use multiple dispersed staging locations and smaller footprint to avoid detection.</li> <li>• . Plan and mitigate threats with complimentary and reinforcing protection capabilities.</li> <li>• Understand and participate in the scheme of protection.</li> <li>• Practice operations and physical security.</li> <li>• Alternate logistics routes to avoid predictability.</li> </ul>
Create and exploit positions of physical, information, and human advantage in pursuit of decision dominance.	<ul style="list-style-type: none"> <li>• Maintain situational understanding of domains and dimension interrelationships.</li> <li>• Identify the enemy's decision cycle.</li> <li>• Conduct collection management.</li> <li>• Continue to manage personnel tracking and reporting.</li> <li>• Continue development of plans for precision and predictive logistics capabilities.</li> <li>• Continue to predict required funding for banking; update finance and operations plans.</li> <li>• Continue development of plans for precision and predictive medical logistics capabilities.</li> <li>• Support displaced persons and detainee operations and support to host nation civilians.</li> </ul>
Make initial contact with the smallest element possible	<ul style="list-style-type: none"> <li>• Course of action development.</li> <li>• Conduct collection management.</li> <li>• Understand enemy forces/dispositions.</li> <li>• Decisively engage on terms that are favorable.</li> <li>• Continue to manage personnel tracking and reporting.</li> <li>• Conduct detainee and displaced persons processing.</li> <li>• Provide operational reach to extend deep operations.</li> <li>• Anticipate rapid resupply operations to multiple small, dispersed elements for judicious employment of friendly forces.</li> <li>• Continue to provide predictive spending, funding, and banking in support of combatant commanders initiatives.</li> <li>• Anticipate rapid medical resupply operations to multiple small, dispersed elements for judicious employment of friendly forces.</li> </ul>
Impose multiple dilemmas on the enemy.	<ul style="list-style-type: none"> <li>• Maintain situational understanding of domains and dimension interrelationships.</li> <li>• Continue course of action development.</li> <li>• Identify/exploit enemy weaknesses.</li> <li>• Practice operations and physical security.</li> <li>• Conduct forcible entry operations.</li> <li>• Set favorable logistics conditions.</li> <li>• Plan, prepare and execute feints/deception operations.</li> <li>• Provide operational reach to extend deep operations.</li> <li>• Utilize multiple logistical nodes (ports of embarkation and ports of debarkation).</li> </ul>

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**Table 1-1. Sustainment considerations for imperatives (continued)**

<i><b>Imperatives</b></i>	<i><b>Sustainment considerations</b></i>
Anticipate, plan, and execute transitions.	<ul style="list-style-type: none"> <li>• Plan and arrange operations for transitions.</li> <li>• Enable task organization that anticipates follow on phases of operations.</li> <li>• Rehearse critical transitions (defense to offense).</li> <li>• Ensure the force understands changes to rules of engagement during mission transitions.</li> <li>• Understand potential risks.</li> <li>• Conduct collection management.</li> <li>• Continue to plan and execute non-unit related personnel replacement operations.</li> <li>• Plan and prepare for unit replacement.</li> <li>• Manage personnel tracking and reporting.</li> <li>• Continue development of plans for precision and predictive logistics capabilities.</li> <li>• Reprioritize resupply operations to maintain momentum.</li> <li>• Identify sustainment shortfalls/gaps against operational requirements.</li> <li>• Continue to provide predictive spending, funding, and banking in support of combatant commander's initiatives.</li> <li>• Anticipate rapid medical resupply operations to multiple small, dispersed elements for judicious employment of friendly forces.</li> <li>• Analyze health service support across the formation in theater.</li> </ul>
Designate, weight, and sustain the main effort.	<ul style="list-style-type: none"> <li>• Designate main effort and prioritize resources.</li> <li>• Continue information collection.</li> <li>• Manage personnel replacement operations and personnel tracking.</li> <li>• Anticipate sustainment requirements of the main effort.</li> <li>• Position supplies and capabilities according to the commander's intent allowing for freedom of maneuver.</li> <li>• Provide sustainment estimates and asset visibility.</li> <li>• Conduct estimates, track funding, and report costs to specific operations.</li> <li>• Provide medical logistics inclusive of all CL VIII equipment and services necessary to sustain operations.</li> <li>• Position medical supplies and capabilities according to the situation and as far forward as possible to decrease mortality.</li> </ul>
Consolidate gains continuously	<ul style="list-style-type: none"> <li>• Assess resources in order to transition to the next phase.</li> <li>• Reconstitute the force to transition.</li> <li>• Exploit sustainment resources/infrastructure.</li> <li>• Establish and manage personnel tracking and reporting.</li> <li>• Support displaced persons, detainee operations, and HN civilians.</li> <li>• Establish, assess, and operate the theater distribution network.</li> <li>• Identify sustainment shortfalls/gaps against requirements.</li> <li>• Plan for and incorporate operational contract support.</li> <li>• Implement in-transit visibility.</li> <li>• Conduct estimates, track funding, and report costs to specific operations.</li> <li>• Conduct audits in order to make resource-informed decisions.</li> <li>• Assess casualty estimates and return to duty rates.</li> <li>• Provide medical logistics inclusive of all CL VIII equipment and services necessary to sustain operations.</li> </ul>

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**Table 1-1. Sustainment considerations for imperatives (continued)**

<b>Imperatives</b>	<b>Sustainment considerations</b>
Understand and manage the effects of operations on units and leaders.	<ul style="list-style-type: none"> <li>• Maintain awareness of the human indicators of fatigue, fear, indiscipline, and reduced morale.</li> <li>• Maintain well-trained, physically fit Soldiers for cohesive units during extended operations.</li> <li>• Plan to match units against missions and rotate units through rest and recuperation periods.</li> <li>• Establish and manage personnel replacements, tracking, and reporting.</li> <li>• Manage personnel and postal actions throughout the competition continuum.</li> <li>• Support morale, welfare, and recreation activities.</li> <li>• Plan and support field services.</li> <li>• Provide predictive sustainment support vs reactive operations.</li> <li>• Distribute and control funds, provide status of funds, and monitor obligation rates.</li> <li>• Forecast upcoming funding requirements based on operational needs.</li> <li>• Conduct periodic health and behavior assessments, resiliency support, and continue troop medical support.</li> <li>• Provide Army medicine to promote and improve, conserve, or restore behavioral and physical well-being.</li> </ul>

## 568 THE OPERATIONAL ENVIRONMENT

569 1-28. An *operational environment* is the aggregate of the conditions, circumstances, and influences that  
570 affect the employment of capabilities and bear on the decisions of the commander (JP 3-0). For Army forces,  
571 an OE includes portions of the land, maritime, air, space, and cyberspace domains understood through three  
572 dimensions (human, physical, and information). The land, maritime, air, and space domains are defined by  
573 their physical characteristics. The cyberspace domain is a manmade network of networks that transits and  
574 connects the other domains. The cyberspace domain includes the internet, telecommunications networks,  
575 computer systems, embedded processors and controllers, and portions of the electromagnetic spectrum.  
576 Sustainment operations are conducted through the land, air, and maritime domains, enabled by capabilities  
577 in the space and cyberspace domains, and cross each dimension. For additional information, see FM 3-0 and  
578 FM 2-0.

579 1-29. Operational and mission variables are tools to assist commanders and staffs in refining their situational  
580 understanding of the OE. Commanders and staffs analyze and describe an OE in terms of eight interrelated  
581 operational variables: political, military, economic, social, information, infrastructure, physical environment,  
582 and time. These variables help leaders understand the land domain and its interrelationships with relevant  
583 actors and capabilities in the other domains, as well as the information environment. Commanders analyze  
584 information categorized by the operational variables in the context of the missions they are assigned. They  
585 use mission variables, in combination with the operational variables, to refine their understanding of the  
586 situation and to visualize, describe, and direct operations. The mission variables are mission, enemy, terrain  
587 and weather, troops and support available, time available, and civil considerations, each of which have  
588 informational considerations. See FM 5-0 for additional information on operational and mission variables.

589 1-30. Understanding the specific OE in each situation is essential to the successful execution of deployment  
590 and sustainment operations conducted in support of CCDR objectives. Sustainers mitigate risks identified  
591 during OE analysis by conducting a sustainment preparation of the OE. Geospatial engineering capabilities  
592 assist sustainers with coordination, integration, and synchronization of resources through a shared  
593 understanding and visualization of the OE. They analyze and identify lines of communication in support of  
594 force projection, identify terrain suitability for intermediate staging and forward operating base emplacement,  
595 emphasize restrictive terrain to assist planners with aerial and ground delivery considerations, and identify  
596 natural resources and infrastructure. For additional information on sustainment preparation of the OE see  
597 Chapter 3 and ATP 4-93.

1-31. Units sustaining large-scale combat operations are affected by a range of factors in the OE. Sustainers must be prepared to support operations in a variety of vastly different OEs. Listed below are examples of how sustainment operations are impacted by specific OE factors:

- Contiguous and noncontiguous areas of operations where ill-defined or fluid boundaries impact task organizations, identification of supported units, command and support relationships, distribution plans, and execution.
- Simultaneous, geographically dispersed operations that may result in long lines of communications (LOCs) and stress sustainment headquarters communications, command and support relationships, distribution plans, and execution.
- Joint, single-Service, and multinational force interactions with intergovernmental organizations, nongovernmental organizations, and contractors requires more liaisons to and from sustainment headquarters and units and longer planning time to ensure all organizations understand the plan. For more information on multinational, intergovernmental organization, and nongovernmental organization support, see ADP 4-0.
- Limited availability of or high competition for host-nation support (HNS), infrastructure, commercial services, commodities, and facilities to support setting the theater, rapid deployment and onward movement of combat forces, and sustainment of the joint security area during military operations.

### SECTION III – SUSTAINMENT SUPPORT TO MULTIDOMAIN OPERATIONS

1-32. Joint interdependence is the purposeful reliance of all the Services upon each other's capabilities to maximize the complementary and reinforcing effects of all. The U.S. Air Force provides strategic airlift capabilities to move Army forces quickly across strategic LOCs. The U.S. Navy provides strategic sealift into deep draft ports and land capabilities to supplement Army theater opening forces entering areas where ports are austere, damaged, or non-existent. The joint force enables Army sustainment and provides the services and capabilities needed to sustain unified action. For additional information regarding joint logistics, see JP 4-0.

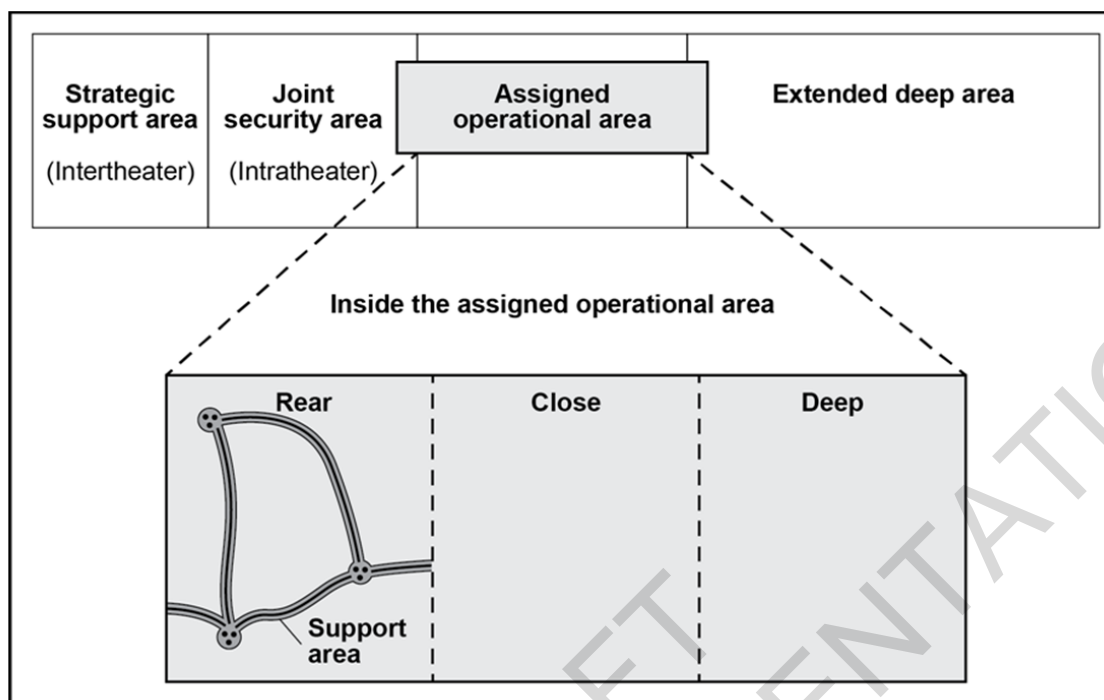
#### Strategic Framework consists of:

- Strategic support area.
- Joint security area.
- Extended deep area.
- Assigned operational area.

#### Operational Framework consists of:

- Assigned areas (area of operations, zone, and sector).
- Deep, close, and rear operations.
- Main effort, supporting effort, and reserve.

1-33. Army sustainment enables operations by providing the support required to keep the Army and its unified action partners engaged in operations across the strategic and operational frameworks. The strategic framework accounts for factors in the strategic environment and the connection of strategic capabilities to operational and tactical-level operations. The strategic framework includes four areas: strategic support area, joint security area, extended deep area, and assigned operational area. The sustainment warfighting function provides the freedom of action, operational reach, and prolonged endurance needed to conduct and sustain operations across the strategic and operational frameworks. The *operational framework* is a cognitive tool used to assist commanders and staffs in clearly visualizing and describing the application of combat power in time, space, purpose, and resources in the concept of operations (ADP 1-01). The operational framework consists of assigned areas; deep, close, and rear operations; and main effort, supporting effort, and reserve. Sustainment forces can be found throughout the operational framework with the majority conducting operations from rear and close areas. Figure 1-4 depicts the operational framework in the context of the strategic framework. For additional information on the operational framework in the context of the strategic framework, see FM 3-0.



**Figure 1-4. The operational framework in the context of the strategic framework**

1-34. The interrelationship of the air, land, maritime, space, and cyberspace domains requires a shared understanding of an OE. Sustainment commanders and staffs must understand the friendly and enemy capabilities that reside in each domain and their potential impacts to sustainment operations. Space and cyberspace operations that degrade sustainment information system capabilities, as well as the peer threat employment of conventional, special operations, guerilla, and insurgent forces to interdict friendly air, land, and maritime operations, can all degrade sustainment operations. Since many friendly capabilities are not organic to sustainment formations, commanders and staffs plan, coordinate for, and integrate joint and other unified action partner capabilities in a multidomain approach to operations.

1-35. During large-scale combat against peer threats, all friendly forces must assume they are under observation and can potentially come into contact in all domains, including space and cyberspace where an adversary's capabilities mean Soldiers must be prepared to operate in denied, degraded, and disrupted communication environments. FM 6-99 includes standardized reports and 541 message formats. The formats in the field manual are for manual and voice use. The report and message formats help users prepare and manually transmit written and voice reports and messages. Each format provides an organized template to record, pass, and store information. Multidomain operations will require Soldiers to maintain the ability to operate in a contested cyber or space environment without the use of enterprise systems. Sustainment organizations should maintain manual reporting skills and should also be prepared to use alternate methods of reporting such as telephone, radio transmission, messenger, or hard copy.

1-36. Precision sustainment is the goal for optimizing resources during multidomain operations. **Precision sustainment is the delivery of required capabilities to the point of employment to maintain operations until successful mission completion.** Precision sustainment integrates sustainment data and information that can be used at all echelons. It also provides anticipation and responsiveness for sustainment and operational planners to react to supply and maintenance trends. Precision sustainment also employs economy and ensures sustainment resources are provided in the most efficient manner to enable employment of assets to the greatest effect possible. Precision sustainment is enabled by predictive logistics that provides sustainment and operational planners with capabilities and decision support tools required to provide operational readiness rates and near real-time total asset visibility and in-transit visibility of assets.

Precision sustainment is enabled by a sustainment enterprise resource planning and decision support system with predictive logistics that enables—

- The ability to resupply without request and/or redirect supplies based on priority.
- A real-time common operational picture viewable by commanders and logisticians at echelon.
- Significant demand reduction across the total force to lessen delivery requirements.

1-37. **Predictive logistics are the capabilities and decision support tools that improve operational readiness in multidomain operations.** Predictive logistics provides decision support using software applications that blend logistics data with predictive algorithms to inform planning and decision making. For example, the information received from predictive logistics applications can be used to predict product replacement rates and request replacement products before the product is needed. Predictive logistics systems can also monitor Class III (Bulk), Class V, water usage rates, and request replenishment without manual input. Predictive logistics will also allow monitoring of transportation assets and enable redirection based on priorities or request replacement parts. Other examples of predictive logistics include the ability to redirect the Joint Tactical Autonomous Aerial Resupply System (drones that have the ability to deliver supplies to the point of employment) to resupply widely dispersed forces and an effective communication network that enables timely situational awareness. The continued development of precision sustainment and predictive logistics capabilities will allow sustainment and operational planners to gain efficiencies in—

- Decision dominance.
- Autonomous distribution.
- Demand reduction.
- Advanced power.
- Maritime operations.

## FREEDOM OF ACTION, OPERATIONAL REACH, AND PROLONGED ENDURANCE

1-38. The sustainment warfighting function, guided by the sustainment principles, is essential for generating combat power and conducting operations as the Army performs its strategic roles. Sustainment provides the operational commander the freedom of action, extended operational reach, and prolonged endurance necessary to shape OEs, counter aggression on land during crisis, prevail during large-scale ground combat, and consolidate gains.

### FREEDOM OF ACTION

1-39. Freedom of action enables commanders to achieve operational initiative and maintain tempo. Successful sustainment commanders facilitate freedom of action by planning and executing sustainment activities able to support the greatest possible number of courses of action for the supported commander in a particular situation. Effective sustainment execution employs the principles of continuity and responsiveness needed by supported commanders to operate freely.

1-40. Sustainers enable freedom of action by conducting sustainment preparation of the OE, synchronizing the sustainment plan with the scheme of maneuver, scheme of protection, and maintaining flexibility and disciplined initiative while supporting maneuver commanders. The proper application of mission command to sustainment operations encourages the greatest possible freedom of action for subordinates. Appropriate

sustainment unit command and support relationships equip subordinate commanders with the authority and flexibility to act boldly and create desired support effects in the absence of continuous direction from higher headquarters (HQ).

## OPERATIONAL REACH

1-41. *Operational reach* is the distance and duration across which a force can successfully employ military capabilities (JP 3-0). Army forces require significant sustainment support and capabilities to strike, disrupt, or destroy enemy forces throughout their depth, preventing the effective employment of enemy reserves, enemy command and control nodes, enemy sustainment, and other enemy capabilities not in direct contact with friendly forces. Operations in depth disrupt the enemy's decision cycle and contribute to protecting the force by destroying enemy capabilities before the enemy can use them.

1-42. Sustainment operations are critical to enabling operational reach. The Army's sustainment capability assists in providing crucial theater and port opening functions that further enable the strategic and operational reach of the joint force. Effective operational reach requires gaining and maintaining operational access in the face of enemy antiaccess and area denial capabilities and actions. The sustainment principles of continuity, survivability, and integration are integral in achieving operational reach and preventing culmination.

## PROLONGED ENDURANCE

1-43. Endurance refers to the ability to employ combat power anywhere for protracted periods. It stems from the ability to organize, protect, and sustain a force, regardless of the distance from its base and the austerity of the environment. Endurance involves the principles of anticipation, improvisation, and economy. Anticipating requirements and making the most effective, efficient use of available resources provides endurance and gives Army forces their campaign quality. Sustainment leaders use improvisation to adapt operations to situations and circumstances to maintain endurance.

1-44. Sustainment provides the support necessary to ensure operations continue until mission accomplishment. Sustainment also provides the capabilities necessary for maintaining the personnel and materiel replacements essential to maintaining combat power. Sustainment support that enables prolonged endurance requires the synchronization of the elements of sustainment with the concept of operations.

## AUTHORITIES AND RESPONSIBILITIES

1-45. The remainder of this chapter discusses the command authority of the CCDR, Army Title 10 sustainment requirements, and Army assigned executive agent (EA) responsibilities. Army command and support relationships are discussed in detail in chapter 2.

## COMMAND AUTHORITY OF COMBATANT COMMANDERS

1-46. Title 10, United States Code Sec 162 specifies the force structure prescribed for each combatant command as follows: (a) *Assignment of Forces.*- (1) *As directed by the Secretary of Defense, the Secretaries of the military departments shall assign specified forces under their jurisdiction to unified and specified combatant commands or to the United States element of the North American Aerospace Defense Command to perform missions assigned to those commands. The Secretary of Defense shall ensure that such assignments are consistent with the force structure prescribed by the President for each combatant command.* (2) *A force not assigned to a combatant command or to the United States element of the North American Aerospace Defense Command under paragraph (1) shall remain assigned to the military department concerned for carrying out the responsibilities of the Secretary of the military department concerned as specified in section 7013, 8013, or 9013 of this title, as applicable.* (3) *A force assigned to a combatant command or to the United States element of the North American Aerospace Defense Command under this section may be transferred from the command to which it is assigned only-* (A) *by authority of the Secretary of Defense; and (B) under procedures prescribed by the Secretary and approved by the President.* (4) *Except as otherwise directed by the Secretary of Defense, all forces assigned to a unified combatant command shall be under the command of the commander of that command. The preceding sentence applies to forces assigned to a specified combatant command only as prescribed by the Secretary of Defense.* (b) *Chain of Command-*



*Unless otherwise directed by the President, the chain of command to a unified or specified combatant command runs- (1) from the President to the Secretary of Defense; and (2) from the Secretary of Defense to the commander of the combatant command.*

1-47. Title 10, United States Code Sec 164 specifies the CCDR's responsibility for authoritative direction for logistics (doctrinally referred to as directive authority for logistics [DAFL]). Paragraph C1 states: *Unless otherwise directed by the President or the Secretary of Defense, the authority, direction, and control of the commander of a combatant command with respect to the commands and forces assigned to that command include the command functions of -(A) giving authoritative direction to subordinate commands and forces necessary to carry out missions assigned to the command, including authoritative direction over all aspects of military operations, joint training, and logistics; (B) prescribing the chain of command to the commands and forces within the command; (C) organizing commands and forces within that command as he considers necessary to carry out missions assigned to the command; (D) employing forces within that command as he considers necessary to carry out missions assigned to the command; (E) assigning command functions to subordinate commanders; (F) coordinating and approving those aspects of administration and support (including control of resources and equipment, internal organization, and training) and discipline necessary to carry out missions assigned to the command; and (G) exercising the authority with respect to selecting subordinate commanders, selecting combatant command staff, suspending subordinates, and convening courts-martial, as provided in subsections (e), (f), and (g) of this section and section 822(a) of this title, respectively.*

1-48. Combatant command (command authority) over assigned forces is vested only in the commanders of combatant commands by Title 10, United States Code, and cannot be delegated or transferred. This authority over assigned forces includes DAFL, which gives the CCDR the authority to organize logistics resources within theater according to operational needs. The President or Secretary of Defense may extend this authority to attached forces when transferring forces for a specific mission and should specify this authority in the establishing directive or order.

## **Directive Authority for Logistics**

1-49. The CCDR uses DAFL to assign responsibility for execution of EA, lead Service responsibilities, and to make other special arrangements such as assigning common-user support or common-user logistics to a Service or agency. DAFL is the CCDR authority to issue directives to subordinate commanders to ensure the effective execution of approved operation plans, optimize the use or reallocation of available resources, and prevent or eliminate redundant facilities and/or overlapping functions among the Service component commands (JP 1, Volume 2).

1-50. DAFL, like other combatant command (CCMD) authorities, cannot be delegated or transferred. However, the CCDR may assign the responsibility for the planning, execution and/or management of as many common support capabilities to a subordinate joint force commander (JFC) or Service component commander as required to accomplish the subordinate JFC's or Service component commander's mission. The Secretary of Defense or the Deputy Secretary of Defense may designate one provider as the EA for some commodities, support, or services common to two or more Services.

1-51. The CCDR must formally delineate assigned responsibilities by function and scope to the subordinate JFC or Service component commander. When exercising this option, the CCDR must specify the control and tasking authorities being bestowed upon the subordinate joint command for logistics as well as the command relationships it will have with the Service components.

## **Coordinating Authority**

1-52. *Coordinating authority* is a commander or individual who has the authority to require consultation between the specific functions or activities involving forces of two or more Services, joint force components, or forces of the same Service or agencies, but does not have the authority to compel agreement (JP 1, Volume 2). In the event that essential agreement cannot be obtained, the matter shall be referred to the appointing authority. 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. For example, a joint security commander exercises coordinating authority over area security

operations within the joint security area. Commanders or leaders at any echelon at or below CCMD may be delegated coordinating authority. These individuals may be assigned responsibilities established through a memorandum of agreement between military and nonmilitary organizations. For additional information, see JP 1, Volume 2.

### **Direct Liaison Authorized**

1-53. *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 more applicable to planning than operations and always carries with it the requirement of keeping the commander granting direct liaison authorized informed. It is a coordination relationship, not an authority through which command may be exercised.

### **Lead Service**

1-54. The CDR may choose to assign specific common-user logistics (CUL) functions, to include planning and execution, to a lead Service. A *lead Service or agency for common-user logistics* is a Service component or Department of Defense (DOD) agency that is responsible for execution of common-user item or service support in a specific CCMD or multinational operation as defined in the combatant or subordinate JFC's operation plan, operation order, and/or directives (JP 4-0).

1-55. Lead Service assignments can be for single or multiple common-user functions and may also be based on phases and/or locations within the AOR. The CDR may augment the lead Service's logistics organization with capabilities from another component's logistics organizations as appropriate. The lead Service must issue procedures and sustainment funding for all items issued to other Services as well as a method for collecting items from other Services.

### **Common-User Logistics**

1-56. *Common-user logistics* is materiel or service support shared with or provided by two or more Services, DOD agencies, or multinational partners to another Service, DOD agency, non-DOD agency, and/or multinational partner in an operation (JP 4-0). It is usually restricted to a particular type of supply and/or service and may be further restricted to specific units or types of units, times, missions, and/or geographic areas.

1-57. While normal Service channels may be an effective means of supporting a joint operation, the Services will often be precluded from deploying the capabilities necessary to provide 100 percent dedicated Service support. More often than not, the operational situation will require CUL support to provide effective and efficient support of one or more major services or supplies. In fact, CUL support occurs in almost all joint operations, especially in the form of standing inter-Service support relationships. For example, the Army provides inland petroleum distribution to the joint force.

1-58. When properly executed, CUL can produce significant efficiencies by eliminating duplication among Service components, DOD agencies, multinational partners, and/or contractors in theater. By utilizing common-item and common-service support, the CDR may be able to produce significant savings in equipment, personnel, and supplies deployed to a particular joint operations area (JOA). These savings may further reduce the requirement for strategic lift, the logistics footprint within a JOA, and possibly the overall cost of an operation. Figure 1-5 displays the CDR's authorities and sample processes used to execute those authorities.

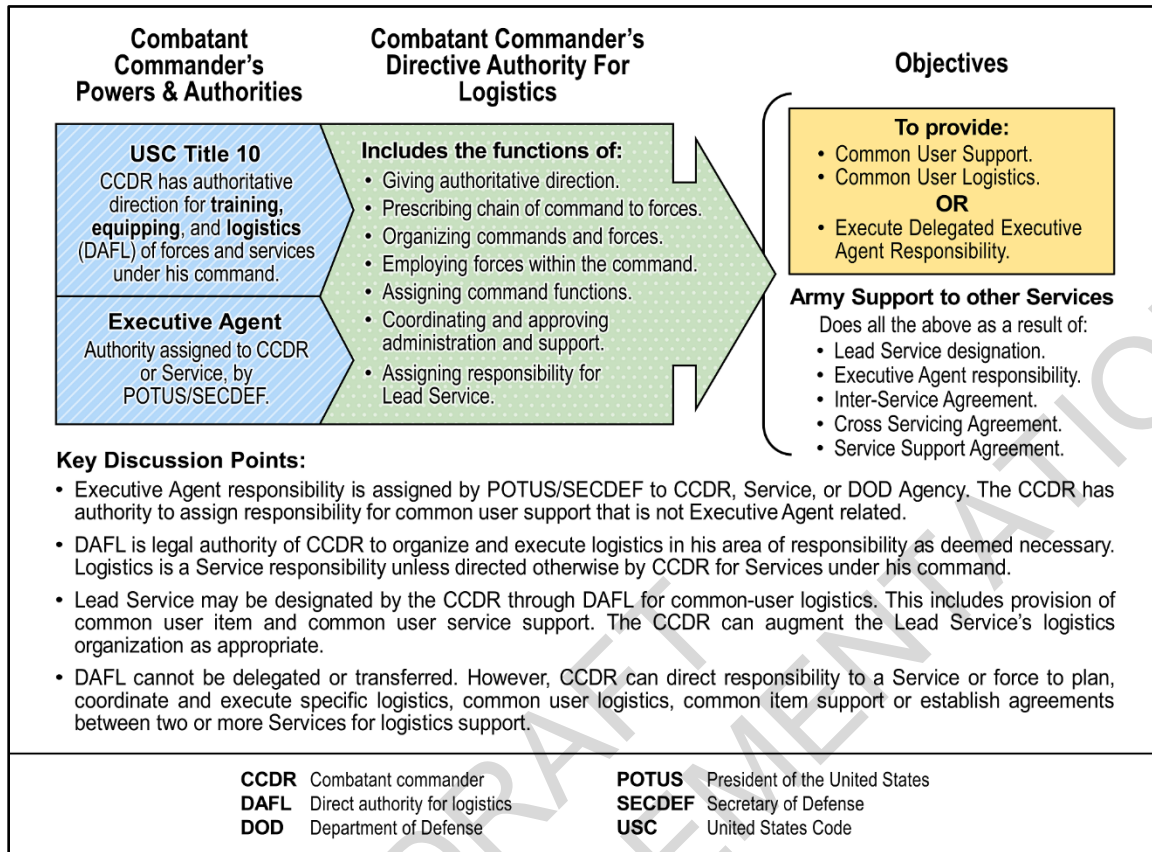


Figure 1-5. Combatant commander's authorities

## JOINT COMMAND FOR LOGISTICS

1-59. The CCDR, through exercising DAFL, may assign joint logistics responsibilities to a Service component to establish a joint command for logistics (JP 4-0). The assignment as a joint command for logistics is clearly designated by orders and establishes the organization as a joint command. This command authority is not to be confused with EA, CUL, or any other type of Army support to other services. Generally, the CCDR will designate the Service with the preponderance of forces or the most capable logistics structure to fill the joint command for logistics requirement. The designated joint command for logistics requires staff augmentation from other Services to meet joint force requirements. See JP 1, JP 3-33, and JP 4-0 for more information on establishing a joint command. In the event the Army Service component command (ASCC) is assigned responsibility for establishing a joint command for logistics, the TSC or expeditionary sustainment command (ESC) with staff augmentation from other Service components is designed to fulfill that mission.

## ARMY TITLE 10 SUSTAINMENT REQUIREMENTS

1-60. Title 10, USC and Department of Defense Directive (DODD) 5100.1 describe the organization, roles, and responsibilities for the elements of the DOD to include the statutory requirements for each military department. In accordance with Title 10, each Service retains responsibility for the sustainment support of forces it allocates to a joint force. The Secretary of the Army exercises this responsibility through the Chief of Staff, U.S. Army and the ASCC assigned to each CCMD. For conventional forces not assigned to CCMDs, the Secretary of the Army established Commanding General, U.S. Army Forces Command as the Army's Service Force Provider. The ASCC is responsible for the preparation and administrative support of Army forces assigned or attached to the CCMD. Theater ASCCs also support Army special operations forces

(ARSOF). U.S. Army Special Operations Command (USASOC) provides ARSOF to combatant commands to perform theater special operations missions.

1-61. Support to other Services while executing assigned EA or lead Service responsibilities is commonly referred to as Army support to other Services. In both instances, the ASCC supports sustainment requirements through its designated TSC, ESC, and theater medical command (TMC).

1-62. The Army has twelve Title 10 responsibilities; nine (bold lettering) are sustainment related:

- Recruiting.
- Organizing.
- **Supplying.**
- **Equipping (including research and development).**
- Training.
- **Servicing.**
- **Mobilizing.**
- **Demobilizing.**
- **Administering (including the morale and welfare of personnel).**
- **Maintaining.**
- **Construction, outfitting, and repair of military equipment.**
- **Construction, maintenance, repairs of building and structures, utilities, acquisition of real property and interests in real property necessary to carry out the responsibilities.**

1-63. The purposeful combination of complementary Service capabilities to create joint interdependent forces is often the most effective and efficient means by which to sustain a joint force. Therefore, additional authorities to Title 10 have been developed to provide for interservice and interagency mutual support.

## ARMY EXECUTIVE AGENT RESPONSIBILITIES

1-64. *Executive agent* is a term used to indicate a delegation of authority by the Secretary of Defense to a subordinate to act on behalf of the Secretary of Defense (JP 1, Volume 2). EA refers to Secretary of Defense directives and instructions to the head of a DOD component (such as Chief of a Service, CCDR, or director of a combat support agency) to provide specific categories of support to other agencies or Service components. The Secretary of Defense designates and funds the Army as the EA for numerous DOD common support requirements. Examples of the Army's sustainment-related responsibilities and support to other services as provided in DODD and joint publications are shown in table 1-2. These DOD-level EA requirements relate to lead Service responsibilities. EA reduces redundancy of common support requirements across the DOD. However, in many cases, lead Service requirements will be closely related to the DOD EA requirements. The CCDR has the authority to assign a Service lead Service responsibilities for support not EA related.

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**Table 1-2. Examples of Army sustainment-related responsibilities**

<b>Army Executive Agent</b>	
<b>Source</b>	<b>Support Responsibility</b>
Deputy Secretary of Defense Memorandum	Coordination of Contracting Activities in the U.S. Central Command Area of Responsibility
Deputy Secretary of Defense Memorandum	Financial Disclosure Management - Ethics Reporting System
DODD 3235.02E	DOD Combat Feeding Research and Engineering Program
DODD 4705.01E	Management of Land-Based Water Resources in Support of Joint Contingency Operations
DODD 5101.11E	DOD Executive Agent for Military Postal Service and Official Mail Program
DODD 6025.21E	Medical Research for Prevention, Mitigation, and Treatment of Blast Injuries
<b>Army Support to Other Services</b>	
<b>Source</b>	<b>Support Responsibility</b>
JP 3-34	Joint Engineering Operations
JP 3-80	Resource Management
JP 4-18	Joint Terminal and Joint Logistics Over-the-Shore Operations
JP 4-03	Joint Bulk Petroleum and Water Doctrine
JP 4-0	Provide Logistics Support to Enemy Prisoners of War
DODD 1300.22	Mortuary Affairs Policy
LEGEND:	DODD Department of Defense Directive
DOD Department of Defense	JP Joint Publication

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1-65. The Secretary of Defense or the Deputy Secretary of Defense may designate an EA for specific responsibilities, functions, and authorities to provide defined levels of support for operational missions, administrative, or other designated activities that involve two or more DOD components. By definition, the designation as an EA makes that organization responsible for a joint capability.

NOT FOR IMPLEMENTATION  
DRAFT

## Chapter 2

# Army Sustainment at Echelon

This chapter provides an overview of sustainment roles, capabilities, and a general discussion of sustainment organizations at the national strategic, theater strategic, operational, and tactical levels of warfare. This chapter concludes with a discussion of joint command relationships, Army command and support relationships, and command and support relationships by echelon.

## SECTION I – OVERVIEW OF NATIONAL STRATEGIC LEVEL OF WARFARE

2-1. The *national strategic level of warfare* is the level of warfare at which the U.S. government formulates policy goals and ways to achieve them by synchronizing action across government and unified action partners and employing the instruments of national power (FM 3-0). The instruments of national power are all of the means available to the government in its pursuit of national objectives, expressed as diplomatic, economic, informational, and military. The national strategic level of warfare focuses on developing global strategy and providing global strategic direction. Strategic direction provides context, tasks, and purpose for the employment of the instruments of national power. The specifics of strategic direction address long-term, emerging, and anticipatory issues or concerns that may quickly evolve due to rapidly changing circumstances. Strategic direction is always evolving and adapting. The following paragraphs discuss sustainment organizations at the national strategic level of warfare. These organizations have the ability to create and deliver effects and support from the strategic base to forces in theater.

## LEVELS OF WARFARE

2-2. The *levels of warfare* are a framework for defining and clarifying the relationship among national objectives, the operational approach, and tactical tasks (ADP 1-01). While the various methods of warfare are ultimately expressed in concrete military action, the four levels of warfare (national strategic, theater strategic, operational, and tactical) link tactical actions to achievement of national objectives. The *national strategic level of warfare* is the level of warfare at which the U.S. government formulates policy goals and ways to achieve them by synchronizing action across government and unified action partners and employing the instruments of national power (FM 3-0). For additional information on the national strategic level of warfare see JP 5-0 and JP 3-0.

2-3. The levels of warfare distinguish four broad overlapping activities: providing national direction and creating national strategy (national strategic); conducting continuous theater campaigning (theater strategic); planning and conducting campaigns and major operations (operational); or planning and executing operations, battles, engagements, and actions (tactical).

2-4. Sustainment organizations execute a series of tasks within the sustainment warfighting function that enable the continuous provision of sustainment across the levels of warfare throughout all domains. These tasks are executed across the competition continuum. Figure 2-1 on page 2-2 provides an overview of select tasks within each element of the sustainment warfighting function. These tasks are collectively linked to support operational objectives and unified action partners by enabling freedom of action, operational reach, and prolonged endurance during operations.

Level of Warfare	National Strategic	Theater Strategic	Operational and Tactical
Sustainment Elements			
<b>Logistics</b>	<ul style="list-style-type: none"> <li>– Conduct force generation and mobilization</li> <li>– Establish the industrial base</li> <li>– Execute materiel readiness</li> <li>– Conduct force deployment</li> </ul>	<ul style="list-style-type: none"> <li>– Establish and operate the theater distribution network</li> <li>– Conduct sustainment mission command</li> <li>– Conduct reception, staging and onward movement</li> <li>– Manage host nation support and operational contract support</li> <li>– Establish and operate forward and intermediate basing</li> </ul>	<ul style="list-style-type: none"> <li>– Conduct maintenance</li> <li>– Conduct transportation</li> <li>– Conduct supply and resupply</li> <li>– Conduct field services</li> <li>– Establish and manage operational distribution network</li> <li>– Conduct operational contract support</li> <li>– Conduct general engineering</li> </ul>
<b>Financial Management</b>	<ul style="list-style-type: none"> <li>– Execute Title 10 functions related to finance</li> </ul>	<ul style="list-style-type: none"> <li>– Establish and conduct theater financial management operations</li> </ul>	<ul style="list-style-type: none"> <li>– Field Ordering Officer</li> </ul>
<b>Personnel Services</b>	<ul style="list-style-type: none"> <li>– Raise and maintain the force</li> </ul>	<ul style="list-style-type: none"> <li>– Establish and manage theater personnel tracking and reporting</li> <li>– Manage personnel replacement operations</li> <li>– Establish and conduct theater personnel support operations</li> </ul>	<ul style="list-style-type: none"> <li>– Conduct personnel tracking and reporting</li> <li>– Conduct replacement operations</li> <li>– Conduct essential personnel services</li> </ul>
<b>Health Service Support</b>	<ul style="list-style-type: none"> <li>– Execute Title 10 function related to health service support</li> <li>– Provide Role 4 hospitalization</li> </ul>	<ul style="list-style-type: none"> <li>– Conduct medical command and control</li> <li>– Provide health service support to other Services</li> <li>– Conduct theater hospitalization</li> <li>– Establish and manage theater medical evacuation (to include medical regulation)</li> <li>– Execute theater lead agent for medical materiel</li> <li>– Serve as the single integrated medical logistics manager</li> </ul>	<ul style="list-style-type: none"> <li>– Provide medical treatment</li> <li>– Provide hospitalization</li> <li>– Conduct medical evacuation</li> <li>– Conduct medical logistics</li> </ul>

Figure 2-1. Sustainment tasks

2-5. U.S. leaders employ the Armed Forces of the United States, the military instrument of national power, in coordination with diplomatic, informational, and economic instruments to advance and defend U.S. values and interests, achieve objectives consistent with national strategy, and conclude operations on terms favorable to the United States. The Armed Forces of the United States achieves these objectives through unified action. *Unified action* is the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort (JP 1, Volume 2).

2-6. In order to effectively support large-scale combat operations, sustainment leaders must understand strategic-level sustainment forces and the capabilities each provides. Joint and Army forces receive support from the strategic support area. The strategic support area describes the area extending from a theater of operations to a base in the United States or another CDR's area of responsibility. It includes the air and sea ports supporting the flow of forces and sustainment into the theater. The strategic base in the strategic support area includes a vast array of DOD, government, and private sector agencies that participate in the sustainment enterprise. The support provided includes strategic lift, materiel integration, financial management support, HR support, and medical services. This support often includes the ability of strategic providers to reach from the strategic base directly to the end user and integrates with support received from the operational and tactical levels. The following paragraphs describe sustainment providers at the national strategic level of warfare. Sections II through IV of this chapter describe sustainment capabilities at the theater strategic level, operational level, and tactical levels of warfare.

## UNITED STATES TRANSPORTATION COMMAND

2-7. The United States Transportation Command (USTRANSCOM) is a CCMD responsible for providing and managing strategic common-user airlift, sealift, and terminal services worldwide. USTRANSCOM is responsible for integrating and synchronizing strategic and theater deployment execution and inter-theater distribution operations into each CDR's AOR. It ensures that military deployment and redeployment, as



well as DOD global patient movement requirements, are met using both military and commercial transportation assets based on supported commander business rules and best business practices. USTRANSCOM determines when commercial channels can meet requirements and relieve stress on limited military assets. USTRANSCOM's major subordinate commands include Air Mobility Command as the Air Force component command, Military Sealift Command as the Navy component command, and the Military Surface Deployment and Distribution Command (SDDC) as the Army Service component command. See JP 4-09 and ATP 3-35 for additional information on USTRANSCOM.

2-8. Commander, USTRANSCOM is the DOD single manager for global bulk fuel management and delivery in support of CCDR requirements. As the single manager, USTRANSCOM synchronizes bulk fuel posture, planning, and execution and advocates for resources, capabilities, and process improvements in coordination with combatant commands, the Services, and the Defense Logistics Agency (DLA).

2-9. Commander, USTRANSCOM exercises coordinating authority for Joint Deployment and Distribution Enterprise operations and planning across all domains and collaborates with other CCMDs, the Services, and, as directed, USG departments and agencies. The Joint Deployment and Distribution Enterprise includes equipment, procedures, doctrine, leaders, technical connectivity, information, organizations, facilities, training, and materiel necessary to conduct joint distribution operations. As such, it provides JFCs with the ability to move and sustain forces across the range of military operations rapidly and effectively. Commander, USTRANSCOM also serves as the Joint Deployment and Distribution Coordinator. USTRANSCOM coordinates planning across global deployment and distribution operations in coordination with other CCMDs, Services, and, as directed, the combat support agencies. See JP 4-09 for additional information on the JDDE. See figure 2-2 on page 2-4 for a depiction of USTRANSCOM's components in the JDDE.

## AIR MOBILITY COMMAND

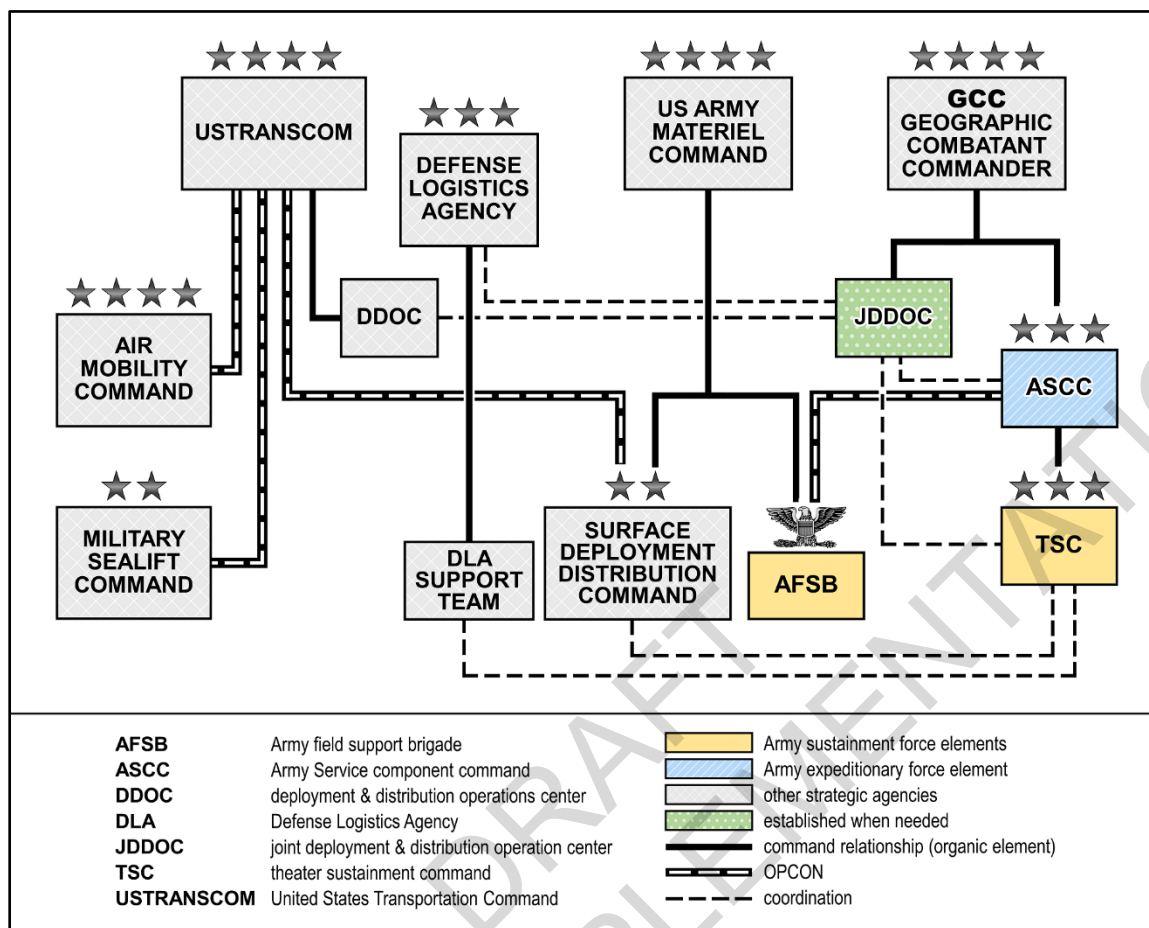
2-10. Air Mobility Command is the U.S. Air Force airlift component command of USTRANSCOM and serves as the single port manager for air mobility. Air Mobility Command aircraft provide the capability to deploy the Army's forces worldwide and help sustain them across the range of military operations. USTRANSCOM, through Air Mobility Command, executes its single port manager role for aerial ports of embarkation and aerial ports of debarkation (APOD) performing functions necessary to support the strategic flow of the deploying forces' equipment and supplies from the aerial ports of embarkation to the theater. For additional information see ATP 3-35.

## MILITARY SEALIFT COMMAND

2-11. Military Sealift Command is the Navy's sealift component command of USTRANSCOM. The mission of the Military Sealift Command is to provide common-user and exclusive-use sealift transportation services to include ocean transportation of equipment, fuel, supplies, Army prepositioned stocks and ammunition to sustain U.S. forces worldwide during peacetime and in war for as long as operational requirements dictate.

## MILITARY SURFACE DEPLOYMENT AND DISTRIBUTION COMMAND

2-12. SDDC is an operational-level Army force designated by the Secretary of the Army as the Army component command of USTRANSCOM and a major subordinate command of United States Army Materiel Command (USAMC). SDDC exercises administrative control (ADCON) authority and responsibility on behalf of the USAMC commander over Army forces assigned to USTRANSCOM and exercises operational control (OPCON) over Army forces as delegated by the USTRANSCOM commander. SDDC is also the surface transportation service provider as part of USTRANSCOM's Joint Deployment and Distribution Enterprise ATP 3-35 and ATP 4-93 provide additional detail on SDDC.



**Figure 2-2. Joint Deployment and Distribution Enterprise**

## SDDC FUNCTIONS AND STAFF RELATIONSHIPS

2-13. SDDC performs single-port management functions necessary to support the strategic flow of the deploying forces' equipment and sustainment supply in the seaport of embarkation and hand-off to the CCDR in the seaport of debarkation (SPOD). SDDC executes its single-port management function from the national strategic level of warfare through the theater strategic level of warfare. SDDC has port management responsibility through all phases of the theater port operations continuum conducting strategic port site surveys, coordinating with Army and Navy operational forces for support to enable strategic ship download and throughput across bare beaches (joint logistics over-the-shore [JLOTS]), and commercial contract fixed-port support deployment. When necessary, in areas where SDDC does not maintain a manned presence, a deployment and distribution management team will be established to direct water terminal operations, including supervising movement operations, contracts, cargo documentation, security operations, arranging for support, and the overall flow of information.

2-14. As the single port manager for seaports, SDDC provides strategic deployment status information to the CCDRs and manages the workload of the SPOD port operator based on the CCDR's priorities and guidance. SDDC transportation brigades and other SDDC units operate ports that use stevedoring labor. If U.S. stevedores are used, transportation brigades assigned to the combatant command operate the port. As an ASCC to USTRANSCOM, SDDC executes the following functions:

- Plans, coordinates, and synchronizes surface transportation movements to move, deploy and sustain DOD forces and build operational readiness and lethality.

- 1053 • Provides surface and multimodal transportation services to DOD and designated multinational and
- 1054 interagency entities.
- 1055 • Plans and executes oversight of command acquisitions for transportation services to support
- 1056 CCMD requirements for enduring and contingency operations and infrastructure.
- 1057 • Books freight on commercial vessels in accordance with (IAW) contractual agreements and
- 1058 provides appropriate support to movements occurring on government and chartered vessels in
- 1059 coordination with Military Sealift Command.
- 1060 • Performs water terminal clearance authority functions as required.
- 1061 • Conducts port surveys, inspections, and certifications via the Transportation Engineering Agency
- 1062 report.

1063 2-15. SDDC executes assigned Title 10 responsibilities on behalf of USAMC, which has ADCON of SDDC.  
 1064 SDDC is OPCON to USTRANSCOM for operational and joint training, and other matters for which  
 1065 USTRANSCOM is responsible.

## 1066 **DEFENSE LOGISTICS AGENCY**

1067 2-16. DLA is the nation's combat logistics support agency, providing nearly 100 percent of the military's  
 1068 consumable items, and is the DOD EA for subsistence, construction/barrier material, medical materiel, and  
 1069 Defense Logistics Management Standards. It also provides distribution and disposal support as appropriate,  
 1070 including the disposal of hazardous waste. DLA supports U.S. Indo-Pacific Command, U.S. Central  
 1071 Command/U.S. Special Operations Command and U.S. European Command/U.S. Africa Command through  
 1072 an established regional command as its focal point. U.S. Northern Command, U.S. Southern Command, U.S.  
 1073 Strategic Command, and U.S. Transportation Command have dedicated liaison officers. DLA participates  
 1074 fully in adaptive planning and execution across the range of military operations, and when requested through  
 1075 a Global Force Management Request for Forces or Secretary of Defense-approved standing executive order,  
 1076 establishes and deploys expeditionary capabilities to support CCMD mission execution. DLA's deployable  
 1077 capabilities can include personnel to provide logistics planning and operations support, commodity and  
 1078 logistics services support (Rapid Deployment Teams that deploy to form a DLA Support Team and Liaison  
 1079 Teams), material disposition and retrograde (DLA Disposition Services Expeditionary Operations), and  
 1080 material processing centers with shipping consolidation functions via DLA Distribution Expeditionary. See  
 1081 DODD 5105.22 and JP 4-0 for additional information.

## 1082 **DEFENSE HEALTH AGENCY**

1083 2-17. The Defense Health Agency is a combat support agency that enables the Army, Navy, and Air Force  
 1084 medical services to provide a medically ready force and ready medical force to CCMDs. Defense Health  
 1085 Agency supports the delivery of integrated health services to Military Health System beneficiaries and is  
 1086 responsible for driving greater integration of clinical and business processes across the Military Health  
 1087 System. For more information, see DODD 5136.13.

## 1088 **DEFENSE CONTRACT MANAGEMENT AGENCY**

1089 2-18. The Defense Contract Management Agency is the combat support agency responsible for providing  
 1090 contract administration services to the DOD acquisition enterprise and its partners to ensure delivery of  
 1091 quality products and services to the operating force. Defense Contract Management Agency, along with the  
 1092 Services, may also serve as an OCS force provider in major contingency and expeditionary operations when  
 1093 requested by the supported CCMD and as directed by the Under Secretary of Defense (Acquisition and  
 1094 Sustainment). See JP 4-0 for additional information.

## 1095 **DEFENSE FINANCE AND ACCOUNTING SERVICE**

1096 2-19. The Defense Finance and Accounting Service is the principal advisor to Secretary of Defense for  
 1097 budgetary and fiscal matters, and as such is responsible for coordinating and collaborating with all DOD  
 1098 agency directors, Service chiefs, and the CCMD that provides military capabilities. The Defense Finance and  
 1099 Accounting Service plays a critical role in support of joint operations as the DOD lead for finance and

1100 accounting and is responsible for policies, procedures, standards, systems, and operations in support of the  
1101 CCDR and sister Services. The Defense Finance and Accounting Service may provide liaison personnel to  
1102 the theater Army G-8 and combatant command J-8 and other financial management elements in theater when  
1103 establishing theater accounting requirements. See JP 3-80 and FM 4-80 for additional information.

## 1104 **UNITED STATES ARMY MATERIEL COMMAND**

1105 2-20. USAMC is the Army's lead materiel integrator providing national-level sustainment, acquisition  
1106 integration support, contracting support, and selected logistics support to Army forces. It also provides related  
1107 common support to other Services, multinational, and interagency partners. The capabilities of USAMC are  
1108 diverse and are accomplished through its various major subordinate commands and other subordinate  
1109 organizations. Some of USAMC's subordinate commands provide capabilities from the national strategic  
1110 level of warfare to the tactical level of warfare. See ATP 4-98 and AR 10-87 for additional information.

1111 2-21. USAMC plans and coordinates expeditionary force contracting support operations, providing  
1112 contracting support for deployed units and installation-level services, supplies, minor military construction,  
1113 the Army organic industrial base, and common-use information technology hardware and software. For  
1114 additional information on USAMC contracting, see ATP 4-71.

1115 2-22. USAMC major commands are Installation Management Command (IMCOM), United States Army  
1116 Financial Management Command, Army Sustainment Command (ASC), U.S. Army Contracting Command  
1117 (ACC), U.S. Army Security Assistance Command, the USAMC lifecycle management commands (LCMCs),  
1118 and SDDC. Discussion of the major USAMC commands and their subordinate commands follows.

## 1119 **INSTALLATION MANAGEMENT COMMAND**

1120 2-23. IMCOM integrates and delivers base support to enable readiness for a globally responsive Army.  
1121 IMCOM's broad range of responsibilities enable installation readiness by providing infrastructure  
1122 management, sustainment, installation protection, and training support services. These responsibilities also  
1123 provide resilient Soldier and Family programs. Full employment of IMCOM's capabilities facilitate  
1124 execution of pre-deployment activities, deployment, and pre-redeployment activities in support of large-scale  
1125 combat operations.

## 1126 **UNITED STATES ARMY FINANCIAL MANAGEMENT COMMAND**

1127 2-24. United States Army Financial Management Command is responsible for the delivery of Army-wide  
1128 headquarters-level financial management functions, including systems support, audit and compliance  
1129 support, financial operations support, and Army Enterprise Resource Planning systems business process  
1130 standardization support. It oversees enterprise-wide finance and comptroller support to Army expeditionary  
1131 and garrison organizations and provides support from the national strategic level of warfare to the tactical  
1132 level of warfare. U.S. Army Financial Management Command provides financial management and systems  
1133 technical training and evaluations of financial management units and develops, fields, trains, and sustains  
1134 electronic commerce capabilities in cooperation with the U.S. Treasury, Federal Reserve Bank, credit unions,  
1135 and banks. Additionally, U.S. Army Financial Management Command is responsible for providing technical  
1136 and integrated oversight of Army field financial management activities. See JP 3-80 and FM 4-80 for  
1137 additional information.

## 1138 **ARMY SUSTAINMENT COMMAND**

1139 2-25. ASC integrates and synchronizes the delivery of USAMC and materiel enterprise capabilities at  
1140 echelon from the theater strategic level of warfare to the tactical level of warfare. ASC delivers materiel  
1141 readiness, force generation, and power projection and sets the conditions for future readiness at home station.  
1142 ASC forward-stationed capabilities provide command and control to all USAMC assets in theater and shape  
1143 the logistics environment and help set the theater to accelerate force reception into theater. Deployable  
1144 logistics support elements provide expeditionary corps and divisions the ability to rapidly integrate into the  
1145 theater delivery of USAMC capabilities at echelon for responsive support to Soldier priorities. ASC serves  
1146 as the Army's lead materiel integrator, identifying excess and obsolete major end items and providing  
1147 disposition instructions to units. It is responsible for integrating logistics support with strategic partners and

links the national sustainment base with the expeditionary Army. Major mission areas include logistics synchronization in support of the Regionally Aligned Readiness and Modernization Model, Army pre-positioned stocks (APS), materiel management, and the Logistics Civil Augmentation Program (LOGCAP). Mission execution is through a global network of organizations to include the ASC staff, Army field support brigades (AFSBs), Army field support battalions (AFSBns), logistics readiness centers (LRCs), and logistics support elements embedded at the division and corps levels. For additional information on ASC subordinate units see ATP 4-98, and for additional information on how ASC supports theater operations see ATP 4-93.

### Logistics Civil Augmentation Program

2-26. LOGCAP is a performance-based program that provides broad, contracted sustainment support to joint operations, coalition partners, and other federal agencies to address ASCC regional and country planning requirements where a military capability is not readily available in support of setting the theater and theater sustainment. Pre-awarded task orders are regionally aligned for rapid response to emerging events. Planning elements are embedded within the AFSB to coordinate annex W development and integrate and synchronize LOGCAP capabilities into operation plans (OPLANs) and concept plans, with focus on OCS-related analysis of the OE, APS, Army PPP, mobilization force generation installations, theater opening, sustainment, theater distribution, stability operations, noncombatant evacuation operations, and defense support of civil authorities. LOGCAP is designed to support shaping OEs and sustainment preparation of the OE. LOGCAP is designated as a preferred source for logistics support and must be considered by requiring activities as part of OCS market research before establishing a new contract. See ATP 4-10.1 and AR 700-137 for additional information.

### Army Field Support Brigades

2-27. The AFSB integrates and synchronizes delivery of USAMC strategic capabilities and enablers to the operational and tactical points of need in support of ASCCs 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. Senior command representatives from each USAMC LCMC are OPCON to each AFSB and enable integrated delivery of USAMC capabilities. The representatives provide a built-in forward technical presence in the tactical environment and anticipate requirements for logistics assistance representatives throughout each Army strategic role. Logistics assistance representatives provide expert technical advice and help identify and mitigate systemic readiness issues. Theater AFSBs are OPCON to the ASCC, and corps-aligned AFSBs deploy a corps logistics support element (CLSE) that is OPCON to the theater AFSB and in direct support to their supported corps during large-scale combat operations. AFSBs are augmented with additional staff or capabilities to meet expanded or unique operational requirements, particularly where redistribution property assistance teams may be used to facilitate the turn-in of equipment for redistribution or retrograde.

2-28. The AFSB is responsible for coordinating acquisition, logistics, and technology support within the theater. The Army Medical Logistics Command provides strategic-level medical logistics support. The U.S. Army Medical Research and Development Command provides Army acquisition and technology support for medical materiel. See ATP 4-98 for additional information.

### Army Field Support Battalion

2-29. The AFSBn mission sets vary from supporting theater strategic to tactical elements. The AFSBn (APS) is responsible for the physical management of APS, both on-shore and afloat, operational project stocks, and Army war reserves. The AFSBn (APS) conducts receipt, storage, maintenance, and issue of the essential equipment sets required for expeditionary operations.

2-30. Division readiness and theater AFSBns enable materiel and deployment readiness of divisions, brigades, and special operations forces (SOF) through LRCs, LCMC logistics assistance representatives, and equipment program executive officers. Direct support readiness AFSBns are allocated to divisions, and theater AFSBns support units on an area basis and assist the theater AFSB execute theater-level materiel enterprise functions. Readiness AFSBns can be found in both CONUS and outside the continental United States (OCONUS) locations. Readiness AFSBns are organic to ASC, which assigns the AFSBn to a parent AFSB in garrison. The AFSBn deploys a division logistics support element TACON to the division to which

it is allocated. The division logistics support element coordinates with the theater AFSB through the corps logistics support element when one is present. The composition of the division logistics support element depends on operational variables, but generally includes AFSBn senior leaders and the LCMC senior service technical representatives. The remaining portion of the divisional AFSB continues to deliver materiel readiness, force generation, power projection, and mobilization force generation installation support. See ATP 4-98 for additional information.

## **ARMY CONTRACTING COMMAND**

2-31. ACC is a major subordinate command within USAMC. ACC provides its capabilities from the national strategic level of warfare through the operational level of warfare. ACC provides expeditionary contracting and contract administration to deployed Army forces through its subordinate CSBs, and systems contracting support to Army program executive officers and program managers, the Head of the Contracting Activity, Senior Contracting Official, and contracting officers for LOGCAP. ACC, through its subordinate Mission and Installation Contracting Command, also provides installation and power projection support to the strategic support area, IMCOM, and the AFSB LRCs. The MICC is a key enabler for homeland defense and defense support to civil authorities operations. In addition, ACC provides OCONUS reach-back contracting support from its CONUS-based contracting centers. ACC CSBs and contracting battalions (CBns) also perform the contingency contract administration services mission during expeditionary force operations. See ATP 4-71 for additional information.

### **Contracting Support Brigade**

2-32. The CSB serves as the Army's primary theater support and contingency contract administration services contracting headquarters. The brigade executes theater support contracting actions and contract administration of external support contracts (for example, LOGCAP in support of Army forces). The CSB commander also serves as the primary contracting support advisor to the ASCC. Allocation of CSBs is one aligned to an ASCC and one aligned to a corps. CSBs provide command and control over a number of CBns as determined during the mission planning process. See ATP 4-71 for additional information.

### **Contracting Battalions**

2-33. The CBn provides command and control over two organic detachments which write, award, and administer contracts to include contingency contract administration services of external support contracts. CBns are normally placed under the direct command of the deploying CSB but may deploy separately from the CSB HQs in small-scale operations. In major sustained operations, the CBn may be combined with contracting elements from other Services to form a regional contracting center. See ATP 4-71 for additional information.

## **UNITED STATES ARMY SECURITY ASSISTANCE COMMAND**

2-34. The U.S. Army Security Assistance Command leads the USAMC Security Assistance Enterprise. It enables security cooperation, military engagement, and other activities conducted to build partner capacity and support and strengthen U.S. global partnerships. The command acts as the primary entry point for Army materiel, service-related, and non-institutional foreign military sales and security assistance requirements as requested by partner nations to enable CCMD strategic priorities for the region.

## **USAMC LIFECYCLE MANAGEMENT COMMANDS**

2-35. USAMC provides logistics, technology, acquisition support, and selected logistics support to Army forces as well as USAMC-related common support to other Services and multinational and interagency partners. This is accomplished principally through national-level maintenance and supply programs managed and executed by the LCMCs, who are OPCON to AFSBs when deployed. LCMCs are the USAMC organizations that have the responsibility to mobilize and deploy sustainment-level maintenance forward repair activities from CONUS LCMC depots and arsenals. LCMCs conduct theater-level contingency planning with USAMC, ASC, and TSCs during set the theater deliberate planning. These USAMC LCMCs include USAMC staff as well as related Assistant Secretary of the Army, Acquisition, Logistics and

Technology program executive office and program management offices. Together, these elements work to ensure support for fielded weapon systems and equipment for their entire life cycle. Program executive office and program management staffs often work in the same office or on the ground in the field along with USAMC LCMC item managers and other technical support personnel. The LCMCs are—

- U.S. Army Communications-Electronics Command: The Communications-Electronics LCMC develops, acquires, fields, and sustains Army communications systems. It provides significant technical support capabilities to deploying and deployed Army forces.
- U.S. Army Tank-Automotive and Armaments Command: This command develops, acquires, fields, and sustains Soldier and ground systems for the operational Army through the integration of effective and timely acquisition, logistics, and cutting-edge technology.
- U.S. Aviation and Missile Command: This command supports Army aviation and missile systems acquisition with field and sustainment-level logistics development, execution, and management; industrial base operations; and delivers responsive aviation, missile and calibration materiel readiness to optimize joint warfighting capabilities at the point of need.
- The Joint Munitions and Lethality Command: This command develops, acquires, fields, and sustains ammunition for the joint force. Core competencies include: research, development, and engineering; acquisition and program management; logistics management; industrial operations; serving as the single manager for conventional ammunition executor and field operating activity; performing demilitarization and disposal of unserviceable stocks; conducting industrial base management and executing transformation; providing real time munitions readiness reporting; maintaining worldwide asset visibility; centrally managing ammunition; and providing integrated lethality solutions.
- U.S. Army Medical Logistics Command: Army Medical Logistics Command is the LCMC for medical materiel. Army Medical Logistics Command executes the medical materiel management functions for combatant commands in order to set and sustain operational medical capabilities in all phases of large-scale combat operations. It includes a headquarters with an integrated logistics support center, and three direct reporting units including the U.S. Army Medical Materiel Agency, U.S. Army Medical Materiel Center – Europe, and U.S. Army Medical Materiel Center – Korea. Core capabilities include medical materiel storage and distribution; supply chain management and integration; central management of contingency programs and prepositioned stocks; sustainment-level medical maintenance; industrial base partnerships; vaccine and medication storage and distribution; medical foreign military sales; and optical fabrication.

## DEFENSE SECURITY COOPERATION AGENCY

2-36. The Defense Security Cooperation Agency plays a critical role in competition. Its mission is to advance U.S. national security and foreign policy interests by building the capacity of foreign security forces to respond to shared challenges. The Defense Security Cooperation Agency leads the broader U.S. security cooperation enterprise in its efforts to train, educate, advise, and equip foreign partners. It administers security cooperation programs that support U.S. policy interests and objectives identified by the White House, DOD, and Department of State. These objectives include developing specific partner capabilities, building alliances and partnerships, and facilitating U.S. access. The Defense Security Cooperation Agency integrates security cooperation activities in support of a whole-of-government approach, provides execution guidance to DOD entities that implement security cooperation programs, exercises financial and program management for the foreign military sales system and many other security cooperation programs, and assists in the long-term development of the security cooperation workforces. It also provides guidance the United States Army Security Assistance Command on executing foreign military sales and security assistance requirements as requested by partner nations. Sustainers can leverage the Defense Security Cooperation Agency operation to facilitate partnerships and agreements.

## UNITED STATES ARMY FORCES COMMAND

2-37. Most Army conventional operating forces are designated as Service-retained forces in the Global Force Management Implementation Guidance assignment tables and are primarily based in CONUS. United States Army Forces Command (FORSCOM) commands Active Component conventional forces (Regular Army,

mobilized Army National Guard, and mobilized Army Reserve), executes training and readiness oversight of Army National Guard forces under state command, and does the same for non-mobilized Army Reserve units. FORSCOM is the command responsible for mobilization and demobilization. Based upon the landpower requirements developed by the CCMDs and validated by the Joint Staff, the Department of the Army and FORSCOM develop task-organized force packages to facilitate strategic deployment and support the gaining JFC's operational requirements.

## UNITED STATES SPECIAL OPERATIONS COMMAND

2-38. USASOC is the ASCC of U.S. Special Operations Command and a force provider of ARSOF to the combatant commands. USASOC's mission is to man, train, equip, educate, organize, sustain, and support forces to conduct special operations across the full range of military operations and spectrum of conflict in support of JFCs and interagency partners to meet theater and national objectives. USASOC major subordinate operational commands and units include 1<sup>st</sup> Special Forces Command (Airborne), special forces groups, 75<sup>th</sup> Ranger Regiment (Airborne), Army Special Operations Aviation Command (Airborne), 160<sup>th</sup> Special Operations Aviation Regiment (Airborne), 4<sup>th</sup> and 8<sup>th</sup> Psychological Operations Groups (Airborne), and 95<sup>th</sup> Civil Affairs Brigade (Airborne).

2-39. ARSOF sustainment organizations include the 528th Sustainment Brigade Special Operations Airborne, special forces group support battalions (GSBs), and Ranger support companies. Each special forces group has a support battalion, and each Ranger battalion has an organic support company. The remaining USASOC major subordinate operational commands possess minimal organic sustainment assets. ARSOF units rely on conventional Army organizations for sustainment support that exceeds the organic capabilities of the supported ARSOF unit. The JFC may assign a command relationship between the conventional supporting force and the ARSOF supported unit, or the JFC may determine a support relationship (GS or direct support) is more appropriate. For additional information on special operations sustainment, see ATP 3-05.40.

## SECTION II – OVERVIEW OF THEATER STRATEGIC LEVEL OF WARFARE

2-40. The *theater strategic level of warfare* is the level of warfare at which combatant commanders synchronize with unified action partners and employ all elements of national power to fulfill policy aims within the assigned theater in support of the national strategy (FM 3-0). Based on strategic guidance, CCDRs with assigned areas of responsibility and staffs update their strategic estimates and develop theater strategies with input from subordinate commands, including theater Armies and supporting commands and agencies. The theater strategy serves as the basis for development of the combatant command campaign plan.

2-41. Army echelons and sustainment units operate across the strategic, operational, and tactical levels; many are affiliated with either supported or supporting commands and operate under a variety of command relationships. Knowing the roles, responsibilities, and authorities of unified action partners is essential to planning, preparing, executing, and assessing sustainment operations.

## THEATER ARMY

2-42. The theater Army is the senior Army headquarters in an AOR and consists of the commander, staff, and all Army forces assigned to a CCMD. Each theater Army (U.S. Army Central, U.S. Army Europe and Africa, U.S. Army North, U.S. Army Indo-Pacific Command, and U.S. Army South) has operational and administrative responsibilities. The operational responsibilities include command of forces, direction of operations, and control of assigned operational areas. The administrative responsibilities encompass the Service-specific Title 10 requirements for equipping, sustaining, and training forces; unit readiness; discipline; and personnel matters.

2-43. The theater Army serves as the ASCC of the combatant command. It is organized, manned, and equipped to perform that role. The ASCC is the command responsible for recommendations to the JFC on the allocation and employment of Army forces within a CCDR's AOR. See ATP 3-93, ATP 4-93, and FM 3-94 for additional information. Theater Army tasks and functions include—

- Executing the CCDR's daily operational requirements.



- 1344 • Opening the operational area (for example: JOA, area of operations (AO), and theater of
- 1345 operations).
- 1346 • Serving as a JTF or joint force land component for crisis response and limited contingency
- 1347 operations.
- 1348 • Serving as the primary interface between the Department of the Army, Army commands, and other
- 1349 ASCCs.
- 1350 • Exercising OPCON of deployed Army forces not subordinated to a JFC.
- 1351 • Exercising ADCON of all Army forces operating within the AOR.
- 1352 • Exercising OPCON of all joint forces attached to it as either a joint force land component
- 1353 headquarters or JTF headquarters as required by the CCDR.

## 1354 THEATER SUSTAINMENT COMMAND

1355 2-44. The TSC is the Army's command for the integration and synchronization of sustainment in the  
 1356 combatant command AOR. The TSC integrates strategic enablers at the operational level. The TSC is  
 1357 assigned to an ASCC and provides Title 10 support of Army forces. The TSC manages requirements for  
 1358 sustainment and the physical flow of forces, equipment, and cargo to meet the daily operational requirements  
 1359 of the ASCC. Working in conjunction with the joint deployment and distribution operations center (JDDOC)  
 1360 and other strategic enablers, the TSC establishes priorities, monitors intertheater movements, and identifies  
 1361 and resolves problems to reduce interference in the intratheater distribution network. The TSC provides  
 1362 guidance to strategic partners when conflicting priorities exist between operational areas. The command  
 1363 ensures the information flow from strategic deployment, distribution, and sustainment partners is accurate,  
 1364 timely, and adequate to support the actions of theater sustainment forces. The TSC has four operational  
 1365 responsibilities to forces in theater:

- 1366 • Theater opening.
- 1367 • Theater distribution.
- 1368 • Sustainment.
- 1369 • Theater closing.

1370 2-45. In the event that the ASCC is assigned responsibility for establishing a joint command for logistics,  
 1371 the TSC or its attached ESC with staff augmentation from other Service components is designed to fulfill  
 1372 that mission. The JTF's Service component augmentation must follow joint doctrine and, in addition to  
 1373 personnel, may also include joint command and control equipment and regional language and cultural  
 1374 experts. Once the joint command for logistics is established, it takes time to receive, train, and integrate new  
 1375 members and then begin functioning as a cohesive headquarters with common processes, standards, and  
 1376 procedures. For additional information on the TSC, see ATP 4-93.

## 1377 THEATER PERSONNEL OPERATIONS CENTER

1378 2-46. The TPOC is a staff element and theater-level center assigned to the DMC of a TSC. The TPOC plans,  
 1379 integrates, and sustains HR and Soldier support systems for the theater. It is responsible for planning,  
 1380 coordinating, synchronizing, and monitoring theater opening HR operations and execution of the theater  
 1381 gateway and military mail terminal missions. The TPOC is responsible for synchronizing replacement  
 1382 priorities with the sustainment community and supports effective support relationships at echelon. The TPOC  
 1383 integrates and provides guidance and technical support for HR units executing personnel accountability and  
 1384 postal functions throughout the theater as defined by policies and procedures. Refer to FM 1-0 and ATP 4-93  
 1385 for additional information on the TPOC.

## 1386 ARMY FINANCIAL MANAGEMENT CENTER

1387 2-47. The Army Financial Management Center is United States Army Financial Management Command's  
 1388 operational element to conduct theater opening and the continuation of setting the theater. It enables joint,  
 1389 interagency, intergovernmental, and multinational operations; provides timely procurement and theater  
 1390 disbursing support through central funding; establishes, coordinates, and maintains finance systems used in  
 1391 theater; enforces HQDA policies and guidelines; and establishes finance policies. The Army Financial

1392 Management Center also supports reconciliation activities, audit support, and synchronizes theater finance  
1393 operations. For additional information on the Army Financial Management Center, see FM 4-80.

#### 1394 **FINANCE SUPPORT CENTER**

1395 2-48. The finance support center is a theater-level center assigned to a TSC. The primary mission of the  
1396 finance support center is to plan, synchronize, and integrate theater finance operations. Additionally, an FISC  
1397 is also required for each ESC supporting an engaged corps and is assigned to the ESC. This rule of allocation  
1398 provides the finance synchronization necessary to support units within the ESC's AOR. Key finance support  
1399 center functions include central funding, banking, economic analysis, finance operations planning, and  
1400 providing finance operations policy.

#### 1401 **THEATER MOVEMENT CONTROL ELEMENT**

1402 2-49. The theater movement control element (TMCE) is a multifunctional theater-level center allocated to a  
1403 TSC or ESC. The TMCE provides movement management, container management, highway regulation, and  
1404 coordination for personnel and materiel movements. It provides staff augmentation to establish and refine  
1405 distribution networks during operations, manage containers (commercial, unit, and DOD), and develop  
1406 movement programs for the distribution of sustainment stocks within the AO or joint operations area as  
1407 required. The TMCE coordinates with strategic partners to locate and identify strategic ports of entry into the  
1408 AOR. It plans, monitors, and coordinates the intertheater movement program to facilitate military forces  
1409 moving during crisis below armed conflict, and it supports large-scale combat operations by committing air  
1410 and ground transportation assets in the support of reception, staging, and onward movement of forces entering  
1411 into theater. For additional information on the TMCE, see ATP 4-93.

#### 1412 **EXPEDITIONARY SUSTAINMENT COMMAND**

1413 2-50. The ESC is attached to a TSC and provides command and control over all assigned and attached units  
1414 in an operational area as directed by the TSC. The ESC is capable of planning, coordinating, integrating, and  
1415 synchronizing sustainment in support of Army forces and, when directed, joint and multi-national forces. It  
1416 may perform the function of a forward CP for the TSC. The ESC attached to a TSC is dependent on the TSC  
1417 staff for long-range planning and enabling capabilities.

1418 2-51. The ESC may form the nucleus of an expeditionary joint command for logistics when provided with  
1419 joint force augmentation. The ESC performing as a joint command for logistics will normally locate within  
1420 a JOA while another ESC or sustainment brigade assumes the responsibilities for supporting Army forces.  
1421 For more information on the ESC, see ATP 4-93.

#### 1422 **QUARTERMASTER GROUP (PETROLEUM AND WATER)**

1423 2-52. The quartermaster group (petroleum and water) operates within a theater AO for distribution of  
1424 petroleum and water in the theater. It provides centralized management of bulk petroleum and water. This  
1425 unit provides C2, planning, liaison, and supervision of the supply, distribution, quality surveillance, and  
1426 storage of bulk petroleum for a theater of operations. It also conducts operational planning for the  
1427 development, rehabilitation, and extension of HN petroleum systems and storage facilities based on the  
1428 theater OPLAN and in coordination with the theater engineer command. For further details, see ATP 4-43.

#### 1429 **THEATER MEDICAL COMMAND**

1430 2-53. The TMC is the senior medical command in support of the ASCC based upon operational and mission  
1431 variables. It is responsible for command and control, integration, synchronization, and execution of AHS  
1432 support within the AOR. The TMC commander is responsible for maintaining a regional focus in support of  
1433 the CCDR and ASCC theater engagement plan, while providing effective and timely direct HSS and force  
1434 health protection to tactical commanders and GS to theater forces at EAB. The enduring regional focus of  
1435 the ASCC drives organizational specialization in the supporting TMC to address unique health threats,  
1436 specific needs of the local populace, availability of other Service medical capabilities, and geographic factors  
1437 that are distinctly related to a particular region. See ATP 4-02.1 and FM 4-02 for additional information.

2-54. The TMC integrates and synchronizes all AHS operations and provides command and control of medical brigades (support), MMBs, and other AHS units providing force health protection and HSS to tactical commanders. The TMC employs an operational CP and a main CP that can deploy autonomously into an operational area and is employed based on the size and complexity of operations or the support required. Key tasks of a TMC include—

- Providing command and control of medical brigade support (MEDBDE [SPT]) and subordinate medical units assigned and attached.
- Task-organizing medical elements based on specific medical requirements.
- Monitoring health threats within each operational area and ensuring the availability of required medical capabilities to mitigate those threats.
- Maintaining situational understanding of medical infrastructure, treatment, and evacuation capabilities.
- Accomplishing Title 10, USC responsibilities and Army support to other Services for the operational area.
- Partnering and training with host-nation and multinational health system units.
- Establishing a command relationship with the theater Army and the CCDR, linking the TSC to the MLMC for coordination and planning.
- Conducting EA for medical research for prevention, mitigation, and treatment of blast injuries.

## **MEDICAL LOGISTICS MANAGEMENT CENTER**

2-55. The MLMC provides centralized, strategic-level management of Class VIII materiel. When deployed, the MLMC forward support team is attached or OPCON to the TSC/ESC DMC and coordinates with the TMC for medical materiel requirements in support of AHS operations. The forward support team serves as the primary link between national strategic-level medical logistics capabilities and theater-level distribution.

## **MEDICAL BRIGADE (SUPPORT)**

2-56. The MEDBDE (SPT) provides the command and control and planning capabilities necessary to deliver responsive and effective AHS support across the range of military operations. The MEDBDE (SPT) ensures the right mix of medical forces and expertise (operational, technical, and clinical) to synchronize AHS support to operations.

2-57. The MEDBDE (SPT) consists of an early entry module, expansion module, and campaign module. The design and flexibility of the MEDBDE (SPT) facilitates the AHS's ability to tailor the unit to meet expeditionary health system support and force health protection requirements in support of early entry operations and transition to provide greater capability and capacity based on the size, composition, and location of supported forces. The MEDBDE (SPT) is assigned to the TMC. See FM 4-02 for additional information.

## **MEDICAL BATTALION (MULTIFUNCTIONAL)**

2-58. The MMB is an EAB headquarters. The unit provides command and control, administrative assistance, logistical support, and technical supervision for assigned and attached medical functional organizations (companies, detachments, and teams) task-organized for support to deployed forces operating within the AO. The MMB can be deployed to provide command and control of medical forces during early entry operations and facilitate the RSOI of theater medical forces. It is under the command and control of the MEDBDE (SPT) and/or TMC. All EAB medical companies, detachments, and teams in theater may be assigned, attached, or placed OPCON to an MMB. See FM 4-02 for additional information.

## **HOSPITAL CENTER**

2-59. The hospital center is a modular Role 3 medical treatment facility tailored to provide hospitalization support to operations. It provides essential care within the theater evacuation policy to either return patients to duty or stabilize them for further evacuation to a Role 4 medical treatment facility in CONUS or another safe haven. The hospital center consists of five modular elements capable of providing mission-specific

1485 medical and surgical support. It may be augmented by one or more medical detachments, hospital  
1486 augmentation teams, or medical teams designed to enhance its capabilities to provide AHS support.

## 1487 **CLASS VIII MANAGEMENT AND DISTRIBUTION PROCESS IN THEATER**

1488 2-60. The TMC controls and supervises medical logistics support within the theater in coordination with the  
1489 TSC providing materiel management and distribution. A MLMC forward team is attached or OPCON to the  
1490 TSC or ESC and collocates with the DMC to coordinate medical materiel management and distribution.  
1491 Army Medical Logistics Command subordinate units U.S. Army Medical Materiel Center-Europe or U.S.  
1492 Army Medical Materiel Center-Korea, and the U.S. Army Medical Materiel Center-Southwest Asia (assigned  
1493 to Army Central Command) execute the theater lead agent for medical materiel mission and provide theater-  
1494 level medical materiel management, medical device maintenance and repair, optical fabrication, and medical  
1495 set assembly and reconstitution. The U.S. Army Medical Materiel Agency, a subordinate of the U.S. Army  
1496 Medical Logistics Command, integrates with ASC logistics support elements and issues medical APS unit  
1497 sets and/or Class VIII contingency program to supported medical units.

1498 2-61. CCDRs often assign the ASCC (or Army component of a JTF) as the single integrated medical logistics  
1499 manager with responsibility to plan and execute medical logistics support to all Services and multinational  
1500 partners operating in the theater. The TMC or senior medical commander executes the single integrated  
1501 medical logistics manager responsibility. The MLMC forward team provides information management and  
1502 distribution coordination support for the single integrated medical logistics manager mission.

1503 2-62. The MEDBDE (SPT) plans, coordinates, and supervises Class VIII supply and resupply within the  
1504 unit's AO and can serve as the single integrated medical logistics manager when designated by the CCDR.  
1505 The MEDBDE (SPT) also coordinates with the sustainment brigade support operations section for Class VIII  
1506 distribution at corps and below.

1507 2-63. The MMB plans and supervises Class VIII supply and resupply within the unit's AO. This battalion  
1508 can also serve as the single integrated medical logistics manager when designated by the CCDR. The medical  
1509 logistics company provides direct support for medical materiel, medical device maintenance, and single and  
1510 multi-vision optical lens fabrication and repair to supported units. The medical logistics company may  
1511 support other Services when its medical command and control is assigned single integrated medical logistics  
1512 manager responsibility by the CCDR. The brigade medical supply office in the BSMC provides organic Class  
1513 VIII and medical maintenance support to medical elements of the BCT. For additional information, see ATP  
1514 4-02.1.

1515 2-64. At echelon, sustainment unit SPO sections plan and supervise Class VIIIA resupply to their supported  
1516 units. The multiclass supply support activities (SSAs) at corps, division, and brigade provide Class VIIIA to  
1517 supported units; they are capable of receiving and managing Class VIIIA requisitions in Army sustainment  
1518 systems and executing receive, store, and issue/distribute actions.

## 1519 **ARMY SPECIAL OPERATIONS FORCES SUSTAINMENT** 1520 **ORGANIZATIONS**

1521 2-65. ARSOF operating and logistics structures differ vastly from Army conventional forces. The GSB  
1522 within the special forces group provides direct support to the special forces group or to the joint special  
1523 operations task force elements when directed by the theater special operations command. The Ranger  
1524 regiment and special operations aviation regiment possess organic support assets at the battalion level. Civil  
1525 affairs and psychological operations units do not possess organic direct support assets. The special operations  
1526 aviation regiment is typically task organized under a joint special operations air component and will be  
1527 provided direct support by the joint special operations air component's direct support elements and the  
1528 designated CUL provider. ARSOF elements that do not have organic support elements are sustained by the  
1529 command they are attached to for the duration of the operation. Civil affairs and PSYOP elements rely on  
1530 their supported units for sustainment support, except for the replacement or repair of SOF-peculiar  
1531 equipment.

1532 2-66. USASOC serves as the ASCC for ARSOF but functions similarly to the Army's generating force and  
1533 serves as a global resourcing command in support of U.S. Special Operations Command. ASCCs provide

1534 sustainment support to ARSOF elements within a CCDR's AOR through TSCs, ESCs, and sustainment  
1535 brigades.

## 1536 **528TH SUSTAINMENT BRIGADE (SPECIAL OPERATIONS) (AIRBORNE)**

1537 2-67. The 528th Sustainment Brigade (Special Operations) (Airborne) sets operational-level logistics  
1538 conditions (enduring relationships, forward posture, and speed) to enable ARSOF and joint element missions  
1539 by providing tailored logistics, signal, medical, and intelligence support to the global special operations forces  
1540 network. The 528th enables ARSOF with purpose-built teams of expert sustainers, communicators, and  
1541 intelligence specialists; delivers SOF-unique sustainment resources; and on-order, rapidly deploys globally  
1542 to enable sustainment for ARSOF.

1543 2-68. The unit consists of a brigade staff, a support operations unit, and three battalions: a special troops  
1544 battalion (containing a special troops support company and a forward support company [FSC]), a special  
1545 operations signal battalion, and a military intelligence battalion. It leverages small units of action that rapidly  
1546 configure and deploy responsive, flexible, and modular teams known as ARSOF support operations teams  
1547 supporting global special operations requirements. The brigade also benefits from forward-positioned  
1548 ARSOF liaison elements (ALEs). The ALEs serve as the special operations logistics liaison to the ASCC and  
1549 TSOC and are geographically aligned to combatant commands. ALEs are responsible for coordinating and  
1550 synchronizing logistics plans and Army common sustainment in support of TSOCs.

1551 2-69. The 528th Sustainment Brigade (Special Operations) (Airborne) provides intelligence processing,  
1552 exploitation, and dissemination, and signal, logistics, and medical support through individual subject matter  
1553 experts, teams, and echelons up to the brigade level. It integrates into ARSOF and the joint force to provide  
1554 SOF-specific support capabilities during transitions and within competition, crisis, and conflict.

1555 2-70. The brigade has three special operations resuscitation teams (SORT) capable of providing damage  
1556 control resuscitation and prolonged field care for 2-4 patients for 48 hours. Capable of integrating with joint  
1557 surgical assets (Army forward resuscitative and surgical detachment, Air Force special operations surgical  
1558 team, Navy forward resuscitative surgical system, Air Force mobile field surgical team), each team can  
1559 conduct split-based operations for a limited period to support forces operating in multiple locations. See ATP  
1560 3-05.40 for additional information.

## 1561 **SPECIAL FORCES – GROUP SUPPORT BATTALION**

1562 2-71. The GSB is the primary sustainment provider in a special forces group. Its mission is to plan,  
1563 coordinate, synchronize, and execute sustainment operations such as the supply support activity, weapons  
1564 and electronic maintenance, strategic mobility, and consolidated aerial delivery and rigging operations in  
1565 support of a special forces group when it is acting as the joint special operations task force. Due to the unique  
1566 employment characteristics of ARSOF units, the GSB habitually does not deploy in its entirety as there is  
1567 only one in each special forces group. The GSB must simultaneously support the operations of each battalion,  
1568 receiving support from conventional forces as required.

1569 2-72. When ASCC logistics support is unavailable or not established in an operational area, the GSB will be  
1570 the primary CUL provider. The GSB can function as a combined and joint HQ, integrating partner-nation  
1571 and sister-Service elements. However, no single support battalion can cover the geographical dispersion  
1572 without conventional force logistics support. The GSB coordinates with conventional force sustainment  
1573 brigades, DSBs, the ESC, and the TSC to enable an area support concept for each special operations task  
1574 force, advanced operations base, and special forces operational detachment alpha. Area support enables SOF  
1575 elements in the vicinity of conventional force bases to receive general sustainment support. See FM 3-05 for  
1576 additional information.

## 1577 **RANGER SUPPORT COMPANY**

1578 2-73. The Ranger support companies are reliant on the Ranger Regiment S-4 section and Ranger support  
1579 operations detachment for planning and coordination. The Ranger support company is multifunctional and  
1580 organic to each battalion within the Ranger Regiment. Ranger support companies provide field maintenance,  
1581 supply support, water production (with limited distribution), transportation, aerial delivery, property

1582 management, limited CBRN decontamination and reconnaissance, and food service. See ATP 3-05.40 for  
1583 additional information.

## 1584 SECTION III – OVERVIEW OF OPERATIONAL LEVEL OF WARFARE

1585 2-74. The *operational level of warfare* is the level of warfare in which campaigns and operations are planned,  
1586 conducted, and sustained to achieve operational objectives to support achievement of strategic objectives (JP  
1587 3-0). The operational level links the employment of tactical forces to the achievement of strategic objectives.

1588 2-75. The operational level of warfare is generally the realm of combatant commands and their Service or  
1589 functional components, and subordinate joint task force (JTF) headquarters and their Service or functional  
1590 components. This includes the theater Army headquarters as the Army Service component to a combatant  
1591 command and any other echelon operating as an ARFOR, JTF headquarters, or land component command.

## 1592 FIELD ARMY

1593 2-76. When constituted, the field army's role is to serve as the ARFOR in a subordinate AO. Army doctrine  
1594 distinguishes between the ARFOR of a combatant command and that of a joint force formed by the combatant  
1595 commander. The ASCC of the combatant command is the ARFOR for the theater and the Army component  
1596 of the subordinate joint force, the field army is the ARFOR for multi-corps operations in the subordinate AO.  
1597 The ASCC as the ARFOR maintains control of all Army units in an AOR until such time that control is  
1598 passed to the field army. As part of controlling Army forces, the ARFOR maintains ADCON of Army forces,  
1599 and it addresses service responsibilities such as coordinating ASOS.

1600 2-77. An ESC may be attached to a field army to control the integration and synchronization of sustainment  
1601 to support field army operations. When attached to the field army, the ESC provides sustainment support to  
1602 units identified in the field army task organization in accordance with the priorities established by the field  
1603 army commander. See FM 3-94 and ATP 4-92 for additional information on field armies.

## 1604 CORPS

1605 2-78. The corps is the Army's most versatile headquarters. The corps functions as one of the principal  
1606 integrators of land power into campaigns. When a field army is not present, a corps is the primary link  
1607 between the operational and tactical levels of war. The corps is organized, manned, and equipped to serve in  
1608 four roles:

- 1609 • Senior Army tactical formation in large-scale combat, commanding two to five Army divisions  
1610 together with supporting brigades and commands. This is its primary role.
- 1611 • ARFOR (with augmentation) within a joint force for campaigns and major operations when a field  
1612 army is not present.
- 1613 • JTF headquarters (with significant augmentation) for crisis response and limited contingency  
1614 operations.
- 1615 • Joint force land component (with significant augmentation) commanding Marine Corps and  
1616 multinational divisions together with supporting brigades and commands.

1617 2-79. Each corps has an assigned ESC. The ESC is the corps' command for the integration and  
1618 synchronization of sustainment in an operational area. The ESC is task-organized with functional and  
1619 multifunctional sustainment units that provide general support for all units in the corps AO. For additional  
1620 information on the corps and its capabilities, see FM 3-94 and ATP 4-92.

## 1621 TRANSPORTATION BRIGADE (EXPEDITIONARY)

1622 2-80. The TBX is normally attached to a TSC or ESC. It provides command and control of Army watercraft  
1623 and water terminal organizations for port opening and operations at inland waterway, bare beach, degraded,  
1624 and improved sea terminals. Water terminal and watercraft units assigned to the TBX conduct deployment,  
1625 distribution support, and redeployment IAW theater Army operational requirements. The TBX commander  
1626 and staff serve as the TSC or ESC commander's primary experts on port operations and management.  
1627 Watercraft assigned to the TBX can also be used to support the movement and sustainment of maneuver

forces and their equipment when required. The TBX also serves as the ARFOR component of any JTF for JLOTS. As the primary Army headquarters element with assigned terminal and watercraft units, it provides the Army's organic capability to conduct specific functions of the Army in support of amphibious operations, riverine operations, wet-gap operations, JLOTS operations, and intra-theater transport of time-sensitive, mission-critical personnel and materiel. See ATP 4-13 for additional information.

## EXPLOSIVE ORDNANCE DISPOSAL GROUP

2-81. The EOD group conducts mission command, planning, and control for all EOD assets in a theater and provides EOD liaison to the theater Army. The EOD group can conduct EOD command and control for two to six EOD battalions. It is attached or placed OPCON to coordinate EOD and weapons technical intelligence operations to a theater Army, corps, or JTF in support of a specific operation, operation order, operation plan, or concept plan. The group may also form the core of a specialized combined JTF with mission command of various protection and exploitation enablers such as counter-explosive ordnance, counter unmanned aerial system, or exploitation task forces. The group can also provide enabling support, analysis, and advisement to execute targeting efforts, theater exploitation, and counter-EO to provide maneuver support and force protection in all operational environments. See JP 3-42, ATP 4-32, ATP 4-32.1, ATP 4-32.2, and ATP 4-32.3 for additional information.

## THEATER PETROLEUM CENTER

2-82. The theater petroleum center serves as the operational Army link to strategic petroleum partners providing liaison between DLA Energy, host/partner nations, the ASCC, Army Petroleum Center, CCMD, and TSC as needed. It serves as the senior theater Army petroleum advisor to the CCMD through operational planning support to the TSC petroleum and water branch or ASCC petroleum and water branch staffs. The quartermaster petroleum liaison team operates as a sub-unit of the theater petroleum center and provides the same capabilities of the theater petroleum center on a smaller scale. Both the theater petroleum center and the quartermaster petroleum liaison team are normally attached to an ASCC, TSC, or ESC as mission dictates. See ATP 4-43 for additional information.

## SUSTAINMENT BRIGADE

2-83. The sustainment brigade plans, synchronizes, and executes sustainment operations across the theater Army, corps, and division echelons. The sustainment brigade is the Army's primary brigade-level sustainment headquarters providing C2 for assigned, attached, and OPCON sustainment units. Sustainment brigades are typically assigned or attached to a TSC, ESC, or division and have a span of control of three to seven battalions. Additionally, the sustainment brigade executes financial management support, personnel services, and logistics including supply, maintenance, transportation, field services, distribution, and OCS. For additional information, see ATP 4-92.

## SECTION IV – OVERVIEW OF TACTICAL LEVEL OF WARFARE

2-84. The *tactical level of warfare* is the level of warfare at which forces plan and execute battles and engagements to achieve military objectives (JP 3-0). Activities at this level focus on tactics—the employment, ordered arrangement, and directed actions of forces in relation to each other (ADP 3-90). Operational-level headquarters determine objectives and provide resources for tactical operations. Tactical-level commanders plan and execute operations to include battles, engagements, and small-unit actions.

## DIVISION

2-85. 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. The division is typically the lowest tactical echelon that employs capabilities from multiple domains to achieve convergence during large-scale combat operations. A division conducts operations in an AO assigned by its higher headquarters—normally a corps. A division typically commands between two and five brigade combat teams (BCTs), a combat aviation brigade, division artillery, and a division sustainment brigade (DSB). It task

organizes its assigned and provided units to accomplish its mission according to mission variables. See FM 3-94 and ATP 4-91 for additional information on the division.

2-86. Winning battles and engagements remains the division's primary purpose. During limited contingencies, it can organize itself to serve in multiple competencies. When the division is uncommitted to a specific operation, it focuses on building and sustaining readiness to prevail in large-scale combat operations. A division may also serve in the following roles:

- Tactical headquarters.
- ARFOR headquarters.
- Joint force land component commander (JFLCC).
- Joint task force (JTF) headquarters.

## **DIVISION SUSTAINMENT BRIGADE**

2-87. The DSB is assigned to a division. The DSB synchronizes and integrates sustainment for the division. It can provide C2 for up to seven battalions with two organic and optional space for five additional battalions. The role of the DSB is to provide C2 to all subordinate units and plan, synchronize, and integrate all sustainment support (including medical) for the division. The DSB performs the following functions: distribution management and operations, transportation, supply support, field maintenance, human resources, financial management, personnel services, and OCS requirements determination in coordination with subordinate units and the division staff. For additional information on the DSB and its organic capabilities, see ATP 4-91.

## **DIVISION SUSTAINMENT SUPPORT BATTALION**

2-88. The division sustainment support battalion is a multifunctional battalion that is organic to a DSB and provides logistics support to a division. Its organizational design includes four organic companies. The division sustainment support battalion has the capability to C2 up to four additional companies, detachments, or teams and synchronizes, integrates, and controls the execution of logistics operations for the division. For additional information, see ATP 4-91.

## **ADDITIONAL ECHELONS ABOVE BRIGADE SUSTAINMENT CAPABILITIES**

2-89. The Army has other organizations that assist with executing sustainment operations in addition to those discussed above. The motor transport, petroleum support, movement control, explosive ordnance disposal, and terminal battalions provide logistics support to division and corps formations as well as enabling units operating throughout the AOR. These battalions can be task organized to sustainment brigades and DSBs to provide critical logistics capabilities in an operational area. The modular ammunition, support maintenance, composite and functional transportation, composite and functional supply, and watercraft companies and detachments provide specific capabilities and execute complex operations. These companies can be task organized into DSSBs, CSSBs, and functional battalions to meet specific requirements.

## **BRIGADE**

2-90. Brigades include BCTs, multifunctional brigades, and functional brigades. BCTs are the Army's primary combined arms, close-operations force, and principal ground maneuver units of the division. BCTs have organic capabilities including battalion-sized maneuver, field artillery, reconnaissance, and sustainment units. Each BCT has organic medical support for Role 1 and 2 medical operations. The three types of BCTs are armored, infantry, and Stryker. BCTs normally operate as part of a division.

2-91. There is a wide range of multifunctional support brigades. These brigades provide a variety of functions in support of operations. Normally attached to a corps or division, these brigades may be under the command of a joint or multinational headquarters. Multifunctional support brigades include the combat aviation brigade (CAB), division artillery, TBX, and maneuver enhancement brigade (MEB).

2-92. Functional brigades or groups provide a single function or capability. These brigades can provide support for a theater, corps, or division, depending on how each is tailored. Functional brigades include the



1720 air and missile defense brigade, civil affairs brigade, engineer brigade, expeditionary military intelligence  
1721 brigade, signal brigade, military police brigade, medical brigade, and theater tactical signal brigade.

## 1722 **BRIGADE SUPPORT BATTALION**

1723 2-93. Sustainment at the brigade echelon is centered on the BSB. The BSB is an organic component of a  
1724 BCT and the corps field artillery brigade. It provides supply, maintenance, motor transport, and Role 2  
1725 medical support to the supported BCT or brigade. It is tailored to support the brigade to which it is assigned.  
1726 For example, the BSB of an armored BCT has more fuel distribution and maintenance capabilities than an  
1727 infantry BCT BSB. The following paragraphs summarize the BSB's companies. See ATP 4-90 for additional  
1728 information.

1729 2-94. The BSB distribution company role is to provide supply and transportation support to a brigade. The  
1730 company provides distribution capability for all classes of supply but does not have the capability to conduct  
1731 troop transport missions. It provides munitions support to the BCT with the modular ammunition transfer  
1732 point.

1733 2-95. The BSB field maintenance company role is to provide field-level maintenance support to the BSB  
1734 and BCT. The field maintenance company provides repair capability for automotive, ground support, and  
1735 limited support for low-density equipment such as communications, electronics, and armament.

1736 2-96. The BSMC provides AHS support to a BCT. The BSMC provides Role 1 and Role 2 in support of a  
1737 BCT and Role 1 AHS support on an area basis to units in the BCT AO that do not have organic medical  
1738 assets. BSMCs are organic to the infantry brigade combat team (IBCT), armored brigade combat team  
1739 (ABCT), and Stryker brigade combat team (SBCT). The BSMC consists of a company headquarters,  
1740 preventive medicine section, behavioral health section, medical treatment platoon containing treatment  
1741 squads, a physical therapy team, dental team, laboratory team, radiology team, medical evacuation platoon,  
1742 and a brigade medical supply office.

1743 2-97. The FSC provides logistics in direct support or general support to its specific supported battalion with  
1744 dedicated logistics assets organized specifically to meet the battalion's requirements. An FSC provides field  
1745 feeding, bulk fuel, general supply, ammunition, and field-level maintenance to its supported maneuver  
1746 battalion. FSCs are organic to the BSB and attached to supported battalions.

## 1747 **AVIATION SUPPORT BATTALION**

1748 2-98. The aviation support battalion (ASB) is organic to a CAB, an expeditionary CAB, and a theater aviation  
1749 brigade. There are four primary differences between a BSB and an ASB:

- 1750 • The ASB is only assigned a medical section and a maintenance platoon. These elements are  
1751 assigned to the headquarters and support company and have significantly less medical capability  
1752 than a BSMC and a field maintenance company.
- 1753 • An aviation support company replaces the field maintenance company and provides aviation  
1754 maintenance and recovery support to the brigade.
- 1755 • The forward support companies are organic to helicopter battalions in the brigade.
- 1756 • A signal company is added, similar to a MEB.

1757 2-99. The ASB performs the following tasks:

- 1758 • Ground vehicle and aviation maintenance and recovery operations.
- 1759 • Signal and network security to the CAB for command and control.
- 1760 • Aviation and ground sustainment operations for the aviation brigade.
- 1761 • Distribution management operations within the aviation brigade.
- 1762 • Role 1 medical care for the ASB.

1763 2-100. Additional sustainment support for aviation battalions and squadrons is provided by an organic  
1764 aviation maintenance company and FSC. For more information on aviation sustainment, see FM 3-04.

## SECTION V – COMMAND AND SUPPORT RELATIONSHIPS

2-101. Determining the optimal command and support relationships between maneuver commanders and sustainment units is critical for both sustainment leaders and those supported. Command and support relationships directly influence the ability to meet maneuver commander requirements. Understanding the practical effects of a particular command or support relationship in the context of a specific operation is critically important. Striking the most effective balance between centralized and decentralized control of sustainment units requires a clear understanding of the supported commander's intent and the tactical situation, as well as the ability to anticipate the various possible outcomes of the combat operations being supported. Knowing the inherent responsibilities of each command and support relationship allows commanders to organize their forces effectively and helps supporting commanders understand their unit's role in the organizational structure.

2-102. The flexibility to adjust command and control structure and employ different command and support relationships in an AO gives both maneuver and sustainment commanders the ability to effectively balance sustainment capabilities across the AOR. Sustainment staff estimates should account for available sustainment forces, assigned missions, commander priorities, and the validity of previous assumptions. As operations continue and theater sustainment matures, leaders should continually re-assess and make recommendations to their supported HQ regarding task organization changes necessary to keep pace with operational requirements. Doing so effectively requires continuous dialogue between sustainment and maneuver commanders.

## JOINT COMMAND RELATIONSHIPS

2-103. JP 1, Volume 2 specifies and details four types of joint command relationships:

- Combatant command (command authority) (COCOM).
- Operational control.
- Tactical control.
- Support.

## COMBATANT COMMAND (COMMAND AUTHORITY)

2-104. COCOM is the command authority over assigned and allocated forces vested only in commanders of combatant commands or as directed by the President or the Secretary of Defense in the Unified Command Plan and cannot be delegated or transferred. COCOM only extends to those forces assigned or allocated to the combatant command by the Secretary of Defense. COCOM is established in federal law by Section 164, Title 10, USC. Normally, the CCDR exercises this authority through subordinate JFCs, Service components, and functional component commanders. COCOM includes the directive authority for logistics.

## OPERATIONAL CONTROL

2-105. The authority to exercise OPCON is exclusively derived from COCOM authority. Forces provided by the Services and attached to a combatant command are typically in an OPCON command relationship. OPCON is the authority to perform those functions of command over subordinate forces involving—

- Organizing and employing commands and forces.
- Assigning tasks.
- Designating objectives.
- Giving authoritative direction necessary to accomplish missions.

2-106. OPCON normally includes authority over all aspects of operations and joint training necessary to accomplish missions. It does not include directive authority for logistics or matters of administration, discipline, internal organization, or unit training. OPCON does include the authority to delineate functional responsibilities and operational areas of subordinate JFCs. In two instances, the Secretary of Defense may specify adjustments to accommodate authorities beyond OPCON in an establishing directive: when transferring forces between CCDRs, or when transferring members or organizations from the military departments to a combatant command. Adjustments will be coordinated with the participating CCDRs.

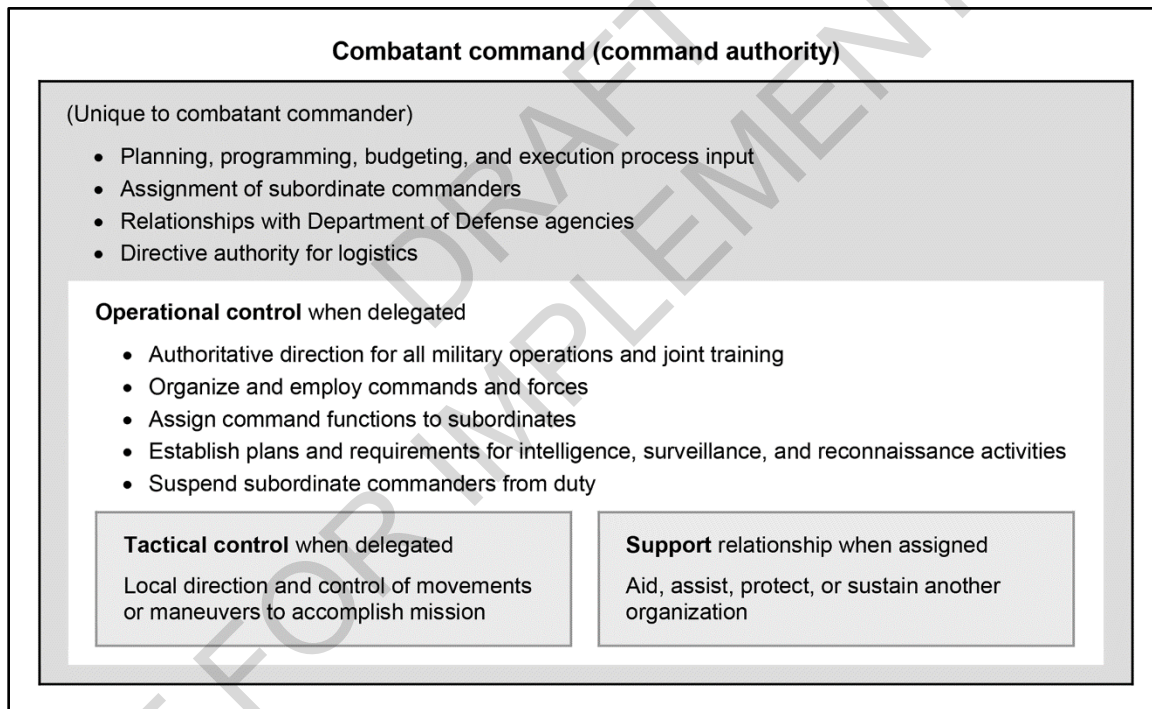
## TACTICAL CONTROL

2-107. TACON is inherent in OPCON. TACON may be delegated to and exercised by commanders at any echelon at or below the level of combatant command. TACON provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets within the assigned mission or task. TACON does not provide organizational authority or authoritative direction for administrative and logistics support; the commander of the parent unit continues to exercise these authorities unless otherwise specified in the establishing directive.

## JOINT SUPPORT RELATIONSHIPS

2-108. Support is a command authority in joint doctrine. A superior commander establishes a supported and supporting relationship between subordinate commanders when one organization should aid, protect, complement, or sustain another force. Designating supporting relationships is important. It conveys priorities to commanders and staffs planning or executing joint operations. Designating a support relationship does not provide authority to organize and employ commands and forces, nor does it include authoritative direction for administrative and logistical support. (See figure 2-3 for a depiction of joint command relationships.)

**Note.** The joint command relationship of “Support” is distinct from Army support relationships.



**Figure 2-3. Joint command relationships**

2-109. Support is, by design, somewhat vague but very flexible. Establishing authorities ensure both supported and supporting commanders understand the authority of supported commanders. JFCs often establish supported and supporting relationships among components. An Army headquarters designated as the land component may be the supporting force during some campaign phases and the supported force in other phases. A joint support relationship is not used when an Army commander task organizes Army forces in a supporting role. When task-organized to support another Army force, Army forces use one of four Army support relationships. See table 2-1 for a listing of joint support categories.

**Table 2-1. Joint support categories**

<b>Category</b>	<b>Definition</b>
General support	Support given to the supported force as a whole and not to any particular subdivision thereof (JP 3-09.3).
Mutual support	That support which units render each other throughout joint operations, because of their assigned tasks, their position relative to each other and to the enemy, or their inherent capabilities (JP 3-31).
Direct support	A mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance (JP 3-09.3).
Close support	The action of the supporting force against targets or objectives that are sufficiently near the support force as to require detailed integration or coordination of the supporting action (JP 3-31).

## ARMY COMMAND AND SUPPORT RELATIONSHIPS

2-110. Command and control of Army sustainment units can pose unique challenges for both sustainment leaders and those supported. It is important that leaders understand all aspects of command and support relationships and the effects of them on the ability to meet the operational requirements. For example, attaching sustainment units to their supported formations allows them to better anticipate and integrate with their supported command, but with an adverse effect on economy. This may result in idle assets that cannot be redirected easily to support elsewhere. Conversely, pooling resources at higher levels can allow planners to maximize the use of scarce assets such as fuel tankers and heavy equipment transporter systems, but responsiveness may suffer as a result.

2-111. Sustainment leaders must strive to strike the right balance, considering the supported commander's intent and the possible outcomes of combat operations. If a commander expects an attack to turn into a pursuit of enemy forces, it may be prudent to assign additional Class III and V assets to a unit in order to extend their operational reach and give the commanders the freedom of action to maintain momentum. On the other hand, if resources are scarce, such a course of action may negatively impact the rest of the formation. The risks to both the operation and the sustainment assets must be weighed carefully and reassessed as the situation develops.

2-112. Command and support relationships provide the basis for unity of command and unity of effort in operations. Within planning, commanders are responsible for task organizing the force and prioritizing efforts as part of the operations process. Task organizing is the act of configuring an operating force, support staff, or sustainment package to meet a unique task or mission. This allows commanders to allocate resources to weight the main effort.

2-113. Commanders recognize that effectiveness is built on mutual trust and confidence between superior, subordinate, supporting, and supported organizations. This trust and confidence is developed through relationships. Generally, the longer a relationship lasts, a greater degree of trust and confidence results. Authorities and responsibilities are typically well known between organizations that have had a long-term habitual relationship. However, the nature of the sustainment structure at EAB forces commanders to place organizations in unfamiliar situations. In this instance, where trust and confidence between organizations is limited, command and support relationships establish baseline doctrinal authorities and responsibilities upon which unfamiliar organizations can operate.

2-114. Command and support relationships vary between different units and echelons. The types of command and support relationships established are dependent on the mission and the degree of authority a commander wishes to establish between subordinate units.

## ARMY COMMAND RELATIONSHIPS

2-115. The five Army command relationships are: organic, assigned, attached, OPCON, and TACON. Each relationship has specific authorities and responsibilities. Army command relationships identify the degree of control of the gaining Army commander. Command relationships unify effort and enable maximum flexibility for commanders to use subordinate forces. The expected duration of a command relationship

1873 normally dictates the type of command relationship between the headquarters involved and identifies the  
 1874 degree of support the gaining and losing Army commanders provide.

1875 2-116. Commanding officers designate command relationships to subordinate units in OPORDs. The  
 1876 designation must indicate the headquarters under which a subordinate unit is placed, the specific command  
 1877 relationship designated, and the duration of the relationship. The duration may be based on time, duration of  
 1878 a phase, or on achieving an objective. This information is included in the “Task Organization” paragraph of  
 1879 the OPORD. If the task organization is long or complicated, commanders may place it in annex A of the  
 1880 order. Table 2-2 on page 2-4 displays the Army command inherent responsibilities. JP 3-0 discusses  
 1881 command relationships for the joint force.

**Table 2-2. Army command relationships**

If relation- ship is—	Then inherent responsibilities—							
	Have command relation- ship with—	May be task – organized by—	Unless modified, ADCON responsib- ility goes through —	Are assigned position or AO by—	Provided liaison to—	Establish/ maintain communic- ations with—	Have priorities established by—	Authorities CDR can impose gaining unit further command or support relationship of—
<b>Organic</b>	Organic HQ	Organic HQ	Organic HQ	Organic HQ	N/A	N/A	Organic HQ	Attached; OPCON; TACON; GS; GSR; R; DS
<b>Assigned</b>	Gaining HQ	Gaining HQ	Gaining HQ	Gaining HQ	N/A	N/A	Gaining HQ	Attached; OPCON; TACON; GS; GSR; R; DS
<b>Attached</b>	Gaining HQ	Gaining HQ	Gaining HQ	Gaining HQ	As required by gaining HQ	Unit to which attached	Gaining HQ	Attached; OPCON; TACON; GS; GSR; R; DS
<b>OPCON</b>	Gaining HQ	Parent unit and gaining unit; gaining unit may pass OPCON to lower HQ	Parent HQ	Gaining HQ	As required by gaining HQ	As required by gaining HQ and parent HQ	Gaining HQ	OPCON; TACON; GS; GSR; R; DS
<b>TACON</b>	Gaining HQ	Parent HQ	Parent HQ	Gaining HQ	As required by gaining HQ	As required by gaining unit and parent HQ	Gaining HQ	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								

**Organic**

2-117. Organic forces are those assigned to and forming an essential part of a military organization. Organic parts of a unit are those listed in its table of organization for the Army, Air Force, and Marine Corps, and are assigned to the administrative organizations of the operating forces for the Navy. Joint command relationships do not include the term organic because a JFC is not responsible for the organizational structure of units. The organic command relationship is unique in that the relationship is inherent in unit force structure; units that have an organic command relationship with a parent unit are an integral part of the parent unit table of organization and equipment. As a result, the organic command relationship cannot be further delegated. Commanders with organic subordinate units may designate any of the other four command relationships to the subordinate unit. Commanders with organic subordinate units have ADCON authority and responsibility for the subordinate units.

2-118. The Army establishes organic command relationships through organizational documents such as tables of organization and equipment and tables of distribution and allowance. If temporarily task organized to another headquarters, organic units return to the control of their organic headquarters after completing the mission. To illustrate, within a BCT, the BSB and all other units within the brigade are organic to the headquarters. In contrast, within most support brigades, there is a base of organic battalions and companies (or sometimes just a headquarters) and a variable mix of assigned and attached battalions and companies.

**Assigned and Attached**

2-119. Commanders establish the assigned and attached command relationships by placing a subordinate unit under the command of another organization for a specified period of time. An assigned command relationship is relatively permanent. The gaining organization controls and administers the units or personnel for the primary function, or greater portion of the functions, of the unit or personnel. An attached command relationship is relatively temporary. The attachment may be for a specific mission or phase of an operation. The commander establishes these command relationships in an operation order issued to the subordinate commander and specifies the duration of the relationship in the order. Unless specifically stated in the operation order, these command relationships include ADCON authority and responsibility for the gaining command.

**OPCON and TACON**

2-120. Commanders establish the OPCON and TACON command relationships by placing a subordinate unit under the command of another organization for a specified period of time. OPCON 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. TACON is a command authority over units made available for tasking that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned. The commander establishes these command relationships in an OPORD issued to the subordinate commander and specifies the duration of the relationship in the order. Unless specifically stated in the OPORD, these command relationships do not include ADCON authority and responsibility for the gaining command. Once the duration of the relationship has lapsed, the unit returns to its parent unit.

**Command Relationship Authorities and Responsibilities**

2-121. Inherent authorities and responsibilities associated with each command relationship are shown below. Commanders use these responsibilities to identify and establish the appropriate command relationship based on the mission requirements.

2-122. Task organization authority:

- Units with an organic command relationship may only be task organized by the organic headquarters.
- Units with assigned, attached, or OPCON command relationships may be task organized by the gaining unit.
- Units with a TACON command relationship may only be task organized by the parent unit.

- 1931 2-123. ADCON authority: Organic, assigned, and attached command relationships incur ADCON authority  
1932 on the organic or gaining unit.
- 1933 2-124. Position/AO assignment: Units with an organic command relationship are assigned a position or AO  
1934 by the organic headquarters. In all other command relationships, the gaining unit assigns positions/AO.
- 1935 2-125. Provide liaison: This is not applicable to units with organic command relationships. For all other  
1936 command relationships, a liaison is provided as required by the gaining unit.
- 1937 2-126. Establish/maintain communications: This is not applicable to units with organic command  
1938 relationships. For assigned and attached command relationships, communication is established and  
1939 maintained as required by the gaining unit. For OPCON and TACON command relationships,  
1940 communication is established and maintained as required by the parent and gaining unit.
- 1941 2-127. Priority establishment: Units with an organic command relationship have priorities established by  
1942 the organic headquarters. In all other command relationships, the gaining unit establishes priorities.
- 1943 2-128. Designation of command or support relationships:
- 1944 • Units with an organic, assigned, and attached command relationship may be further attached,  
1945 OPCON, or TACON to another organization by the parent/gaining unit. The parent/gaining unit  
1946 may also impose any support relationship on the unit.
- 1947 • Units with an OPCON command relationship may be further OPCON or TACON to another  
1948 organization by the gaining unit. The gaining unit may also impose any support relationship on  
1949 the unit.
- 1950 • Units with a TACON command relationship may be further TACON to another organization by  
1951 the gaining unit. The gaining unit may also impose any support relationship on the unit.

## 1952 ARMY SUPPORT RELATIONSHIPS

- 1953 2-129. Army support relationships are direct support, GS, reinforcing, and GS-reinforcing. Army support  
1954 relationships are not command authorities and are more specific than joint support relationships.
- 1955 2-130. Direct support is a support relationship requiring a force to support another specific force and  
1956 authorizing it to answer directly to the supported force's request for assistance (joint doctrine considers direct  
1957 support as a mission rather than a support relationship). A unit assigned a direct support relationship retains  
1958 its command relationship with its parent unit but is positioned by and has priorities of support established by  
1959 the supported unit.
- 1960 2-131. Reinforcing support is a support relationship requiring a force to support another supporting unit.  
1961 Only like units can be given a reinforcing mission. A unit assigned a reinforcing support relationship retains  
1962 its command relationship with its parent unit but is positioned by the reinforced unit. A unit that is reinforcing  
1963 has priorities of support established by the reinforced unit first, and then by the parent unit.
- 1964 2-132. GS-reinforcing is a support relationship assigned to a unit to support the force as a whole and to  
1965 reinforce another similar-type unit. A unit assigned a GS-reinforcing support relationship is positioned and  
1966 has priorities established by its parent unit and secondly by the reinforced unit.
- 1967 2-133. GS is that support which is given to the supported force as a whole and not to any particular  
1968 subdivision thereof. Units assigned a GS relationship are positioned and have priorities established by their  
1969 parent unit.
- 1970 2-134. Commanders establish support relationships when subordination of one unit to another is  
1971 inappropriate. Assigning support relationships is one aspect of command and control. Commanders assign a  
1972 support relationship when:
- 1973 • The echelon of the supporting unit is the same as or higher than that of the supported unit. For  
1974 example, the supporting unit may be a brigade, and the supported unit may be a battalion. It would  
1975 be inappropriate for the brigade to be subordinated to the battalion; hence, the echelon uses an  
1976 Army support relationship.
- 1977 • The supporting unit supports several units simultaneously. The requirement to set support  
1978 priorities to allocate resources to supported units exists.

1979 2-135. Units that have a command relationship with a unit are not designated a support relationship with  
 1980 the same unit. Since a command relationship is established, it provides adequate authority for the gaining  
 1981 unit to direct support efforts. Support relationships do not alter ADCON.

1982 2-136. Army support relationships allow supporting commanders to employ their units' capabilities to  
 1983 achieve results required by supported commanders. Supporting commanding officers clearly designate  
 1984 support relationships to subordinate units in OPORDs. The designation must identify the supported unit, the  
 1985 specific support relationship designated, and the duration of the relationship. The duration may be based on  
 1986 time, duration of a phase, or based on achieving an objective. This information is included in the 'Task  
 1987 Organization' paragraph of the OPORD. Supported commanders must also identify supporting units to  
 1988 subordinates in the same paragraph. Commanders may place this information in annex A of the order. The  
 1989 support is more effective if a commander with the requisite technical and tactical expertise controls the  
 1990 supporting unit rather than the supported commander.

1991 2-137. Support relationships can be an exclusive relationship between two units (direct support), or a broad  
 1992 level of support extended to all units under the control of the higher headquarters (general support). While  
 1993 reinforcing and GS-reinforcing relationships are not commonly used by sustainment units, these relationships  
 1994 are valid for sustainment units and may be designated based on support requirements.

1995 2-138. Although all support relationships are applicable to sustainment units, direct and GS are the most  
 1996 commonly used. Direct support requires a unit to support another specific unit and authorizes it to answer  
 1997 directly to the supported unit's request for assistance. A unit assigned a direct support relationship retains its  
 1998 command relationship with its parent unit, but is positioned by and has priorities of support established by  
 1999 the supported unit. The parent unit may end or redirect the direct support relationship at any time if directed  
 2000 to do so by its higher headquarters.

2001 2-139. GS requires a unit to support multiple units simultaneously and not any specific subdivision of the  
 2002 unit. A unit assigned a GS relationship retains its command relationship with its parent unit and is positioned  
 2003 and has priorities established by the parent unit. The parent unit may end or redirect the GS relationship at  
 2004 any time if directed to do so by its higher headquarters. Table 2-3 lists Army support relationships.

**Table 2-3. Army support relationships**

If relation- ship is—	Then inherent responsibilities—							
	Have command relation- ship with—	May be task- organized by—	Receives sustain- ment from—	Are assigned position or an area of operations by—	Provide liaison to—	Establish and maintain communi- cations with—	Have priorities established by—	Authorities a commander can impose on gaining unit further command or support relationship by—
Direct support <sup>1</sup>	Parent unit	Parent unit	Parent unit	Supported unit	Supported unit	Parent unit, supported unit	Supported unit	See note 1
Reinforc- ing	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
<b>Note:</b> <sup>1</sup> 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.								



## COMMAND AND SUPPORT RELATIONSHIPS BY ECHELON

2-140. The command and support relationships most commonly used vary by echelon. The relationships described below are typical examples. However, relationships may vary based on mission and operational variables.

### STRATEGIC SUPPORT AREA

2-141. The strategic support area contains the organizations, agencies, and lines of communications required to support deployed forces. It also includes the air and sea ports that support the flow of forces and sustainment into a theater. Support originating from the strategic support area can be either direct support or general support. Organizations that provide support for the strategic support area normally include, but are not limited to, USTRANSCOM, USAMC, and DLA.

### JOINT SECURITY AREA

2-142. Discussion of each type of Army headquarters assumes employment in the joint security area. All units may or may not be employed. Within the joint security area, sustainment command relationships will normally be the following:

- The TSC is assigned to the theater Army.
- The ESC is attached to the TSC.
- Sustainment brigades are attached to the ESC. The sustainment brigades will have the same relationship with the TSC if an ESC is not employed in the joint security area.
- CSSBs are attached to the sustainment brigade.
- Functional logistics and HR companies are attached to the CSSB or special troops battalion.

2-143. Operational medical units also operate in the joint security area. Within the joint security area, medical command relationships are normally the following:

- The TMC is assigned to the theater Army.
- Task-organized medical formations in the joint security area are assigned to the MEDBDE (SPT) or TMC.
- The MLMC forward team is assigned to the TMC and collocates with the DMC of the TSC or ESC and provides direct support for class VIII distribution.
- Elements of the global medical field laboratory may be in GS of the theater Army and may be assigned to the TMC or MEDBDE (SPT).

### CORPS AREA

2-144. The task organization of sustainment units in the corps area may be complex. Multiple sustainment headquarters may be operating in the area. Some of the sustainment headquarters are assigned or attached to the corps headquarters while others are not.

2-145. An ESC is assigned to the corps. The theater Army will also attach one or more sustainment brigades to the ESC. Furthermore, CSSBs, functional logistics battalions, and functional companies will be attached to the sustainment brigades as required to support the corps mission. All command relationships will be designated in an OPORD issued by the theater Army. The units attached to the corps receive mission orders from the corps headquarters, normally in support of specific corps operations. The normal support relationship for all sustainment units in the corps area is GS. However, other support relationships may be designated based on mission requirements.

2-146. Other ESCs operating in the corps area will remain attached to the TSC and will also have sustainment brigades, CSSBs, functional logistics battalions, and functional logistics companies attached. Sustainment units not attached to the corps receive mission orders from the TSC to support broader theater operations.

2-147. The task organization of medical units in the corps area is also complex. Multiple medical command and control headquarters may be operating in the area. Medical command and control headquarters are

generally in a GS relationship with the corps. However, other support relationships may be designated based on mission requirements. Within the corps, medical command relationships will normally be the following:

- The TMC is assigned to the ASCC and provides direct or GS to the corps through the MEDBDE (SPT).
- MEDBDEs (SPT) provide direct or GS to the corps and may have hospital centers, medical battalions (multifunctional), and dental companies assigned.
- MMBs may have medical companies, detachments, and teams assigned.
- Role 3 hospital centers may have field hospitals and hospital detachments and teams assigned.
- Elements of the global medical field laboratory may be in GS of the corps.

## **DIVISION AREA**

2-148. The task organization of sustainment units in the division area is subject to the same complexities as the corps area. Multiple echelons above division sustainment units may be operating in the area alongside the DSB with its organic DSSB.

2-149. Other sustainment brigades operating in the division area will remain attached to an ESC in the corps area. Sustainment brigades attached to the ESC will have CSSBs, functional logistics battalions, and functional logistics companies attached. The CSSBs attached to the sustainment brigade will have functional companies attached. Sustainment units not assigned to the division receive mission orders from the ESC to support broader theater operations.

2-150. The DSB and its organic DSSB are assigned to the division. The division's task-organized DSB provides direct support to the division and GS for all units in or passing through their geographic area. The DSB commander remains responsible for integration and synchronization of sustainment in the division area.

2-151. The task organization of medical units in the division area is subject to the same complexities as the corps area. Elements of the MEDBDE (SPT), MMB, and hospital center may be operating in the division area. The MEDBE (SPT) and its subordinate units are normally in a GS relationship with the division commander. Within the division, medical command relationships will normally be the following:

- MEDBDEs (SPT) provide direct or GS to the division and may have hospital centers and medical battalions (multifunctional) assigned.
- MMBs may have medical companies, detachments, and teams assigned.
- Role 3 hospital centers may have field hospitals and hospital detachments and teams assigned.

## **BRIGADE COMBAT TEAM AREA**

2-152. The BSB is organic to the BCT headquarters; it is an integral part of the BCT table of organization and equipment. The distribution, field maintenance, medical, and forward support companies are organic to the BSB and have a GS relationship with the BCT units to include the forward support companies. The forward support and medical companies have a direct support relationship with the supported maneuver battalion. The forward support companies and elements of the medical company may be attached to the supported maneuver battalion for limited periods of time based on mission requirements. This attachment is normally limited to the duration of a specific mission or phase of an operation.

## **Chapter 3**

# **Sustainment Operations During Competition Below Armed Conflict**

This chapter provides an overview of sustainment operations during competition. It begins with an overview of Army operations during competition. It also discusses sustainment planning considerations during competition and describes sustainment roles and responsibilities by echelon during competition.

### **SECTION I – OVERVIEW OF ARMY OPERATIONS DURING COMPETITION**

3-1. Competition below armed conflict occurs when an adversary's national interests are incompatible with U.S. interests, and that adversary is willing to actively pursue them short of open armed conflict. While neither side desires, at least initially, to use military force as the primary method to achieve its goal, the adversary is willing to employ national instruments of power, including military force, below the threshold of actual armed conflict to achieve its aims. The resulting tension between the two sides creates potential for violent escalation when one side challenges the status quo. Situations during competition, in which U.S. joint forces take actions outside of armed conflict against an adversary, are typically nonviolent and conducted under greater legal or policy constraints than in armed conflict. However, these may include violent action by U.S. joint forces with allies and partners.

### **PREPARATION FOR LARGE-SCALE COMBAT OPERATIONS**

3-2. Army forces that cannot credibly execute operations during armed conflict neither deter adversaries nor assure allies and other unified action partners. Preparation for large-scale combat operations is therefore the primary focus of Army conventional forces during competition. Some of the activities Army forces execute to prepare for armed conflict with sustainment implications include—

- Setting the theater.
- Building allied and partner capabilities and capacity.
- Improving joint and multinational interoperability.
- Preparing to transition and execute operation plans (OPLANs).

### **INTERAGENCY COOPERATION**

3-3. During competition, it is critical that sustainers work with other agencies to achieve integrated whole-of-government operations and synchronization of interagency activities such as information sharing, security cooperation, and foreign assistance. This requires Army sustainers to develop and share detailed time-phased logistics requirements/estimates with interagency partners. During competition, the Department of State will play a large role in maintaining or establishing a path toward greater stability, with elements from the intelligence community and DOD in support. Other agencies that may provide crucial logistics support during shaping operations are DLA, Department of Treasury, Federal Reserve Bank, and USAMC. Liaison officers are often the first sustainment planners on ground. Liaison officers begin sustainment preparations and discussions with the ASCC, TSC, State Department officials, and country teams. The liaison officers may assist with expediting movement of equipment and logistics planning. USTRANSCOM may also send liaison officers to facilitate transportation operations.

## COMPETITION ACTIVITIES

3-4. Competition involves activities conducted under numerous programs within a combatant command. The CCDR uses these activities to improve security within partner nations, enhance international legitimacy, gain multinational cooperation, and influence adversary decision making. Competition activities include obtaining access for U.S. forces, maintaining sufficient forward-based presence within a theater to influence conditions in the strategic environment, and mitigating conditions that could lead to a crisis or armed conflict. At any time during competition, but especially during times of heightened tension, leaders must take great care to ensure Army forces avoid activities that inadvertently provoke crisis or armed conflict. Army forces, as directed by the theater Army, must stay within an activity level that meets the CCDR's intent for readiness without unintentionally increasing tensions.

## MILITARY ENGAGEMENT

3-5. *Military engagement* is the 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). A military-to-military engagement requires less sustainment support than large-scale combat operations. *Host-nation support* is civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations (JP 4-0). Military engagements can reduce tensions and may preclude conflict; if conflict is unavoidable, these engagements may allow the United States to enter into it with stronger alliances or coalitions. Sustainers are involved in all these engagements primarily to facilitate sustainment agreements and coordinate planning for future operations.

## SECURITY COOPERATION

3-6. *Security cooperation* encompasses all DOD interactions with foreign security establishments to build security relationships that promote specific U.S. security interests, develop allied and partner nation military and security capabilities for self-defense and multinational operations, and provide U.S. forces with peacetime and contingency access to allied and partner nations (JP 3-20). The Department of State leads and provides oversight for security cooperation efforts.

3-7. Sustainment commands conduct parallel and collaborative planning in order to synchronize sustainment operations for theater security cooperation activities. The Army approach to supporting the larger DOD security cooperation effort is either indirect or direct.

3-8. Indirect approach activities involve the United States supporting a nation with security cooperation programs, given legitimate authorities, designed to enhance its capability and capacity. The sustainment command supports the following programs and activities typical of the indirect approach:

- International military education and training.
- Multinational and joint exercises and exchange programs.

3-9. Direct approach activities involve U.S. forces assisting the host nation by conducting operations for the mutual benefit of the host nation and U.S. interests. These operations either provide a capability the host nation does not possess or increase the capacity of the host nation to conduct the operation.

3-10. *Security assistance* is a group of programs authorized by federal statutes by which the United States provides defense articles, military training, and other defense-related services by grant, lease, loan, credit, or cash sales in furtherance of national policies and objectives, and those that are funded and authorized through the Department of State to be administered by Department of Defense/Defense Security Cooperation Agency, which are considered part of security cooperation (JP 3-20). It is a group of programs the U.S. Government uses to provide defense articles, military training, and other defense-related services by grant, loan, credit, or cash sales. Security assistance programs are typically focused on the transfer of defense articles and services to eligible foreign governments, the provision of training and education to foreign military personnel, and the sale of construction services in support of partner nation military establishments. Sustainers are frequently required to provide support and logistics training to support these activities.

3-11. *Security force assistance* includes the DOD activities that support the development of capacity and capability of foreign security forces and their supporting institutions (JP 3-20). Army sustainers interact with sustainers of partner countries in these operations. These partnerships assist in future interoperability and enhance partner nation militaries to be more self-sufficient in logistics capabilities.

3-12. *Foreign internal defense* is participation by civilian and military agencies of a government in any of the action programs taken by another government or other designated organization to free and protect its society from subversion, lawlessness, insurgency, terrorism, and other threats to its security (JP 3-22). Sustainment support operations are limited by applicable U.S. law without an acquisition and cross-servicing agreement (ACSA). Such support usually consists of transportation or limited maintenance support, although an ACSA can allow additional support. Sustainment of combat operations in foreign internal defense is similar to sustainment for other types of operations. However, the political sensitivities and concern for host-nation legitimacy and minimum U.S. presence change the complexion of sustainment operations in foreign internal defense. As in security force assistance, sustainers are critical for developing well-established sustainment foundations. SOF play a critical role in executing foreign internal defense operations.

3-13. In security cooperation, support considerations include support to U.S. forces and support to host-nation forces based on a variety of authorizations. Support to host or partner nations is primarily driven by already established ACSAs. If ACSAs are not in place, local State Department officials act as lead for determining what support can be granted to host nations.

## DEPARTMENT OF STATE

3-14. The Department of State leads and provides oversight for security cooperation efforts through its bureaus, offices, and overseas missions. Security cooperation activities are conducted and coordinated throughout the AOR by, with, or through the ASCC to—

- Build defense relationships that promote specific U.S. security interests.
- Develop multinational and friendly military capabilities for self-defense and multinational operations.
- Provide U.S. forces with peacetime and contingency access to a host nation.

3-15. The TSC supports all DOD operations during competition. Since the boundaries for Department of State are different from the boundaries of the CCDRs, the TSC (through the ASCC) may have to coordinate operations through each Embassy's Security Cooperation Organization or host-nation law enforcement representatives.

## SENIOR DEFENSE OFFICIALS

3-16. The senior defense official or defense attaché is the principal military advisor on defense and national security issues. The senior defense official is also the senior diplomatically accredited DOD military officer assigned to a U.S. diplomatic mission and the single point of contact for all DOD matters involving the embassy or DOD elements assigned to or working from the embassy. This individual acts as the in-country focal point for planning, coordinating, supporting, and/or executing U.S. defense issues and activities in the host nation, including theater security cooperation programs under the oversight of the CCDR. Army sustainers may be tasked to assist in establishing and maintaining sustainment foundations to enhance nation partnerships. For additional information regarding DOD operations at U.S. embassies, see DODD 5205.75.

## COMBINED TRAINING AND EXERCISES

3-17. Army forces build partner combat readiness and set conditions for future contingencies through training and exercises. Combined exercises familiarize both forces with the capabilities and shortfalls of the other force and develop procedures to leverage capabilities and mitigate shortfalls. These serve to sustain and/or develop interoperability between nations as well as build partnership capacity.

3-18. These exercises are extremely diverse in size, participation, duration, and sustainment requirements. The requirements may be a few aircraft being sustained by HNS or OCS with minimal DOD sustainment, to large-scale training operations requiring a combination of HNS, OCS, and home-station sustainment activities. These exercises may be with one United States military agency and another country or with joint

agencies and multiple nations. These events can generate very high support requirements. Sustainment commands are thoroughly embedded in the planning process to determine support requirements, specific responsibilities, and support procedures. While the volume of requirements for short-term multinational training events may not be burdensome, the events are complex and require careful planning and synchronization. The use of multinational exercises establishes theater gateways and access agreements for activities like cross-border movements and status of forces agreements.

#### **Sustainment in Competition – REFORGER**

In the late 1960s, with the United States Army decisively engaged in Southeast Asia, the decision was made to remove almost 28,000 military personnel from West Germany to support other missions. Concerned that this redeployment would be interpreted by both the Warsaw Pact and America's NATO allies as a weakness or lack of resolve, the Department of Defense developed a plan to regularly rotate units back to Europe. This plan would become REFORGER or Return of Forces to Germany. For the next 24 years, these exercises helped to enhance the military capabilities of the U.S. and Allied forces as well as reassure NATO of America's firm commitment to the alliance.

For a generation of soldiers, these exercises constituted the major training and combat rehearsal event of their careers. REFORGER typically included employment of the Civilian Reserve Air Fleet, deployment of Army Reserve and Army National Guard units, live fire exercises with NATO allies, and large-scale reception, staging, onward movement, and integration events. For REFORGER 1988, over 125,000 troops deployed from CONUS to multiple locations across Western Europe. At the time, it was termed the largest movement of troops to Europe since the end of the Second World War.

A key component of supporting REFORGER was the various prepositioning of materiel configured in unit sets sites located across Western Europe. Prepositioning of materiel configured in unit sets sites in Belgium, West Germany, and the Netherlands would eventually contain combat equipment for three heavy divisions, with three additional division sets planned for the late 1980s. The fall of the Berlin Wall and subsequent collapse of the Soviet Union cancelled those plans. During the drawdowns of the 1990s, significant material and equipment was relocated back to the United States. Over the next decade, these legacy prepositioning of materiel configured in unit sets sites would evolve into today's APS.

## **SECTION II – PLANNING CONSIDERATIONS DURING COMPETITION**

3-19. In addition to the sustainment activities and other considerations for operations during competition mentioned above, there are additional conditions and planning considerations for sustainment forces. In certain instances, such as forcible entry and in certain OEs, OCS may not be readily available or accessible to sustainment planners. In these situations, sustainment planners must be prepared to meet the challenges of distributing supplies and bulk fuel utilizing military assets without reliance on OCS and contractors on the battlefield. Additional considerations are discussed below.

## **THEATER STRATEGIC, OPERATIONAL, AND TACTICAL COMPETITION ACTIVITIES**

3-20. Certain conditions must be established in theater during competition at the theater strategic, operational, and tactical levels. These conditions must be in place to enable deployment, employment, sustainment, and redeployment of forces. The conditions include—

- 2272 ● Whole-of-government initiatives.
- 2273 ● JOA.
- 2274 ■ Theater opening.
- 2275 ■ Port opening.
- 2276 ■ RSOI.
- 2277 ● Support to other Services.
- 2278 ● Theater distribution.

## 2279 **WHOLE-OF-GOVERNMENT INITIATIVES**

2280 3-21. Whole-of-government initiatives enable access to countries. They involve strategic organizations  
 2281 establishing host-nation agreements, contracts, and clearances to allow forces to enter ports and airfields and  
 2282 operate on highways, rail lines, and waterways in theater. They can be complex and time consuming. The  
 2283 number of governments and defense organizations involved can complicate and prolong the process to gain  
 2284 access to a country's infrastructure and commerce.

## 2285 **JOINT OPERATIONS AREA OPENING**

2286 3-22. Establishing a JOA relies on the efforts of theater strategic, operational, and tactical-level  
 2287 organizations. This condition must be tailored to accommodate the size and capabilities of deploying forces.  
 2288 Specific tasks involved in establishing a JOA include theater opening, port opening, and RSOI.

## 2289 **Theater Opening**

2290 3-23. Theater opening involves establishing and operating ports of debarkation (air, sea, and rail), a  
 2291 distribution system, and sustainment infrastructure. This condition facilitates port throughput for the RSOI  
 2292 of forces in theater. Specific capabilities include security forces, port opening teams, maintenance companies,  
 2293 transportation companies, and command and control structures. Coordination between the supported CCDR,  
 2294 USTRANSCOM, and other strategic organizations will determine the who, what, and how of theater opening.

## 2295 **Port Opening**

2296 3-24. Port opening is a joint mission involving USTRANSCOM and its subordinate Service component  
 2297 commands. The Air Force's Air Mobility Command is responsible for managing APODs, and SDDC is  
 2298 responsible for managing SPODs. The Navy's Military Sealift Command provides sealift from its organic  
 2299 fleet or through contracts with commercial ocean carriers. Multiple port opening options are available to  
 2300 assist the CCDR.

2301 3-25. The Army's quartermaster petroleum liaison detachment supports the theater port opening mission of  
 2302 the TBX when assigned. It provides planning, coordinating and operations support to the TBX when the bulk  
 2303 petroleum portion of the mission exceeds staff capabilities. Each quartermaster petroleum liaison detachment  
 2304 is assigned to support a TSC, ESC, petroleum and water group, or TBX. The quartermaster petroleum liaison  
 2305 detachment is similar to the theater petroleum center and provides the same capabilities on a smaller scale.

## 2306 **Joint Task Force-Port Opening**

2307 3-26. The joint task force-port opening is an option available to the CCDR. The joint task force-port opening  
 2308 is designed to combine specific Air Force, Army, and Navy capabilities to provide the USTRANSCOM  
 2309 commander with a ready-to-deploy, jointly trained force for opening ports and establishing the initial  
 2310 distribution network. The joint task force-port opening facilitates joint reception, staging, onward movement  
 2311 and integration and theater distribution by providing an interface at the APOD and/or SPOD and distribution  
 2312 node. Joint task force-port opening capabilities include:

- 2313 ● APOD and SPOD assessment.
- 2314 ● APOD and SPOD opening and initial operation.
- 2315 ● Distribution network assessment.
- 2316 ● Distribution node management.

- 2317
  - Cargo and passenger operations.
- 2318
  - Movement control, including coordinating for onward movement of arriving cargo and
- 2319
  - passengers.
- 2320
  - Establishment of joint in-transit visibility and radio frequency identification networks.

2321 3-27. A key task of the joint task force-port opening along with opening an APOD and SPOD is to open and  
2322 initially operate an associated forward distribution node (such as cargo marshalling or transload) within 10  
2323 kilometers of the airfield ramp area.

2324 3-28. The joint task force-port opening may be employed to move the cargo off the ramp at the airfield to  
2325 the forward node for eventual distribution into the theater.

### 2326 ***Transportation Brigade Expeditionary***

2327 3-29. The transportation brigade expeditionary provides command and control of assigned and attached port,  
2328 terminal, and watercraft units conducting expeditionary port-opening, movement control, and austere  
2329 intermodal operations at unimproved seaports. The transportation brigade expeditionary provides oversight  
2330 of the Army watercraft and water terminal assets. It has the ability to perform port management and can  
2331 provide command and control to both operating and generating force deployed units.

### 2332 **SUPPORT TO OTHER SERVICES**

2333 3-30. Support to other Services relies on joint interdependence that is essential to sustainment operations.  
2334 Joint interdependence occurs when one Service relies on another Service's capabilities such as common-user  
2335 transportation. This allows Services to maximize optimum use of resources and reduce duplication of effort  
2336 and competition for the same resources. The CCDR implements joint interdependence through DAFL and  
2337 can assign the Army the task of providing common-user support to other Services.

### 2338 **THEATER DISTRIBUTION**

2339 3-31. Establishing the theater distribution network is an essential part of sustainment support and is pivotal  
2340 to obtaining freedom of movement and action. It provides operational forces with the materiel, supplies, and  
2341 retrograde of repairable material needed to maintain readiness. Theater distribution involves four networks:

- 2342
  - Physical Network. It includes the means for distribution (airfields, roads, bridges, railroads,
- 2343
  - structures, pipelines) and the capabilities for supporting distribution operations.
- 2344
  - Financial Network. It facilitates distribution operations by providing policies, processes, and
- 2345
  - systems for the use of fiscal resources.
- 2346
  - Informational Network. It is the combination of all information systems that support theater
- 2347
  - distribution.
- 2348
  - Communication Network. It links the complex elements of distribution. It enables capacity,
- 2349
  - reliability, and security of communication networks that support the rapid transmission of global
- 2350
  - distribution data. Real-time communications are vital for successful execution of distribution
- 2351
  - operations.

2352 3-32. The bulk of planning for Army sustainment in a theater is done by the ASCC and TSC. Planners focus  
2353 on the challenges of geographically large and difficult to access areas. Planners develop means to generate  
2354 and apply capabilities within the operational area.

2355 3-33. The ASCC plans and coordinates means to identify and mitigate capability gaps. When directed, the  
2356 theater Army may contract for the establishment of intermediate staging bases, possible locations for pre-  
2357 positioned stocks, and possible assembly areas.

2358 3-34. Planners consider sustainment by type of support and across a continuum of possibilities to gain  
2359 capabilities from other military partners, host nations, the sustainment enterprise, contracted support, and  
2360 organic capabilities. OPLANs and concept plans are the basis for planning to evaluate total requirements and  
2361 capabilities. For more information regarding theater distribution considerations, see Chapter 5.

2362 3-35. The following planning considerations may apply to multiple sustainment functions and are important  
2363 for sustainers to consider during competition:



- 2364 ● ACSA.
- 2365 ● International agreements.
- 2366 ● Established contracts (theater, external [LOGCAP], and systems support).
- 2367 ● Customs requirements.
- 2368 ● Commercial capabilities.
- 2369 ● Requesting funding authorities.
- 2370 ● Noncombatant evacuation operations.

2371 3-36. Risk, uncertainty, and chance are inherent in all military operations. Sustainment planners must seek  
 2372 to understand, balance, and take prudent risks, rather than avoid risks, to ensure sustainment of the operational  
 2373 force. Risk considerations and other considerations should be addressed, and mitigation  
 2374 strategies/alternatives developed as part of the sustainment plan. Sustainment commanders must assess and  
 2375 mitigate risks continuously throughout operations. The following is a sample list of risk considerations during  
 2376 competition:

- 2377 ● Large APS sites constitute a high value target for potential adversaries (for both lethal targeting  
 2378 and information collection purposes). How will the loss of an APS site impact operational  
 2379 requirements? Can we establish multiple sites, and will the cost outweigh the force  
 2380 protection/redundancy benefits? How can the footprint be minimized while meeting requirements?
- 2381 ● Are APS sites, financial and supply automation, and other systems hardened against cyber-  
 2382 attacks? How do you validate requirements received through electronic systems? Does the threat  
 2383 have the capability to change information verses directed denial of service attacks?
- 2384 ● Is the operational plan over-reliant upon HNS, ACSAs, and contingency contracts to support  
 2385 combat forces? Is there sufficient redundancy and flexibility in the instruments to rapidly adapt to  
 2386 changing requirements?
- 2387 ● Have you negotiated multiple points of access/entry? What happens if a HN denies country  
 2388 clearance?
- 2389 ● Has support to other Services and allies been factored into the support plan and the appropriate  
 2390 request/accounting processes been established?
- 2391 ● Can the shaping activities be misunderstood (considered threatening) and cause threat forces to  
 2392 accelerate their plans?

2393 3-37. Multidomain operations in a contested environment over extended lines of communication present  
 2394 risks to sustainment forces. These threats increase the likelihood of attacks at any point in the strategic  
 2395 framework. It is therefore necessary to continuously plan for and coordinate for protection resources and  
 2396 assets to mitigate effects of enemy attacks in support areas and maintain freedom of action.

## 2397 **Disperse Deployment and Sustainment**

2398 3-38. The theater Army executes deployment and sustainment along multiple dispersed routes. Army  
 2399 expeditionary forces deploy from the homeland and other regions using joint strategic transportation and  
 2400 arrive at multiple points in theater, proceed forward along multiple routes, and then occupy dispersed tactical  
 2401 assembly areas within range of enemy antiaccess and area denial systems. Aviation units employ split basing  
 2402 between the tactical and operational support areas, or in the case of division formations, between the tactical  
 2403 support and close areas. Aircraft and units rotate through a network of dispersed, austere locations in the  
 2404 tactical support and close areas. Sustainment draws on multiple sources for local procurement and  
 2405 prepositioned supplies, distributed through dispersed supply nodes operated by forward-presence units.  
 2406 Intensive sustainment-level maintenance of aviation, ground, and electronic combat systems, including battle  
 2407 damage assessment and repair is conducted within the operational support area's lower threat environment.  
 2408 The Army postures redundant sustainment infrastructure forward, plans and prepares precision logistics  
 2409 support, and ensures the availability of additional expeditionary capacity through proper balance across the  
 2410 Active and Reserve Components.

## 2411 Mitigate Effects of Enemy Attacks In The Support Areas

2412 3-39. The theater and field armies mitigate the effects of enemy attacks in the support areas to enable the  
 2413 reception of expeditionary forces executing strategic and operational maneuver. Multidomain forces in the  
 2414 support areas employ deception to cause the enemy to expend resources on decoys or targets that have moved,  
 2415 miss fleeting opportunities, or expend high-value capabilities on less important targets. APS are protected  
 2416 and hardened to allow the rapid integration of expeditionary forces and the generation of combat power.  
 2417 Army forces in the support areas build resilience and redundancy by dispersing critical deployment and  
 2418 sustainment capabilities in mixed clusters and gain residual protection from air and missile defense radars  
 2419 and launchers, aerial surveillance, and other specialized protection capabilities that they would otherwise not  
 2420 be allocated.

2421 3-40. Sustainment headquarters, including the TSC and ESC, use dispersion and multiple command posts to  
 2422 mitigate the effect of enemy attack and maintain C2 of sustainment operations. The configuration of the TSC  
 2423 and ESC headquarters is determined by their ability to command forces across vast land areas while  
 2424 supporting Army forces. TSC and ESC commanders exercise C2 over widely dispersed formations while  
 2425 maintaining a common operational picture (COP) with higher headquarters and subordinate units. TSC and  
 2426 ESC commanders vet the C2 capabilities of their organizations using command posts during exercises and  
 2427 training events. The commander, with the assistance of the staff, determines the communication capabilities  
 2428 required for each CP during dispersed operations. Key considerations for evaluating C2 capabilities include  
 2429 staff integration and crosstalk, communication systems, and the ability to maintain a common operational  
 2430 picture.

## 2431 CONSIDERATIONS FOR SUSTAINMENT FUNCTIONS

2432 3-41. Key considerations for sustainers during competition are covered by function below.

### 2433 MAINTENANCE

2434 3-42. Maintenance operations during competition focus on planning and preparing for deployment while  
 2435 continuing to conduct routine equipment maintenance. The AFSB's LRCs may provide maintenance support  
 2436 at home station. Successful maintenance operations in theater require units to deploy with their authorized  
 2437 stockage lists, shop stock, and bench stock items, because the flow of parts may be greatly restricted within  
 2438 countries during shaping operations. HNS, theater support contracting (which includes local purchase),  
 2439 external support contracts (reach back contracting office and LOGCAP), and/or systems support contracts  
 2440 (reach back sustainment support) are force multipliers for maintenance in many of these operations.

### 2441 TRANSPORTATION

2442 3-43. USTRANSCOM is responsible for moving units and equipment into theater. Once inside the AOR,  
 2443 the TSC and/or ESC provides recommendations for transit priorities. Special interests include border crossing  
 2444 agreements, infrastructure capacity (roads, bridges, and ports), customs and diplomatic clearance, and  
 2445 movement control. During competition, it is critical for sustainers to test transportation nodes and identify  
 2446 alternate LOCs. Aerial delivery capabilities should be identified and understood during this period, as  
 2447 requirements for alternate resupply may increase. Transportation plans for operational area opening and  
 2448 concepts of support may be tested during shaping. Movement boards are a mechanism to review and manage  
 2449 transportation plans, agreements, policies, and priorities. Movement boards are also a means of reviewing  
 2450 route status, convoy protection plans, and transportation asset allocation to support distribution operations.  
 2451 For additional details, see ATP 4-16.

### 2452 SUPPLY AND SERVICES

2453 3-44. The CCDR assigns lead Service responsibilities, normally through the contingency planning process,  
 2454 to achieve efficiencies and improve effectiveness through optimizing available modes, nodes, routes, and  
 2455 suppliers. These lead Service support functions can be for single or multiple common-user functions and  
 2456 often include general supplies. The lead Service is responsible for forecasting operational requirements to  
 2457 support all operations from humanitarian assistance to large-scale combat operations. Lead Service

sustainment planners should anticipate increased needs for bulk fuel, ammunition, construction and barrier material, and repair parts to support concept plans and OPLANS. The lead Service can also request support from DLA to decrease wait time, reduce cost, and improve military readiness.

3-45. ACSAs and OCS may be leveraged to attain several classes of supply. Food may also be provided through such arrangements. For clothing, individual equipment, tentage, and organizational tool sets, it is critical that units bring what is required to execute their anticipated tactical tasks with them. ACSAs should be considered for living arrangements.

3-46. The utilization of existing pipelines, military pipelines, assault hose lines, contracts, host-nation support, and agreements (including blanket purchase agreements, into-plane contracts, into-truck contracts, and bunker contracts), along with HN bulk fuel and water agreements is leveraged to provide bulk fuel and water. DLA-Energy's contract support, interaction with other nations to develop ACSAs, contingency sites, fuel exchange agreements, and the implementation of a quality surveillance testing program for products are critical to the overall success of the operation. DLA Energy has responsibility for the centrally procuring bulk petroleum for DOD. In cases where pre-established agreements with nations in the AOR are absent, DLA establishes contracts with local vendors. DOD components submit requests to the combatant commander's JPO for validation and subsequently gain DLA Energy's authorization for local procurement of petroleum products exceeding the annual limits. Several considerations must be considered:

- Quality surveillance.
- Additization equipment requirements in the event DLA Energy cannot source additized jet fuel.
- Storage capacity and locations.
- Types of fuel required for an operation.
- Requirements for the Army support to other services Title 10 inland distribution mission.
- Planned receipt methods in the corps rear area including over-the-shore, host-nation pipeline/storage, DLA Energy contract deliveries, and rail tank cars.

3-47. For ammunition, planning includes an evaluation of receipt, storage, and issue options to include dispersion considerations required for net explosive weight. Planning should also include identifying locations within the AOR for a theater storage area and multiple ammunition supply points to provide redundant and robust storage capability. Ammunition stocks can be received directly from the port and distributed laterally between supply points or directly to forward unit holding areas. Units can also consider the use of ammunition caches in support of operations to continue offensive momentum and prepare for transitions to the defense. Units should also be aware of the risks that caches may be discovered, interdicted, and destroyed.

3-48. It is also important to consider foreign ammunition during competition. U.S. forces may be called upon to receive, store, and dispose of foreign ammunition. Logistics planners can leverage EOD assets that are trained in foreign ammunition for storage and compatibility determination. Quality assurance specialist ammunition surveillance personnel can also assist with NATO and foreign ammunition storage and compatibility requirements.

3-49. Major end items are traditionally brought from home station during competition. In the event of a replacement major end item being needed, supply managers request through current supply systems for replacement. In addition, paying agents can be used to make local purchases for emerging requirements. USAMC receives prioritization and authorization from HQDA to redistribute assets based on command priorities or replacements from other sources. These sources include OCONUS theater sustainment stock, unit deploying leave behind equipment, and APS. The theater AFSB manages the theater sustainment stocks, redistribution property assistance yard, and provides integrated issue of major systems. The AFSB also provides integrated fielding of all components of new equipment, normally at home station, in conjunction with new equipment training. The Army Medical Logistics Command and medical logistics planners leverage APS, medical materiel, and medical maintenance support agreements and contracts established during competition. For critical items not available from those sources, units bring sufficient supplies to sustain operations.

**DISTRIBUTION**

3-50. Distribution is the primary means that enables freedom of action, operational reach, and prolonged endurance during operations. Establishing a distribution network is critical to shaping an OE. It is enabled by a distribution management system designed to achieve support objectives. *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).

3-51. Planning, coordinating, and synchronizing strategic and Army capabilities for distribution are essential. Global distribution extends from the point of origin (garrison or point of supply) to the point of employment (the Soldier in theater). The Army conducts theater distribution as part of the global distribution system. *Theater distribution* is the flow of equipment, personnel, and materiel within theater to meet the combatant commander's mission (JP 4-09). The theater segment extends from the ports of debarkation or source of supply (in theater) to the points of need.

3-52. The TSC or ESC will establish movement boards to manage transportation policies, priorities, LOC status, convoy protection and synchronization, and transportation asset allocation to support theater distribution operations.

3-53. The TSC or ESC validated movement program should be published in an OPORD and executed by subordinate units like the sustainment brigade or movement control battalion. When transportation assets are tasked, the movement control board will ensure the transportation movement request is produced to capture transportation requirements. For additional details, see ATP 4-16.

3-54. Petroleum and water distribution planning is a key function of the quartermaster (petroleum and water) group during competition. This group (usually assigned directly to the TSC) plans the development, design, and construction of the petroleum distribution system and storage facilities based on the operational plan of the theater commander. A critical planning requirement for the group is to create detailed plans for the purification, distribution, and storage of potable water. It also evaluates host-nation petroleum systems and plans for their development, rehabilitation, and extension aligning with the operational plan of the theater commander. The quartermaster (petroleum and water) group also coordinates construction, rehabilitation, and maintenance requirements for petroleum facilities with the engineer command. It is dependent on external support for area signal support, security, construction, facility maintenance, and other supporting functions. Engineer support is required for construction, rehabilitation, and maintenance of petroleum and water facilities. For additional information, see ATP 4-43 and ATP 4-44.

**MORTUARY AFFAIRS**

3-55. DOD assigns the task of recovering and evacuating military fatalities during joint operations to the Army. Sustainment planners must consider fatality estimates per phase, the flow of allocated mortuary affairs assets into the theater, and the sustainment channels with the most expedient available transportation resources to evacuate human remains. Human remains will be evacuated without delay to preserve the forensic evidence for the Armed Forces Medical Examiner. The logistics channels also provide for the evacuation of personal effects to the Joint Personal Effects Depot (CONUS). Establishing responsibilities and roles during shape is critical to the smooth operation of mortuary affairs and the evacuation of human remains and personal effects out of the operational area. Sustainers must work with interagency and international partners for the recovery and evacuation of fatalities from—

- U.S. citizens.
- Allied and coalition forces.
- Host nation.
- Detainee.

3-56. While evacuation of human remains out of the theater is paramount, mortuary affairs processing capacities and theater evacuation platforms can be overwhelmed due to the lethality of large-scale combat or CBRN operations. In this event, the CDR is empowered by Title 10 to authorize temporary interment for U.S. forces; that responsibility may not be delegated to subordinate commanders. Temporary interment should only be considered as a last resort, and only when operational constraints prevent the storage or

evacuation of human remains out of the operational area to a servicing mortuary or when it is deemed prudent for the protection and health and welfare of personnel. Subordinate unit commanders must obtain permission from the CCDR to conduct temporary interment operations. In extreme circumstances, when a unit is cut off and has no means to communicate with higher headquarters, the senior commander is responsible for deciding whether hasty burial will be utilized after all known support options have failed.

3-57. During competition, sustainment planners explore all other options prior to temporary interment, but must develop plans for temporary storage, identify potential locations, and estimate the engineer assets required to conduct interment. Existing international agreements, Standardization Agreement 2070, and Quadripartite Standard Agreement 655 establish the precedent for interment of allied and coalition fatalities. However, plans for temporary interment overseas will require additional policies, procedures, and host-nation approval prior to execution. For additional information, see ADP 4-0, JP 4-0, and ATP 4-46.

## **GENERAL ENGINEERING SUPPORT**

3-58. General engineering support during competition focuses on building, repairing, and maintaining various infrastructure facilities, providing essential services, and ultimately building partner capacity to co-develop host-nation capabilities to perform such tasks. Infrastructure development is often a series of technical tasks that fall under different sectors such as electricity, road and rail transportation, water supply and sanitation, water treatment, and sewage.

3-59. Shaping the OE requires that engineer planners anticipate the impact of geography, force projection infrastructure with specific engineer missions, and available engineer forces within the supported AOR. Engineer planners determine the basic mobilization, deployment, employment, and sustainment requirements of the CCDR concept of operations. Engineer planners secure funding within authorities and plan for procurement of Class IV supplies and services. For more information on engineering, see FM 3-34.

## **OPERATIONAL CONTRACT SUPPORT**

3-60. At the theater level, sustainment planners align allocated military resources against forecasted requirements and employ non-organic sources such as OCS to mitigate risk. Sustainment planners must also be prepared for theaters where forcible entry operations will be required or an adversary with peer or overmatch capabilities will limit available OCS support. As part of the military decision-making process (MDMP), all primary staff and most special staff have responsibility to develop Annex W and ensure the integration and synchronization of OCS capabilities within the commander's operational concept. This synchronization includes the identification of commercial support requirements, the location and capabilities of contracting support units, and the procedures and responsibilities for ensuring the safety and accountability of contractors. Commanders at each echelon must plan for the integration of contracted capabilities and should include planners from the supporting contracting support brigade and AFSB to address specific OCS capabilities.

3-61. Theater support contracts address theater-specific requirements and include micro-purchases. Elements of ACC deploy with combat forces to provide, or attain and provide, the necessary contracting authority to award these contracts in support of Army operations. External support contracts provide contingency requirements on a global scale and often require administrative contracting, quality assurance, and government property administration support. The LOGCAP program, managed by ASC, provides deployed forces with the largest, most comprehensive external support contract within the DOD. All Army primary staff elements are responsible for the integration and synchronization of OCS capabilities in Army operations. External support contracts with DLA, TRANSCOM, and other DOD agencies also provide deploying forces with critical commercial support. Systems support contracts provide field services representatives to maintain and repair critical systems, both in CONUS and during contingency operations.

3-62. Sustainment headquarters at brigade and above include an organic OCS branch within the support operations section that plans and manages the OCS process. The theater Army (and when constituted, the field army) must form an OCS integration cell led by the G-4 staff and including participation from all primary and relevant special staff directorates to ensure effective OCS planning and management. Because commercial support impacts multiple staff sections and lines of effort, commanders at EAB may establish bureaus, boards, centers, cells, and working groups to plan, synchronize and integrate desired effects. The

2607 theater Army (and when constituted, the field army) does not have an OCS cell and should form one within  
2608 the G-4 staff to fulfill OCS planning and management. The cell members may include representatives from  
2609 other sections, including the staff judge advocate (SJA). For additional information, see JP 4-10, ATP 4-10,  
2610 ATP 4-71, and ATP 4-98.

## 2611 **FINANCIAL MANAGEMENT**

2612 3-63. Financial managers must be prepared to provide funding support across the competition continuum.  
2613 As the financial management strategic enterprise integrator, USAFMCOM utilizes its internal capabilities to  
2614 deliver system support to financial Enterprise Resource Planning systems, financial audit and compliance  
2615 support, financial management technical training and evaluation, banking, and limited accounting for  
2616 sustainment elements below corps. In addition, it directly coordinates with interagency enablers to include  
2617 the Office of Secretary of Defense (Comptroller), the Assistant Secretary of the Army (Financial  
2618 Management and Comptroller), Federal Reserve Banks, DFAS, and U.S. Treasury in support of the financial  
2619 management enterprise. These interagency partners are critical in providing battlefield currency support,  
2620 eCommerce, financial authorities and policies, and accounting support.

2621 3-64. Resource management cells (J-8, G-8, and S-8) must forecast and request funding authorization in  
2622 advance for future operations through appropriate fiscal channels. Operation and Maintenance, Army is the  
2623 primary source of funding to support U.S. appropriations to be enacted by Congress for specific purposes.  
2624 Special funding appropriations provide support to U.S. and non-U.S. military personnel and are generally for  
2625 stability efforts. Financial managers must be prepared to execute and account for all special funding with the  
2626 same level of effort required to execute and account for Operation and Maintenance, Army funding.

2627 3-65. Support during competition may include funding support for organizing, equipping, and training  
2628 foreign forces. Title 22, USC contains the Foreign Assistance Act, the Arms Export Control Act, and other  
2629 laws that authorize security assistance, developmental assistance, and other forms of bi-lateral aid that  
2630 financial management personnel must be familiar with to support stability operations. ARSOF and the  
2631 supporting or supported conventional force have long used Title 22 funding, provided by the Department of  
2632 State, in foreign internal defense operations that occur during stability operations or follow on from a larger  
2633 stability operation. Congress has also authorized DOD to provide security cooperation support to foreign  
2634 military and security forces, with Department of State coordination and Congressional notification, through  
2635 chapter 16 of Title 10, U.S. Code.

2636 3-66. USAFMCOM and the financial management support center continuously work in close coordination  
2637 with sustainment elements below corps to ensure the readiness of financial management units at the tactical  
2638 level. Readiness support is provided through combined training opportunities and external evaluations.  
2639 Financial management units provide pay agent training and payment support through cash, eCommerce, and  
2640 ACSAs during shaping exercises. Individual and collective training opportunities may be available during  
2641 theater security cooperation and exercise events. For more information, see FM 4-80.

## 2642 **PERSONNEL SERVICES**

2643 3-67. Personnel services complement logistics by planning for and coordinating efforts which provide and  
2644 sustain personnel. Personnel services contribute to personnel welfare (readiness and quality of life).  
2645 Personnel services facilitate the Army's ability to prolong endurance. Personnel services include HR support,  
2646 legal support, religious support, and band support.

## 2647 **Human Resources Support**

2648 3-68. Successful HR support is dependent on careful planning, coordination, synchronization, and  
2649 continuous integration with strategic partners during shaping activities and must occur prior to, during, and  
2650 after military action. The objective of HR support is to maximize operational effectiveness by anticipating,  
2651 manning, and sustaining military operations. HR support operations accomplish this by building, generating,  
2652 and sustaining the force to provide CCDRs with the forces required to set conditions to win future conflicts.

2653 3-69. During competition, HR support involves the national-level capability to plan, resource, manage, and  
2654 control the HR management life cycle functions for the Army. It involves integrating HR functions and  
2655 activities across the Army staff, among the respective components, and among the Services.

3-70. HR support during competition includes functions and tasks planned, coordinated, integrated, and executed by operational-level HR organizations and HROBs located within ESCs, DSBs, and sustainment brigades. These functions and tasks include casualty and postal operations, personnel accountability, and HR planning and operations. Deliberate coordination and synchronization of these functions with strategic-level partners like the Casualty and Mortuary Affairs Operations Division for casualty operations, Military Postal Services Agency for postal, and HRC for replacement operations are necessary in order to prolong endurance during large-scale combat operations. These habitual support relationships facilitate the CCDR's ability to extend operational reach.

3-71. During competition, the ASCC G-1 coordinates with corps/division to establish theater replacement management networks, personnel flow, and postal flow estimates. The ASCC G-1 refines and validates the casualty estimate and establishes and manages the personnel portion of reconstitution or reorganization efforts. To ensure initial HR capabilities are established prior to the arrival of the main flow of forces, HR support elements are included as part of the early entry element of the sustainment brigade assigned to the theater opening mission. The TG PAT establishes initial theater personnel accountability and theater replacement networks. Its mission is to conduct personnel accountability in the RSOI process, load and unload personnel data from the deployed theater accountability system, and conduct limited essential personnel services for transient personnel.

3-72. Additional TG PATs and military mail terminal teams, with corresponding HR companies and platoons, could be required if more than one inter-theater port of debarkation (POD) is used for RSOI and/or mail flows. However, with multiple entry points, it may be necessary for initial personnel accountability to be completed by TG PATs or the deploying units themselves. In this case, the arriving personnel data file would be passed to the TG PAT at the primary POD.

3-73. The TG PAT mission does not include conducting any other sustainment-related requirements for life support and RSOI (billeting, feeding, equipping, and transportation of transient personnel). These activities are conducted by the DSB, sustainment brigade, DSSB, CSSB or MCT. For more details, see FM 1-0 and ATP 1-0.2. Planning requirements include the number and placement of HR elements and units within a theater of operations. HR support responsibilities for early entry elements include—

- Initiating and establishing theater personnel accountability and personnel tracking.
- Establishing and operating the theater casualty information center and conducting casualty operations.
- Establishing, operating, and maintaining a theater personnel database.
- Coordinating and synchronizing the establishment of a military mail terminal to support postal operations for the theater.
- Estimating intra-theater mail movement (usually by ground) between the military mail terminals and Army post offices.
- Establishing the replacement operations plan.

3-74. The HROB is part of the early entry element of the sustainment brigade SPO, focusing on ensuring TG PAT personnel are included as part of the early entry element for theater opening and the establishment of TG PAT support and initial postal support. Early establishment of postal infrastructure during theater opening or early entry operations limits the requirements for postal restrictions and allows the flow of mail to commence earlier. The HROB receives technical guidance from the TPOC and higher-level HROBs while receiving sustainment and execution guidance from the SPO section and the commander.

## **Legal Support and Religious Support**

3-75. Legal support assists commands during competition by providing sound legal advice. Judge advocate legal services can provide advice on administrative and civil law, contract and fiscal law, military justice, national security law, Solider and Family legal services, and train defense. Religious support assists the commander in providing for the free exercise of religion and provides religious, moral, and ethical advisement and leadership. Religious support also advises the commander and staff on religion, ethics, morals, and morale, and their impact on all aspects of military operations. For additional information see FM 3-84 and FM 1-05.

## Band Support

3-76. Army bands support competition by promoting regional stability. Through cultural exchange, bands are uniquely capable of influencing human behavior and perceptions without ever speaking a word. Army bands support CCDRs by promoting U.S. national interests and building partnerships. Army bands can exert a low-threat, influential effect when performing in support of the commander's outreach plan or public and cultural diplomatic initiatives. See ADP 4-0 and ATP 1-19 for more details.

## HEALTH SERVICE SUPPORT

3-77. HSS capabilities are critical enablers during competition. Army medical personnel provide AHS support to sustain forces deployed during competition. The HSS mission includes medical treatment (organic and area support), hospitalization, medical evacuation (including medical regulating), and medical logistics (including blood management). The ASCC commander has the authority to designate command and support relationships to deployed commands to integrate and synchronize capabilities (such as transportation, engineers, EOD, medical, and logistics) until later enabling commands arrive in theater. The TMC is responsible for integration, synchronization, coordination, planning, and execution of AHS support to the deployed force.

3-78. Essential AHS support tasks during competition and crisis include the provision of support to stability efforts (which include global health engagements), home station medical activities, and generation of medical capabilities. AHS support operations during competition and crisis are executed continually across the competition continuum with the intent of enhancing international legitimacy and gaining multinational cooperation to mitigate conditions that could lead to a crisis. Therefore, AHS support to stability operations are critical to mission success throughout the phases of conflict. Regional health threat assessments, regional medical infrastructure assessments, building partner medical capacity, establishment/maintenance of support agreements, and other AHS support activities to set the theater provide the foundation for planning, sustaining, and achieving effective medical support to the theater campaign plan.

3-79. AHS support activities identified for planning and coordination to set the theater are implemented and executed during competition. The TMC, MEDBDE (SPT), and their subordinate units provide AHS support to theater opening, RSOI of early entry forces, integration of joint and multinational medical capabilities for establishment and execution of the joint trauma system, and global health engagements and other stability operations in support of security cooperation and deterrence missions to build partner medical capacity, which promotes regional stability. Other key AHS activities during competition include the provision of AHS support for medical maintenance and execution of medical support agreements, home station medical readiness and training activities, force tailoring for generation of medical capabilities, providing Army operational medical support to other Services and unified action partners, as well as assessment and release of theater APS and other medical logistics support. Efforts are also made to identify capability gaps and determine fills.

3-80. The role of Army Medicine in support of the combatant command is to preserve fighting strength by providing medically ready forces and trained, ready, and rapidly deployable medical forces. Preserving fighting strength also focuses on maximizing the number of troops available for employment by preventing or mitigating health threats, maximizing return to duty rates, minimizing morbidity and mortality, and clearing the battlefield to enable freedom of movement. To accomplish these tasks, Army Medicine leverages the surgeon sections (staff channel) at each echelon and medical command and control channels to provide AHS support of U.S. national objectives, the CCDR's theater campaign plan, and the Unified Command Plan across the full range of military operations.

3-81. Medical staff channels (surgeon sections) conduct integration, coordination, synchronization, and planning of AHS support. The chain of medical commanders executes AHS support to established plans. Starting with the Surgeon General, the surgeon sections at echelon identify, assess, counter and/or mitigate health threats throughout the range of military operations. The surgeon sections advise commanders on the optimal placement and coordinate use of medical assets to support operations (for example, forward-positioned forces, APS, and assets in adjacent or supporting regions).

3-82. During competition, institutional medical organizations within Army Medicine (in coordination with the Defense Health Agency) conduct home station medical activities to maintain health readiness, support



contingencies, and project medical forces in support of the combatant command. At EAB, organizations without organic medical capabilities receive GS AHS support on an area basis, while organic medical elements at BDE and below provide DS to parent units.

## **SUPPORT TO ARMY SPECIAL OPERATIONS FORCES**

3-83. Though applicable across the range of military operations, ARSOF support planning and execution begins during competition below armed conflict. As discussed in Chapter 2, ARSOF sustainment structures (Ranger support companies, GSBs, and the 528th Sustainment Brigade [Special Operations] [Airborne]) are lean and unable to provide all sustainment functions required to support ARSOF missions. ARSOF sustainment structures are designed to perform the following tasks:

- Enable expeditionary ARSOF missions.
- Deploy early and rapidly.
- Fill immediate and critical logistics requirements within organic formations.
- Provide the capability to plug into theater logistics structures to achieve required endurance.
- Tie the ARSOF units to the operational theater support structure.

3-84. ARSOF rely on ASCC logistics structures to provide Service CUL to all Army forces in the operational area regardless of command structure. ARSOF routinely arrive in the operational area early, execute forcible-entry operations, and operate independently in small teams. Because of these factors, ASCC sustainment support to ARSOF is tailored to meet requirements based on the OE.

3-85. For example, a special forces group-led combined joint special operations task force with its organic GSB cannot simply plug into the distribution network of a single DSB or sustainment brigade and execute tactical distribution to each of the special forces battalions, companies, and Operational Detachments Alpha. This is due to the GSB's lack of organic capability and the fact that special forces groups do not deploy as a single entity. The GSB often supports a special forces group conducting activities across multiple locations. For this reason, CUL is required.

3-86. In addition to CUL, ARSOF have requirements for SOF-peculiar equipment that requires supply, sustainment, and maintenance mechanisms outside of the Army common support structure. SOF-peculiar sustainment requirements are the responsibility of USASOC and U.S. Special Operations Command.

## **SOF SUPPORT IN UNDEVELOPED THEATERS**

3-87. When a SOF unit deploys into an undeveloped theater during competition, it must bring sufficient resources to survive and operate until it establishes a bare-base support system or makes coordination for TSC or ESC, host-nation, or third-country support. All SOF units require services pertaining to food, water, and clothing, as well as medical and personnel needs. Operational project stocks and foreign-nation support agreements will be utilized as available. A bare-base support system may function from CONUS, afloat (amphibious shipping or mobile sea bases), or at a third-country support base. The bare-base support system relies heavily on strategic and tactical airlift or sealift for resupply.

3-88. Deployed SOF units in an undeveloped AO may have to bypass normal logistics support echelons. These units may maintain direct contact with their parent units or may request a tailored support package from the 528th Sustainment Brigade (Special Operations) (Airborne) to accompany them into the theater of operations. The brigade can then request directly from the wholesale logistics system and provide support and sustainment to the ARSOF units. The brigade may also rely on theater OCS to obtain local support. The 528th Sustainment Brigade (Special Operations) (Airborne) is capable of deploying a tailored brigade headquarters for command and control of operational-level logistics in support of ARSOF missions until relieved by ASCC logistics command and control capabilities. The brigade is capable of providing command and control of Army CSSBs operating in support of ARSOF for up to six months. In practice, the solution may be some combination of all options.

2802 **SOF SUPPORT IN DEVELOPED THEATERS**

2803 3-89. In a developed AOR, the ASCC establishes a sustainment structure that provides support to ARSOF.  
2804 Pre-positioned war reserve materiel stocks, operational project stocks, and foreign-nation support agreements  
2805 may provide support. The logistics force structure of ARSOF has the mechanisms to plug in to all joint and  
2806 Army sustainment structures required for replenishment operations. Basic life support funding for SOF forces  
2807 must be coordinated through financial managers.

2808 3-90. ARSOF elements will require tailored organic ARSOF sustainment capabilities often augmented by  
2809 theater ASCC or the designated combatant command lead for CUL support. Special operations-peculiar  
2810 support and services will be provided by United States Special Operations Command IAW Title 10, Section  
2811 167. The nature of the SOF campaign and mission may also require leveraging host-nation, interagency, or  
2812 nonstandard logistics capabilities. See ATP 3-05.40 for more information on ARSOF sustainment and FM  
2813 6-05 for more information on conventional forces and SOF integration, interoperability, and interdependence.

## The 528th Special Operations Support Battalion in OPERATION DESERT SHIELD/DESERT STORM

Two days after President George H.W. Bush ordered the deployment of American forces to deter Iraqi aggression on August 7, 1990, the 528th Special Operations Support Battalion received its deployment order from its higher headquarters. Previously, per the operations plan, U.S. Special Operations Command – Central (SOCCENT) maintained operational control of all Army Special Operations Forces in theater, yet it did not control its logistical support elements. That support was supposed to come from U.S. Army Central Command (ARCENT). SOCCENT recognized that this support was insufficient for deployed ARSOF units. Based upon its proven record in OPERATION JUST CAUSE in Panama, the 528th Special Operations Support Battalion was chosen to fill this gap. By the second week of September, most of the unit had arrived in Saudi Arabia, minus a small stay-behind contingent. Despite its experience in other theaters, this battalion-wide deployment to CENTCOM would be an exercise in improvisation.

The 528th Special Operations Support Battalion's four companies [Alpha (supply), Bravo (maintenance), Charlie (transportation), and an HHC] began their mission at King Fahd International Airport (KFIA). SOCCENT directed the unit to provide direct support to the combination of units assigned to the Army Special Operations Task Force, the Naval Special Warfare Task Group, and elements from two Psychological Operations battalions. Shortly after their arrival, a Forward Area Support Team was sent to King Khalid Military City (KKMC), 350 miles to the northwest of KFIA, to support 2nd and 3rd battalions of the 5th Special Forces Group and the 3rd battalion of the 160th Special Operations Aviation Regiment.

During OPERATION DESERT SHIELD/DESERT STORM, the 528th Special Operations Support Battalion provided a wide array of support functions, both planned and unplanned. Alpha Company provided support across all the classes of supply to units at KFIA and KKMC, and wherever ARSOF units were located throughout the desert. Bravo Company kept busy repairing overheated engines and blown out tires, especially due to the vast distances traveled and the heat and sand encountered. Charlie Company moved all these supplies vast distances, from the King Abdul Aziz Seaport, near Dammam, through KFIA and KKMC to numerous border outposts. The M923 5-ton cargo truck was a workhorse for the unit as it logged over a quarter million miles during the deployment.

The 528th Special Operations Support Battalion showed flexibility by assuming responsibilities for unanticipated missions. USASOC tasked the battalion with a water purification mission and issued it 4x600 gallon-per-hour reverse osmosis water purification units, which were set up at an oasis between KFIA and Dammam. Approximately 3,000 gallons of potable water was produced each day and then transported to SOF units in 500-gallon blivets, sling-loaded under CH-47 Chinook helicopters. Additionally, it operated a forward arming and refueling point for the XVIII and VII Corps as it redeployed units to the west for the launch of OPERATION DESERT STORM and provided as much as 40,000 gallons of aviation fuel for over 400 helicopters. When coalition units moved to occupy Kuwait City International Airport, the 528th sent a Forward Area Support Team to Kuwait City International Airport to provide support to special operations force units, including the establishment of a forward arming and refueling point using East German and Heavy Expanded Mobility Tactical Trucks.

By the end of OPERATION DESERT STORM and redeployment to the U.S., the 528th Special Operations Support Battalion had a laundry list of accomplishments that included delivering 303.39 short tons of ammunition, transshipping 7,584 short tons of supplies on the ground and 2,070 via air, and delivering 500,000 Meals-Ready-to-Eat and 600,000 bottles of water. The unit received the Valorous Unit Award with streamers embroidered Iraq-Kuwait 1991. In 2008, the lineage of the 528th Special Operations Support Battalion was passed to the newly activated 528th Sustainment Brigade (Special Operations) (Airborne).

## SECTION III – ROLES AND RESPONSIBILITIES BY ECHELON

3-91. Sustainment operations during competition differ from sustainment operations during crisis or armed conflict. For example, sustainment tasks to support military engagement and security cooperation are less resource intensive than tasks conducted for large-scale combat operations. Regardless of the activities, the roles of Army organizations do not change. A *role* is the broad and enduring purpose for which the organization or branch is established (ADP 1-01).

## THEATER ARMY

3-92. The theater Army's role is ASCC to a combatant command. The theater Army integrates land power within theater engagement plans and security cooperation activities. Integrating land power requires the theater Army to train and prepare Army forces for operations and to coordinate training and readiness requirements with Service force providers. Integrating land power also includes establishing and extending the network, sustainment infrastructure, and leveraging the intelligence enterprise assets and protection capabilities that support operations throughout an AOR. The theater Army staff works closely with the TSC to develop plans to execute sustainment during operations. Together, these staffs apply all the considerations discussed above to develop the plan, and the TSC executes the plan. Key activities during the planning process are—

- Plan and coordinate sustainment for security cooperation activities such as bilateral and multinational exercises to improve multinational interoperability and operations.
- Plan and coordinate sustainment for missions to train, advise, and equip foreign forces.
- Provide recommendations to Army representatives negotiating basing and transit rights, establishing relationships, and formalizing support agreements.
- Participate in OPLAN and concept plan development to include the logistics supportability analysis and provide logistics estimates to interagency partners.

3-93. During competition, the theater Army supports the combatant command in conducting missions, tasks, and actions that shape the environment to assure friends, deter adversaries, and establish conditions for future contingencies. To accomplish this, the theater Army, as the ASCC, executes CCDR daily operational requirements while training and preparing for future contingency operations.

3-94. Executing operational requirements prepares the ASCC to rapidly transition to conflict should the CCDR identify an increased threat and an operational requirement in an AOR. Well in advance of any conflict, the theater Army ensures the ARFOR/JFLCC's targeting desires are represented during the development of the modernized integrated database and the resulting joint target list, restricted target list, and no-strike list.

3-95. Should the CCDR identify a potential crisis, the theater Army examines a range of basing and deployment options. When the CCDR decides on specific deterrent options, the theater Army begins the process of recommending, requesting, and tailoring landpower. This is done while refining plans for the full employment of landpower should deterrence fail to resolve the crisis.

3-96. As soon as feasible, Army forces attached to the theater deploy and the theater Army receives, stages, and integrates additional Army forces into an AO. To accomplish this, the theater Army develops additional basing requirements. As Army forces deploy into a JOA, the theater Army expands its footprint to sustain and protect Army, joint, and multinational forces as directed by the CCDR. Functions executed by the theater Army include, but are not limited to—

- Execute CCDR's daily operational requirements.
  - Provide ASOS.
  - Conduct theater security cooperation.
  - Assess and develop infrastructure.
  - Develop concept and operation plans.
- Set and maintain the theater.
- Set and support operational areas.

- 2917                   ▪ Conduct RSOI.
- 2918                   ▪ Provide sustainment support in an operational area.

## 2919 THEATER SUSTAINMENT COMMAND

2920 3-97. The TSC concentrates on strategic and operational-level sustainment support and management. When  
 2921 directed, the TSC provides lead service sustainment and executive agency support for designated logistics  
 2922 and services to other government agencies, multinational forces, and nongovernmental organizations. The  
 2923 TSC has four operational responsibilities to forces in theater:

- 2924                   • *Theater opening* – The ability to establish and operate ports of debarkation (air, sea, and rail), to  
 2925 establish a distribution system and sustainment bases, and to facilitate throughput for reception,  
 2926 staging, and onward movement of forces within a theater of operations (ADP 4-0).
- 2927                   • *Theater distribution* – The flow of personnel, equipment, and materiel within theater to meet the  
 2928 geographic combatant commander’s mission (JP 4-09).
- 2929                   • *Sustainment* – The provision of logistics, financial management, personnel services, and health  
 2930 service support necessary to maintain operations until successful mission completion (ADP 4-0).
- 2931                   • *Theater closing* – The process of redeploying Army forces and equipment from a theater, the  
 2932 drawdown and removal or disposition of Army non-unit equipment and materiel, and the transition  
 2933 of materiel and facilities back to host nation or civil authorities (ADP 4-0).

2934 3-98. The TSC simultaneously plans and synchronizes sustainment operations for theater security  
 2935 cooperation activities, which include security assistance, joint and multinational exercises, security force  
 2936 assistance, civil-military operations, and large-scale combat operations.

2937 3-99. The quartermaster petroleum group, normally attached to the TSC, operates within the AOR for  
 2938 distribution of petroleum in the theater. Embedded within the theater Army are staff elements which provide  
 2939 oversight of petroleum and water supply, storage, reporting, and health safety within the AOR. The G-3 is  
 2940 responsible for developing the theater Army concept of operations, which will drive fuel requirements. The  
 2941 G-4 staff is the primary staff concerned with petroleum and water requirements determination. Theater-level  
 2942 petroleum and water situational awareness occurs between the theater Army and the theater-level logistics  
 2943 headquarters.

2944 3-100. The Theater Petroleum Center (TPC) or petroleum liaison detachments may be assigned or attached  
 2945 to the theater Army G-4 to support planning and operations at the theater level. The TPC serves as the senior  
 2946 Army petroleum advisor to the combatant commands. The TPC provides strategic through operational  
 2947 planning support to combatant commands, the theater Army, corps, and TSC. The TPC conducts liaison  
 2948 support with DLA Energy, the Army Petroleum Center, the JPO, SAPO, and other partners as needed. The  
 2949 TPC is allocated one per theater Army supporting a CCDR, or in the TSC when their capabilities to plan and  
 2950 execute petroleum operations are exceeded. For additional information, see ATP 4-43.

2951 3-101. Planners use the understanding of an OE and situational understanding developed during the  
 2952 execution of shaping activities to develop and refine OPLANs as conditions change in various operational  
 2953 areas. For example, a TSC review of an OPLAN could reveal that a planned port or designated supply route  
 2954 is inadequate for large-scale combat operations. The TSC forwards a recommended alternative to the ASCC  
 2955 headquarters.

2956 3-102. The ASCC G-1 is the senior Army HR representative/advisor in the theater. Its primary function is  
 2957 to plan and prioritize HR support to assure a unity of purpose and effort that maximizes the readiness and  
 2958 operational capabilities of forces within the theater. The TSC ensures HR organizations (HR support  
 2959 company, MMT, TG PAT, HR company) execute their HR missions IAW the policies, priorities, and  
 2960 timelines established by the ASCC G-1/AG. Refer to FM 1-0 for specific roles and responsibilities.

2961 3-103. Funding at the operational or theater level is engaged in resourcing requirements; identifying,  
 2962 acquiring, and distributing funds; and tracking, analyzing, and reporting execution in support of stated  
 2963 objectives to senior Army leaders and Army budget office. The theater G-8 is the senior financial resource  
 2964 manager in theater and is responsible for providing theater-specific guidance, policy, and instructions for  
 2965 theater funding. Theater funding guidance is published in the form of an appendix to the theater OPORD or

2966 fragmentary order to the original OPORD. The appendix provides detailed instructions the theater staff and  
2967 subordinate units need to follow in order to meet requirements for funding.

## 2968 EXPEDITIONARY SUSTAINMENT COMMAND

2969 3-104. The ESC is the expeditionary command for joint logistics. Normally, the ESC is task-organized to  
2970 the TSC based upon the requirements of the operation. The ESC, when assigned as a subordinate element of  
2971 the TSC, supports the deployed force while the TSC maintains AOR-wide focus. The ESC concentrates on  
2972 synchronizing operational-level sustaining operations to meet the day-to-day and projected operational  
2973 requirements of the supported force. It accomplishes this, in part, by establishing mid-range and short-range  
2974 planning horizons derived from the supported commander's operation plan, commander's intent,  
2975 commander's critical information requirements, tempo, and distribution system capacity. The expeditionary  
2976 capability of ESCs becomes critical when multiple JTFs operate in an AOR. The ESC attached to a TSC has  
2977 two operational responsibilities to forces in theater:

- 2978 • Synchronize and integrate sustainment support for a JFC or JTF within a JOA.
- 2979 • Support reception, staging, and onward movement within a JOA.

## 2980 SET THE THEATER

2981 3-105. Setting the theater is continuous and is conducted as part of competition for contingency or crisis  
2982 response operations. Set the theater describes the broad range of activities conducted to establish the  
2983 conditions in an operational area for the execution of strategic plans. The CCDR has overall responsibility  
2984 for this activity but executes many responsibilities through the TSC of the ASCC. The purpose of setting a  
2985 theater is to establish favorable conditions for the rapid execution of military operations and the support  
2986 requirements for a specific OPLAN during crisis or conflict.

2987 3-106. Setting the theater involves all of the warfighting functions:

- 2988 • The focus of the command and control warfighting function is the organization and the command  
2989 and control of forces to accomplish missions. The ASCC tailors and controls Army forces in the  
2990 AOR. The TSC provides command and control of assigned and attached sustainment forces in the  
2991 AOR.
- 2992 • The movement and maneuver warfighting function focuses on mobilization, deployment,  
2993 employment, and redeployment of forces. The ASCC conducts theater opening and is responsible  
2994 for RSOI of Army forces. The TSC provides TACON for movement of Army forces into theater,  
2995 conducts RSOI, and provides command and control for theater distribution.
- 2996 • The intelligence warfighting function focuses on planning, collecting, producing, and  
2997 disseminating intelligence. The ASCC provides Army intelligence capabilities to support CCMD  
2998 operations. Part of that intelligence support is setting the theater from an intelligence perspective  
2999 that is bigger than supporting sustainment operations (see FM 2-0). Supporting theater sustainment  
3000 intelligence requirements is a significant and complex mission. The TSC G-2 directs, plans,  
3001 collects, and disseminates intelligence to subordinate units to meet theater sustainment intelligence  
3002 requirements. However, the TSC G-2 also depends on the intelligence enterprise and the theater  
3003 intelligence architecture for access to critical intelligence.
- 3004 • The fires warfighting function plans and directs Army fires in coordination with joint fires.  
3005 Sustainment supports joint and Army fires.
- 3006 • Protection focuses on establishing force protection measures for Army forces. The ASCC is  
3007 responsible for Army forces protection in the AOR. Sustainment plans, coordinates, and executes  
3008 protection plans for sustainment forces.

3009 3-107. Setting the theater during competition (from a sustainment perspective) involves actions to provide  
3010 sustainment (logistics, financial management operations, personnel services, and HSS) to SOF, security force  
3011 assistance brigades (SFABs), military engagements, and security cooperation. It also involves conducting  
3012 sustainment preparation of the OE and other activities in support of daily Title 10 requirements, contingency  
3013 operations, and crisis response operations.

3014 3-108. The ASCC conducts theater sustainment analysis as part of setting the theater. This analysis begins  
3015 during competition and continues during crisis. This analysis identifies risk in terms of access, capabilities,

and capacities across the AOR. It consists of the actions taken by sustainment planners to optimize means (force structure, resources, and strategic lift) for supporting the command's plan. These actions include identifying and preparing intermediate staging bases and forward operating bases, selecting and improving LOCs, and forecasting and building operational stock assets forward and afloat. Sustainment preparation of the OE is part of setting the theater and identifies potential risks in terms of access, infrastructure capabilities, and capacities in theater so planners can develop alternatives and mitigating measures. Logistics planners use the sustainment preparation of the OE analysis to optimize the distribution system. The analysis products may include identifying forward operating bases, selecting LOCs, determining operational stock assets, and designing a distribution and automatic information technology infrastructure for the theater.

3-109. The theater campaign plan is the CCDR's vehicle for operationalizing the theater strategy. The theater campaign plan provides a framework within which the CCDR conducts security cooperation activities and military engagement with regional partners through cooperative security and development. A theater campaign plan's main function is to provide guidance to coordinate steady-state components of contingency planning by conducting security cooperation activities across the AOR.

3-110. The theater Army develops the force structure required to support the theater campaign plan. The theater Army requests Army forces and the resources required to support them. These resources include required sustainment capabilities. The theater Army, in conjunction with the sustainment command (TSC or ESC), provides support to forces participating in exercises to support the theater security cooperation plan, designs effective and efficient movement plans for land forces into and out of the theater of operations, and also requests forces to support ongoing Army responsibilities for sustainment.

3-111. Sustainment support to setting the theater involves theater opening and receiving initial forces, equipment, and supplies, assembling them into mission-tailored units, and transporting them to their final destination. LOGCAP ensures a rapid response to emerging crises. The Army should also utilize HNS to the maximum extent possible to give sustainment units time to close in theater. It places set the theater as a priority and provides for holistic operational planning across the Army's strategic roles. LOGCAP planners are placed at the ASCC, TSC, and corps with LOGCAP decision authority being at the ASCC.

3-112. Set the theater activities during competition may also include establishing a distribution network, identifying local procurement requirements, employing the TG PAT, and setting the conditions for medical operations. The broad range of setting the theater activities also includes the synchronization and integration of sustainment through the establishment of boards, bureaus, centers, cells, and working groups. For more information on setting the theater activities see JP 3-31, ADP 3-0, ADP 4-0, ATP 3-93, FM 1-0, FM 4-80, FM 3-0, FM 3-94, and ATP 4-10.

3-113. Establishing the distribution network is a complex joint effort. The CCDR typically establishes a JDDOC. It is an integral component of the CCDR's staff, normally under the staff supervision of the CCDR J-4. A JDDOC may be co-located with the DMC. Some initial tasks of the JDDOC include—

- Monitoring airlift and sealift flow.
- Providing movement control of arriving supplies, personnel, equipment, and units.
- Establishing theater-wide capabilities required to meet anticipated transportation and throughput capacities.

### **Financial Management Support To Set The Theater**

3-114. FM forces assist commanders with setting the theater by tailoring and projecting FM support to the force. Some initial tasks include—

- Identifying funding authority for deployment operations and funding in support of operations, to include special funding authorities throughout the strategic roles.
- Determining the requirement for multiple disbursing station symbol numbers and dispersion throughout theater.
- Securing initial funding for central funding and cash management operations (for example, establishing a limited depository account).
- Establishing financial management policies and procedures to address finance and resource management operations (for example, cash holding authority and fund certification thresholds).

- 3066 • Analyzing current banking infrastructure throughout the theater and determining the need to
- 3067 expand synchronization.
- 3068 • Identifying the mobility of the financial management distribution network between strategic and
- 3069 operational echelons for replenishment (strategic lift, surface transportation) in the absence of
- 3070 host-nation capabilities.

### 3071 **Army Health System Support To Set The Theater**

3072 3-115. The TMC is assigned to the ASCC and serves as the theater medical command responsible for  
 3073 synchronization and execution of AHS support operations within the AOR. The TMC commander  
 3074 coordinates with the ASCC surgeon to provide AHS support within the AOR. The TMC maintains a regional  
 3075 focus that encompasses the CCDR's entire AOR and is critical for the successful provision of AHS support  
 3076 to set the theater. The medical commander's ability to assess host-nation medical capability/capacity and the  
 3077 presence of health threats prevalent in the AOR facilitates the planning and execution of regional strategies  
 3078 for establishment of the theater joint trauma system and mitigation of identified threats. The TMC assists the  
 3079 CCDR in maximizing the use of scarce medical resources, shaping the security environment by building  
 3080 partner medical capacity and alleviating health conditions that impact U.S. military forces and multinational  
 3081 partners, and particular challenges faced by the host nation. Efforts must also be made to understand the roles  
 3082 and responsibilities of all agencies involved (to include the Department of State, World Health Organization,  
 3083 partner nations, and others) for integration and synchronization of all medical capabilities in the region. The  
 3084 TMC also provides AHS support to set the theater through synchronization, coordination, planning, and  
 3085 integration of strategic medical capabilities from the U.S. sustaining base. It also provides support through  
 3086 global health engagements, establishing and maintaining medical support agreements, deploying medical  
 3087 technical expertise for consultation services and other support, military medical training exercises, and other  
 3088 tasks, including but not limited to—

- 3089 • Executing AHS support to other Services.
- 3090 • Ensuring adherence to eligibility criteria for treatment in U.S. military medical treatment facilities
- 3091 (MTFs).
- 3092 • Recommending theater evacuation policy adjustments.
- 3093 • Providing theater food protection support.
- 3094 • Coordinating with USTRANSCOM for patient movement plans.
- 3095 • Ensuring integration and interoperability of theater medical capabilities.
- 3096 • Providing AHS support to foreign humanitarian assistance and disaster relief.
- 3097 • Conducting medical preparation of the OE.
- 3098 • Maximizing use of host-nation medical capabilities.
- 3099 • Establishing and executing occupational and environmental health surveillance programs and
- 3100 countermeasures.
- 3101 • Coordinating with the National Center for Medical Intelligence, Centers for Disease Control and
- 3102 Prevention, and other strategic partners for identification and mitigation of regional health threats.
- 3103 • Coordinating and planning for AHS support to—
- 3104   ▪ Noncombatant evacuation operations.
- 3105   ▪ Detainee operations.
- 3106   ▪ RSOI and theater opening.
- 3107   ▪ Large-scale casualty producing events.
- 3108 • Other Services.

### 3109 **FIELD ARMY**

3110 3-116. When constituted, field armies assist the theater Army commander and JFCs with posturing the joint  
 3111 and multinational force for armed conflict. They do so by relieving the theater Army from day-to-day  
 3112 command and control of Army forces operating in an AOR and by executing competition tasks within the  
 3113 overall framework established by the combatant command and the theater Army. They provide JFCs with a  
 3114 land component command capability for the transition to large-scale ground combat. This enables the theater



Army to focus on theater-level matters and allows it to synchronize competition and preparation for combat activities across the entire AOR.

3-117. During competition, the field army can deter threats and prepare to transition to large-scale combat operations when the risk for immediate, multi-corps, large-scale combat is high. With joint force augmentation, the field army may also serve as the JFLCC during competition.

3-118. The field army, when employed, focuses on deterrence and setting conditions for contingency operations should the adversary attack or the decision be made to initiate armed conflict. While the theater Army continues to shape the entire theater and address aggression outside this designated AO, the field army maintains the necessary formations and capabilities to provide credible deterrence and ensure the ability to quickly respond to escalation within the AO. The field army can conduct a land-based campaign of completion against the adversary on behalf of the CCDR and, due to its presence, is postured to transition to a joint task force headquarters should conflict arise. The field army is also tailored in its capability and capacity as determined by the nature and capabilities of the near-peer adversary. As the near-peer adversary's capabilities change, so do those of the field army. Key activities during the planning process are—

- Prepare for potential armed conflict by conducting detailed analysis of critical adversary systems in conjunction with partners.
- Conduct an aggressive campaign of competition to counter and contain the near-peer threat as an integral part of the theater campaign.
- Maintain the necessary formations and other capabilities to provide credible deterrence.
- Utilize dispersion, hardened facilities, deception, and multidomain obscurity to create protected positions of advantage.

3-119. The ESC attached to the field army simultaneously plans and synchronizes operations for the field army security cooperation activities, including joint and multinational exercises, flexible deterrence operations, and operations during armed conflict in multiple operational areas. The ESC attached to a field army has two operational responsibilities to forces in theater:

- Synchronize and integrate sustainment support for the field army.
- Support reception, staging, and onward movement within the field army area of operations.

## CORPS

3-120. Army units at the corps and lower echelons execute shaping tasks and provide the forces for security cooperation. Army forces may support foreign internal defense or security force assistance by participating in multinational exercises, medical and other civil-military operations, development assistance, and training exchanges. Army forces at corps echelons and below directly engage with partner forces, governmental and nongovernmental organizations, and civilian populations to accomplish their mission, build rapport, and improve conditions to promote stability.

3-121. When uncommitted to specific CCDR requirements, the corps serves as a tactical echelon that focuses on preparation to prevail in large-scale combat. When committed to a theater of operations, the theater Army or field army command and controls corps unless the corps is subject to the operational control of a JFC subordinate to the CCDR. In such cases, the theater Army maintains an ADCON relationship with the corps due to its theater-wide ARFOR responsibilities.

3-122. During competition, a corps shapes its assigned AO depending on the role that it is fulfilling. As an ARFOR, a corps assists higher echelons in their efforts to set, support, and shape operational areas. Corps do so by executing operational-level tasks, collecting information, providing bottom-up refinement to planning, and participating in activities to posture the joint and multinational force to prevail in the event that armed conflict occurs.

3-123. The ESC assigned to the corps participates in multinational exercises and supports readiness of corps units at home station. It may be tasked to support specific shaping operations if the scope of the operation and the command and control and distribution/materiel management requirements warrant a sustainment command presence. This may become important in multinational exercises or large-scale humanitarian assistance operations.

## **DIVISION**

3-124. Division headquarters are often tasked to be the primary interface for the Army with various unified action partners during competition. When regionally aligned, a division with a tailored package of its subordinate brigades and other enablers from both Active and Reserve Components is allocated to a CCDR to help execute that CCDR's theater campaign plan.

3-125. Divisions provide trained and ready forces and echelons of command and control in support of exercise or training events with the intent to shape the security environment, improve mutual understanding, and improve interoperability with treaty partners or potential coalition partners. Due to the limited scale and short duration of violence, a division usually serves as a tactical headquarters, joint force or multinational force land component command, and, if required, as a JTF headquarters or ARFOR. While most U.S. military engagement and security cooperation typically takes place in the echelons below brigade, there are multiple exercises where a division is used to assist in command and control or sustainment activities. These exercises support military engagement and security cooperation efforts in critical theaters.

3-126. During competition activities, the DSB synchronizes and integrates sustainment operations for the division which include security cooperation activities and exercises. The DSB assigned to the division participates in multinational exercises and supports readiness of division units at home station. DSBs may be aligned to a specific country for partnership. If so, DSBs are task organized based on the sustainment command's deliberate analysis of requirements to support the CCDR's mission. Regionally assigned and aligned sustainment forces train and work together with partner nations in an effort to better understand each other's capabilities and operating procedures. These relationships are critical to establishing agreements and contacts that will mutually benefit both countries.

## **CONSOLIDATION OF GAINS DURING COMPETITION**

3-127. Army forces continuously consolidate gains to maintain an OE that is advantageous to U.S. strategic interests. Examples of consolidating gains during competition range from transportation system improvements (including port, airfield, and rail lines of communications), increasing theater supply stocks, intelligence cooperation, and providing Army medical personnel to support a combatant command's humanitarian and civic assistance activities. Army forces contributing to foreign humanitarian assistance and disaster relief efforts with allies and partners help cement existing international relationships or set conditions for new ones in other places.

3-128. Army sustainment forces play a key role in consolidating gains during competition. Sustainment forces often times are key contributors to the examples listed in the preceding paragraph. Sustainment forces that maintain presence or support relationships reinforce confidence between allies and partner nations. Providing security, food, water, shelter, and medical treatment to the population are stability tasks that enable consolidation of gains and help ambassadors, country teams, and JFCs maintain influence and cooperation with allies and partners as they pursue mutually beneficial objectives.

## **TRANSITION TO CRISIS AND ARMED CONFLICT**

3-129. A transition from competition to crisis and armed conflict can occur rapidly with little notice or forewarning. Transitions are complex and unpredictable and responses to a transition may lead to differing perceptions of what has taken place. Decisions made before and during the initial stages of a crisis or armed conflict have significant impact on the decisions made by adversaries and the ultimate outcome of a particular situation. Sustainment forces and their leaders must be prepared to anticipate and respond to crisis and conflicts in the OE.

## Chapter 4

# Sustainment Operations During Crisis

This chapter provides an overview of Army operations during crisis. This chapter discusses sustainment planning considerations, considerations for forcible entry operations and describes roles and responsibilities of organizations for sustainment operations by echelon during crisis.

## SECTION I – OVERVIEW OF ARMY OPERATIONS DURING CRISIS

4-1. A *crisis* is an incident or situation involving a threat to the United States, its citizens, military forces, or vital interests that develops rapidly and creates a condition of such diplomatic, economic, or military importance that commitment of military forces and resources is contemplated to achieve national objectives (JP 3-0). A crisis may be the result of adversary actions or indicators of imminent action, or it may be the result of natural or human disasters. During a crisis, opponents are not yet using lethal force as the primary means for achieving their objectives, but the situation potentially requires a rapid response by forces prepared to fight to deter further aggression. When directed, the Army provides a JFC with capabilities to help deter further provocation and sufficient combat power to maintain or reestablish conventional deterrence.

4-2. Crisis response operations are characterized by actions to protect friendly forces and indicate the intent to execute subsequent phases of a planned operation. With the transition from shaping to deterrence, the theater Army shifts to refining contingency plans and preparing estimates for landpower based on CCDR guidance.

## ARMY SUPPORT TO THE JOINT FORCE DURING CRISIS

4-3. The military supports unified action partners during crisis by providing flexible deterrent and response options. A flexible deterrent option (FDO) 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.

4-4. A flexible response option (FRO) is a military capability specifically task organized for effective reaction to an enemy threat or attack and adaptable to the existing circumstances of a crisis. FDOs and FROs occur across the diplomatic, informational, military, and economic instruments of national power. They are most effective when integrated and implemented in a simultaneous manner.

4-5. FDOs are preplanned, deterrence-oriented actions carefully tailored to bring an issue to early resolution without armed conflict, and they can be initiated before or after unambiguous warning of threat action. Examples of Army contributions to joint flexible deterrent options (FDO) include—

- Command and control headquarters—establishment of a field army or deployment of a corps or division.
- Deploying a security force assistance brigade to establish liaison capability or conduct security force assistance.
- Building or expanding infrastructure and increasing sustainment capacity to facilitate reception, staging, onward movement, and integration.

4-6. FROs can be employed in response to aggression by adversaries, and they are intended to facilitate early decision making by developing a wide range of actions carefully tailored to produce desired effects. Army contribution examples to joint flexible response options (FRO) include—

- Airborne or air assault units positioned to conduct joint forcible entry.

- 3248 ● A brigade combat team drawing Army pre-positioned stocks.
- 3249 ● Port opening to receive the joint force.
- 3250 ● Multi-domain task force to respond to adversary antiaccess and area denial activities.
- 3251 ● Special operations forces to conduct foreign internal defense, direct action, or special
- 3252 reconnaissance.

## 3253 **FORCE PROJECTION**

3254 4-7. The demonstrated ability to project Army forces into an operational area is an essential element of  
 3255 conventional deterrence. Army forces depend upon joint lift capabilities for deployment. *Force projection* is  
 3256 the ability to project the military instrument of national power from the United States, or another theater in  
 3257 response to requirements for military operations (JP 3-0).

3258 4-8. Force projection is particularly important during crisis, as Army forces have an unknown amount of  
 3259 time to shape a developing situation. It can occur, however, in any context. Forces projected forward during  
 3260 competition to conduct exercises, bolster allies and partners, and conduct other activities are under  
 3261 observation. Adversaries assess the speed and efficiency of these routine deployments, which can have a  
 3262 deterrent effect. Given the fluid nature of a crisis, force projection may continue well after a crisis has  
 3263 transitioned to armed conflict. Force projection includes—

- 3264 ● Opening the theater.
- 3265 ● Deployment.
- 3266 ● Initial employment of forces.
- 3267 ● Sustainment.
- 3268 ● Redeployment.

## 3269 **OPENING THE THEATER**

3270 4-9. During the transition to crisis or armed conflict, Army forces open the theater to receive deploying  
 3271 forces. Army forces execute existing plans to establish and open air, sea, and rail terminals. Distribution  
 3272 systems and intermediate staging bases may be established where required. Higher echelon (including  
 3273 theater, corps, and division enablers) and rapidly deployable C2 elements begin to integrate with host-nation  
 3274 forces as quickly as possible to set the conditions for RSOI of follow-on tactical forces. This includes  
 3275 coordination with the forces of other supporting nations to assure effective distribution of services, facilities,  
 3276 and supplies to all deploying units across the alliance or coalition. During theater opening, designated arriving  
 3277 forces draw available APS. This provides the JFC with increased capacity and capability during the initial  
 3278 stages of a crisis or armed conflict. Army forces must be prepared for combat while conducting theater  
 3279 opening operations. The first deploying units require the capability to defend themselves while they provide  
 3280 reaction time and maneuver space for follow-on forces.

## 3281 **DEPLOYMENT**

3282 4-10. *Deployment* is the movement of forces into and out of an operational area (JP 3-35). How the JFC  
 3283 intends to employ forces is the foundation of the deployment structure and timing. For example, a JFC may  
 3284 deploy a combat-ready brigade combat team (BCT) or division early in a crisis to stabilize a situation or  
 3285 secure ports for follow-on forces, accepting risks to the movement efficiency of follow-on forces. Corps and  
 3286 division staffs examine all deployment possibilities and conduct parallel planning.

## 3287 **INITIAL EMPLOYMENT OF FORCES**

3288 4-11. The initial employment of Army forces during a crisis will most likely be as part of FDOs or FROs.  
 3289 This employment may represent the opening stages of a joint operation or a show of force demonstration.  
 3290 The objective of this early employment is to deter an adversary from further aggression, expand the theater  
 3291 to receive follow-on Army and joint forces, and form a credible defense with host-nation forces to prevent  
 3292 adversary gains.

## SUSTAINMENT

4-12. Sustainment is central to force projection, and sustainment preparation of an operational environment is the basis for sustainment planning. Corps, division, and brigade planners focus on identifying the resources available in an operational area for use by friendly forces and ensuring access to them. There is no fundamental difference in sustainment preparation of an operational environment during competition, crisis, or armed conflict, except that sustainment activities intensify as Army forces respond to crisis and prepare for armed conflict.

## REDEPLOYMENT

4-13. *Redeployment* is the transfer or rotation of forces and materiel to support another commander's operational requirements, or to return personnel, equipment, and materiel to the home and/or demobilization stations for reintegration and/or out-processing (JP 3-35).

## SECTION II – SUSTAINMENT FUNDAMENTALS DURING CRISIS

4-14. Sustainment of operations during crisis requires a force array tailored to the type of operation, geographic location, permissiveness of the environment, threat, and a host of other considerations determined during the planning phase of competition. Commanders must also consider possible sequels and branches during planning to ensure optimal command and support relationships are established and the right mix of forces are identified for potential follow-on operations. The phased arrival of Army sustainment forces will require planners to integrate non-Army solutions, including ACSAs and OCS, to enable the rapid deployment of combat forces.

4-15. The ASCC is responsible for all Army operations, to include receiving forces, sustaining forces, and preparing to redeploy forces. The ASCC also interacts with theater strategic and operational commands and organizations essential to the theater distribution network.

4-16. Establishing a host-nation coordination center is a means to enhance stability and interaction between nations. The lead element for the coordination center is security cooperation (G-9), with representation from the logistics and medical (G-4, Surgeon), financial management (G-8, FMSC), engineer, and G-3 sections, host-nation representatives, Department of State, and any other governmental agencies or non-governmental organizations as required. A multinational command, especially one that operates under a parallel command structure, establishes a coordination center during the shape role of an operation. It organizes and controls functional areas including logistics and civil-military operations. A coordination center is the initial focal point for support issues such as force sustainment, medical support, infrastructure engineering, HNS, and movement control. As a multinational force matures, the center's role includes activities such as force provision or force deployment. When a coordination center is activated, member nations provide action officers who are familiar with its activities. Multinational forces are encouraged to maintain contact with parent headquarters. For more information, see FM 3-16.

4-17. Assessment of sustainment preparation of the OE and sustainment analysis while conducting operations during crisis are key activities for sustainers. The outcomes of sustainment preparation of the OE are informed OPLANs and time-phased force and deployment data (TPFDD). The data also aids in identifying capabilities and capacities needed to successfully transition from crisis to operations in support of armed conflict or going back to a state of competition. It is during crisis operations that plans and estimates are refined, the theater distribution network is expanded, and actions are taken to deploy forces as required.

## REFINING PLANS AND DEVELOPING ESTIMATES

4-18. The CCMD, in coordination with the Service components and DLA, continues to refine its mission analysis and logistics estimates to identify joint logistics requirements and continue to set the theater. Actions may include:

- Changes in inventory positioning (for example, locations and quantities).
- Contract reviews for appropriate surge clauses and operational contingency zones.
- Market research to identify local procurement opportunities.

- Discussions with industrial base partners regarding production capacities.
- Identification of potential acquisition policy waivers that may be required.
- Close coordination with the Services on readiness rates and critical weapon systems.
- A readiness review of DLA deployable capabilities. DLA may provide additional liaison officers or deploy a DLA assessment team with forward deployed units to coordinate support.

4-19. The TSC, ESC, DSB, and sustainment brigade refinement of sustainment plans and estimates is a continuous process. Sustainment planners will continue to conduct detailed analysis and assessment to update support requirements and availability of resources based on the ever-changing OE. These estimates are provided to the CCMD and interagency partners for planning purposes. The availability of commercial support will play a particularly important role during the early stages of crisis operations and may change rapidly due to enemy activity or host-nation policy.

## LOGISTICS ESTIMATION

4-20. Sustainers employ tools such as the Operational Logistics Planner that produce class of supply consumption estimates for units at all levels. Operational Logistics Planner and the Quick Logistics Estimation Tool enable staffs at all echelons to estimate mission requirements for all Class I, II, III (bulk and packaged), IV, V, VI, VII, VIII, and IX as well as water, ice, and mail for their units. It also provides an analysis of the estimated transportation assets needed to get the supplies to the units. These tools use the latest Army-approved planning rates and force structures. Units can be customized to add or remove equipment and personnel. Additionally, sustainment planners use the Army Water Planning Guide (AWPG) for water support operations. For additional information, see Appendix E.

## CASUALTY ESTIMATION AND REPLACEMENT REQUIREMENTS

4-21. The Army G-1 is the functional proponent for overall casualty estimation (killed in action, captured, missing in action, wounded in action, and disease and non-battle injury) and must coordinate closely with the Army Surgeon General for Army evacuated rates in support of projected manning requirements. Replacement requirements consist of the killed in action and evacuated Soldiers not return-to-duty, detainee, and missing in action. Casualty estimation is conducted at ASCC level and above as part of the planning process for contingency operations and approved by the CCDR.

4-22. The Director of Military Personnel Management, Army G-1 has designated the Medical Planners' Toolkit as the casualty estimation tool of record for EAB Army HR planners. The Medical Planners' Toolkit integrates several tools, including the Casualty Rate Estimation Tool, which provides the capability for planners to calculate the combat and noncombat injuries and illnesses that would be expected during military operations. Casualty estimates can be generated for ground combat, ship attacks, fixed facilities, and natural disasters. The Casualty Rate Estimation Tool-generated patient streams are based on the casualty estimate and the user-selected Patient Condition Occurrence Frequency distribution.

4-23. Close coordination with the support operations officers in ESCs, DSBs, and sustainment brigades is required to ensure HR planners are properly synchronized with logistics and medical planners. Casualty estimates support operations planning, future force planning, and staff training. Casualty estimation and replacement requirements should be planned during course of action development to assess force strength for missions within the concept of operations and scheme of maneuver. This allows for establishing communications and electronic interface for personnel accountability and patient tracking early and enables timely and accurate information, especially during large-scale combat operations.

4-24. Mass casualties must be included in the planning process, as well as processing large-scale replacements. *Mass casualty* is defined as any number of human casualties produced across a period of time that exceeds available medical support capabilities (JP 4-02). The ASCC G-1 must continuously coordinate with the corps/divisions for proper personnel replacement flow in theater with allocated personnel replacement seats in the TPFDD. During large-scale combat operations, the Army's theater planners may anticipate a sustained percentage of casualties each day. The percentage of casualties per day will be based on the total number of deployed forces. These casualties will vary in severity of injury and represent killed in action, wounded in action, and disease and non-battle injuries. Army HR planners should anticipate having

3389 to replace approximately 25% of the total casualties (killed in action, captured, missing in action, wounded  
 3390 in action, and disease and non-battle injury). Army medical planners should anticipate having to support 75%  
 3391 of the total casualties that are wounded in action and disease and non-battle injuries.

3392 *Note:* Medical is responsible for wounded in action and disease and non-battle injuries.  
 3393 Sustainment is responsible for killed in action.

3394 4-25. The ASCC G-1/AG is responsible for developing personnel replacement requisitions as part of the  
 3395 deliberate planning process. HRC assists Army commands in developing personnel replacement force  
 3396 packages by using a reinforcement sourcing process. This process guides collectively trained Soldiers in  
 3397 crews, teams, or squads to combat in a manner that preserves their morale and fighting spirit, benefiting them  
 3398 and the units they join. See ADP 4-0, FM 1-0, and ATP 4-93 for more details.

## 3399 **ARMY HEALTH SYSTEM SUPPORT DURING CRISIS**

3400 4-26. Army operations during crisis are designed to prevent adversary opportunities to further exploit  
 3401 positions of relative advantage. AHS support, through synchronization and integration by the TMC, is a  
 3402 critical asset in the ASCC commander's mission to prevent/deter the escalation of future combat and  
 3403 positively impact the wellbeing of the HN population. Key AHS activities during crisis include the provision  
 3404 of medical support to flexible deterrence/response options and setting the theater for possible escalation.  
 3405 Medical planners continue support to the theater campaign plan and provide medical support to force  
 3406 projection activities.

3407 4-27. During the transition to crisis, the surgeon sections at each echelon conduct planning refinement,  
 3408 coordination, synchronization, and integration of AHS support to flexible deterrence/response options. These  
 3409 options range from mobilization, force tailoring, repositioning forward stationed medical assets, providing  
 3410 the medical plan for forces in-transit, and/or employing expeditionary medical assets. Surgeon sections at  
 3411 EAB derive or refine medical support requirements based on G-1 new or revised casualty estimations and  
 3412 modify medical plans for capability and capacity sufficiency.

3413 4-28. Surgeon sections at EAB assess, plan, and coordinate medical activities in support of setting the theater  
 3414 in anticipation of possible expansion of theater operations. This includes continued evaluation of health  
 3415 threats, leveraging regional medical agreements, and procuring support to expanded medical operations.  
 3416 Theater-level medical command organizations or agencies, such as Defense Health Agency, continue  
 3417 conducting home station activities to maintain health readiness, support contingencies, and reassess the  
 3418 sufficiency of AHS capability generation to support rotational, expeditionary, and escalation force structures  
 3419 for contingency operations. As required, theater-level medical commanders provide medical support to  
 3420 enable the RSOI of incoming medical units. The chain of command for forward-positioned, rotational, and  
 3421 expeditionary operational medical units executes AHS support in accordance with established plans.

## 3422 **MEDICAL PLANNING TOOLS**

3423 4-29. The Joint Medical Planning Tool, the Medical Planners' Toolkit, and the Medical Contingency  
 3424 Requirements Workflow are planning tools approved for calculation of medical requirements. The Joint  
 3425 Medical Planning Tool and Medical Planners' Toolkit are fully integrated for versatility and enhanced  
 3426 medical planning efficiency.

3427 4-30. The Joint Medical Planning Tool is a computer-based simulation tool developed by the Naval Health  
 3428 Research Center. It supports research, medical systems analysis, operational risk assessment, and field  
 3429 medical services planning. The Joint Medical Planning Tool is based on empirical data, including over 400  
 3430 patient conditions and their associated medical treatment tasks, times, consumable supplies, and the  
 3431 equipment necessary to accomplish patient care. It also includes algorithms that calculate died of wounds  
 3432 due to treatment delay and complications. The Joint Medical Planning Tool spans the spectrum of  
 3433 theater-based roles of care and emulates all Service MTFs and their respective functional areas, including the  
 3434 number and type of personnel and the type, speed, and capacity of transportation assets.

4-31. The Medical Planners' Toolkit provides planners an end-to-end solution for medical support planning across the range of military operations. The Medical Planners' Toolkit combines several tools, the Patient Conditions Occurrence Frequency tool, the Casualty Rate Estimation Tool, and the Expeditionary Medicine Requirements Estimator, into a single desktop application. This allows the user to manage the frequency distribution of probabilities of illness and injury and estimate of casualties in a wide variety of military scenarios. See JP 4-02, ATP 4-02.55, and ATP 4-02.7 for additional information.

4-32. The Medical Contingency Requirements Workflow is web-based and resides in the unclassified domain for users to perform Class VIII analysis, run scenarios for contingency supply forecasting, and provide a variety of theater strategic, operational, and tactical tailorable support through national stock number and assemblage research capability. Medical Contingency Requirements Workflow also generates materiel item estimates using clinical treatment protocols supporting military and civilian patient-generating scenarios.

## SECTION III – ROLES AND RESPONSIBILITIES BY ECHELON

### THEATER ARMY ROLES DURING CRISIS

4-33. The theater Army commands all Army forces in the AOR until the CCDR attaches selected Army forces to a subordinate JTF. Until another organization can assume the role, the theater Army initially divides its responsibilities between the Army component (the ARFOR) in the JOA or theater of operations and Army forces operating in other parts of the AOR. This may require force tailoring by the theater Army to develop the initial request for forces, followed by additional task organization as forces arrive in the AOR.

### THEATER SUSTAINMENT COMMAND

4-34. The TSC continues to support operations during crisis by conducting set the theater and security cooperation activities throughout the AOR. The TSC's priority of effort still focuses on sustaining deployed forces. If the TSC has an attached ESC, that ESC may focus on select operational activities such as operational area opening activities, Army support to other Services, and sustaining deployed forces in the AOR. This division of responsibilities enables the TSC to continue focusing on long-range planning to set the theater.

4-35. During crisis, the theater petroleum and water group (in coordination with the supported unit G-4 staff) continues to refine the petroleum concept of support and begin distribution of POL and water to forward storage facilities. The theater petroleum and water group staff reviews and refines fuel consumption estimates and requirements to ensure effective petroleum distribution is available to meet tactical requirements. Fuel consumption estimates must be accurate in order to develop realistic plans in support of tactical forces. During crisis operations, POL and water units increase security and quality surveillance measures to ensure availability and quality of bulk fuel and water to support operational requirements.

4-36. Risk, uncertainty, operational security, and chance are inherent in all military operations. Sustainment professionals must seek to understand, balance, and take calculated risks rather than avoid risks to ensure sustainment of the operational force. Sustainment commanders must assess and mitigate risk continuously throughout operations. These risk considerations and others should be addressed, and mitigation strategies/alternatives developed as part of the sustainment plan. The following is a list of risk considerations (not all inclusive) during crisis operations:

- Will the sustainment activities place the tactical plan at risk (for example, provide the enemy with sufficient information to know the plan)?
- Have risk reduction measures been implemented and operational security measures been established to mitigate risks to operations? Are there sufficient forces to support combat operations if crisis operations are not successful?
- Will sustainment activities precipitate transition to armed conflict?
- Are sustainment systems hardened against cyber-attack? How do you validate requirements received through electronic systems? Does the threat have the capability to change information verses directed denial of service attacks?



- 3483 • Is coordination with host nations sufficient to ensure smooth flow into and out of APODs and
- 3484 SPODs? Have limits of host-nation ports been considered (for example, net explosive weight
- 3485 limitations and hazmat requirements) and planned to be accommodated?
- 3486 • Are security measures in place to protect critical resources such as commercial line haul, storage
- 3487 sites, stocks, caches, and critical infrastructure?

## 3488 TAILOR ARMY FORCES

- 3489 4-37. Force tailoring combines two complementary requirements-selecting the right forces and deploying
- 3490 the forces in the optimal sequence. Much of the effort for selection and deployment order occurs prior to
- 3491 deploying forces to a theater.
- 3492 4-38. Throughout the process, sustainment commands work with the theater Army sustainment staff to track
- 3493 force composition and order of deployment to ensure support is available to sustain the force package. The
- 3494 right types and number of sustainment units should be integrated early into the force flow.
- 3495 4-39. Selecting the right force involves identifying, selecting, and sourcing required Army capabilities and
- 3496 establishing their initial task organization to accomplish the mission. The result is an Army force package
- 3497 matched to the needs of the CCDR. The theater Army works with force providers (for example, FORSCOM
- 3498 and USAMC) to match the composition of the force with the forces identified in theater security cooperation
- 3499 plans or contingency plans. In the deliberate sustainment planning process, it is critical the Center for Army
- 3500 Analysis analyzes contingency plans and provides battle damage attrition estimates to the theater Army,
- 3501 TSCs, and USAMC LCMCs to ensure that adequate depot maintenance and calibration and repair forward
- 3502 activities support is identified and integrated into the force flow for planning purposes.
- 3503 4-40. Force tailoring establishes the order of deployment for the force package, given the available lift and
- 3504 the CCDR's priorities. The organization established in force tailoring is not necessarily the same as the task
- 3505 organization for combat. It is a macro-level organization established to control the forces through deployment
- 3506 and RSOI.
- 3507 4-41. The Army National Guard and the Army Reserve makeup the Army Reserve Components. The Army
- 3508 National Guard represents Component 2, and the Army Reserve represents Component 3. Together, these
- 3509 two make up over half of the Army's total force.
- 3510 4-42. The Army Reserve Components are largely composed of sustainment and maneuver support forces.
- 3511 Almost 80 percent of the Army's sustainment force structure is in the Army Reserve Components. Army
- 3512 Reserve sustainment capabilities are essential for the operating force and provide the preponderance of
- 3513 sustainment, civil affairs, and psychological operations capabilities.
- 3514 4-43. The Army Reserve Components were not expected to deploy early into an operation. However, as the
- 3515 OE has changed and the balance of sustainment forces shifted from the Regular Army to the Army Reserves,
- 3516 Army Reserve Forces maintain higher levels of expeditionary readiness.

## 3517 RECEPTION, STAGING, ONWARD MOVEMENT, AND INTEGRATION RESPONSIBILITIES

- 3518 4-44. A critical portion of the deployment process often associated with crisis operations is RSOI. It is this
- 3519 process that delivers combat power to the JFC in an AOR. RSOI is also a process the Army has not been
- 3520 challenged with to the extent required for large-scale combat operations in recent history. The increased
- 3521 challenge will stem from the initial deployment of large forces and will continue with a heavy flow of
- 3522 replacements. Accurate casualty estimates are a critical part of RSOI planning. RSOI goals are to link units
- 3523 with their equipment while maintaining a balanced flow of supplies, personnel, equipment, and units
- 3524 consistent with strategic lift capabilities and CCDR priorities.
- 3525 4-45. Sustainment commands are assigned responsibilities for RSOI operations by the ASCC. The TSC will
- 3526 normally be assigned the responsibility of RSOI. Subordinate units of the TSC from an ESC, sustainment
- 3527 brigade, CSSB, down to a movement control team can be assigned specific tasks in support of RSOI. Specific
- 3528 tasks include feeding, billeting, limited supply, finance, personnel accountability, HSS, battlefield
- 3529 orientation, and transportation of replacements to their assigned units. Support for execution of RSOI is
- 3530 provided by some combination of theater support contracts, external support contracts (primarily LOGCAP),

regionally available commercial HNS, military assets, and Component 2 or 3 units deployed early. It requires sufficient capabilities and capacity to provide the support required by arriving units at PODs. For example, heavy vehicle operators and mechanics are required to move and repair vehicles being downloaded from ships for onward movement. The TSC and/or ESC directs the operation of the theater's PODs and the AOR distribution networks to minimize bottlenecks that may impede the flow of cargo and forces into and throughout the theater.

4-46. Effective RSOI consists of the processes that transform arriving personnel and equipment into forces capable of meeting operational requirements in accordance with established timelines. Army units are attached from the supporting commander (usually FORSCOM) to the ASCC. The ASCC subsequently passes TACON of the unit to the sustainment command managing RSOI activities. RSOI is an ongoing series of four interrelated and overlapping processes that ensure synchronized clearance of nodes and assembly of combat power that is then rapidly transported to point of need to support operational requirements. *Reception* is the process of unloading personnel and equipment from strategic modes of transport, marshaling the deploying units, transporting them to staging areas, and if required, providing life support (JP 3-35). *Staging* is the process of rapidly assembling and organizing arriving personnel and equipment into units and force packages that constitute combat power, and then preparing units and forces for onward movement (JP 3-35). Life support is provided during reception and staging until the unit becomes self-sustaining. Onward movement is the process of moving combat power and supplies from reception facilities and staging areas to tactical assembly areas or other locations as designated by the CCDR, moving arriving non-unit personnel and replacements to gaining commands, and moving arriving sustainment materiel from reception facilities to distribution sites. The sustainment command then transfers TACON of the units to the gaining JFC or joint functional command for integration.

4-47. The role of the DSB during RSOI operations is to go through RSOI and then provide support to its division going through RSOI. The sustainment command responsible for conducting RSOI must consider the DSB a tactical unit and not part of the RSOI support structure. The DSB must be able to complete the RSOI process and move forward to a tactical assembly area with its supported division.

4-48. Success of RSOI is measured by force closure. Force closure is the point in time when a supported JFC determines that sufficient personnel and equipment resources are in the assigned operational area to carry out assigned tasks. It is essential during RSOI operations that data relating to arriving unit personnel, unit equipment, contractors, and containers be captured at each point of entry into the theater (for example, APODs, SPODs, railheads, and border crossings) to facilitate personnel/asset accountability and force closure reporting. For more information on force projection, see JP 3-35, ATP 3-35, and FM 1-0.

4-49. The execution and support of RSOI requires a complement of various capabilities and units, which when synchronized and integrated, can efficiently and effectively receive and move forces (personnel and equipment) to key staging areas for assembly and onward movement while sustaining forces remaining behind. The optimal mixture of support and enablers tailored to receive forces will minimize the time it takes for units to maneuver through the RSO process. Three main nodes/functions (APOD, SPOD, and intermediate staging base [ISB]) are each slightly different in their makeup, yet connected to each other through the transportation of equipment, personnel, and materials. The amount of distribution assets on ground during the early phases of conflict directly correlate to a commander's ability to rapidly transition from crisis operations to large-scale combat operations. Planners should focus on the early deployment of sustainment assets during crisis. RSOI planners will need to assess the threat risk as well as mission priority when determining the arrival and integration of units and enablers executing and supporting RSOI. The most common enablers from Army sustainment formations required for RSOI are—

- Transportation assets. Cargo transfer companies for their material handling equipment and vessel offload capabilities, transportation truck companies, heavy equipment transportation companies for movement of tracked vehicles, and movement control teams for traffic circulation.
- Quartermaster assets. Quartermaster companies for feeding, material storage, and distribution, POL companies for fuel storage and distribution.
- Ordnance assets. Modular ammunition company to provide ammunition to units prior to their onward movement. Maintenance assets augmented by contracted support to maintain vehicle readiness throughout the process.

- Medical assets. Operational medical units to provide AHS support to units prior to their onward movement.
- HR and financial management. Typically located at theater gateways and various intra-theater ports of debarkation to assist with initiating and establishing theater personnel accountability and personnel tracking. Financial management elements provide support for transient personnel.

4-50. In addition to the sustainment capabilities mentioned above, there are other assets that play a vital role in RSOI. These assets provide additional infrastructure capabilities, security, protection, and command and control of the RSOI process. EOD personnel provide commanders the ability to quickly respond to explosive ordnance threat situations as they occur. Military police provide force protection for units conducting RSOI and convoy escorts for units moving from reception to staging areas. The U.S. Army Corps of Engineers can provide infrastructure improvements, establish the power grids, and determine power distribution for APODs, SPODs and ISBs. CBRN capabilities must also be part of the RSOI effort. CBRN reconnaissance elements will assess for any CBRN hazards, and decontamination elements support contamination mitigation. These assets must be requested and incorporated early in the flow of forces into theater to support RSOI at the APODs, SPODs, and ISBs.

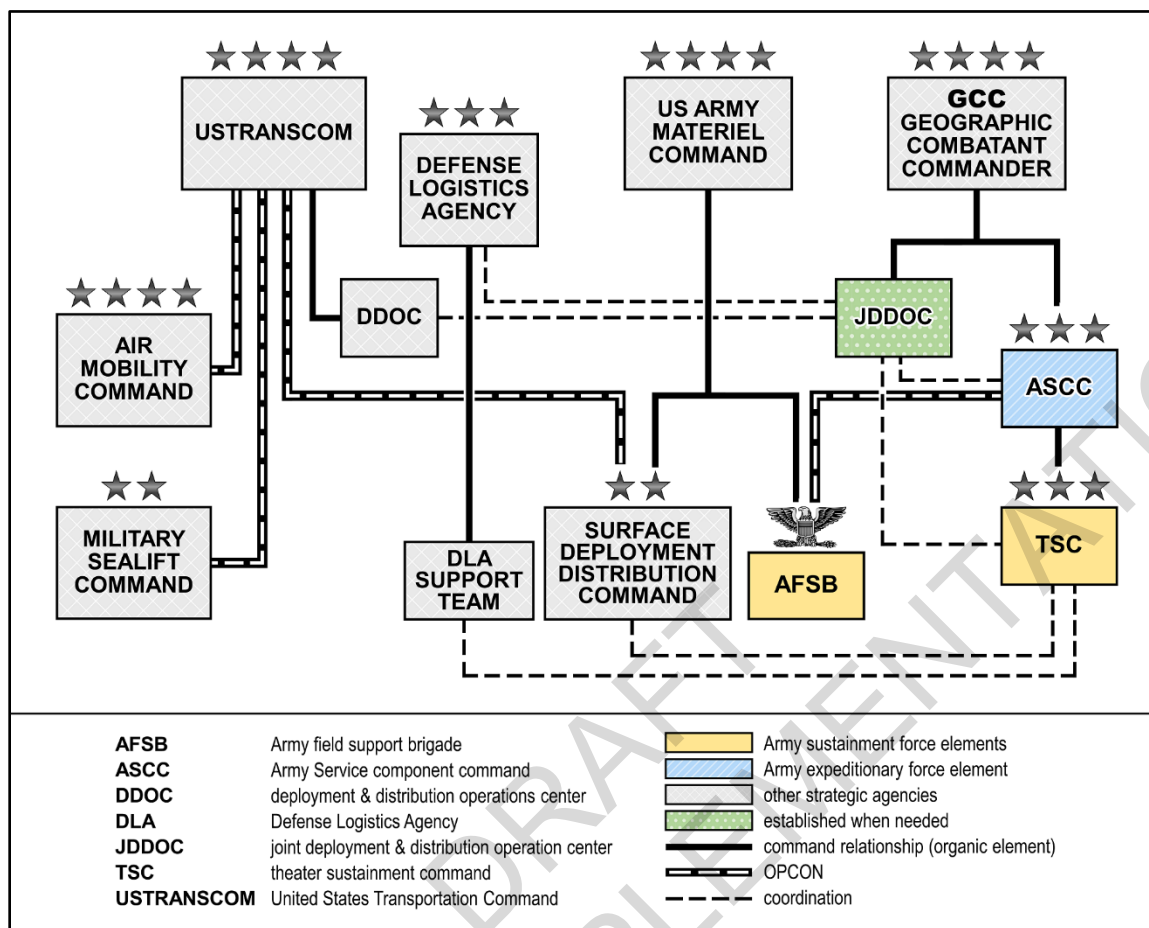
### INTERMEDIATE STAGING BASE

4-51. An ISB is temporary location used for staging forces, sustainment, and/or extraction into and out of an operational area. The ISB is the critical staging area with the focus of assembling all equipment, containers, and personnel as well as classes of supply to support onward movement for a limited contingency operation.

4-52. ISBs enable the forward staging forces to accomplish tasks and provide support from a location closer to the contingency operation. To best use ISBs for forcible entry operations, planners can pair those two tasks with these three purposes: build capacity, conduct intermodal transfer, and disaggregate and aggregate forces. Sustainment planners should develop contingency plans for the use of multiple ISBs or points of entry into the JOA, as economic and political situations can rapidly deteriorate and result in the unexpected closure of bases. For more detailed discussion of ISBs, see JP 3-34, JP 3-35, ATP 3-37.10, and ATP 3-35.

### DISTRIBUTION NETWORK

4-53. Sustainment commands establish the initial distribution network in the operational area and synchronize and integrate intra-theater deployment and distribution operations. These commands monitor all segments of the distribution network. The TSC manages the strategic-to-operational links of the global distribution network. This includes the segment of the distribution network that begins at the strategic source of support and extends to the point of need. Figure 4-1 on page 4-10 depicts key agencies involved in the distribution network. The ESC manages the operational-to-tactical links of the global distribution network. This includes the segment of the distribution network that begins at the POD or theater source and ends at the point of employment. Both the TSC and ESC have distribution management responsibilities executed through a DMC. The TSC or ESC will establish movement boards to manage transportation policies, priorities, LOC status, convoy protection and synchronization, and transportation asset allocation to support theater distribution operations. The sustainment commands also provide command and control of organizations that execute distribution and distribution management and control capabilities.



**Figure 4-1. Strategic providers to Army theater distribution**

## Corps Roles During Crisis

4-54. During crisis, the corps headquarters may deploy into an operational area as a tactical headquarters with subordinate divisions and brigades. Corps typically deploy an early entry command post, comprising selected personnel from within the headquarters, to provide C2 of arriving forces. Should crisis become armed conflict, large-scale combat operations may require the corps headquarters to function under the command of a multinational force land component or become subordinate to a field army equivalent established as part of a multinational coalition.

## LIMITED CONTINGENCY OPERATIONS

4-55. In a limited contingency, a corps normally fills the role of the JTF or the joint force land component command. Normally, the commander of the JTF or joint force land component command exercises command and control over all forces and other resources in a JOA or ground forces in a JOA. If the corps is functioning as the joint force land component command, then it is also capable of filling the ARFOR role, and it often does.

## EXPEDITIONARY SUSTAINMENT COMMAND

4-56. The ESC is assigned to the corps. The ESC synchronizes and integrates sustainment operations for the corps during Army operations during crisis. The ESC assigned to the corps has two operational responsibilities in limited contingency operations:

- 3639 • Synchronize and integrate sustainment support for the JOA.
- 3640 • Support reception, staging, and onward movement within the JOA.

## 3641 Division

3642 4-57. The division headquarters performs many of the same activities as the corps headquarters. The division  
 3643 headquarters fulfills its primary role as a tactical headquarters staffed, trained, and equipped to command two  
 3644 to five BCTs and other subordinate brigades and battalions. One or more of these brigades may be allied  
 3645 formations. Upon deployment into a theater, a division may undergo significant task organization in  
 3646 preparation for its assigned roles during operations. Initially, during crisis, a division conducts defensive,  
 3647 security, and stability tasks in support of joint operations. The primary role of a division during crisis is to  
 3648 demonstrate credible coercive force as a combined arms formation. Divisions should expect to conduct short  
 3649 notice training exercises with multinational partners and perform other activities that demonstrate capabilities  
 3650 as part of crisis response. In an immature theater, a division headquarters should be prepared to accommodate  
 3651 the command structure of the next higher echelon until that echelon's systems are in place.

3652 4-58. Some adversaries possess significant capability to employ antiaccess and area denial strategies across  
 3653 all domains. Countering those strategies is the responsibility of the JFC. The land component commander's  
 3654 challenge is conducting forcible entry operations and deploying significant combat power in an environment  
 3655 where the enemy has an initial advantage.

3656 4-59. *Forcible entry* is the seizing and holding of a military lodgment in the face of armed opposition or  
 3657 forcing access into a denied area to allow movement and maneuver to accomplish the mission. (JP 3-18)  
 3658 These operations are complicated and always joint. In the case of a no-notice and/or crisis response mission,  
 3659 only hours separate the alert from the deployment.

3660 4-60. The phases of a forcible entry operation are (1) preparation and deployment, (2) assault, (3)  
 3661 stabilization of the lodgment, (4) introduction of follow-on forces, and (5) termination or transition  
 3662 operations. Once an assault force seizes a lodgment, it normally defends to retain it while the JFC rapidly  
 3663 deploys additional combat power by air and sea.

3664 4-61. Sustainment of these operations is normally divided into three echelons during deployment: assault,  
 3665 follow-on, and rear echelons. Sustainment of forces during early entry operations focuses on supply and  
 3666 distribution. This is accomplished by leveraging resupply by air including planned resupply, immediate  
 3667 airdrop resupply, and emergency airdrop resupply requests. The assault force is supported by both organic  
 3668 and external elements organized to distribute supplies, materiel, fuel, and ammunition forward by air or water  
 3669 LOCs. The exact organization and disposition of the assault and follow-on sustainment elements is a function  
 3670 of the assault force's mission and anticipated follow-on operations.

3671 4-62. The DSB provides the foundational capabilities for enabling forcible entry. DSBs may perform  
 3672 specialized roles in rapid deployment operations from home station in support of forcible entry. Once  
 3673 deployed, the DSB and its task-organized subordinate units focus on sustaining both the assault and  
 3674 introduction of follow-on forces.

3675 4-63. As sustainers plan for support of the force entering the theater, they also consider requirements during  
 3676 crisis operations that may differ in scale, scope, and/or type from those associated with other operations.  
 3677 Planners identify and account for unique requirements such as—

- 3678 • Establishing civil security and control.
- 3679 • Supporting essential services requirements.
- 3680 • Integrating non-organic sustainment capability.
- 3681 • Providing support to infrastructure development, such as general engineering support logistics  
 3682 element activities.
- 3683 • Providing direct or indirect support to unified action partners.
- 3684 • Building POL stockage objectives and inter-theater and intra-theater days of supply.

## **CONSOLIDATION OF GAINS DURING CRISIS**

4-64. During and after crisis response, Army forces consolidate gains to deny adversary forces the means to extend the crisis or create a similar crisis in the future. This will often entail maintaining an enhanced force posture in a JOA for a period of time to demonstrate U.S. willingness to defend allies and partners. Army forces continue to support improvements to host-nation capabilities through a security cooperation plan designed to make them less vulnerable to future crisis. If an adversary directly targets partner forces, or acts through a proxy, the United States must be prepared to reconstitute the partner's forces as quickly as possible. The ability of Army forces to reconstitute partner nation forces is especially important to JFCs since, in many areas, only the Army has the capacity to conduct a comprehensive security cooperation program. Many allies and partners rely primarily on their armies and do not have robust navies or air forces. Consolidating gains during and after crisis response creates enduring change that reinforces deterrence against adversaries and improves relative advantages for U.S., allied, and partner forces.

## **TRANSITION TO COMPETITION AND ARMED CONFLICT**

4-65. During a crisis, partner nation security forces and government institutions may suffer losses that reduce capability and capacity due to the actions of adversary or proxy forces. Army forces may be tasked to execute security cooperation programs to help restore or maintain partner-nation capabilities and capacity as a means to consolidate gains. Army forces seek to restore partner security forces and government institutions as quickly as possible to maintain popular support. Doing so reduces the need for large numbers of U.S. forces to deploy in the future or be maintained in theater to support or enable a partner nation's security. A quick recovery also highlights the strength of the alliance or bilateral relationship of a partner nation with the United States.

4-66. Army forces responding to a crisis are prepared for and expect to fight. This saves time during the transition and requires an understanding of the OPLAN or likely concept of operations as early as possible. Forward-positioned forces reposition into battle positions or tactical assembly areas and take all available measures to protect themselves from attack in every domain as they prepare for combat. When located with allied or partner units, Army forces synchronize their activities to ensure unity of purpose and mutual support.

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## Chapter 5

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# Sustainment Operations During Armed Conflict

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This chapter provides an overview of sustainment operations during armed conflict.

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This chapter covers sustainment of large-scale combat operations, sustainment of

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defensive operations, and sustainment of offensive operations. This chapter concludes

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with a discussion on the transition from the conflict to competition or crisis.

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## SECTION I – ARMED CONFLICT AND LARGE-SCALE COMBAT OPERATIONS

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5-1. Armed conflict encompasses the conditions of a strategic relationship in which opponents use lethal force as the primary means for achieving objectives and imposing their will on the other. The employment of lethal force is the defining characteristic of armed conflict, and it is the primary function of the Army.

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5-2. During armed conflict, operations usually reflect combinations of conventional and irregular warfare approaches. Leaders apply doctrine for large-scale combat operations during limited contingencies that require conventional warfare approaches. Irregular warfare includes counterinsurgency and unconventional warfare. The initial actions of large-scale combat operations will likely overlap with actions initiated during competition and crisis.

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5-3. Large-scale combat operations are extensive joint combat operations in terms of scope and size of forces committed, conducted as campaigns aimed at achieving operational and strategic objectives through the application of force. Large-scale combat on land occurs within the framework of a larger joint campaign, usually with an Army headquarters forming the base of a joint force headquarters. These operations typically entail high tempo, high resource consumption, and high casualty rates. Large-scale combat introduces levels of complexity, lethality, ambiguity, and speed to military activities not common in other operations.

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5-4. Large-scale combat operations occur in circumstances usually associated with state-on-state conflict, and they encompass divisions and corps employing joint and Army capabilities from multiple domains in a combined arms manner. Irregular warfare activities often complement large-scale combat operations, with conventional, irregular, and special operations forces conducting operations close to each other.

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5-5. Successful large-scale combat operations defeat enemy armed forces while establishing control over land and populations to achieve operational and strategic objectives. They may capitalize on superior military capability to quickly overwhelm a weaker enemy and consolidate gains as part of a rapid campaign. Large-scale combat operations against more capable enemy forces are likely to be of longer duration, lasting months or longer.

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## OPERATING AS PART OF THE JOINT FORCE

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5-6. The Army always fights as part of a joint force, and usually as part of a multinational coalition during large-scale combat operations. Because CCDRs often assign the senior Army commander as the JFLCC, it is imperative that Army leaders from the JFLCC to brigade level understand the integration of operations on land with those in the other domains for the joint force.

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5-7. The Army supports the joint force by providing the capabilities and capacity to apply sustained combined arms landpower through movement, close combat, and fires at whatever scale is necessary to defeat enemies on land. It does this by employing capabilities from the land, maritime, air, space, and cyberspace domains in support of ground operations on land and employing ground-based capabilities to enable operations in the other domains.

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## CONDUCTING LARGE-SCALE COMBAT OPERATIONS

5-8. During large-scale combat operations, Army forces conduct offensive, defensive, and stability operations to defeat enemy forces. Defeat of enemy forces in close combat is normally required to achieve campaign objectives and national strategic goals after the commencement of hostilities. Divisions and corps are the formations central to the conduct of large-scale combat operations, as they are organized, trained, and equipped for the deep, rear, and support operations that enable subordinate success during close combat. The ability to prevail in ground combat is a decisive factor in breaking an enemy's will to continue a conflict. Conflict resolution requires the Army to conduct sustained operations with unified action partners as long as necessary to achieve national objectives.

## SUSTAINING LARGE-SCALE COMBAT OPERATIONS

5-9. Large-scale combat operations require greater sustainment than other types of operations. Their high tempo and lethality significantly increase maintenance requirements and expenditure of supplies, ammunition, and equipment. Large-scale combat incurs the risk of mass casualties, which increase requirements for health service support, mortuary affairs, and large-scale personnel and equipment replacements. Large-scale combat operations demand a sustainment system that can move and distribute a tremendous volume of supplies, personnel, and equipment.

5-10. Army sustainment is a key enabler of the joint force on land. Army forces provide sustainment to other elements in the joint force according to the direction of the JFC. The JFC has the overall responsibility for sustainment throughout a theater, but the JFC headquarters executes many of its sustainment responsibilities through the TSC. When directed, Army sustainment capabilities provide the bulk of Army support to other services through executive agency, common-user logistics, lead Service, and other common sustainment resources. (See JP 4-0 for more information on joint sustainment.)

5-11. Successful sustainment operations strike a balance between protecting sustainment capabilities and providing responsive support close to the forward line of troops. A well-planned and executed logistics operation permits flexibility, endurance, and application of combat power. Plans must anticipate and mitigate the risk posed by enemy forces detecting and attacking friendly sustainment capabilities. Sustainment formations pursue operations security, survivability, and protection with the same level of commitment as all other forces. While most rear and support operations are economy of force endeavors when allocating combat power in divisions and corps, the continuity and survivability of those operations are vital to deep and close operations.

5-12. Dispersion of assets and redundancy help protect sustainment formations. Dispersing sustainment formations makes it less likely that enemy long-range fires can destroy large quantities of material. Dispersion also creates flexibility, as several nodes can execute the sustainment concept without a single point of failure. However, dispersed sustainment operations complicate C2 and can be less efficient than a massed and centralized approach. Commanders balance the risk between dispersion and efficiency to minimize exposure to enemy fires while maintaining the ability to enable the supported formation's tempo, endurance, and operational reach.

5-13. Commanders must plan for the possibility of heavy losses to personnel, supplies, and equipment. Even with continuous and effective sustainment support, units may rapidly become combat ineffective due to enemy action. Commanders at all levels must be prepared to conduct reconstitution efforts to return ineffective units to a level of effectiveness that allows the reconstituted unit to perform its future mission. For additional information see ATP 3-94.4.

## SUSTAINING ENABLING OPERATIONS

5-14. Enabling operations set the friendly conditions required for most operations. Commanders direct enabling operations to support the conduct of offensive, defensive, and stability operations and defense support to civil authorities tasks. The execution of enabling operations alone does not directly accomplish the commander's end state, but enabling operations must occur to complete the mission. Enabling operations are reconnaissance, security, troop movement, relief in place, passage of lines, countermobility, combined



3800 arms mobility, tactical deception, and linkup. While sustainment supports all enabling operations, troop  
3801 movement and combined arms mobility require the most sustainment support.

## 3802 SUSTAINING TROOP MOVEMENT

3803 5-15. *Troop movement* is the movement of Soldiers and units from one place to another by any available  
3804 means (FM 3-90). Troop movements are made by different methods such as dismounted and mounted  
3805 marches using organic combat and tactical vehicles; motor transport; and air, rail, and water means in various  
3806 combinations. The method employed depends on the situation, the size and composition of the moving unit,  
3807 the distance the unit must cover, the urgency of execution, and the condition of the troops. It also depends on  
3808 the availability, suitability, and capacity of the different means of transportation. Troop movements may also  
3809 be used as a form of deception. Concealing troop movements may deceive the adversary and divert their  
3810 efforts from the main objective. See ADP 3-90 for additional information on troop movements. Troop  
3811 movements over extended distances have extensive sustainment considerations. Movement control boards  
3812 are critical for planning and enabling troop movement. Movement control boards support synchronization  
3813 and coordination of troop movement against distribution priorities. For additional information, see ATP 4-16.

## 3814 ROAD MOVEMENT

3815 5-16. Road movement is a route synchronization plan that involves movement of forces from ports of  
3816 debarkation (PODs), redeployment of forces to ports of embarkation, movement of supplies and equipment,  
3817 and movement of units. The goal of route synchronization planning is to sustain movements according to the  
3818 commander's priorities and make the most effective and efficient use of the road networks. It requires  
3819 synchronization and coordination with planners of unit movement and maneuver. Planning is done in a  
3820 logical sequence and results in the publication of the route synchronization plan. The unit movement officer  
3821 coordinates movement planning during deployments, redeployments, and other moves. For additional  
3822 information, see ATP 3-35 and ATP 4-16.

## 3823 ARMY AIR MOVEMENT

3824 5-17. Army air movements are operations involving the use of utility and cargo rotary-wing assets for other  
3825 than air assaults. Commanders conduct air movements to move troops and equipment, to emplace systems,  
3826 and to transport ammunition, fuel, and other high-value supplies. Commanders may employ air movements  
3827 as a substitute for ground tactical movements. Air movements are generally faster than ground tactical  
3828 movements, but air movements can be vulnerable to enemy air defense systems or influenced by bad weather.  
3829 The same general considerations that apply to air assault operations also apply to Army air movements. For  
3830 additional information, see FM 3-0, FM 3-04, and FM 3-99.

## 3831 RAIL AND WATER MODES

3832 5-18. Operating forces can use rail and water modes of transportation to conduct troop movements if these  
3833 are available in an AO. Their use can provide flexibility by freeing other modes of transport for other missions  
3834 or circumventing closed or high-threat highway routes. Their use normally involves a mixture of military and  
3835 commercial assets, such as defense freight railway interchange railcars pulled by privately owned diesel-  
3836 electric engines to transport tanks along railroad right-of-ways from one rail terminus to another.  
3837 Responsibility for coordinating the use of railroads and waterways resides in the ARFOR headquarters in the  
3838 theater of operations.

## 3839 MOVEMENT CONTROL DURING LARGE-SCALE COMBAT OPERATIONS

3840 5-19. Sustainment of troop movement is achieved through movement control. Movement control links the  
3841 tactical employment and sustainment of forces to national and operational objectives. During the execution  
3842 of large-scale combat operations, movement control prioritizes and synchronizes movements to support  
3843 actions in the division rear, close, and deep areas. Coordination and synchronization of movements within an  
3844 operational area are coordinated through the corps transportation officer, division transportation officer,  
3845 movement control team, and supporting movement control battalion. For additional information on road

3846 movement planning, route synchronization, automated information systems for movement, and movement  
3847 tables, see ATP 4-16.

### 3848 **Corps Transportation Officer**

3849 5-20. A corps on the move can consist of over 42,000 vehicles that cover vast expanses of terrain. Movement  
3850 of a corps requires significant planning and preparation. The corps transportation officer is the primary  
3851 technical advisor to the corps commander on theater transportation policy, mode operations, movement  
3852 planning, in-transit visibility, and transportation automation systems. This also includes support of reception  
3853 and onward movement of forces, replacement operations, and retrograde. The corps transportation officer  
3854 also assesses the overall effectiveness of the TSC and/or ESC movement programs supporting corps  
3855 operations during large-scale combat operations. Other corps transportation officer duties include, but are not  
3856 limited to, the following:

- 3857 • Coordinating transportation planning to support large-scale combat operations with the TSC
- 3858 and/or ESC, division, and separate brigade transportation officers to determine requirements.
- 3859 • Establishing procedures for movements that cross boundaries IAW the corps G-3 plans.
- 3860 • Planning transportation support, developing policies, providing guidance, and recommending
- 3861 movement priorities and procedures for movement control and route synchronization.
- 3862 • Planning, coordinating, and overseeing large or special movements in conjunction with the TSC
- 3863 and/or ESC.
- 3864 • Assisting major subordinate commands and units transiting the corps area.
- 3865 • Preparing, in coordination with the TSC and/or ESC, the transportation portion of corps plans and
- 3866 orders.

3867 5-21. The corps transportation officer also coordinates with the corps G-3 during unit movements, force  
3868 tracking, and maneuver planning. The corps G-3 plans and directs movement and maneuver of combat units  
3869 through or within the corps area. This may require rapidly projecting these forces over extended distances on  
3870 main supply routes. The corps G-3, coordinating with the G-4, establishes priorities for using main supply  
3871 routes for movements and maneuver. Maneuver will normally have priority over movements. However,  
3872 maneuver must be well coordinated with movements to prevent route congestion, enforce movement  
3873 priorities, and provide continuous logistical support. The G-4, using the recommendations of the corps  
3874 transportation officer, establishes plans and implements sustainment priorities for movement. These priorities  
3875 become the basis of the TSC and/or ESCs distribution plan. For additional information, see ATP 4-16.

### 3876 **Division Transportation Officer**

3877 5-22. The division transportation officer is involved in the movement of units and maneuver elements in  
3878 coordination with the division G-3. Additionally, the division transportation officer is a staff planner that  
3879 advises the commander and coordinates transportation support with the division G-3 and G-4. The division  
3880 transportation officer coordinates with the G-3 on operational movements, the G-4 on sustainment, and also  
3881 provides guidance and coordinates transportation issues with other staff sections and commanders. The  
3882 division transportation officer advises the commander and staff on transportation matters during large-scale  
3883 combat operations that include, but are not limited to—

- 3884 • Division priorities for transportation and movement to support division plans and orders.
- 3885 • The availability of subordinate brigade transportation assets.
- 3886 • Movement regulating of main supply routes and alternate supply routes the division will control.
- 3887 • Assisting the G-4 in preparing, updating, and maintaining the transportation portion of the logistics
- 3888 estimate.

3889 5-23. The division transportation officer is the focal point for transportation technical guidance and  
3890 assistance for the division staff in areas of planning and in the execution of operations. Additional information  
3891 on the division transportation officer is available in ATP 4-16. Division transportation officer responsibilities  
3892 also include—

- 3893 • Conducting route synchronization (in coordination with the G-3 and division provost marshal) to
- 3894 include movement regulating teams and providing movement credits and march tables for
- 3895 sustainment convoys.

- 3896 • Conducting parallel and collaborative planning with the staff to integrate movement, maneuver, and transportation sustainment operations.
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- 3898 • Developing the deployment, movement, and route synchronization portions of division operation plans and operation orders.
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- 3900 • Validating and coordinating the requirement for external transportation when requirements exceed a brigade's organic capability.
- 3901
- 3902 • Maintaining the status of subordinate brigade transportation assets.

### 3903 **Division Sustainment Brigade Transportation Branch**

3904 5-24. The DSB transportation branch develops a movement program for their transportation assets in  
 3905 coordination with the division transportation officer. The branch executes the sustainment command's  
 3906 movement program based on the division transportation officer's established priorities. The DSB  
 3907 transportation branch forecasts movement requirements for supplies, equipment, and personnel in  
 3908 coordination with the materiel management branch and HROB. It determines transportation capabilities  
 3909 available by mode (air, land, and water) and node to support division movement requirements. This may  
 3910 include contracted or host-nation transportation capabilities. The DSB transportation branch balances  
 3911 transportation capabilities with division movement requirements based on priorities established by the  
 3912 division G-3 and division transportation officer. This includes planning known, anticipated, and contingency  
 3913 transportation requirements.

### 3914 **Movement Control Team**

3915 5-25. The MCT has the capability to commit allocated transportation assets, regulate movement, and provide  
 3916 transportation services in a theater of operations. MCTs are subordinate elements of the movement control  
 3917 battalion and are positioned throughout the theater to assist in the decentralized execution of movement  
 3918 control responsibilities. MCTs are the entry point for joint and Army forces to request Army common-user  
 3919 transportation assets when movement requirements exceed an organization's organic transportation  
 3920 capability. The MCT executes five movement control missions: intermodal, area, movement regulation,  
 3921 documentation, and division support. When given the authority by the movement control battalion, MCTs  
 3922 can directly coordinate motor truck transportation with a DSB or sustainment brigade, host nation, or  
 3923 commercial assets and can coordinate for the use of allocated fixed/rotary wing assets in the aviation brigade.

3924 5-26. Though an MCT may not have committal authority over Air Force aviation assets, HN rail, or Army  
 3925 watercraft, it will coordinate the use of those assets when those modes of transportation are the most efficient  
 3926 and effective means to meet the movement requirement. MCTs can provide transportation services to other  
 3927 organizations that include in-transit visibility of personnel, supplies, and equipment moving through the  
 3928 transportation system, assistance with transportation shipping documentation, and unit movement data  
 3929 processing as well as performing unit movement coordinator duties as required in the operational area.  
 3930 Additionally, MCTs can be used as an asset to collect information when operating in their AOR. For  
 3931 additional information, see ATP 4-16.

3932 5-27. An MCT can be attached or OPCON to a corps or division headquarters and placed under the control  
 3933 of the corps transportation officer or division transportation officer to augment that staff and assist in  
 3934 providing a range of transportation support planning, programming, and operations required to support the  
 3935 range of military operations. The team operates on a 24-hour basis to assist the corps transportation officer  
 3936 or division transportation officer in planning, scheduling, controlling, and coordinating mode operations. The  
 3937 team's automation systems also provide the corps and division linkage to the theater movement control  
 3938 network, maintaining in-transit visibility of materiel and personnel transiting into, within, and out of the corps  
 3939 and division areas. The MCT supporting the corps transportation officer and division transportation officer  
 3940 is not subordinate to a movement control battalion. Other functions with which the MCT can assist the corps  
 3941 transportation officer and/or division transportation officer include—

- 3942 • Executing route synchronization.
- 3943 • Coordinating for use of main supply routes within the corps and division.
- 3944 • Operating first destination reporting point for sustainment convoys.
- 3945 • Providing technical expertise to transportation users in the corps and division AO.

- 3946 ● Providing movement control support for any divisional movements.
- 3947 ● Providing movement control capability to a BCT and/or maneuver MEB as needed.

3948 5-28. The MCT, along with the corps and division transportation officers, coordinates with the movement  
 3949 control battalion to deconflict and coordinate the planned movement of convoys on controlled main supply  
 3950 routes in order to coordinate departure and arrival times, manage movement priorities, and synchronize  
 3951 protection enablers (route clearance, aerial surveillance, and other protection measures). Similar to the  
 3952 movement board, this coordination requires daily and weekly meetings such as a movement synchronization  
 3953 boards and groups to validate convoy departure times and issue movement credits, and as required to initiate  
 3954 the process to reroute or divert convoys. Coordination at all levels must occur before and during movement  
 3955 with the S-3/G-3 or headquarters responsible for the operational areas the convoy is traversing.

3956 5-29. While it is important to monitor the in-transit status of all convoys, the unit that controls the AO also  
 3957 plays a critical role in monitoring and supporting convoys that traverse controlled main supply routes and  
 3958 alternate supply routes. Changes to route status due to weather, enemy, and other mission threats must be  
 3959 communicated to the highway traffic section of the movement control battalion for theater routes or the corps  
 3960 and division transportation officers for corps and division routes. Any changes to convoy departure times  
 3961 will be communicated from the movement control battalion's highway traffic section through the MCTs  
 3962 responsible for communicating route status information and issuing movement credits to the corps and  
 3963 division transportation officers.

## 3964 Movement Control Process

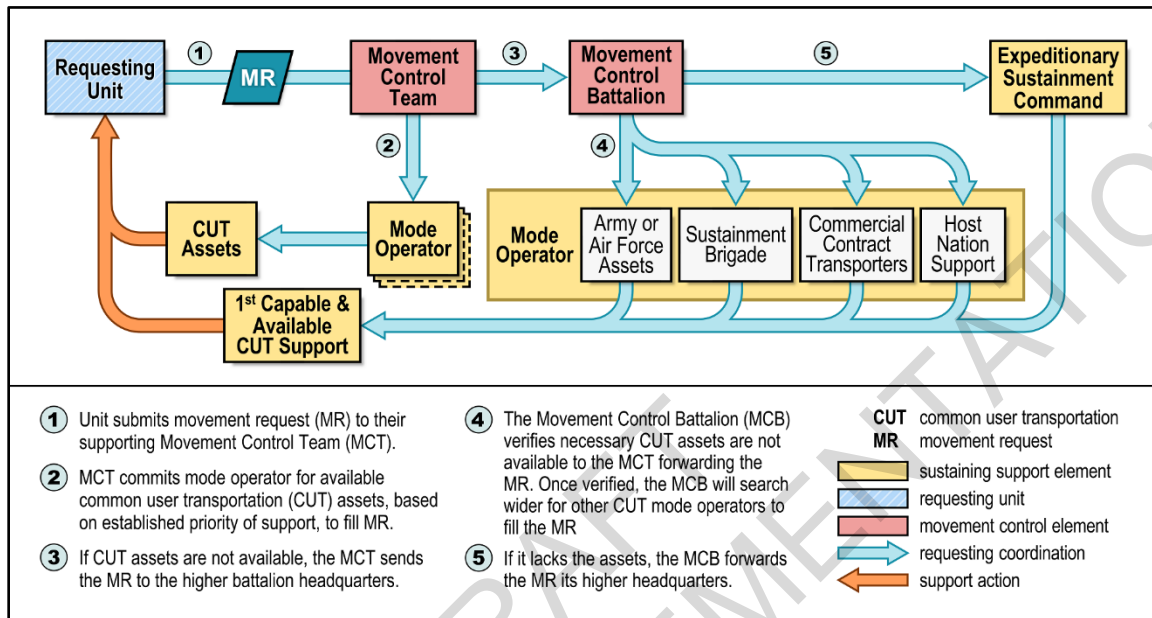
3965 5-30. The movement control battalion and/or movement control team will determine the most appropriate  
 3966 mode of transportation (for example, truck, rotary wing, or fixed wing). The movement control battalion  
 3967 and/or movement control team will consider a variety of factors to determine the most effective and efficient  
 3968 means to fill movement requirements. These considerations include, but are not limited to—

- 3969 ● Allocated transportation assets. The availability status of the mode operator's transportation assets  
 3970 must be a factor in determining which mode and which organization can execute the mission.
- 3971 ● Priorities. Provide service according to the command priorities for movement and support.
- 3972 ● Tactical. Depending on the type of military operation or phase, the environment can be extremely  
 3973 fluid and non-static. Coordinate with the requesting and destination units to determine potential  
 3974 changes in pickup or delivery locations.
- 3975 ● Routes. Rerouting may be required if there are changes to route classifications, the distribution  
 3976 pattern, or one of the other factors dictates a change.
- 3977 ● Host-nation and commercial assets. Use is limited to those modes and assets provided by the host  
 3978 country or available through commercial contract.

3979 5-31. Once all the considerations have been reviewed, the origin MCT requests a positive inbound clearance  
 3980 for sensitive, classified, oversize, overweight, strategic "door to door," or other priority shipments through  
 3981 the destination MCT before issuing a transportation movement request. The positive inbound clearance  
 3982 process assesses the unit's ability to receive the shipment considering the unit capabilities to have materials  
 3983 handling equipment, storage, and personnel available. The destination MCT can also confirm the availability  
 3984 of backhaul cargo ready for shipment at this time. The destination MCT confirms the organization's location  
 3985 and ability to off-load the cargo to the origin MCT. If the organization is unable to receive a shipment, the  
 3986 origin MCT reschedules the shipment by coordinating for alternate delivery dates. Though the origin MCT  
 3987 can schedule routine shipments without an inbound clearance, a receiving organization must notify the origin  
 3988 MCT (through the destination MCT) that it cannot receive the shipment and request the shipment be held.

3989 5-32. To execute the movement request (as shown in figure 5-1), the MCT will commit a mode operator  
 3990 IAW movement control battalion guidance or forward the movement request to the movement control  
 3991 battalion. The mode operator may be a DSB, sustainment brigade, aviation brigade, host-nation asset, or  
 3992 commercial organization. Commitments flow through predetermined channels developed between the TSC  
 3993 and/or ESC, movement control battalion, and the brigade-level mode operator. Normally for Army assets,  
 3994 the movement control battalion or MCT will coordinate movements through a sustainment or aviation brigade  
 3995 headquarters. However, depending on the OE, the sustainment or aviation brigade may permit direct  
 3996 coordination with their subordinate units. When the MCT commits a mode operator, it creates a transportation

movement request, which is a document that provides the details of that movement mission for the mode operator. The mode operator tasks one of their subordinate battalions for the mission and submits a request for convoy or route clearance to its supporting MCT. If the mode operator cannot support the transportation movement request for any reason, it must notify the MCT immediately. The MCT either attempts to establish an alternate delivery date and time, selects another operator, selects another mode, or forwards the movement requirement to the movement control battalion.



**Figure 5-1. The movement control process**

5-33. When the movement control battalion receives a movement request from an MCT, it will verify the common-user assets available are committed based on the theater commander's priority of support. If an issue of prioritization arises, the movement control battalion will work to resolve the issue with the mode operator. When the mode operator's transportation assets are matched against valid commitments, the movement control battalion can forward the request to another MCT to use the assets that it has committal authority over, or the movement control battalion can execute the request if it has committal authority over transportation assets. The movement control battalion can also retain committal authority of allocated transportation assets if the OE dictates. Transportation assets such as Army aviation, rail, or Army watercraft are limited, and selection of these modes can be retained at the movement control battalion. Additionally, the committing of host-nation or certain commercial assets can be retained at the movement control battalion if necessary.

5-34. When the movement control battalion commits a mode operator, it will create a transportation movement request for the movement and follow the process above. If the movement control battalion is unable to execute a movement request, it will forward the request to the TSC or ESC or coordinate directly with a joint organization for the use of other Service assets such as Air Force aircraft.

5-35. In the event that an unforeseen change in priorities requires a change to the transportation movement request after movement is initiated, the MCT contacts the mode operator's convoy commander by radio or digital messaging to provide the revised transportation movement request. Transportation units normally have a mix of radio and digital communication systems mounted in their vehicles. For example, a 5k petroleum transportation company has a total of 71 vehicles, 70 radios and 24 digital messaging devices. Almost every vehicle in the company will be equipped with radios for internal and external communication. If a convoy is out of radio range and lacks digital communication devices, the revised transportation movement request may be communicated to the convoy commander at an MCT or military police checkpoint along the convoy's route.

5-36. The destination MCT has the responsibility to close out all transportation movement requests terminating in their operational area. Although there are a variety of automation systems that will provide asset and in-transit visibility, MCTs should make direct contact with the receiving organization to ensure the shipment has arrived when communications allow. To close out the transportation movement request, the destination MCT will contact the origin MCT to relay the mission is complete or close out the transportation movement request in an automation system when available. The movement control battalion has the responsibility to ensure commercial movements arranged by SDDC are closed out and reported to the TSC and/or ESC. For additional information, see ATP 4-16.

## SUSTAINING MOBILITY

5-37. Freedom to move and maneuver within an operational area is essential to the application of combat power and achieving results across the range of military operations. An OE will present numerous challenges to movement and maneuver. These are typically overcome through the integration and synchronization of mobility and countermobility in support of mission requirements. Sustainment units should be prepared to support gap crossing operations and aviation assets during the movement of maneuver troops. For additional information, see ADP 3-37, ATP 3-39.30, ATP 3-90.4, and ATP 3-90.8.

## SUSTAINMENT OF GAP CROSSING OPERATIONS

5-38. Gap crossing operations require maneuver forces to break formations, concentrate within lanes or at crossing points, and reform on the far side before continuing to maneuver. Gap crossing types are deliberate, hasty, and covert. Gap crossings require large amounts of indirect fire support for obscuration and suppression that generate logistics requirements for ammunition and transportation. The amount of resources required to obscure the crossing is dependent on multiple variables such as duration required, weather, and terrain. Obscuration requires close coordination, control, and detailed planning to maximize the desired effects on the enemy while not degrading friendly capabilities. This is especially important when conducting breaching in complex or restrictive terrain due to the close-in nature of the fighting. Artillery units conducting suppression and obscuration missions will displace frequently for survivability, requiring pre-positioning of munitions at various firing positions and position areas.

## AVIATION OPERATIONS

5-39. Aviation operations related to sustainment increase mobility for light forces, offer aerial medical evacuation support, and provide additional options for distribution. These operations may include rotary, fixed-wing, and unmanned aerial systems. Sustainment forces should expect fuel and ammunition requirements to increase during aviation operations. Sustainment units should be prepared to conduct aerial resupply for maneuver forces. Planning considerations for aerial delivery should include type of airdrop asset and type of aerial delivery operation. Special planning considerations must include the fuel required by the aviation force at fluctuating rates. A company of CH-47 Chinooks could consume as much as 40,000 gallons of fuel in as little as two days or could also consume almost no fuel in two days based on weather and operational considerations. The brigade aviation element is critical to coordinating aviation as an enabler. See FM 3-04 for additional details.

## RECONSTITUTION OPERATIONS

5-40. The scale, complexity, and increased destructive power of large-scale combat operations results in greater loss of personnel, weapon platforms, supplies, and equipment than other types of operations. The objective of reconstitution operations is to restore combat power and build and maintain unit strength within a limited window of time. Under exceptional conditions, with severely degraded units, constrained time, and limited or no personnel replacements, commanders may make the decision to execute reconstitution. Reconstitution operations are extraordinary actions that commanders take to restore degraded units to an acceptable level of combat effectiveness as determined by the commander, commensurate with mission requirements, available time, and resources. Reconstitution must be planned and resourced during competition. Commanders directing reconstitution missions use assets under their control, along with those provided by higher echelons. For additional information, see ATP 3-94.4.

## SUSTAINMENT CHALLENGES IN LARGE-SCALE COMBAT OPERATIONS

5-41. The magnitude, scale, and scope of large-scale combat operations present challenges in addition to velocity, precision, and volume. The following discussion addresses the scope of sustaining large-scale combat operations and presents a few challenges. Operational variables, mission variables, and many other factors impact actual daily consumption rates, and the following example is illustrative and is not intended to replace detailed mission analysis. The example uses a fighting force of two corps with six divisions. The six divisions consist of eighteen BCTs (ten ABCTs, six SBCTs, two IBCTs) and associated enablers.

5-42. The total fighting force of two corps with six divisions, eighteen BCTs, and enablers requires an average of 720K gallons of potable water and 1.04M gallons of non-potable water on a daily basis. Moving these requirements from the theater area forward requires 372 trucks to pull a combination of trailers and fabric tank configurations. Moving the water farther forward into the tactical areas requires the use of 460 heavy expanded mobility tactical trucks with a combination of load handling system and/or palletized load handling system (PLS), tank rack configurations, and towed water trailers. The 460 trucks must each tow another 2K gallon compatible water tank rack (HIPPO) mounted on a PLS trailer.

5-43. The corps headquarters and supporting enablers (medical brigade, operational fires command, military police brigade, expeditionary military intelligence brigade, and cavalry organizations in this example) require a daily average of 633K gallons of fuel to operate. A minimum of one hundred and twenty-seven 5K fuel tankers are required to support the corps daily fuel consumption. Support to meet the average daily consumption rate of 688 short tons of dry cargo for the corps and its enablers requires 78 PLS trucks and trailers.

5-44. The division headquarters and its enablers (field artillery brigade, combat aviation brigade, MEB, DSB, and engineer brigade in this example) average daily consumption rate for large-scale combat operations is 445K gallons of fuel and 653 short tons of dry cargo. A minimum of ninety 5K tankers and 74 PLS trucks and trailers are needed to support the requirements.

5-45. One day of supply in a division consisting of three ABCTs and a CAB consumes on average 642K gallons of fuel and 963 short tons of dry cargo. One hundred and twenty-nine 5K fuel tankers and 120 PLS trucks and trailers are needed to fulfill the requirements.

5-46. Class V replenishment for a field artillery brigade aligned with a corps or under the OPCON of a JTF, land component command, or other supported command is based on its task organization. Field artillery brigades may vary both in the number of battalions attached and in the type of firing platform fielded. Typically, brigades have from one to five rocket and missile multiple launch rocket system (MLRS), high-mobility artillery rocket system (HIMARS), or cannon battalions.

5-47. MLRS and HIMARS battalions have either two firing batteries with eight launchers apiece or three batteries with nine launchers each. MLRS ammunition is packaged in pods that carry either one missile or six rockets. Each MLRS carries two pods, and a HIMARS carries one. This establishes a combat load for an MLRS battalion as 32 to 54 pods, and 16 to 27 pods for the HIMARS. Both MLRS and HIMARS battalions have 16 PLS trucks and trailers, which in combination can carry eight pods for a basic load of 128 pods. The MLRS battalion has a combined combat and basic load requirement of 160 pods, and the HIMARS battalion is slightly lower with a combined requirement of 144 pods. To deliver the combined combat load and basic load for a MLRS battalion in one lift requires twenty trucks and trailers from a medium truck company (PLS). To do the same with a HIMARS battalion requires only 18 PLS trucks and trailers. Alternatively, a medium truck company (EAB line haul) (cargo) could complete the missions, but it would require 36 tractor-trailers to deliver the load for MLRS battalions and 40 for a HIMARS. The tractor-trailers would also require materials handling equipment augmentation to offload cargo.

5-48. A 155mm cannon battalion, typically fielding the self-propelled 155mm Paladin, has three firing batteries, each with six cannons. The Paladin carries 37 rounds as a combat load. The 155mm battalion also has 18 ammunition carriers capable of transporting a basic load of 95 rounds each. The battalion's combat load is 666 rounds, and the basic load adds an additional 1,710 giving it a combined total of 2,376 rounds. Using a planning weight of 95 pounds per 155mm shell, including propellant and fuse, the battalion would require 113 short tons to replace the combined combat and basic loads. A medium truck company (PLS) can

4127 deliver this load in one lift using 22 PLS trucks and trailers based on available pallet positions. A medium  
 4128 truck company (EAB line haul) (cargo) would require two lifts to deliver the load based on available pallet  
 4129 positions. Between the lifts, a total of 73 line haul tractor-trailers would be required.

### 4130 **3rd Corps Support Command and Large-scale Combat Operations** 4131 **in OPERATION IRAQI FREEDOM**

4132  
 4133 On March 19, 2003, ground operations for OPERATION IRAQI FREEDOM began. The  
 4134 planning and coordination for sustainment operations, however, began well before that  
 4135 date. Advance elements of the 3rd Corps Support Command (COSCOM) led by BG  
 4136 Charles Fletcher arrived in Kuwait on January 10, 2003. 3rd COSCOM not only had to  
 4137 coordinate with V Corps, the lead invasion force under LTG William Wallace, but also  
 4138 with its upper echelon, the Combined Forces Land Component Commander and Third  
 4139 Army Commander, LTG David McKiernan, and the 377th TSC under MG David  
 4140 Kratzer.

4141  
 4142 In the beginning, 3rd COSCOM had two corps support groups, the 7th and the 16th,  
 4143 and three separate battalions attached to it, totaling approximately 4,000 Soldiers. By  
 4144 the end of summer, it had quadrupled in size to approximately 17,000 soldiers in six  
 4145 corps support groups, five separate battalions, and a rear operations center. The  
 4146 personnel comprised an even split between Active Duty, Army Reserve, and National  
 4147 Guard components.

4148  
 4149 The 3rd COSCOM crossed the berm on March 21st behind the 3rd Infantry Division  
 4150 (Mechanized), the main striking force. BG Fletcher utilized four command posts  
 4151 reaching from Camp Arifjan up to the forward, embedded division elements to operate  
 4152 sustainment activities. From March 21st to April 18th, 3rd COSCOM moved with V  
 4153 Corps for a total of 828 miles. On April 19, the lead elements of 3rd COSCOM and the  
 4154 24th Corps Support Group occupied the airbase near Balad, 45 miles north of  
 4155 Baghdad, and established Logistics Support Area – Anaconda. This became a primary  
 4156 sustainment hub for Operation Iraqi Freedom until American withdrawal from Iraq in  
 4157 December 2011. The establishment of the logistics support area signaled the change  
 4158 from offensive operations to defensive operations operating along a system of ground  
 4159 and air supply routes for American and allied forces in Iraq. 3rd COSCOM transferred  
 4160 responsibility to the 13th COSCOM on January 31, 2004.

### 4161 **ENEMY CHALLENGES AND THREATS TO SUSTAINMENT FORCES**

4162 5-49. Enemy forces possess a wide range of space, air, maritime, and land-based ISR capabilities that can  
 4163 detect U.S. forces. Leaders must assume they are under constant observation from one or more domains and  
 4164 continuously ensure they are not providing lucrative targets for the enemy to attack. The challenges posed by  
 4165 enemy forces are massed and precision fires against static or fixed forces; air and missile threats including  
 4166 loitering munitions and other unmanned aircraft systems; degraded communications; areas and resources  
 4167 contaminated by CBRN; fixed and bypassed enemy formations; enemy infiltration and targeting of  
 4168 vulnerable units first; and enemy influence campaigns.

4169 5-50. Army sustainment forces must prepare for continuous visual, electromagnetic, and influence contact  
 4170 with adversaries. Sustainment forces are under persistent visual surveillance by enemy space and other  
 4171 capabilities. Sustainment forces and individuals are in constant electromagnetic contact with adversaries who  
 4172 persistently probe and disrupt individual, group, and Army capabilities dependent on space and cyberspace  
 4173 domains. Army forces are subject to adversary influence through disinformation campaigns targeting  
 4174 Soldiers and their families and friends through social media and other platforms.

4175 5-51. During competition, enemy forces are capable of employing multiple methods of collecting on Army  
 4176 sustainment forces to develop an understanding of sustainment capabilities, readiness status, and intentions.



Enemy forces are capable of doing this inside and outside the continental United States. They employ space-based surveillance platforms to observe unit training and deployment activities. They employ cyberspace capabilities to penetrate networks and gain access to individual and group cyberspace personas to create options for future intimidation, coercion, and attack. During armed conflict, the enemy can employ networked land, maritime, air, and space-based capabilities to detect and rapidly target sustainment forces with fires. U.S. forces that are concentrated and static are easy for enemy forces to detect and destroy. Dispersion of sustainment forces and resources has multiple survivability benefits. It increases opportunities to use cover and concealment to reduce probability of detection. In the event the enemy detects elements of sustainment forces, dispersion acts as a form of deception, helping to conceal their intentions. Sustainment leaders must only concentrate forces when necessary and balance the survivability benefits of dispersion with the negative impacts dispersion has on mission effectiveness.

5-52. A *threat* is any combination of actors, entities, or forces that have the capability and intent to harm U.S. forces, U.S. national interest, or the homeland (ADP 3-0). Threats may include individuals, groups of individuals, paramilitary or military forces, nation-states, or national alliances. In general, a threat can be categorized as an enemy or an adversary.

5-53. FM 4-0 is focused on sustaining large-scale combat operations against peer threats in an OE with challenges across multiple domains. A peer threat is an adversary or enemy with capabilities and capacity to oppose U.S. forces across multiple domains worldwide or in a specific region where it enjoys a position of relative advantage. Peer threats present credible challenges to sustainment forces through the use of information warfare, isolation, systems warfare, preclusion, and sanctuary. Other considerations such as contested LOCs and antiaccess/area denial techniques coupled with challenges across multiple domains (air, land, maritime, space, and cyberspace) challenge sustainment support to operations. Sustainment commanders must consider the OE and all factors that affect their ability to sustain operations during planning.

5-54. Peer threats have the ability to influence and direct irregular forces, criminal elements, and hostile populations and to impose disruptive effects in cyberspace that will challenge Army sustainment during pre-deployment, deployment, employment, and redeployment. These disruptive effects may occur at unit home stations, ports of embarkation, while in transit to the theater, and upon arrival at ports of debarkation as well as within the theater.

5-55. Peer threats employ their capabilities across multiple domains to attack U.S. vulnerabilities, including sustainment facilities, networks, and formations. They use their capabilities to create lethal and nonlethal effects throughout an OE. During combat operations, threats seek to inflict significant damage across multiple domains in a short period of time. They seek to delay U.S. forces long enough to achieve their goals and for U.S. forces to reach culmination. One effective way to delay U.S. forces, which generally operate on very long LOCs, is to disrupt sustainment operations and nodes. Peer threats can also disrupt contracted support capabilities through predatory economics, cyber attacks, intimidating contractors or companies, misinformation and disinformation that disrupt host/local support, and competing for resources, bidding up prices. The adversary will build up their capability to do these things during competition to set conditions in their favor if competition transitions to conflict, as well as favor their objectives during competition. See FM 3-0 for additional information on peer threats.

5-56. Threat forces may employ tactics that force the U.S. Army into conducting large-scale combat operations in urban areas. Currently more than 50 percent of the world's population lives in urban areas, and this is likely to increase to 70 percent by 2050, making large-scale combat operations in cities likely. Large-scale combat operations in urban terrain are complex and resource intensive. In most urban operations, the terrain, dense population, military forces, and unified action partners will further complicate sustainment operations. For additional information on operations in urban areas, see ATP 3-06.

5-57. Threat use of subterranean spaces and structures (any space or structure located below ground) as a means to covertly maintain the initiative against a more powerful military opponent may occur during large-scale combat operations. Such spaces and structures can be used for command and control, defensive networks, operations, storage, production, or protection. Continued improvements in the construction of subterranean environments have increased their usefulness and their proliferation. For additional information, see ATP 3-21.51.

## IMPLEMENTING DISPERSION FOR SUSTAINMENT FORCES

5-58. Sustainment leader efforts to preempt and mitigate enemy detection are essential, but they cannot eliminate the risk of enemy massed and precision fires, including CBRN and weapons of mass destruction. To improve survivability from enemy indirect fires, Army sustainment forces must maintain dispersion and remain as mobile as possible to avoid presenting themselves targets to the enemy systems. If sustainment forces are required to remain static, those forces must dig in to increase survivability. (See ATP 3-37.34 for information on survivability positions.)

5-59. Sustainment commanders, including the TSC and ESC, have options for achieving dispersion. They can use split command post operations to achieve dispersion while maintaining C2 over widely dispersed forces. At the operational level, sustainment commanders maintain dispersion by employing multiple staging areas and multiple lines of communications. Vetting the ability to maintain C2 of over widely dispersed forces can be tested during training and exercises. At the tactical level, sustainment commanders achieve dispersion by increasing the distance between sustainment formations and among the elements of the supported force. In the offense, sustainment forces should utilize multiple routes and longer march intervals as practical to support the maneuver commander's intent and only concentrate forces enough to support the massing of effects. In the defense, sustainment forces occupy areas far enough away from anticipated action to prevent their detection and destruction by enemy deep fires. See FM 3-0 for additional information on being under constant observation and all forms of enemy contact.

## SUSTAINMENT PLANNING CONSIDERATIONS

5-60. Planning considerations include a known or anticipated support requirement, a known or anticipated problem, a readiness issue, a capability shortfall, enemy threat, or an aspect of operational or mission variables that influence sustainment support. If identified and used properly, planning considerations assist planners in identifying specific support or operational requirements based upon available information. Sustainment planners must also plan for execution of all sustainment functions and associated sub-functions at all echelons—logistics, financial management, personnel services, and HSS. This includes personnel replacement, casualty reporting, medical treatment, medical evacuation, and medical logistics/supply.

5-61. Planners must consider the scope of support provided by the DSBs assigned to divisions. All units attached to the division are supported by the DSB and its organic DSSB. This includes the attached BCTs as well as other organizations supporting the division's operation. Units such as engineer, military police, CBRN, and air defense may operate in the division's consolidation and support areas. If the scope of support requirements exceeds the capacity of the organic DSSB, additional modular logistics companies or an additional CSSB may be required to meet support requirements. The division G-4 and the DSB commander must continually assess the situation and make organizational changes as necessary. Division units that have small or inadequate logistics planning and execution capabilities, such as the division artillery, should share information with the division G-4 and coordinate with the DSB for logistics planning and execution.

5-62. Commanders and staffs should be very deliberate in planning sustainment support and only plan for support that is absolutely essential to mission accomplishment. Planning for non-essential support puts unnecessary demands on already limited distribution and transportation assets and puts capability at needless risk. This may also deprive units of support for which units have a legitimate requirement. As an example, if heavy equipment transporter system support is needed for a mission with no additional transportation requirements needed, commanders should request a heavy equipment transporter system company, not a composite truck company (heavy). The composite truck company comes with additional, unneeded types of trucks that will only burden the mission and waste a critical asset that can be legitimately used elsewhere. Another example is the use of laundry and shower units. These may be desirable but unnecessary for mission accomplishment.

5-63. The tempo and lethality of large-scale combat operations may overwhelm maintenance, medical, personnel replacement, and mortuary affairs capabilities. Additionally, the strain of support to other Services and multinational partners will exact a heavy toll on already constrained sustainment resources. For example, the quantity of air and ground distribution assets required to fulfill the Army's role as lead service for bulk petroleum (when designated) will place significant demands on the Army in support of large-scale combat

4279 operations. Because of these factors, sustainment planning should include coordination, integration, and  
4280 synchronization at all levels for reinforcing sustainment support to the joint force and multinational partners.

#### 4281 **LOGISTICS PLANNING CONSIDERATIONS**

4282 5-64. The high tempo of large-scale combat operations will result in gaps and seams that create both  
4283 opportunities and risks as enemy formations disintegrate or displace. The variety of possible situations arising  
4284 during large-scale combat operations requires that sustainment operators establish a flexible and tailorable  
4285 distribution system in support of tactical commanders.

4286 5-65. Distribution management, using all modes of transportation, is the method by which sustainment  
4287 commanders and staffs move materiel and personnel from an originating point to the point of employment.  
4288 The distribution system extends from ports of debarkation and supply points in the joint security area and  
4289 extends to the forward line of troops. Distribution execution becomes ever more complex and threatened by  
4290 enemy action as it moves from higher to lower echelons. Distribution planners must understand that  
4291 retrograde of materiel, casualties, and human remains is a significant component of distribution and requires  
4292 extensive planning and management. Well-developed distribution plans, synchronized across all warfighting  
4293 functions and echelons with redundancy, are critical to ensure all units have the materiel and personnel  
4294 needed for maximum capability. Figure 5-2 on page 5-14 displays a graphic depiction of a distribution  
4295 network.

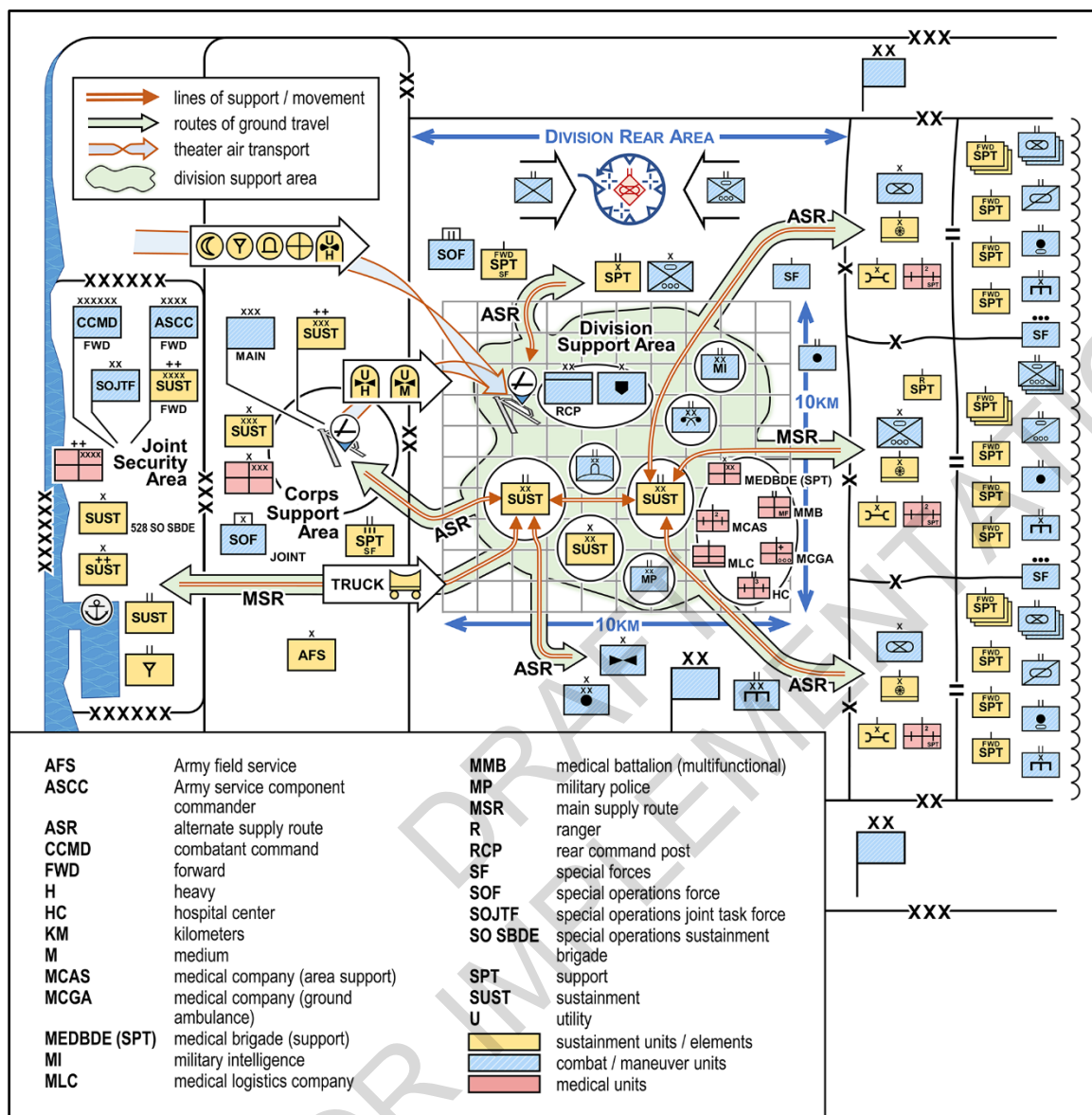


Figure 5-2. Distribution network

5-66. Sustainment planning is not a singular activity, but both a continuous and a cyclical part of the operations process. While planning may start based upon receipt of a specific mission as part of an iteration of the operations process, planning does not stop with the production of an order. During preparation and execution, the plan is continuously assessed against pre-established requirements and refined as the situation changes. Thorough assessment of measures like died-of-wounds rates, percentage of requisitions filled, operational readiness rates, and funding authorities and funds available (status of funds) can provide insight as to what is and is not working, and how the unit can adapt to changing conditions. Feedback from subordinate units and supported formations can also contribute to this insight.

5-67. Sustainment planners should expect maneuver units to be degraded to a large degree in supplies, communications, and equipment readiness due to equipment failure due to tempo and operational loss. Planning considerations must factor in major end item battle loss attrition, battle damage sustainment, and how the depots project OCONUS capabilities to support the OPLAN. During the set the theater planning process, theater Armies and their supporting TSCs must coordinate with the Center for Army Analysis and develop OPLAN battle loss and battle damage estimates with USAMC and its subordinate LCMCs. The

4311 TSCs, in conjunction with ASC and the USAMC LCMCs, need to plan for the footprint, support  
 4312 requirements, and force protection of depot maintenance forward repair activities.

4313 5-68. Contracted sustainment support should include considerations for operational security and address the  
 4314 constraints and limitations of contracted support. Planning should address under what conditions contracted  
 4315 support should be used and where to emplace it on the battlefield. During large-scale combat operations,  
 4316 planners should be aware of the location of contracting organizations forward of the corps rear boundary.  
 4317 This is for both operational security and effectiveness. Many contracting vendors use local nationals that may  
 4318 gather essential elements of friendly information and communicate that information to threat entities which  
 4319 could compromise an operation and lead to failure. Although local contracting for services and commodities  
 4320 might be limited due to operational area effects and constraints, these elements are present to support the  
 4321 maneuver forces with requirements anticipation, development, and provision of support.

4322 5-69. Transition from offensive operations to defensive operations requires sustainment forces to have Class  
 4323 IV stocks on-hand. Forces require every option to defend from attacks, and these include protective barrier  
 4324 material such as concertina wire, bastions, and lumber for overhead cover. Transitioning back to offensive  
 4325 operations may require aggregate for road repair, ford sites, and gap crossing preparation. Class IV is also  
 4326 required for detainee collection sites.

4327 5-70. Sustainment planners should anticipate increased expenditures of munitions during large-scale combat  
 4328 operations that could exceed the availability in theater. The munitions section of the TSC and ESC DMC  
 4329 must monitor expenditure rates in relation to stockage levels, forecasts regarding current and future  
 4330 operations, and limitations to re-supply and recommend controlled supply rates to the CCDR. Reconciling  
 4331 controlled supply rates and required supply rates is informed by OPLANS and anticipated expenditure rates.

4332 5-71. Ammunition planning includes determining ammunition requirements, echeloning capabilities and  
 4333 ammunition units, establishing split-based operations where required, pre-configuring ammunition and  
 4334 resupply, and, when required, using civilian, contractor, allied, and host-nation capabilities. A combat  
 4335 configured load is a mixed ammunition package designed to provide for the complete round concept, type of  
 4336 unit, type of vehicle, capacity of transporter, and weapons system (ATP 4-35). Contents of the package are  
 4337 predetermined and provide optimum distribution velocity, quality, and mix to support a particular weapon  
 4338 system or unit. Combat configured loads can be built at either the national-provider level or in a theater.  
 4339 Combat configured loads built at the national-provider level may be re-configured in theater at an ammunition  
 4340 supply point as required and delivered as far forward to the using unit as possible.

4341 5-72. Sustainment and supported units should consider building combat configured loads to meet the Class  
 4342 V demands for initial entry operations and large-scale combat operations. Configured loads represent a way  
 4343 of requesting or pushing ammunition rapidly with a mix of all or most of the munitions a weapons platform  
 4344 or unit needs. Combat configured loads can be quickly distributed to the platform level with little to no  
 4345 intermediate handling but are resource intensive. Building, storing, transporting, and rebuilding the  
 4346 configured load with unused Class V requires significant amounts of personnel, facilities, haul, and security.

4347 5-73. The supported unit commander determines ammunition required supply rates based on desired effects  
 4348 (obscure, destroy, defeat, suppress), knowledge of upcoming tactical operations, and input from subordinate  
 4349 organizations including the supporting sustainment unit. The supported commander should also ensure a  
 4350 sustainment representative participates in targeting boards to provide subject matter expertise. The supporting  
 4351 unit commander manages the allocation and distribution of munitions based upon the supported commander's  
 4352 sustainment priorities. The supporting commander calculates and recommends composition of combat  
 4353 configured loads based upon the controlled supply rate, forecasting, and historical data.

4354 5-74. Explosive ordnance threats may be present across the competition continuum during the conduct of  
 4355 operations both in CONUS and OCONUS. EOD detects, identifies, evaluates, renders safe, and conducts  
 4356 exploitation, disposal, or other disposition of explosive ordnance, including weapons of mass destruction.  
 4357 Commanders manage risk posed by explosive ordnance by synchronizing and integrating EOD during the  
 4358 planning and execution of operations to protect life, property, and priority assets.

4359 5-75. Sustainment commanders and leaders at all levels must have a complete understanding of the maneuver  
 4360 unit's concept of operation. This is the only way to understand and proactively anticipate the requirements to  
 4361 support current and future operations. It allows commanders to use command and control and the operations  
 4362 process to plan, prepare, execute, and assess the appropriate support functions. Interaction with the supported

unit planners is critical to this understanding. At the company level, this requires interaction with the maneuver company headquarters. At echelons with staff, the interaction must be with the S-1/G-1, S-3/G-3, S-4/G-4, S-8/G-8, and the unit surgeon. Sustainment planning must be executed in parallel and collaboratively with operational planning to ensure complete integration and synchronization.

5-76. The concept of operations drives requirements determination for all sustainment functions. Ideally, it will identify support priorities in terms of units, support functions, and commodities. This allows sustainment commanders to understand the sustainment requirements and to plan accordingly.

5-77. In addition to the concept of operations, sustainment commanders must understand the OE and the problems it presents to support operations. This is one of the most critical aspects of supporting large-scale combat operations. Time, space, enemy, and environmental threats all impact a sustainment commander's ability to develop an executable support concept. Planning for echeloned sustainment support should be done on a continuous basis. Figure 5-3 depicts an example of echeloned sustainment using field, combat, and company trains to include templated distances between locations. Operational and mission variables should be considered when actually selecting locations and determining distances between locations. The purpose of the field trains is to receive, configure and deliver all classes of supply forward and synchronize with the BSB. The purpose of the combat trains is to generate combat power and return it to the unit's fighting formations and to execute sustainment operations with company trains. Additional information on field and combat trains can be found in ATP 4-90.

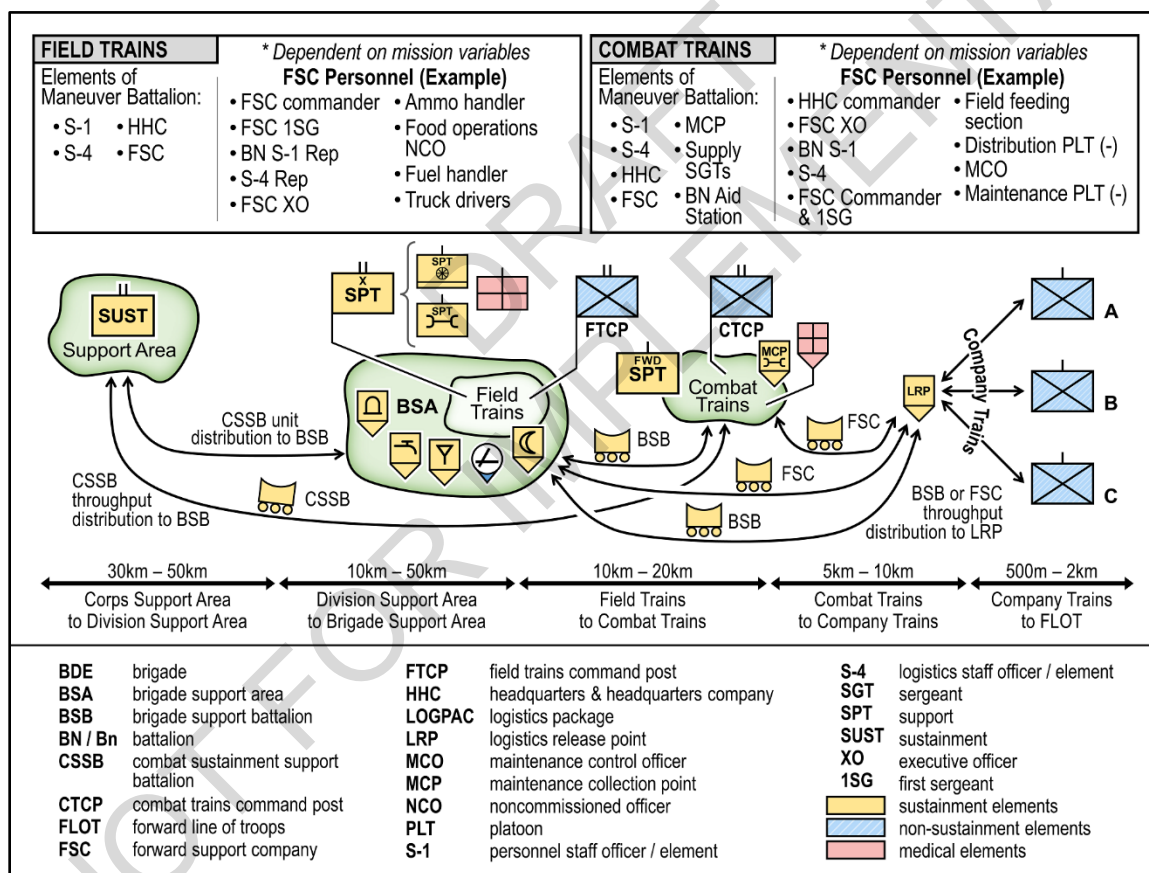


Figure 5-3. Example of echeloned support

5-78. Risk, uncertainty, and chance are inherent in all military operations. Sustainment planners must seek to balance and understand risks, rather than avoid them, to ensure continuous sustainment of the operational force. Sustainment planners should develop mitigation and risk reduction strategies to reduce and/or minimize the effects of risks. Military deception activities seek to hold the adversary's attention and can mitigate the impact of hazards that drive risk. Sustainment capabilities can be used at echelon by operational

commanders to deceive an adversary. Conducting joint logistics-over-the shore operations at multiple ports can deceive the adversary as to the true intent of the United States. Sustainment commanders must assess and mitigate risks continuously throughout operations. The ability to sustain units in the corps, division, and brigade areas of operation will incur significantly high risks resulting from conventional and hybrid threats. Sustainment units must be trained and prepared to execute reconnaissance and security tasks when military police are unavailable to ensure they can accomplish their sustainment missions.

5-79. To deal with expected direct enemy attack by aircraft and long-range artillery, commanders plan to disperse into smaller bases and base clusters. This applies to all bases from the BSA to bases operating in the joint security area. Units should train on communicating and securing base clusters with available personnel and equipment to prevent communications disruptions and potential fratricide. Dispersion mitigates effects of long-range fires and attack aircraft, but commanders still consider all security integration implications of the base cluster. Commanders ensure base defense measures are adequate to detect and defeat small unit operations (Level I or Level II threats) and that units use adequate cover and concealment measures to prevent detection by enemy forces. Security of base clusters should be integrated into planning.

5-80. Dispersion is essential, but it must be orderly enough to enable sustainment operations to continue after a brief period of reorganization and resupply with collaborative multi-echelon planning and coordination. Both command and control nodes and support capabilities in the support and consolidation areas are lucrative targets for the enemy. While dispersion may provide protection against long-range fires, it potentially makes defending against other threats like irregular forces or SOF more difficult. For sustainment of large-scale combat operations, there can be no massive stockpiles outside of sanctuary with appropriate assets assigned to maintain them. Sustainment commanders ensure as much dispersion as tactically prudent to prevent destruction. Wide dispersion of forces and lengthening LOCs create challenges for movement control, in-transit visibility, terminal operations, mode operations, and many other sustainment activities. The POL pipeline presents the same challenges. Pipeline security can be a significant challenge and cover a very large or isolated geographical area. Sustainment commanders must anticipate mitigating challenges presented by the need to disperse versus priorities of support. Shortfalls in transportation assets will require deliberative planning to overcome these mobility challenges.

5-81. Dispersion and the distributed nature of large-scale combat operations create increased requirements on transportation assets. Two corps with six divisions engaged in tactical formation for offensive operations may occupy an area roughly the size of Connecticut (5,000 square miles), significantly impacting demands on transportation assets. Planners must consider transportation requirements such as distribution and retrograde of materiel and personnel. For line haul operations, planners should consider one trip per day covering 90 miles one way to support materiel and personnel moving from the BSB to the FSC. For local haul operations, planners should consider two or more trips per day covering 20 miles each way to support materiel and personnel moving from the FSC to forward locations. Transportation requirements that exceed Army capabilities must be mitigated through support from contracting, the joint Services, multinational partners, or other unified action partners.

## PERSONNEL SERVICE PLANNING CONSIDERATIONS

5-82. Units will also have large numbers of casualties that require immediate treatment and evacuation. Units should identify potential medically related commander's critical information as it pertains to the health threat. A rapid and accurate assessment of supported unit status and support capability is critical. This is normally accomplished using command and control systems and specifically through LOGSTAT and PERSTAT reporting generated from the lowest levels through all command echelons. Sustainment planners at all echelons must ensure synchronization of replacement operations to sustain units suffering high casualties during large-scale combat operations. Corps, division, and brigade echelons require capability to receive, orient, and integrate replacements. HR planners send prioritized replacement requests, based on current strength and anticipated losses, to maintain units in combat at or near full strength. Units should have a standard operating procedure and plan to execute deliberate reorganization as a routine operation to integrate personnel replacements and equipment.

5-83. The planning process must include planning for mass casualties as well as processing and integrating large-scale replacements at echelon. The ASCC G-1 must continuously integrate with the TSC, ESC, corps, and divisions for proper replacement flow in theater.



5-84. The ASCC G-1/AG is responsible for developing casualty estimates (arranged by skill and grade), corresponding replacement requirements, and identifying replacement staging bases as part of the deliberate planning process to support the OPLAN. Replacements are sourced as part of the TPFDD. For replacement units, HQDA will task Army command, ASCC, and direct reporting unit commanders to provide replacement units to the requesting commander. HRC, in coordination with HQDA Deputy Chief of Staff, G-1 and FORSCOM, executes total Army manning and assists Army commands in developing replacement force packages (buddy teams, squads, crews, platoons, companies). HRC is responsible for implementing non-unit related personnel distribution to support replacement operations.

5-85. Sustainment planners should anticipate the effects of CBRN conditions. This includes impacts to supply routes and increases in requirements for non-potable water and chemical defense equipment, such as individual protective equipment, filters, and CBRN medical countermeasures. CBRN defense planning must include detailed procedures for assessing the threat, protecting people, resources, and equipment, and mitigating the impact. For more information see FM 3-11. CBRN defense plans must also include procedures for processing contaminated human remains and equipment decontamination. IAW DOD and Federal policy, the safety of the living takes precedence over the evacuation of contaminated remains. If unable to be decontaminated for transport, contaminated human remains will not depart the theater of operations. Sustainment planners must identify and resource cold storage or interment. For more information on decontamination of human remains, see ATP 4-46.

5-86. Sustainment planners must consider fatality estimates, the flow of allocated mortuary affairs assets into the theater, and the sustainment channels with the most expedient available transportation resources to evacuate human remains. The evacuation of human remains should be without delay to preserve the forensic evidence for the Armed Forces Medical Examiner. Sustainment channels also provide for the evacuation of personal effects to the Joint Personal Effects Depot in CONUS. Evacuation of human remains and personal effects may place a significant strain on the transportation system. Planning must include transportation for U.S. citizens, multinational forces, HN, detainees, and detainees.

5-87. Despite the increased demand for unit replacements expected in large-scale combat operations, the requirement for individual replacements always exists. To begin the personnel flow as soon as possible after deployment, the Army initially uses a push system based on personnel requirements from approved casualty estimates and existing personnel shortages. As soon as possible after deployment, data on actual battlefield losses is used to adjust the push packages. While not a requisition system, the push package eventually reflects actual wartime requirements rather than casualty estimates. After utilization, the replacement system will transition to a pull operation based on theater requirements. The ASCC G-1 consolidates replacement requirements from subordinate organizations, receives replacement priorities from the ASCC G-3, and passes to the national HR provider.

5-88. Theater replacement operations entail the coordinated support, accountability, and distribution of individual replacements from the point of origin to requesting commanders. The TSC commander ensures that replacements are delivered from higher to lower echelons as far forward on the battlefield as possible based on distribution priorities established by the theater commander and requirements provided by the theater G-1. Normally, replacements are processed through the theater gateway, integrated into the theater database for accountability, and placed into the distribution network for movement to the unit of assignment. The sustainment brigade then coordinates transportation for distribution of replacements based on established priorities to unit of assignment. Unit of assignment decisions are relayed from the ASCC through the TSC to the sustainment brigade responsible for theater distribution or from the supported unit to the HROB at other echelons. The HROB is the key integrator between G-1/AG at echelon and the sustainment enterprise.

## **HEALTH SERVICE SUPPORT PLANNING CONSIDERATIONS**

5-89. AHS formations are designed as tailorable and modular units but may require significant additional transportation resources for mobility. A Role 3 hospital can take 72 hours to tear down, requires 22 additional flatbed trucks to move, and requires an additional 96 hours to be fully operational.

5-90. Medical formations are designed for modularity that facilitates augmentation, cross leveling, and reinforcement of Role 1 and 2 medical capabilities within the division or with assets from the MEDBDE (SPT). Role 1 and Role 2 capabilities consist of the following medical modules:



- 4490 • Combat medic section (Roles 1 and 2).
- 4491 • Ambulance squad (Roles 1 and 2).
- 4492 • Treatment squad (Roles 1 and 2).
- 4493 • Area support squad (Role 2).
- 4494 • Patient holding squad (Role 2).

4495 5-91. Evacuation of fatalities may not occur during large-scale combat operations based on the availability  
 4496 of transportation platforms and the tactical and operational situation. Casualty estimates indicate the capacity  
 4497 for human remains processing by mortuary affairs companies will be exceeded during large-scale combat  
 4498 operations and may require the establishment of an in-theater mortuary. Mortuary affairs companies prepare  
 4499 and temporarily store human remains until transportation to a CONUS port mortuary is available.  
 4500 Sustainment planners must coordinate for adequate cold storage capacity within close proximity to the theater  
 4501 mortuary evacuation point. Cold storage platforms such as refrigerated shipping containers and multi-  
 4502 temperature refrigerated container systems normally used for Class I storage may be used for the temporary  
 4503 storage of remains. It is important to note that these containers can be returned to service for Class I storage  
 4504 through a process of cleaning and disinfecting as outlined in TG 195A. Although a last resort, temporary  
 4505 interment operations may be the only option to account for and safeguard human remains until the cessation  
 4506 of hostilities. For additional information, see ADP 4-0, ATP 4-46, and JP 4-0.

## 4507 **MOBILITY PLANNING CONSIDERATIONS**

4508 5-92. Large-scale combat operations will require significant mobility and constant displacement to avoid  
 4509 indirect fires and other threats. The need to constantly displace will create competition for transportation  
 4510 assets that will be required to shift from executing distribution operations to assisting with the mobility of  
 4511 various headquarters to prevent their destruction. Commanders will have to weigh risks and establish  
 4512 priorities of support.

4513 5-93. It is essential to understand mobility planning considerations for units operating within the corps and  
 4514 division areas. Mobility is critical to survivability during large-scale combat operations. At the corps echelon  
 4515 and below, mobility can be broken down into tactical mobility and sustainment mobility. Competition for  
 4516 transportation assets is high when planning for mobility, and considerations should be made for the trade-  
 4517 offs between tactical mobility and sustainment mobility.

## 4518 **Tactical Mobility**

4519 5-94. *Tactical mobility* is the ability of friendly forces to move and maneuver freely on the battlefield relative  
 4520 to the enemy (ADP 3-90). By design, tactical units are generally more mobile and therefore require fewer  
 4521 external transportation assets to relocate. However, corps and division enablers have limited organic  
 4522 transportation assets and require significant assistance to move rapidly over long distances. Achieving tactical  
 4523 mobility varies based upon unit composition and based upon operational requirements. Sustainment units  
 4524 generally require external support from transportation enablers. It is difficult, but not impossible, for the DSB  
 4525 to conduct sustainment operations while displacing. The DSB requires augmentation from a corps  
 4526 sustainment brigade and prioritization of effort. Augmentation extends the division's tactical reach by  
 4527 enabling the DSB to push supplies to the BSB and the BSB to subsequently push supplies to supported units.  
 4528 Additional information on the mobility ratings and requirements for specific units can be found in Section 1  
 4529 of the modified table of organization and equipment.

## 4530 **Sustainment Mobility**

4531 5-95. Sustainment mobility is the ability to support logistics, financial management, personnel services, and  
 4532 health service support operations. Motor transport operations provide essential distribution and lift  
 4533 capabilities for supporting sustainment mobility. The DSB's composite truck company requires augmentation  
 4534 to support sustainment mobility. Without augmentation, the composite truck company's capacity is consumed  
 4535 with supporting tactical mobility. The lack of augmentation requires BSBs to pull supplies from the DSA  
 4536 instead of receiving supplies from the DSB. The FSCs in turn must then pull supplies from the BSA and push  
 4537 supplies to the forward line of own troops multiple times a day. By design, BCTs have two mobile days of

4538 supplies with one day of supplies located at the FSC and one day of supplies located at the BSB. The third  
4539 day of supplies is not mobile and is stored at the A company in the DSSB.

## 4540 MISSION ANALYSIS: REQUIREMENTS, CAPABILITIES, AND 4541 SHORTFALLS

4542 5-96. For sustainment planning, the most important factors are requirements, capabilities, and shortfalls. For  
4543 example, insufficient transportation assets impact the ability of sustainment units to rapidly disperse or  
4544 displace. Extended supply lines present significant challenges to bulk petroleum distribution. Peer threats  
4545 impact the Army's ability to outsource fuel distribution, forcing sustainment commands to use military assets  
4546 over extended supply lines. The inability to leverage OCS or host-nation assets may result in operational  
4547 pause or culmination before reaching an objective. Commanders and staffs at all echelons assess what is  
4548 needed to support the force, what is on hand, and how to mitigate any shortfalls in space and time. The results  
4549 developed by applying command and control systems and analytics in support of large-scale combat  
4550 operations differ from those during prevent operations in scope and composition, but the analytical process  
4551 is the same. The same is true of capability assessment. Chapter 2 outlines some basics.

4552 5-97. Protection planning is a continuous process that must include a thorough understanding of a dynamic  
4553 operating environment. Sustainment planners must also consider requesting additional security and control  
4554 measures (military police escort, route clearance, checkpoints, traffic control points) to protect movements  
4555 or alleviate traffic concerns along an area of a specific route. Sustainment Planners must be actively  
4556 participants in the protection working group to articulate, organize, and synchronize needed security  
4557 resources and activities. Additional security and control measures may be established to facilitate the  
4558 movement of a single element, or they may be established for a longer period of time to facilitate the  
4559 movement of a number of elements along a given route. The owner of an AO should apply protection  
4560 measures within the AO along an established main supply route or a route designated for unit movement  
4561 when there is an increased enemy threat. See ADP 3-37 for additional information on protection.

4562 5-98. BCTs with organic BSBs and FSCs have relatively robust logistics capability to fulfill maintenance  
4563 requirements in most cases. However, a shortfall exists in ABCTs and SBCTs because these lack track and  
4564 specialized armor maintenance capabilities beyond the FSC. Commanders in the two-level maintenance  
4565 system have multiple options available for maximizing maintenance capabilities. Commanders may want to  
4566 consider echeloning maintenance and recovery assets to maintain responsive support to sustain momentum  
4567 and preserve combat power. Commanders may choose to utilize multiple maintenance collection points to  
4568 optimize repair and limited recovery resources. Commanders may also authorize battle damage assessment  
4569 and repair, controlled exchange, or overrides to deficiencies so equipment can be operated under the specific  
4570 limitations directed by higher authority. Establishing timelines, standards, and resources for these actions  
4571 should be addressed in unit standard operating procedures.

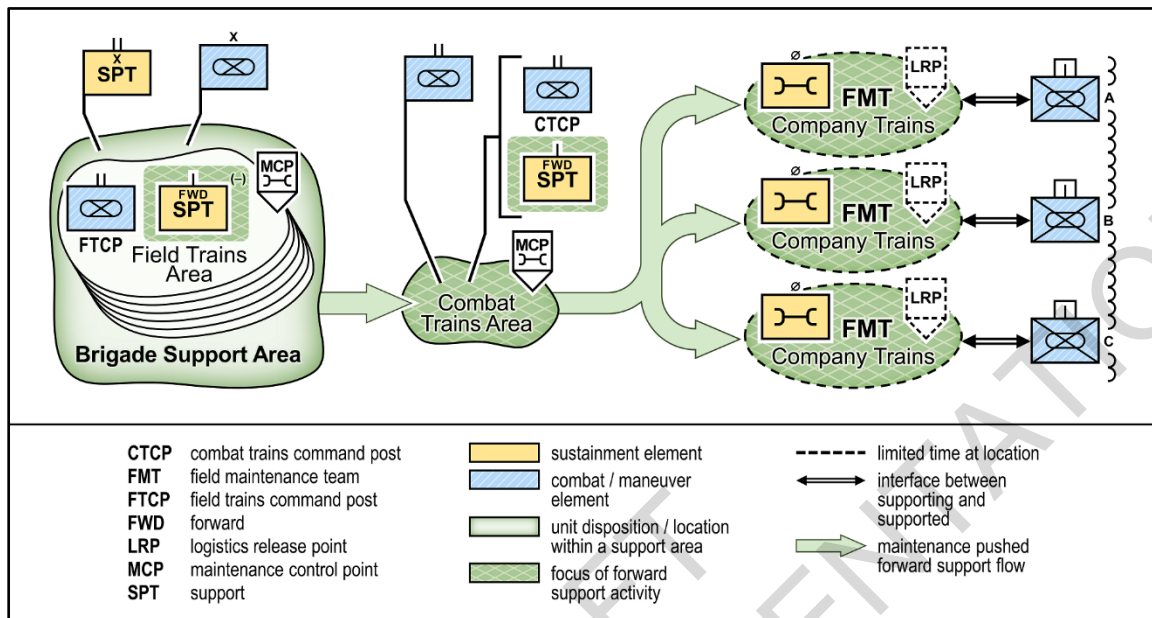
4572 5-99. Figure 5-4 depicts an example of echeloned maintenance capabilities for an organic FSC in support of  
4573 an ABCT. In this example, the FSC commander arrays the field maintenance section and recovery section in  
4574 three echelons. In the first echelon, a field maintenance team with two or more maintainers and a tracked  
4575 recovery vehicle are located in each of the company trains. The teams assist the company's vehicle operators  
4576 and personnel with verifying faults, repairing minor issues, and ordering parts.

4577 5-100. Vehicles requiring repairs that exceed the timelines established in the unit standard operating  
4578 procedures are evacuated from the company trains to the second echelon. In this example, the maintenance  
4579 collection point containing the majority of the FSC maintainers is the second echelon. The maintainers work  
4580 on vehicles and equipment to repair and return forward IAW unit standard operating procedure timelines.

4581 5-101. Vehicles and equipment at the second echelon that exceed repair timelines in the unit standard  
4582 operating procedure are further evacuated to the third echelon shown as the BSA. The FSC commander keeps  
4583 a small team of maintainers in the field trains located in the BSA. Their role is to make a final attempt to  
4584 repair equipment at field-level maintenance before it is coded out and turned in for sustainment-level  
4585 maintenance.

4586 5-102. If the ABCT must move forward, the maneuver commander must choose to either leave the  
4587 maintenance collection point in place, move the maintenance collection point forward with the unit, evacuate

the equipment in the maintenance collection point back to the BSA, or move the BSA forward to the maintenance collection point. There is significant risk associated with each course of action and the commander chooses the optimal one based on operational requirements.

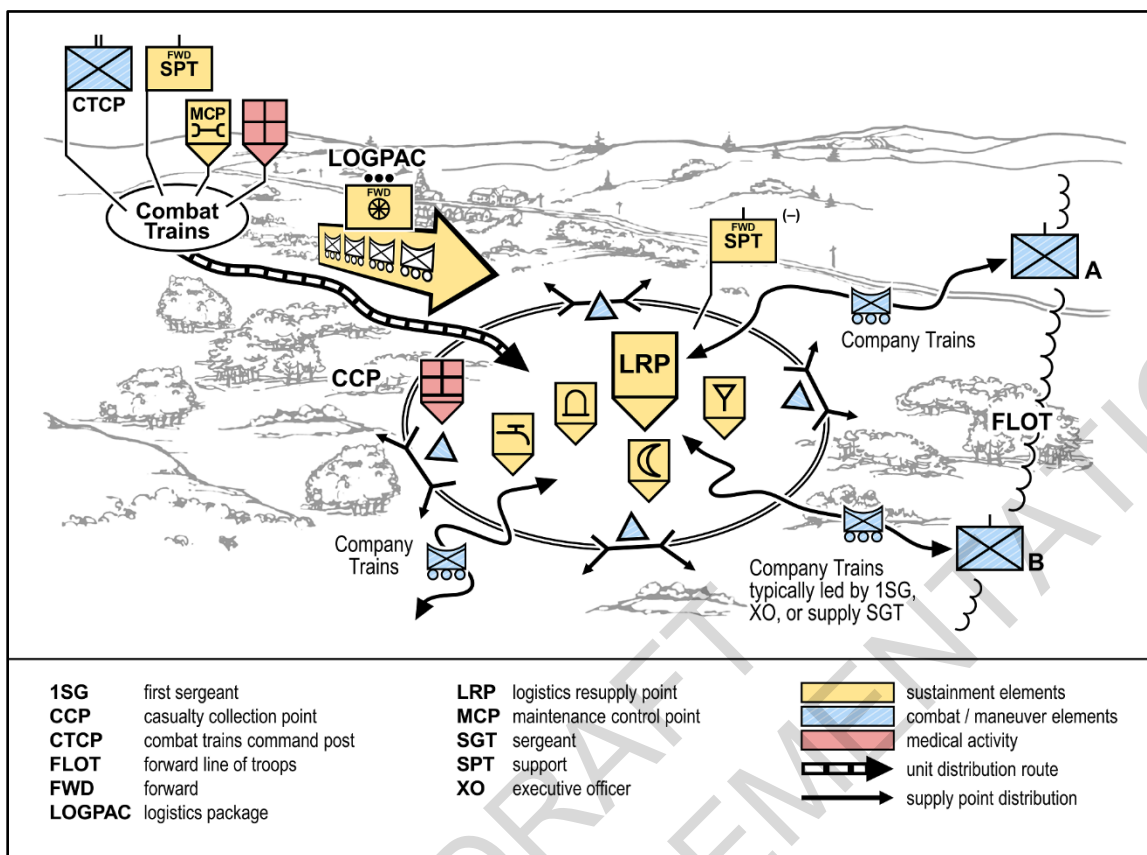


**Figure 5-4. Examples of echeloned maintenance support to an ABCT**

5-103. BCTs with organic BSBs and FSCs also have relatively robust logistics capability to fulfill other support requirements. Their personnel services and HSS capability is similar, with limitations and dependencies on EAB formations and their support relationships. Field artillery units have organic sustainment organizations, but lack certain capabilities (such as commodity maintenance, separate distribution, and brigade support medical companies) that BCTs possess.

5-104. BCTs with organic BSBs and FSCs most commonly execute supply point distribution to fulfill requirements by means of logistics release points (LRPs). LRPs may be any place on the ground where distribution unit vehicles take supplies and are met by the supported unit that then takes the supplies forward to their unit for subsequent distribution.

5-105. Units use LRPs to maximize efficient use of distribution assets and reduce the amount of time and distance supported units must travel in order to receive supplies needed for missions. LRPs are often located between the combat trains and the emplaced maneuver battalion's company trains. They are normally established and secured for only a limited duration. Resupply operations at LRPs are planned, coordinated, and synchronized operations conducted to mitigate shortfalls. Figure 5-5 on page 5-22 depicts an example of an LRP on a battlefield.



**Figure 5-5. Examples of a logistics release point**

5-106. At EAB, Army sustainment capability is modular and based on the specific task organization of TSCs, ESCs, TMCs, DSBs, sustainment brigades, MEDBDEs (SPT), TBXs, CSSBs, and DSSBs. Planners must also consider other sources of support (for example, DLA, HNS, contracted support, and support from other Services). As discussed in the previous chapter, planners assess support capabilities and build task organizations. How these capabilities are arrayed on the battlefield forms the foundation of the sustainment concept of support.

5-107. Analysis does not end with the formation of the task organization and concept of support. Commanders and staffs track and assess readiness of systems, personnel, and equipment as a baseline for adjusting support plans. The G-4 has coordinating staff integrating responsibility for the G-1, G-8, transportation officer, and the surgeon. At the brigade and battalion levels, the S-4 is the primary staff officer for logistics. The G-4 or S-4 prepares annex F (Sustainment), annex P (Host-Nation Support), and, in coordination with the AFSB and CSB, prepares annex W (Operational Contract Support) with appendices 1, 2, and 3 (as these are key to setting the theater for contracting support and completing the operation order or operation plan). The logistics planner in the theater, corps, or division G-5 provides sustainment input to annex A (Task Organization), annex C (Operations), and annex M (Assessment) to the operation order or operation plan. The surgeon prepares appendix 3 (Health Service Support) of annex F and also appendix 9 (Force Health Protection) of annex E (Protection). The sustainment staffs provide input to the operations staffs for the COP.

5-108. The sustainment staffs determine sustainment requirements for subordinate units, track the sustainment status of subordinate units, and establish support priorities IAW the commander's priorities and intent. The S-4 or G-4 monitors logistics requirements, the S-1 or G-1 does the same for personnel readiness, the S-8 or G-8 for financial management, and the surgeon for HSS. The staffs work in close coordination with the sustainment organizations supporting their echelon.

5-109. For logistics, the primary staff section in the TSC and ESC is the DMC. For HR, the TPOC synchronizes external human resources support with the TSC DMC and the HROB within the ESC DMC and DSB/sustainment brigade support operations sections. The surgeon sections within the ESC and DSB/sustainment brigade plan and assess medical operations; this includes medical treatment, medical evacuation and regulating, and medical logistics within ESC and sustainment brigade units. The ESC and DSB/sustainment brigade surgeons advise their commanders on the health of the command and coordinate with the TMC and MEDBDE (SPT) for AHS support at EAB. The ESC and DSB/sustainment brigade surgeon sections work closely with the corps or division surgeon sections to ensure synchronization with medical evacuation, casualty evacuation, and the distribution plans for Class VIII. The DSB, sustainment brigade, TBX, DSSB, CSSB, and BSB all have support operations sections. The key staff position in sustainment formations is the support operations officer. The support operations staff supports the headquarters staff with the sustainment preparation of the OE and determining supply, maintenance workload, and AHS support requirements. In a support unit, the unit's current operations cell maintains the COP with sustainment specific input from the unit DMC or support operations staff.

5-110. Until the Army Readiness-COP is fully operational, LOGSTAT and PERSTAT reports are the tools used as a basis to track and assess readiness of systems, personnel, and equipment. They are compiled by all types of units and originate at the lowest echelons—teams and squads. The reports flow from the lower echelons and are compiled at each subsequently higher echelon for assessment and analysis. At the company echelon, the information is compiled by the command element: company commander, executive officer, and first sergeant. At battalion and higher echelons, the information is received and analyzed by the S-1/G-1 and the S-4/G-4. Within sustainment organizations at battalion level and higher, the LOGSTAT is received and analyzed by the SPO staff. Figure 5-6 depicts the SPO to G-4/S-4 linkages at each echelon. The PERSTAT is received and processed through the G-1 chain.

5-111. LOGSTAT and PERSTAT reports must flow through both operational headquarters and sustainment headquarters in parallel to provide a COP. As an example, a maneuver company within a BCT should submit a LOGSTAT to the battalion headquarters and to the supporting FSC. This provides the battalion headquarters with information to assess the company's readiness status and identifies critical shortages to the battalion staff. It also provides the FSC with the same information that identifies requirements and allows the FSC leaders to plan support.

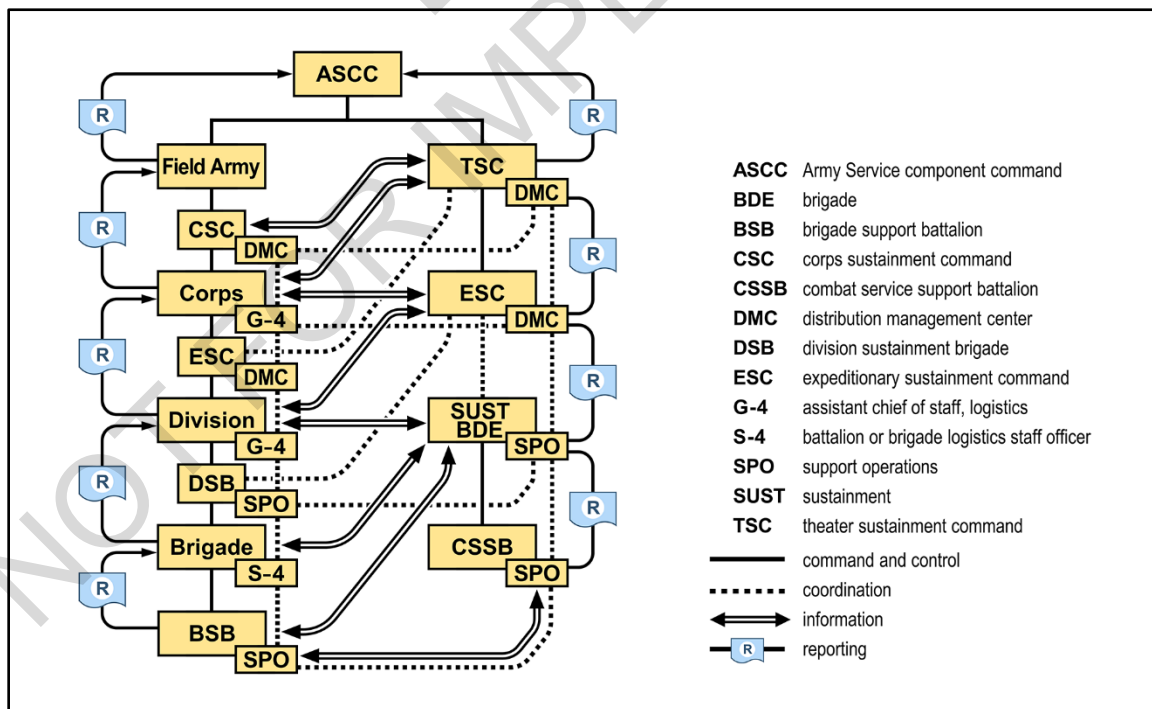


Figure 5-6. Support operations to G-4/S-4 linkages at echelon

5-112. LOGSTAT and PERSTAT reports should provide commanders with enough information to support decision making and be tied to the commander's critical information requirements. LOGSTAT and PERSTAT reports can also be used to anticipate requirements and begin the planning process for future operations. The reports should not contain superfluous information that is irrelevant and makes compiling the report too difficult or time consuming. Information submitted in LOGSTATs and PERSTATs include, but is not limited to, personnel status (to include critical military occupational skill shortages), status of critical supplies, status of major weapon systems, and status of critical support equipment (for example, transportation assets, materials handling equipment, water treatment resources, maintenance test sets, and funding authorities).

5-113. LOGSTAT and PERSTAT reports are submitted using available command and control or sustainment information systems. The content of the reports generated are based upon the needs of the commander and staff. Reports may be submitted via radio if required. Commanders plan for LOGSTAT and PERSTAT report submission during periods of degraded communications. Analog reports are a means for providing status reports during degraded operations. Effective LOGSTAT and PERSTAT reporting requires command emphasis. The timing of sustainment status report submissions is based on both the commander's requirements and unit battle rhythm. Typically, these reports are submitted at least once daily and whenever a significant change occurs. The commander may require more frequent status updates during periods of increased intensity. See appendix E for LOGSTAT and PERSTAT reports.

5-114. The Army has a deployed theater accountability system for use in a deployed theater. In the event the deployed theater accountability system is not available (due to lack of bandwidth, degraded communications, or other issues), manual reports such as the PERSTAT, personnel summary, and personnel requirements report can be used. Within a deployed theater, the ASCC G-1/AG establishes PERSTAT reporting requirements for unit strengths to include required "as of" times. When operating in a joint environment, the joint PERSTAT requires the same data elements as the PERSTAT. Standardized LOGSTAT and PERSTAT reports are located in appendix G.

## ASSESSMENT

5-115. *Assessment* is a continuous process that measures the overall effectiveness of employing capabilities during military operations (JP 1-02). Assessment is a critical part of planning considerations for sustainment operations. Assessment allows commanders, staffs, and leaders to gain situational awareness of current conditions and measure the effectiveness of sustainment operations. If conducted properly, assessment provides commanders, staffs, and leaders with the necessary information to determine all sustainment support requirements and adjust plans. Assessment should include the following requirements at a minimum:

- Assess the threats and hazards that may impact the freedom of sustainment operations throughout the OE, as well as the suitability of protection resources and activities to meet current and future operational objectives.
- Assess the status of the support capability of organic, attached, and assigned units. This includes, but is not limited to, status of personnel strength, equipment readiness, critical equipment on hand, critical supplies on hand by class, casualty status, organic medical capability (if applicable), and operational losses. This information is used to determine support requirements by sustainment function. It identifies problem areas such as combat ineffective units and shortages of critical supplies such as precision munitions.
- Assess the status of supported units to determine specific sustainment requirements in order to develop a concept of support that can effectively meet those requirements.
- Assess the status of sustainment support capability to determine if the support assets available have the required capability to support defensive operations. This assessment should determine if the sustainment task organization is adequate to support the defensive mission and identify shortfalls in terms of sustainment functionality.
- Assess time to execute sustainment operations, as it should also be a factor in determining sustainment support capability. Timing and windows for execution will vary during operations against a peer threat. Planners must know the time available versus time to execute versus next time to execute.

- Assess the OE to identify aspects that will present problems or cause difficulty to the support concept execution. All operational and mission variables should be examined to determine if any would impact the operation and freedom of action.

5-116. Ultimately, assessment allows commanders and staffs to diagnose problems and determine operational adjustments needed to ensure the support concept is adequate to achieve the desired results. It also provides commanders and staffs with information on how sustainment operations are progressing and identifies problem areas where commanders can expect friction or conflict.

5-117. Assessment precedes and guides every operations process activity and concludes each operation or phase of an operation. While assessment is listed as the last operations process task, it is continuous. Throughout execution, staffs use running estimates to assess if support operations are occurring as planned and if the desired results are being achieved. This information is passed up through the chain of command and is compiled at each echelon. It must be reported parallel through maneuver and sustainment channels to build a common operational picture of the sustainment status.

5-118. Assessment should also determine specific sustainment functional gaps in capability and report to higher HQ for appropriate action. It includes, but is not limited to, the following:

- Status of required supplies by class of supply. This should be in terms of quantities on hand to allow planners to balance on-hand quantities with required quantities. Planners should also assess supply positioning to ensure supplies are positioned properly to support the defense and priority efforts.
- Status of field maintenance capability to ensure it is adequate to repair damaged equipment to meet operational readiness requirements and timetables. The assessment should include critical maintenance equipment such as testing and fabrication equipment.
- Status of transportation capability to ensure it is adequate to transport required commodities. All types of transportation assets should be assessed: light, medium, heavy, aircraft, aerial delivery, water, rail, and petroleum transportation.
- Status of shower and laundry, field services, and mortuary affairs capability and location.
- Changes to distance that affect distribution calculations.
- Status of AHS capabilities to include medical treatment (holding), hospitalization (surgical and bed status), medical logistics (CL VIII, blood on hand, medical device maintenance and shortages), and medical evacuation. Planners should assess the positioning of medical units to support the defense and priority efforts.
- Status of sustainment information systems interfaces to include Combat Service Support Automated Information System Interface and the Combat Service Support Very Small Aperture Terminal.
- Status of HR support capabilities, casualties, personnel strength, and availability of personnel replacements to ensure adequate HR support, religious support, and identify any critical personnel shortages, and/or combat ineffective units to rebuild combat power or consider reconstitution. HR managers report personnel requirements through a personnel requirements report. This report lists unit personnel replacement requirements by grade and military occupational specialty and is based on comparison of authorized versus assigned strength.
- Status of financial management capabilities, funding authorities, and funds available (status of funds) to support mission requirements.

## SUSTAINMENT SYNCHRONIZATION

5-119. Logistics, financial management, personnel services, and HSS require coordination and synchronization at every stage of the planning process. This synchronization is crucial in large-scale combat operations with its inherent distributed nature. Only by integrating and synchronizing sustainment functions can the sustainment system produce required effects at the speed, volume, velocity, and lethality of large-scale combat operations.

5-120. Sustainment commanders and staffs present synchronized courses of action commensurate with sustainment capabilities to allow as much freedom of action as possible. Limitations such as insufficient



infrastructure or non-availability of key classes of supply have a bearing on the commander's ability to execute the mission and are accounted for in the planning process. Sustainment leaders also coordinate, synchronize, and integrate the sustainment plan with joint and other unified action partners to ensure continuous linkage with strategic-level providers. A successful sustainment plan will extend operational reach, prevent culmination or loss of the initiative, manage transitions, exploit possible opportunities, and mitigate risk.

5-121. Identifying and accepting prudent risk is a principle of mission command. Throughout the operations process, commanders and staffs use risk management to identify and mitigate risks associated with all hazards that have the potential to injure or kill friendly and civilian personnel, damage or destroy equipment, or otherwise impact mission effectiveness. For sustainment commanders and staffs, identifying and mitigating risk must always include not only risk to finite and limited sustainment capabilities, but also how those capabilities are employed to enable freedom of action and extend operational reach.

5-122. Sustainment synchronization remains the focus as sustainment commanders plan for and coordinate support through such continuing activities as battle rhythm events, information collection, liaison, meetings, protection efforts, and reporting. For the purposes of sustaining large-scale combat operations, two of these—liaison and reporting—require special emphasis.

5-123. Liaison refers to contact or intercommunication maintained between elements of military forces or other agencies to ensure shared understanding and unity of purpose and action. Most commonly used for establishing and maintaining close communications, liaison continuously enables direct, physical communications between commands.

5-124. Sustainment commanders and staffs have the continuous requirement to coordinate with higher, lower, adjacent, supporting, and supported units and civilian organizations. The sustainment liaisons participate in boards, bureaus, cells, centers, and working groups, especially in the case of the TSC with the ASCC, the ESC with the corps, the DSB with the division, the BSB with the BCT, and the ASB with the CAB. While the use of liaisons taxes organic staff manpower in sustainment organizations, their presence and active participation is essential to sustaining large-scale combat operations and mitigating the effects of dispersion, threat disruption of communications, and accelerated tempo.

5-125. Both maneuver and sustainment commanders rely on logistics and personnel status reports to identify support requirements and capabilities to enable large-scale combat operations. Sustainment staffs use data from sustainment estimation tools, higher headquarters orders, and documents such as country studies to develop running estimates. A running estimate is the continuous assessment of facts, assumptions, constraints, and limitations concerning the current situation and OE used to determine if the current operation is proceeding according to the commander's intent and if planned future operations are supportable. Using sustainment information systems, commodity managers include information in running estimates such as quantity on-hand, quantity consumed, expected quantity on-hand, and expected consumption to anticipate requirements and assist in synchronization. Each staff element and CP functional cell maintains a running estimate focused on how its specific areas of expertise are postured to support future operations.

5-126. Current sustainment systems possess vulnerabilities and connectivity requirements that may make them susceptible to disruption and deliberate targeting by threat forces, both lethally and non-lethally. To mitigate this vulnerability and maintain an accurate readiness COP, organizations develop the battle rhythm, data cut-off times, as-of times, and reporting times. Commanders and staffs also balance the timeliness and potential latency of reporting with the amount of time needed to analyze data when evaluating unit readiness and combat capability.

5-127. Sustainment enterprise resource planning systems and associated decision support tools help provide near real-time status with minimal staff effort required to gather and display information from multiple databases. Integrating this information with command and control systems is crucial to give the sustainment leaders and supported commanders and staffs the identical current COP. The value of integrated sustainment information systems and command and control systems is that everyone on the network can see and use the same reported information to plan and control operations. For more details, see appendix E.



5-128. Sustainment rehearsals are critical to synchronization and the success and accomplishment of the mission. Conducting sustainment rehearsals immediately after combined arms rehearsals ensures understanding and synchronization of the unit's maneuver and sustainment plans as it traverses the battlefield. It is critical that the combined arms team and all elements of sustainment are represented and participate in sustainment rehearsals to ensure all sustainment commodities understand how these integrate with other elements of sustainment to accomplish the mission. The sustainment rehearsal helps synchronize the sustainment warfighting function with the other warfighting functions to create a shared understanding of the plan.

#### ***Sustainment Rehearsals***

- Critical to success and mission accomplishment.
- Synchronize the sustainment warfighting function with other warfighting functions.
- Should be conducted immediately after the combined arms rehearsal.
- Facilitate understanding and synchronization of the unit's maneuver plan.
- Participants must include the combined arms team and all elements of sustainment.

## **REAR OPERATIONS**

5-129. *Rear operations* are tactical actions behind major subordinate maneuver forces that facilitate movement, extend operational reach, and maintain desired tempo (FM 3-0). This includes continuity of sustainment and C2. Rear operations support close and deep operations. At the operational level, rear operations sustain current operations and prepare for the next phase of the campaign or major operation. These operations are distributed, complex, and continuous. At the tactical level, rear operations enable the desired tempo of combat, assuring that friendly forces have the agility to exploit any opportunity. Rear operations typically include five broad activities:

- Positioning and moving reserves.
- Positioning and repositioning aviation, fire support, and AMD units.
- Conducting support area operations.
- Securing sustainment and C2 nodes.
- Controlling tactical unit movement between the division or corps rear boundary and units conducting close operations.

5-130. Rear operations typically include efforts that consolidate gains to make conditions created by deep and close operations more permanent. All of these activities compete for limited terrain and lines of communications. Division and corps rear command posts are generally responsible for rear operations.

5-131. The rear area is inside the commander's overall AO. Some of it may be assigned to subordinate units, and some of it may be retained by the commander. The rear area is normally, but not always, distributed in multiple locations across an echelon. It is where most of an echelon's sustaining operations occur (Figure 5-7 on page 5-28 depicts the joint security area and corps support area operations and figure 5-8 on page 5-29 depicts a division and brigade support area operations). The geographic size of a rear area is based on mission and operational variables and is difficult to quantify. These variables include the number of units assigned to the rear area, the existing threat, and the amount of terrain that can be influenced by the unit assigned rear area responsibility. As an example, for a division rear area, if it is assumed to be a brigade-sized area, it will be approximately 20 square kilometers. This number is for general planning consideration and to give readers an idea of the geographic scope of a division rear area and the impact it has on command and control and protection. It should be understood that division rear area size may vary widely. The corps rear area will be significantly larger.

5-132. Within the joint security area, strategic enablers such as USTRANSCOM, USAMC, DLA, and each of their individual subordinate components link strategic support activities with theater support activities. Examples of these activities include synchronizing strategic and operational distribution of equipment, supplies, and personnel; managing materiel and establishing contracts; establishing theater fuel stocks; and managing excess property turn-in. USASOC coordinates operational support requirements while monitoring SOF activities within the theater. The TSC and ESC (with attached sustainment brigades) conduct RSOI for units arriving in theater and support the movement of those units forward to corps and division areas. The

TMC or MEDBDE (SPT) provides command and control of all EAB medical units providing direct or general support to the corps and division areas. Other sustainment forces in the joint security area support activities including Class I and Class III (Bulk) distribution, APOD and SPOD operations, personnel services, financial management activities, and other support tasks.

5-133. Within a division and corps rear area, a MEB is normally designated to control the area. If a MEB is not available, a BCT should be designated to control the area. Rear area control responsibilities include area security; terrain management; information collection, integration, and synchronization; civil affairs operations; civil-military operations; psychological operations; movement control; mobility support; clearance of fires; personnel recovery; airspace control; and minimum-essential stability tasks. This allows sustainment units to focus on their primary functions.

5-134. The corps headquarters is likely to position assets in the division rear area to facilitate division operations and enable freedom of action. The division headquarters orchestrates the sustainment and protection tasks essential to ensuring freedom of action in the division close and deep areas. Planning in the rear area largely influences current and future operations in the close and deep areas. The rear area is not a single large base; it is a base cluster comprised of multiple bases, each established by units assigned to the rear area. The MEB is responsible for terrain management to include placement and integrated protection of the bases.

## SUPPORT AREA OPERATIONS

5-135. Support area operations are a critical part of rear operations. *Support area operations* are the tactical actions securing lines of communications, bases, and base clusters that enable an echelon's sustainment and command and control (FM 3-0).

5-136. A support area is where units position, employ, and protect base sustainment assets and lines of communications required to sustain, enable, and control operations. Support area operations include sustainment for the echelon and relevant security operations. They enable the tempo of deep and close operations and require detailed planning to coordinate among the various units providing sustainment, protection, and security. A MEB or BCT typically provides C2 for support area operations for a division or corps due to the level of security, planning, and integration required.

## SUPPORT AREA SECURITY

5-137. Sustainment forces prepare for the various threats during support area operations and must be organically trained and manned to contribute to their own security. Threats in the division rear area are categorized by the three levels of defense required to counter them. Any or all threat levels may exist simultaneously in the division support area. All threats pose potential risks to sustainment and other support operations. Emphasis on base defense and security measures may depend on the anticipated threat level. 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 (ATP 3-91). A Level I threat for a typical base consists of a squad-sized unit or smaller groups of enemy soldiers, agents, or terrorists. Typical objectives for a Level I threat include supplying themselves from friendly supply stocks, disrupting friendly command and control nodes and logistics facilities, and interdicting friendly LOCs.

5-138. Units must also employ cover and concealment to prevent observation and detection of sustainment equipment and bases by reconnaissance elements, reconnaissance aircraft, drones, or attack aircraft. Cover and concealment includes signature management and emissions control. Dispersion aids in concealment and limits destruction and losses in the event of an attack. Units at all echelons must conduct CBRN defense preparation.

5-139. At higher echelons, military police units from the MEB enhance protection capabilities by performing area security within the rear areas. These units perform response-force operations to defeat Level II threats against bases and base clusters located in that support area. 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 (ATP 3-91). In the case of Level III threats, these units maintain contact with the threats in the division support area until the tactical combat force under the MEB's control can respond. A *Level III threat* is an

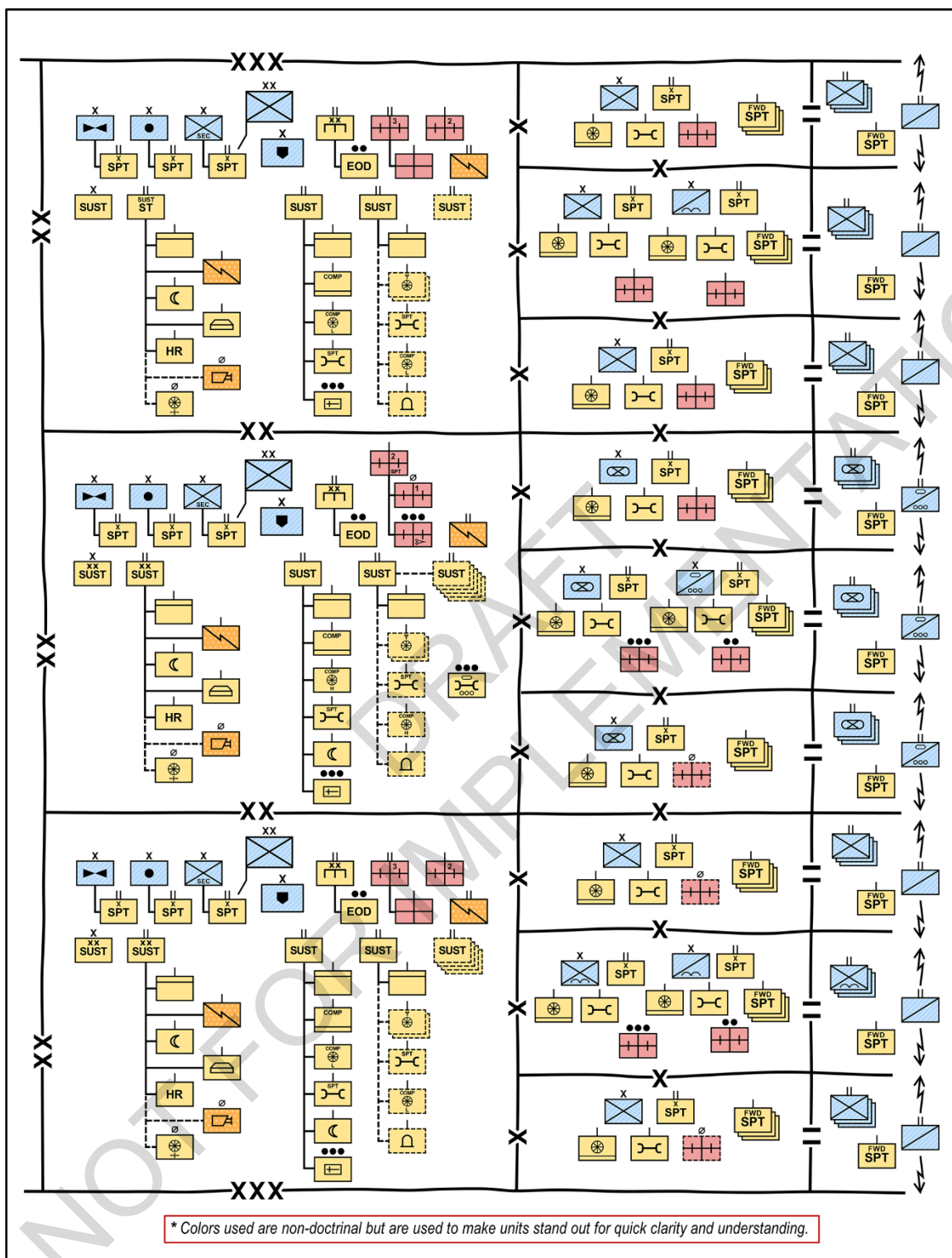
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4912

enemy force or activities beyond the defensive capability of both the base and base cluster and any local reserve or response force (ATP 3-91).



4913

Figure 5-7. Support area operations at echelon (joint security area/corps)



**Figure 5-8. Support area operation at echelon (division and brigade)**

5-140. Corps and division commanders designate close, deep, and rear operations to describe the physical arrangement of forces in time, space, and focus. Corps and division commanders should always designate a close area, a support area, and a deep area as required. The rear area does not necessarily need to surround or

contain the support area base clusters, but it typically does. The rear area requires a purposefully task-organized combined arms unit to conduct area security, stability tasks, employ and clear fires, and consolidate gains.

5-141. Army forces consolidate gains made in corps and division areas to build combat power for continued action against remaining enemy forces and protection of the civilian population. These gains include the establishment of military government and the use of populace and resources control measures to provide the minimum-essential stability operations tasks to establish civil security, support civil control, and provide for the population's immediate needs. Concurrently, corps and divisions must be able to accomplish these activities while sustaining, repositioning, and reorganizing subordinate units to continue operations in the close and deep area.

5-142. Consolidation of gains activities may encompass a lengthy period of post-conflict operations prior to redeployment. Consolidation of gains may occur even if large-scale combat operations are occurring in other parts of an AO to exploit tactical success. Anticipation and early planning for activities after large-scale combat operations ease the transition process.

5-143. Commanders address the decontamination, disposal, and destruction of war materiel. Commanders must also address the removal and destruction of unexploded ordnance and the responsibility for demining operations (the consolidation of friendly and available enemy mine field reports is critical to this mission). In addition, if support areas are surrounded by a consolidation area, the higher echelon headquarters must clearly articulate the roles and responsibilities for controlling supply routes and clearance procedures. Additionally, the theater Army is prepared to provide medical support, emergency restoration of utilities, support to social needs of the indigenous population, and other humanitarian activities.

## **ARMY HEALTH SYSTEM SUPPORT DURING LARGE-SCALE COMBAT OPERATIONS**

5-144. Key AHS activities during large-scale combat operations include augmenting organic medical treatment and hospitalization capabilities for large-scale casualty producing events, providing medical support on an area basis, enabling prolonged care, clearing the battlefield of patients to facilitate movement and maneuver, and providing medical support to reconstitution operations. Army medical formations utilize the six AHS principles to provide medical support at the speed required by maneuver, within the constraints placed by sustainment, and in the best interest of the commander.

5-145. The surgeon sections at each echelon conduct coordination, synchronization, integration, and planning of AHS support to large-scale combat operations within their echelon's area of operations. At the national strategic level, the Office of the Surgeon General coordinates with the Defense Health Agency and the National Health System for increased requirements of medical services and the Armed Services Blood Program for blood and blood products, avoiding expiration through premature shipping and storage. The Surgeon General and FORSCOM surgeon work closely with HRC to develop medical force generation strategies in support of large-scale combat operations. Surgeon sections at EAB integrate, coordinate, synchronize, and plan area medical support, augmentation of organic medical capabilities and capacities, and medical support for large-scale casualty and evacuation events; enable prolonged care; and provide medical support to reconstitution operations. Medical brigade (SPT) commanders allocate AHS resources to support these tasks and provide AHS support to reconstitution operations as well as continued support to RSOL. See FM 4-02 for additional information on AHS support.

## **TRANSPORTATION AND LOGISTICS CONSIDERATIONS FOR ROLE 3 MEDICAL TREATMENT FACILITIES**

5-146. The hospital center and subordinate detachments require a significant amount of logistics and transportation support getting to and once in theater. When planning for placement of Role 3 MTFs, medical planners should consider these requirements (as shown in Table 5-2), external support available, and the amount of time it will take to disestablish, containerize, move, and reestablish a hospital. Planners and commanders cannot expect a hospital to relocate from one location to another and be able to provide the full complement of Role 3 medical care in the new location in just two to three days. Executing the move of a

hospital center may take a significant amount of time depending upon the distance required to move and training level of the unit. It is a significant undertaking that requires planning, coordinating for resources, evacuating all patients, systematically discontinuing services, disassembling and packing the facility, conducting the move, and then re-establishing the facility. Table 5-2 lists logistics and transportation planning factors for movement and sustainment of Role 3 MTFs.

**Table 5-2. Hospital center logistics and transportation planning factors**

<b>HOSPITAL CENTER SECTIONS</b>	<b>Diesel (Gal/ Day)</b>	<b>Gas (Gal/ Day)</b>	<b>Power (Kw)</b>	<b>Water (Gal/ Day)</b>	<b>Operation Space (Acres)</b>	<b>Housing (Acres)</b>	<b>Comm Trucks (Asstd)</b>	<b>Rail (flatcar)</b>	<b>Air (C-17)</b>
<b>HHD, Hospital Center 27 Pax</b>	10	0	118	Surgical 625	1.12	0.35	4	2	2
<b>Hospital AUG DET 24 Bed, Surgical 66 Pax</b>	360	97	380	Patient Care 4,135	1.09	0.2	13	6	6
<b>Hospital AUG DET 32 Bed, Medical 45 Pax</b>	240	75	263	UUL 3,836	0.23	0.2	12	6	6
<b>Medical AUG DET 60 Bed, ICW 33 Pax</b>	120	55	89	Laundry 3,836	0.32	0.14	5	3	3
<b>Medical AUG DET 60 Bed, ICW 33 Pax</b>	120	55	89	Shower 2,633	0.32	0.14	5	3	3
<b>Field Hospital 166 Pax</b>	1,006	176	755		6.78	0.39	37	15	13
<b>Field Hospital 166 Pax</b>	1,006	176	755		6.78	0.39	37	15	13
<b>Totals 536 Pax</b>	2,862	635	2,450	15,117	16.64	1.81	113	50	46
AUG	augmentee			ICW			intensive care ward		
C-17	transport aircraft			Kw			kilowatt		
Comm Truck Asstd	commercial truck (assorted)			Pax			passengers		
Det	detachment			UUL			universal unit listing		
Gal	gallon						(drinking, personal hygiene,		
HHD	headquarters and headquarters detachment						food preparation, and non- potable water)		

#### 4973 **ENABLE PROLONGED CARE**

4974 5-147. Contested domains may require formations conducting semi-independent operations to hold injured  
4975 personnel beyond doctrinal evacuation timelines. Medical care provided during those extended periods is

called prolonged care. Strategies to enable prolonged care include medical force multiplication measures, pushing advanced medical capabilities forward, and augmentation of operational medical organizations. Medical force multiplication consists of pushing advanced knowledge, skills, and materiel enablers forward to enhance medical capacity. Development of medical materiel solutions is also in progress to enable prolonged care and enhance enroute care capability. However, significant total medical force structure capacity shortfalls for treatment and medical logistics remain. Leveraging medical agreements established during the competition phase and interoperability with unified action partners may mitigate some shortfalls. The use of tactical combat casualty care allows every Soldier and combat lifesaver to assist medical organizations with continued patient treatment while they are conducting prolonged care.

## **MEDICAL SUPPORT IN DENSE URBAN ENVIRONMENTS**

5-148. Security and the limits of operational reach determine the medical support required in dense urban environments. Civil information obtained during competition and crisis is integrated into the planning process by the civil affairs staff officer. These civil considerations help medical planners to establish flexible options for casualty collection points and roles of medical care. Current science and technology solutions improve physical access (for elevated structures) and extraction of casualties (surface and subterranean).

## **PLAN, RESOURCE, COORDINATE, AND SYNCHRONIZE LARGE-SCALE CASUALTY EVENTS**

5-149. Patient movement occurs at the tactical, operational, and theater strategic levels and requires the synchronization and integration of Service component resources as well as coordination with air evacuation liaison teams and HR casualty liaison elements for personnel accountability. Strategic medical regulating officers coordinate and synchronize multi-modal global patient movement options (TRANSCOM, unified action partners, and the global patient evacuation enterprise) for projected and surging requirements. Operational medical regulating officers (TMC, medical brigade [support], multifunctional medical battalion) coordinate and synchronize medical evacuation operations with aviation and sustainment organizations. Tactical medical staff (BDE surgeon, BSB SPO-Medical, BSMC, battalion medical operations officer/platoon leader) coordinate with the chain of command, organic sustainment assets (first sergeants, FSCs), and supporting assets for air and ground evacuation and medical evacuation operations. EAB casualty liaison elements and other HR elements leverage the liaison officer chain at Role 3 and Role 4 MTFs to maintain accountability and readiness status of personnel throughout the continuum of care.

5-150. Casualty information is collected from all available sources on the battlefield and reported through official channels as quickly as possible. Casualty managers at each echelon of command need to deploy as part of each echelon's early entry elements. In the absence of an TPOC, the senior element G-1 must be ready to immediately assume the role of the theater casualty information center. The casualty reporting mission needs to take priority, and additional requirements for information from higher levels may increase the complexity of the reporting requirements.

5-151. During large-scale combat operations, units will report all casualties found on the battlefield to include American civilians, DOD or DA Civilians, contractors, and personnel of other Services. Units will record casualties that result from contingency operations on DA Form 1156 (*Casualty Feeder Card*). To ensure accuracy without delay or as the battlefield allows, units will verify information on the DA Form 1156 before forwarding it to the appropriate battalion S-1 or division G-1. A field-grade officer from the casualty's battalion-level unit will review and approve the completed DA Form 1156, initial and supplemental casualty report for deceased, duty status whereabouts unknown, or excused absence whereabouts unknown with particular focus on timeliness of reports, detailed circumstances, and verification of the inflicting force.

5-152. When a casualty occurs, every level of command initiates an initial report to the next higher level and passes casualty information to the contingency casualty information center. The casualty information center continually reconciles, verifies, and consolidates incoming information before passing it to the casualty and mortuary affairs operations division at Fort Knox. The verified casualty report is transmitted to the casualty and mortuary affairs operations division as quickly as possible. Casualty liaison elements are assigned to Role 3 MTFs and other locations best suited to capture casualty information. See FM 1-0 for additional information.

## Ethical Considerations for the Provision of Medical Support

5-153. International law, as it pertains to the treatment of detainees and civilians during conflict, helps to ensure the ethical treatment of all sick and wounded personnel. The determination of eligibility for medical treatment in Army MTFs is established in accordance with command guidance, practical humanitarian and medical ethical considerations, availability of U.S. medical assets (in relationship to the threat faced by the force), and potential training opportunities for medical forces. Any personnel requesting medical care should receive a timely medical assessment of their condition. Although individuals may not be eligible for treatment in accordance with Army regulations or command policy, life, limb, or eyesight-saving procedures will be provided to stabilize the individual for transfer to the appropriate civilian or other nation MTF. See FM 4-02 for additional detail.

5-154. The conduct of armed hostilities on land is regulated by both written and unwritten law. This law of land warfare is derived from two sources, custom and lawmaking treaties such as the Geneva and Hague Conventions. The rights and duties set forth in these conventions are part of the supreme law of the land; violation of any one of them is a serious offense. The following are several ethical considerations applicable to the conduct of AHS support:

- Self-defense, as defined by the Geneva Conventions, restricts medical personnel to the use of small arms for self-protection and defense of patients. The increased demand for medical support during large-scale combat operations will prohibit use of medical personnel for perimeter defense and other security details.
- Strict adherence to the provisions of the Geneva Conventions prohibits concurrent storage of class VIII with other classes of supplies (such as food or ammunition).
- Class VIII supplies and equipment are also afforded protective status under the provisions of the Geneva Conventions. 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 detainees.

5-155. The Geneva Conventions (405 c.) also stipulate that “in the practice of the U.S., religious buildings, shrines, and consecrated places employed for worship are used only for aid stations, medical installation, or for the housing of wounded personnel awaiting evacuation, provided in each case that a situation of emergency requires such use.” See FM 6-27 and FM 4-02 for additional information.

## Battlefield Flow

5-156. Casualty information is collected and reported through official channels as quickly as possible with the standard being that it is passed to the casualty and mortuary affairs operations division normally within hours of knowledge of an incident. A casualty is any person who is lost to the organization by having been declared deceased, duty status-whereabouts unknown, excused absence-whereabouts unknown, missing, injured, or ill. Units will report all casualties to include American civilians, DOD and DA Civilians, contractors authorized to accompany the force, and personnel of other Services. The scope and scale of personnel losses expected during large-scale combat operations against a peer competitor has the potential to overwhelm the casualty reporting process timelines and negatively impact the notification process. Commanders should consider supplementing the casualty reporting system at critical nodes with HR squads or ad hoc teams with sufficient capability to gather and report casualty information in a timely manner.

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**Note:** Based on guidance from the JTF, joint forces land component command, or coalition forces land component command, the ASCC may delegate authority to corps-level commanders to release casualty reports directly to casualty and mortuary affairs operations division with a copy provided to the theater casualty assistance center.

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5-157. Due to the personal nature of information within casualty reports, the theater casualty assistance center, established by the TPOC, reports casualty information to the casualty and mortuary affairs operations division using Defense Casualty Information Processing System as the official means of casualty reporting.



5073 In the absence of the TPOC, the ASCC G-1/AG or senior element G-1/AG must immediately assume the role  
5074 of the theater casualty information center.

5075 5-158. Soldiers may be evacuated to a medical treatment facility where the casualty liaison element, in  
5076 coordination with the Soldiers' unit, may generate the Defense Casualty Information Processing System  
5077 report for submission to the theater casualty information center. Information includes date and time of the  
5078 casualty, circumstances, and location. Casualty liaison elements are allocated to the TPOC operating the  
5079 theater casualty information center. See FM 1-0 for additional information.

## 5080 **Casualty Liaison Element**

5081 5-159. The casualty liaison element provides accurate and timely casualty reporting and tracking  
5082 information at Role 3 MTFs, General Officer commands, and the TPOC casualty operations division.  
5083 Casualty liaison elements facilitate real-time casualty information for commanders. Not only do casualty  
5084 liaison elements provide accurate casualty information, but they also act as a liaison for each affected  
5085 commander and unit. Casualty liaison elements provide updated status reports to affected units and inform  
5086 them when Soldiers are evacuated from theater. They also assist with coordinating a Soldier's return to duty.

5087 5-160. The casualty liaison element's primary function is to ensure timely reporting of casualty information  
5088 to the theater casualty assistance center and the unit S-1. The theater casualty assistance center verifies the  
5089 information and sends it to casualty and mortuary affairs operations division to coordinate notification actions  
5090 through the appropriate CONUS and/or OCONUS casualty assistance center. Casualty liaison elements  
5091 supporting G-1s assist commanders in maintaining accurate casualty information throughout the duration of  
5092 an operation.

5093 5-161. The casualty liaison elements begin coordination with patient administration sections to handle those  
5094 casualties evacuated to military or civilian hospitals within their AO. Casualty liaison elements located at a  
5095 Role 3 medical treatment facility review each patient's status, document newly arrived patients, and collect  
5096 casualty-related information for entry into the Defense Casualty Information Processing System. The Joint  
5097 Patient Tracking Application assists G-1s and S-1s with casualty tracking and Soldier location information.

5098 5-162. Mass casualty incidents or transfer of injured personnel may require treatment at hospitals outside  
5099 theater. The casualty liaison elements are essential for providing updated information on all incapacitated,  
5100 injured, and ill personnel through the theater casualty assistance center to casualty and mortuary affairs  
5101 operations division. The casualty and mortuary affairs operations division then notifies the installation  
5102 casualty assistance center, who in turn provides updated information to the primary next of kin. Casualty  
5103 liaison elements also provide updated information as personnel transit through MTFs.

5104 5-163. The Office of the Surgeon General is responsible for identifying the MTFs within the sustaining  
5105 base to treat patients in the AO through MTF sourcing, and outside of the deployed AO for patients who  
5106 evacuate from the deployed AO. Once identified, the theater casualty assistance center ensures the casualty  
5107 liaison element network is established, positioned, and resourced to support the deployed AO for casualty  
5108 reporting. See FM 1-0 for additional information.

## 5109 **SECTION II – SUSTAINMENT OF DEFENSIVE OPERATIONS**

5110 5-164. This section provides an overview of sustainment of defensive operations and addresses fundamental  
5111 principles of sustainment during the defense. It also provides additional planning considerations needed for  
5112 sustainment support of defensive operations. A *defensive operation* is an operation to defeat an enemy  
5113 attack, retain key terrain, gain time, and develop conditions favorable for offensive operations or stability  
5114 operations (ADP 3-0). Although a defensive operation normally does not achieve victory, it sets the  
5115 conditions necessary to regain the initiative and achieve other goals.

## 5116 **OVERVIEW OF SUSTAINING DEFENSIVE OPERATIONS**

5117 5-165. As a component of combat operations, the defense is a combination of highly complex tasks that  
5118 place tremendous and continuous demands on Army sustainment organizations. Situational awareness,  
5119 mission analysis, and detailed planning are keys to successful support operations. Commanders take

5120 advantage of the time available during a defense to build combat power. However, the time available is likely  
5121 to be unknown since the enemy typically has the initiative. As a result, sustainment organizations and the  
5122 functions they execute play a critical role in supporting the defense and the success of subsequent future  
5123 operations.

5124 5-166. There are three types of defensive operations: area defense, mobile defense, and retrograde. An area  
5125 defense orients on retaining terrain and denying enemy forces access to desired terrain while not destroying  
5126 the enemy outright. A mobile defense defeats the attacking forces by permitting the enemy to advance into a  
5127 position that exposes them to counterattack. A retrograde moves the friendly forces away from the enemy to  
5128 gain time, preserve forces, place the enemy in unfavorable positions, or avoid combat under undesirable  
5129 conditions.

5130 5-167. Defending commanders combine the three types of defensive operations to fit the situation. All three  
5131 types of defenses use mobile and static elements. In mobile defenses, static positions help control the depth  
5132 and breadth of the enemy penetration and retain ground from which to launch counterattacks. In area  
5133 defenses, commanders closely integrate patrols, security forces, and reserve forces to cover gaps among  
5134 defensive positions. Commanders reinforce positions as necessary and counterattack as directed. In  
5135 retrograde operations, some units conduct area or mobile defenses or security operations to protect other units  
5136 that execute carefully controlled maneuver or movement rearward. These units use static elements to fix,  
5137 disrupt, turn, or block the attackers. Mobile elements are used to counterattack and destroy the enemy.

5138 5-168. Commanders execute defensive operations for various reasons, such as to retain decisive terrain or  
5139 deny a vital area to the enemy, weaken or fix the enemy as a prelude to offensive actions, or increase the  
5140 enemy's vulnerability by forcing the enemy to concentrate subordinate forces. The ultimate purpose of the  
5141 defense is to create conditions for a counteroffensive whereby it allows Army forces to regain the initiative.

## 5142 SUSTAINMENT FUNDAMENTALS FOR DEFENSIVE OPERATIONS

5143 5-169. Enemy commanders look for opportunities to counter corps and division defensive operations. The  
5144 enemy will seek to employ special purpose forces, irregular forces, electronic warfare, long-range artillery,  
5145 rockets, missiles, information capabilities, and cyberspace electromagnetic activities to disrupt sustainment  
5146 activities. The enemy, to assist in targeting of sustainment units and locations, may exploit use of  
5147 electromagnetic signals such as cell phones and geotagged photos. Sustainment commanders must be aware  
5148 of these unintended threats and focus on those efforts that would help set the conditions necessary to regain  
5149 the initiative during defensive operations.

5150 5-170. All sustainment functions are planned and executed to support defensive operations and build  
5151 combat power to prepare for future offensive operations. The exact type and extent of support operations and  
5152 the organizations executing them will vary by echelon based on the support requirement. Even though  
5153 defensive operations may be the main effort, simultaneous offensive operations with their support  
5154 requirements are also likely to be ongoing.

5155 5-171. Sustainment commanders and staffs plan for increased requirements in Class IV, V, VIII, and IX  
5156 items to support the defensive effort and build Class III (bulk and package) and Class VIII stocks to prepare  
5157 to transition to offensive operations. Sustainment planners anticipate where the greatest need might occur  
5158 during operations and consider pre-positioning sustainment stocks far forward to reduce response times for  
5159 critical support. Planners also consider alternative methods for delivering sustainment in emergencies.  
5160 Sustainment of defensive operations requires a coordinated planning effort designed to maximize  
5161 synchronization, integration, and continuity of support at all echelons. Commanders and staffs at every  
5162 echelon must anticipate operational requirements, be responsive in requisitioning and distributing resources,  
5163 and be prepared to improvise tactics and techniques for execution that ensure responsiveness, even in  
5164 unexpected situations.

## PLANNING CONSIDERATIONS FOR THE DEFENSE

5-172. Sustainment planning is both a continuous and a cyclical activity of the operations process. For sustainment planning, the most important factors are requirements, capabilities, and shortfalls. As outlined in the paragraphs below, planning considerations assist planners in identifying specific support or operational requirements based upon available information. Many planning considerations affect the ability to execute defensive operations. These considerations must be recognized, analyzed in the time available, and prioritized based on the commander's intent.

### ***Sustaining Defensive Operations***

- Plan Class IV for transitions from offense to defense.
- Expect increase in Class V.
- Plan for pre-positioning of supplies.
- Plan retrograde support.
- Increased demand for Class VII.
- Increased demand for Class VIII.
- Mass casualties.
- Large scale personnel replacements in a short period.

5-173. Planning considerations must encompass all warfighting functions to ensure the plan is integrated across all functions and domains. A planning consideration may have various levels of effects that drive support requirements across all warfighting functions. The following discussion describes considerations for each warfighting function during planning for sustaining large-scale defensive operations.

## SUSTAINMENT PLANNING CONSIDERATIONS

5-174. The planning considerations listed below for sustainment are examples of what sustainment planners may consider during defensive operations. It should not be considered all-inclusive. Considerations will vary for individual operations. The list provides some common planning considerations for sustainment during all defensive operations. If a defense operation has a special consideration, it is indicated in the list:

- Plan for execution of all sustainment functions and associated sub-functions at all echelons; personnel services, financial management, HSS, and logistics. This includes personnel replacement, casualty reporting, medical treatment, medical evacuation, medical logistics, hospitalization, and all logistics functions.
- Shift maintenance and recovery capabilities in the FSC. BCT commanders, staff, and support operations offices should weight the main defensive effort by cross-leveling sustainment/logistics assets within the brigade.
- Prioritize main effort support for spoiling attacks, counter attacks, and follow-on offensive operations. 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 centrally and well forward. Consider the use of mission-configured loads. Balance forward positioning of resupply and rapid mobility.
- Ensure that proper handling and storage requirements are addressed for temperature-sensitive medical products when prepositioning Class VIII.
- Expect high demand for Classes IV and V to support the 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 operation. This transportation is required to move serviceable and unserviceable main battle tanks, infantry/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.

- 5216 • Plan for troop transportation assets to support the retrograde defense operation. This is required to
- 5217 move large numbers of personnel during the retrograde.
- 5218 • Plan for back-haul of equipment and supplies during the retrograde. This is for serviceable and
- 5219 unserviceable equipment and repairable Class IX items.
- 5220 • Echelon support for the retrograde task to ensure seamless movement from the main battle area to
- 5221 the support and consolidation areas.
- 5222 • Expect high demand for obscurant supplies and equipment.
- 5223 • Coordinate with the supporting DSSB to provide support to BCT units when the BSB is in
- 5224 retrograde movement.
- 5225 • Expect an increase in demand for Class VIII (medical materiel and blood products). Establish
- 5226 whole blood inventory level by role of care to ensure distribution requirements are identified.
- 5227 • Plan for increased use of batteries for technologies that require them.
- 5228 • Plan for limited visibility and limited distribution routes.
- 5229 • Plan for maximum use of unit distribution of classes of supplies.
- 5230 • Plan for reinforcing support to aviation brigades for downed aircraft recovery operations.
- 5231 • Expect increase in aerial delivery operations.
- 5232 • Anticipate mass casualties and large-scale personnel replacements to include potential
- 5233 reconstitution of severely degraded units.
- 5234 • Plan for continuous replacement operations, specifically the transportation and integration of
- 5235 replacement personnel into units in the tactical close area.
- 5236 • Plan for primary, alternate, contingency, and emergency communications plans to ensure effective
- 5237 personnel asset visibility and delivery of LOGSTAT reports.

## 5238 **COMMAND AND CONTROL PLANNING CONSIDERATIONS**

- 5239 5-175. The planning considerations for command and control are listed below:
- 5240 • Expect enemy attacks on space and cyberspace domains to include the electromagnetic spectrum
  - 5241 that will degrade communications and digital information transmission. Attacks on these domains
  - 5242 affect sustainment operations in terms of satellite communications, positioning, navigation,
  - 5243 timing, information collection, internet operations, computer systems, and frequency modulation
  - 5244 communications. Commanders must develop and execute a primary, alternate, contingency, and
  - 5245 emergency communications plan to ensure redundancy. In addition, fast-paced offensive
  - 5246 operations conducted prior to the defense may have prevented sustainment information systems
  - 5247 from functioning for a period of time, creating a lag in requisitions and data exchange.
  - 5248 Commanders capitalize on the time available during the defense to ensure all required sustainment
  - 5249 information is passed.
  - 5250 • Identify sustainment forces that will support the defense reserve force in all types of defense
  - 5251 operations. Commanders will determine what risk is acceptable in attaching sustainment units to
  - 5252 the reserve.
  - 5253 • Understand how terrain may limit/degrade communications and force retransmission stations.
  - 5254 This is important for Combat Service Support Automated Information Systems Interface/Very
  - 5255 Small Aperture Terminal operations. Understanding terrain can also provide some degree of
  - 5256 protection to EW by masking antennas from the enemy while still providing line of site to friendly
  - 5257 forces.
  - 5258 • Assess sustainment task organization frequently to ensure it is adequate and positioned properly
  - 5259 to support the sustainment mission. Plan for replacement of units that are lost as a result of enemy
  - 5260 attack.

## 5261 **MOVEMENT AND MANEUVER PLANNING CONSIDERATIONS**

- 5262 5-176. The planning considerations for movement and maneuver are listed below:
- 5263 • Expect sustainment resupply and support elements to operate outside the unit boundaries and
  - 5264 beyond the forward line of own troops while supporting covering, guard, and screening forces and

counter and spoiling attack forces. Sustainment units must understand tactical enabling tasks and operational control measures used by maneuver forces in perimeter defense.

- Understand/anticipate how terrain, defense obstacles, fire support coordination measures, movement restrictions, and terrain will affect the methods of resupply. These factors must be considered in all distribution management and movement control plans.
- Expect requirements for unmanned aircraft Class III(B), V, and IX repair parts to increase during defensive operations. Unmanned aircraft systems often require motor gasoline or aviation gasoline. This requirement must be included in LOGSTATs, requisitioning, storage, and distribution.
- Task and coordinate with movement control units for road usage or de-confliction during retrograde operations. This is critical to ensure the retrograde is not hindered by uncoordinated or conflicting unit movement on available routes. Commanders must identify main and alternate movement routes.
- Plan for support to SOF operating in the BCT area. This includes special ammunition and non-standard equipment maintenance.
- Plan for support to attack helicopter operations in the close area. This includes planning for fuel, maintenance, munitions, and placement of FARPs.
- Coordinate with the consolidation and support area terrain managers to deconflict airspace for aerial delivery, Air Force airland delivery, and aeromedical evacuation requirements.

## INTELLIGENCE PLANNING CONSIDERATIONS

5-177. The planning considerations for intelligence are listed below:

- Intelligence is critical for planning sustainment operations in support of the defense. It starts with an understanding of the overarching operational and mission variables but then extends to intelligence preparation of the operational environment products, detailed intelligence estimates, and other intelligence products that describe enemy capabilities and courses of action. From these products, planners can estimate friendly casualty rates and munition expenditure rates, plan protection operations, and have a better understanding of where and when sustainment capabilities are needed. See ADP 2-0 and FM 2-0 for more information on the intelligence warfighting function.
- Like the other warfighting functions, there are some unique aspects of sustainment support to defensive operations that are critical to the intelligence warfighting function. Low-density intelligence and electromagnetic warfare maintenance is especially critical to the intelligence architecture and intelligence operations.

## FIRES PLANNING CONSIDERATIONS

5-178. The planning considerations for fires are listed below:

- Forecast increased consumption of long range and precision munitions for BCT and corps fires units.
- 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 that ammunition transportation assets are adequate and properly positioned to support ammunition distribution for fires operations. The TSC must coordinate with the CCDD J-4 and strategic providers to ensure required munitions are being distributed to the theater.

## PROTECTION PLANNING CONSIDERATIONS

5-179. The planning considerations for protection are listed below:

- Plan for establishing base cluster operations to create dispersion and facilitate concealment. Commanders should plan to disperse large, consolidated bases from which sustainment units operate into smaller bases to form a base cluster. This is for all bases, from the BSA to bases

- 5313 operating in the joint security area. Consider all security integration implications of the base  
5314 cluster.
- 5315 • Plan for CBRN conditions. CBRN defense plans should include assessment (threat assessments,  
5316 detection methods, reconnaissance, and surveillance plans), protection, and mitigation strategies  
5317 (dispersion, covers). This includes an increase in requirements for non-potable water and CBRN  
5318 defense equipment. See FM 3-11 for more information. CBRN defense planning must include  
5319 detailed procedures for processing contaminated human remains and equipment decontamination.
  - 5320 • Plan for positioning of EOD assets to render safe and dispose of explosive hazards threatening  
5321 critical infrastructure, terrain, materiel, and nodes necessary for force generation, including the  
5322 removal of lodged rounds in aircraft, armored vehicles, mortars, artillery tubes, and other weapon  
5323 systems in order to consolidate gains and prepare for future operations.
  - 5324 • Expect direct enemy attack by small unit/special operations ground forces, attack aircraft, and  
5325 long-range artillery. Commanders must ensure that base defense measures are adequate to detect  
5326 and defeat small unit operations (Level I or Level II threats). Units must use adequate cover and  
5327 concealment measures to prevent detection by enemy forces. Dispersion mitigates effects of long-  
5328 range fires and attack aircraft. See ADP 3-37 for more information.
  - 5329 • Plan for adequate convoy security for convoys supporting the mobile defense. This may be from  
5330 internal sources or from coordinated external sources.

### 5331 ADDITIONAL PLANNING CONSIDERATIONS

5332 5-180. Just as significant as the commodity requirements for supporting a defense are the many implications  
5333 for tactics, techniques, and procedures employed by sustainment forces. Sustainers anticipate how terrain,  
5334 defensive obstacles, fire support coordination measures, and movement restrictions will affect sustainment  
5335 operations. These factors are considered in all distribution management and movement control plans.  
5336 Planners expect to weight sustaining operations support for spoiling attacks, counter attacks, and follow-on  
5337 offensive operations. This may require sustainers to weight the main defensive effort by cross-leveling  
5338 sustainment assets. In some cases, sustainers pre-position Classes I, IIIB/P, IV, V, VIII, and IX stocks, as  
5339 well as water centrally and well forward, but always balance forward positioning of sustainment assets with  
5340 the need for rapid mobility. While supporting covering, guard, and screening forces and counter and spoiling  
5341 attack forces, sustainers plan for support elements to operate outside the unit boundaries and beyond the  
5342 forward line of own troops. Sustainers also consider operational control measures to include passage of lines  
5343 with maneuver forces in perimeter defense. Finally, sustainment leaders identify sustainment forces that will  
5344 support the defense reserve force in all types of defensive operations. Commanders determine what risk is  
5345 acceptable in attaching sustainment units to that reserve force.

5346 5-181. Defensive operations also place a burden on medical resources due to the magnitude and lethality of  
5347 forces involved. Medical units anticipate large numbers of casualties in a short period of time due to the  
5348 capabilities of modern conventional weapons and the possible employment of weapons of mass destruction.  
5349 These mass casualty situations can exceed the capabilities of organic and DS medical assets. To mitigate this  
5350 risk, planners should anticipate the possibility for mass casualty situations and coordinate with area support  
5351 medical units to help absorb the acute rise in battlefield injuries. The command surgeon or medical operations  
5352 officer at echelon works with the logistics, personnel, and operations officers to develop mass casualty plans  
5353 and advise commanders on integrating all available resources into an effective plan. Casualty evacuation is  
5354 a unit-level responsibility and must occur concurrently with operations.

5355 5-182. Unit commanders must plan for and ensure the availability of casualty evacuation assets to augment  
5356 available ambulances in the event of a mass-casualty situation. Unit commanders must also ensure integration  
5357 of the casualty evacuation plan with the medical evacuation plan. Evacuation of casualties during a mobile  
5358 defense is especially challenging due to possible relocation of receiving MTFs and threats to evacuation  
5359 routes. Units should always plan for mass casualty situations and have an evacuation plan, including  
5360 identification of casualty evacuation assets and casualty collection points. The casualty evacuation plan  
5361 should complement and be synchronized with the medical evacuation plan (ambulance shuttle system and  
5362 routes) for the use of both air and ground medical evacuation and casualty evacuation platforms in addition  
5363 to lifts of opportunity. For additional information on mass casualty operations, see ATP 4-02.4, ATP 4-02.6,  
5364 and ATP 4-02.13.

5-183. Mortuary affairs planners must strive to support the defense in depth. Because of the fixed nature of mortuary affairs assets and evacuation routes, these assets and routes are more vulnerable to enemy action. Mortuary affairs planners must identify both primary and secondary LOCs for evacuating the human remains of friendly, enemy, and local nationals. Planners must be aware of this and ensure that policies and procedures are established for the prompt, dignified return of these human remains to local government officials, Red Cross, Red Crescent, or family members. For additional information, see ADP 4-0, ATP 4-46, and JP 4-0.

5-184. Sustainment planners and maneuver commanders in the defense should be prepared to execute reconstitution operations to rebuild combat power. Commanders assess the unit's readiness capability and determine the most expedient method to bring the unit to an acceptable combat posture through reorganization or regeneration. For additional information on reconstitution, see appendix C.

5-185. To support defensive operations, sustainment forces at all echelons consider echeloning support assets to expedite replenishment for critical support. Sustainment forces have limited protection capabilities and may be required to execute security tasks until the arrival of dedicated maneuver security elements.

## ECHELONS ABOVE BRIGADE SUSTAINMENT

5-186. The companies operating at echelons above the brigade provide all sustainment support to defense enabling units operating in the division support or consolidation areas. These companies also provide area support for units transiting these areas and provide sustainment support to the BCTs. These units will normally be attached to a DSSB, CSSB, DSB, or a sustainment brigade. Functional companies may be attached to a functional battalion when available. Examples of functional battalions include the motor transport battalion, petroleum support battalion, and movement control battalion. Support is executed based on priorities and support relationships established in the order issued by the DSSB, CSSB, DSB, or sustainment brigade in support of the overall theater distribution effort.

### ***Sustainment Functional Battalions***

- Motor transport battalion
- Petroleum support battalion
- Movement control battalion

5-187. During the defense, commanders address several unique sustainment requirements. Commanders determine which supplies are needed, how often to supply, and which method of supply best supports defensive operations. Priorities for replenishment are normally bulk water, ammunition, and materials to construct obstacles for defensive positions. There is normally a reduced need for bulk fuel. There may also be an increased demand for decontaminants and CBRN collective and personal equipment.

5-188. Distribution is a critical aspect of sustaining defensive operations to ensure adequate resupply at all times. Echelons above brigade sustainment units work within the distribution network to execute operations through the integration and synchronization of materiel management and transportation. Distribution builds and maintains combat power with the delivery of supplies, personnel, and equipment as replenishment support to a BSB, extends operational reach of maneuver forces, maintains freedom of action, and prolongs endurance.

5-189. A composite or quartermaster supply company resupplies BSBs and EAB units conducting or supporting defensive operations. Resupplies include general supply, fuel, water, and retrograde support. Supply stocks are replenished by other supply companies executing supply support within the theater. The replenishment is delivered to the supply company via EAB transportation companies executing theater distribution that supports the overall theater distribution plan.

5-190. Troop movements and resupply convoys with combat-configured loads are delivered to maneuver units on a scheduled basis during the defense. The composite or functional transportation companies provide heavy, medium, light, bulk water, and bulk petroleum transportation capability through various types of units. The transportation company role is to provide transportation support and execute convoys to move supplies, equipment, and personnel replacements in support of defensive operations.

5-191. Truck companies should expect to provide unit distribution to units in the brigade close area and even into the brigade deep area to support screening and security operations. Enemy attack aviation and long-

range fires capabilities dictate well dispersed march orders. Movement into the brigade deep area requires additional convoy security.

5-192. During defensive operations, there are a number of different formations that require unique munitions support and capabilities. The field artillery brigade executing deep fires, air and missile defense units, combat engineers, and the CAB all have specific munitions requirements. The modular ammunition company provides ammunition support to these units while also providing ammunition resupply support to the BCT distribution company. The modular ammunition company ammunition managers must configure ammunition loads required to support the defense by type of ammunition and priority of movement.

5-193. Sustainment planners should expect high demands on all field services during defensive operations. There are various types of field service companies and the role of each in supporting defensive operations depends on the type of service the company is designed to perform. Field service capabilities are aerial delivery, field feeding, shower and laundry, mortuary affairs, and water treatment. Food service support for EAB units is supported by the field feeding company. This support must be part of the planning process to ensure food service equipment and manpower is coordinated to support feeding operations. See ATP 4-41 for additional details. Field service companies execute operations based on priorities and support relationships established in the order issued by sustainment commanders. The field service functions are critical to rebuild combat power, prepare for transition to offensive operations, and to restore unit morale.

5-194. Commanders provide maintenance support as far forward as possible during the defense. Maintenance collection points help reduce the need to evacuate equipment. The thrust of the maintenance effort is to fix as far forward as possible those systems that can quickly be returned to the unit in combat-ready condition. The support maintenance company is the only EAB unit performing field-level maintenance (including all low density) and limited recovery support to units on an area basis. The support maintenance company provides field maintenance support to units that do not have organic maintenance capability in EAB. Test, measurement, and diagnostic equipment capabilities reside in the support maintenance company to provide calibration and repair support to divisional and EAB units. The support maintenance company does not have maintainers trained to make repairs on ABCT or SBCT combat platforms.

5-195. During defensive operations, financial management focuses on supporting contracting and local procurements by funding paying agents to pay local vendors for specific defense operations requirements. Other tasks executed during defensive operations include securing and safeguarding captured currency (enemy, allied, neutral, U.S., or mutilated currency), commercial vendor services and contract payments, disbursing and funding support, controlling currency (U.S. or local), providing detainees with pay support, special programs, and supporting monetary compensation/consolation. Paying agents require a CSB-trained and appointed field ordering officer in order to accomplish payment of local vendors.

5-196. Human resources planners should expect large numbers of casualties in a short period of time during defensive operations. They must be prepared to process mass casualties and large-scale personnel replacements (to include reconstitution) to maintain personnel accountability and build combat power to prepare for future offensive operations.

5-197. Medical planners must stay in close coordination with the other sustainment planners when preparing for defensive operations. Medical evacuation personnel generally must negotiate extended LOCs to reach the patient, complete vital tactical combat casualty care, and evacuate the Soldier. The medical company (area support) provides Role 1 and Role 2 AHS support to units supporting defensive operations. The medical company (area support) is attached to an MMB and executes area medical support operations within an area identified in the operation order issued by the MMB commander. The medical company (area support) can task-organize and is tailorable to the operational environment and mission requirements dictated by defensive operations. There are several EAB medical companies that support one or more medical functions and may provide area support or direct support to a maneuver commander. For additional information on EAB medical support, see FM 4-02 and ATP 4-02.6.

5-198. Evacuation of fatalities during the defense may be highly problematic. Limited availability of lift will be prioritized to life saving and defense enhancement. Task organized mortuary affairs teams for echelons at or below brigade will have limited human remains storage. Planners will make every effort to conceal fatalities from the view of the living and safeguard human remains from access of carrion scavengers.



## BRIGADE COMBAT TEAM SUSTAINMENT

5-199. All three types of BCTs have companies that support BCT operations. The types and quantities of these companies is the same for each BCT, but the exact composition and capability of the supporting companies will differ based on the type of BCT. All BCTs have a distribution company, a field maintenance company, BSMC, and six forward support companies. Each FSC supports a specific maneuver battalion. These companies are organic to the BSB, and each has a specific role.

### DISTRIBUTION COMPANY

5-200. The distribution company's role is to provide supply distribution to the BCT units executing defensive operations. It executes a combination of supply and transportation functions to accomplish supply replenishment to support defensive operations. The distribution company plans, directs, and supervises supply distribution in support to a BCT to ensure that anticipatory replenishment is executed IAW the support concept.

5-201. The distribution company commander and key leaders must constantly conduct distribution management to integrate supplies with available transportation assets and control the movement of these according to the distribution plan. During defensive operations, the BSB SPO anticipates the time requirements for increased fuel, munitions, barrier material, and potable water distribution. The DSSB operating at EAB replenishes the distribution company with all classes of supplies. The BSB SPO officer coordinates with the DSB SPO officer to ensure this support is in place.

5-202. Degraded LOCs during the defense may make it necessary for the distribution company to preposition sustainment stocks centrally and well forward within the main battle area. Planners should coordinate EAB throughput to reduce transportation requirements of limited organic assets. The BSB commander sets priorities of support for the distribution company based on the concept of operations. When requirements exceed the capability of the distribution company, aerial delivery or throughput resupply directly to units might be required to ensure timely delivery of supplies.

### FIELD MAINTENANCE COMPANY

5-203. The field maintenance company's role is to provide field-level maintenance support to the BSB and brigade combat elements not supported by an FSC. The field maintenance company provides repair capability for automotive, ground support equipment, communications and electronics, and armament. The field maintenance company also provides limited field-level maintenance support to the FSCs for low density commodities such as communications, electronics, and armament equipment. The field maintenance company is not equipped with additional maintainers. Maintainers are pushed as far forward as possible to make repairs at the point of need. During the defense, the field maintenance company is critical to repair damaged equipment to build combat power.

5-204. Large-scale combat operations demand a maintenance system that is focused on returning systems to operational status quickly and as close as possible to the point of failure or damage. Properly planned and executed field maintenance allows rapid repair of non-mission capable weapon systems and critical equipment.

5-205. The field maintenance company may be required to use recovery assets to assist FSCs in recovering damaged equipment from the point of failure to a maintenance collection point or BSA. Recovery and evacuation vehicles should position themselves at critical locations on the battlefield to keep disabled vehicles from blocking movement routes. If necessary, equipment transporters and armored vehicles with inoperative weapon systems may be used to accomplish this.

5-206. During defensive operations, maintenance requirements may overwhelm field maintenance company capabilities. The commander establishes maintenance, recovery, and evacuation requirement priorities (including timelines) and destruction criteria for inoperable equipment within the OPORD based on capabilities. Considerations should be given to weigh this priority with additional repair part capabilities to include authorized stockage list items, shop stock lists, line and shop replaceable units, and combat spares.

**BRIGADE SUPPORT MEDICAL COMPANY**

5-207. The BSMC provides Role 2 medical care to supported maneuver battalions with organic medical platoons. The BSMC provides Role 1 and Role 2 medical treatment on an area basis to those units without organic medical assets operating in the BSA. The medical company plans and supervises the Class VIII distribution in support to a BCT to ensure replenishment is executed IAW the support plan.

5-208. Medical support associated with defensive operations anticipates significant casualties just as in the offense. Integrated planning would include casualty evacuation use of planned evacuation routes, identified points in the ambulance shuttle system (such as ambulance exchange points), and should include the augmentation of medical devices and medical providers for the provision of en route care when available. The BSMC is organized to provide triage and management of mass casualty, tactical combat casualty care, initial resuscitation and stabilization, care for patients with disease and nonbattle injury, and battle wounded and injured Soldiers. The BSMC also provides operational public health, intervention for combat and operational stress reaction, and preparation of patients for further medical evacuation.

5-209. During the defense, medical evacuation from the forward security or striking force area poses significant challenges because of distance, limited situational awareness, and rapid changes in the tactical situation. In a mobile defense, considerations must be given to the fixing force that will likely suffer higher casualty rates than the striking force as it absorbs the enemy's main attack. Defensive forces may be conducting noncontiguous combat operations with a high probability that movement routes are interdicted. This makes it imperative the COP is available to ground and air ambulances and is accurate and updated frequently.

**FORWARD SUPPORT COMPANY**

5-210. The FSC provides support to a maneuver battalion during defensive operations. The FSC provides field-level maintenance and distribution support to the supported battalion. FSCs provide the BSB commander the ability to prioritize the logistics effort in support of defensive operations. They coordinate with the BSB commander and SPO to determine proper location of the field and combat trains. FSCs become the vital link from the BSB to the supported battalions and provide the brigade, battalion, and BSB commanders the greatest flexibility while supporting defensive operations.

5-211. FSC support occurs through disciplined logistics status reporting and the use of command and control and sustainment systems to gain situational understanding, develop a common operational picture of current and future operations, and plan for the supported maneuver battalion. This is imperative to synchronize the concept of operations with priorities of support to ensure continuity and responsiveness.

5-212. Commanders and sustainers plan for ongoing routine resupply while in the defense. Resupply during the defense should not be viewed as emergency resupply, but planned and deliberately executed events to sustain operations. In addition to planned resupply, both commanders and sustainers need to be alert to lulls in the fight which provide unplanned opportunities to resupply units in the defense. FSC commanders and S-4s must plan to synchronize consumption rates and execute planned resupply and be prepared to execute emergency resupply as required in support of the maneuver battalion. All commanders designate priorities of support to subordinate units against the operational plan. Priority of support should not be determined by who has the least amount of supplies, but by unit who is currently the main effort, or who will become the main effort for the next phase of the operation.

5-213. The FSC positions maintenance assets as far forward as the tactical situation permits to return inoperable and damaged equipment to the operation as quickly as possible. For the ABCT, the FSC is the sole source of maintenance support for the M1, M2/3, and M109A6 weapon systems. For the SBCT, the FSC is the sole source of maintenance support for the Stryker systems. Commanders may utilize multiple maintenance collection points and array their mechanics on the battlefield. Commanders may further authorize battle damage assessment and repair, controlled exchange, or overrides in order to preserve combat power. Brigade commanders must weight the main defensive effort by cross-leveling FSC maintenance assets.

5-214. The FSC commander must anticipate operating in the brigade deep area if supporting guard or covering forces. The commander must also expect to operate in this area if supporting a mobile defense.

5562 5-215. Continuous exchange of configured loads of supplies on BSB distribution company flatracks, water  
 5563 tank racks (HIPPOs), modular fuel systems, and multi-temperature refrigerated container systems and  
 5564 retrograding empty FSC flatracks are resupply techniques that should be employed during defensive  
 5565 operations. This increases the supported maneuver commander's tactical flexibility and decreases  
 5566 sustainment transportation asset time on station when resupplying.

## 5567 **AVIATION BRIGADE SUSTAINMENT**

5568 5-216. Aviation brigades also have companies that support brigade operations. The types and quantities of  
 5569 the companies that make up the ASB are the same for each aviation brigade, but the exact composition and  
 5570 capability of the supporting companies will vary based on the type of aviation brigade. All ASBs have a  
 5571 headquarters and support company, a distribution company, a brigade signal company, and an aviation  
 5572 support company. These companies are organic to the ASB, and each has a specific role.

## 5573 **AVIATION SUPPORT COMPANY**

5574 5-217. Aircraft maintenance above the aviation operational battalion/squadron level is provided by the  
 5575 aviation support company. The aviation support company is the only unit staffed and equipped to perform  
 5576 ground recovery of brigade or squadron airframes. The aviation support company is generally responsible  
 5577 for dedicated recovery missions, both air and ground. Additionally, the aviation support company can  
 5578 facilitate self-recoveries and perform battle damage assessment and repair as part of a downed aircraft  
 5579 recovery team mission. Aviation support companies may provide personnel and equipment to augment the  
 5580 aviation maintenance company/troop performing downed aircraft recovery team missions when directed by  
 5581 the aviation brigade.

5582 5-218. The aviation support company commander is responsible for forming a downed aircraft recovery  
 5583 team with rapid response times and robust capabilities mirroring the requirements of an aviation maintenance  
 5584 company/troop downed aircraft recovery team program. The aviation support company downed aircraft  
 5585 recovery team program should expand beyond the aviation maintenance company/team program by including  
 5586 the primary responsibility for conducting aerial and ground dedicated recovery missions. Additionally, the  
 5587 aviation support company generally supports recovery missions for aircraft in the aviation brigade area of  
 5588 coverage not assigned to the brigade, transitioning the operational area, or operating in the brigade area of  
 5589 coverage. The priority for the aviation support company downed aircraft recovery team program is dedicated  
 5590 aircraft recovery, with self-recovery and battle damage assessment and repair as contingency operations.

## 5591 **DISTRIBUTION COMPANY**

5592 5-219. The distribution company provides support for the aviation brigade and receives, temporarily stores,  
 5593 and issues Class III (B). The distribution company also establishes and operates Class III and Class V  
 5594 transload sites in the brigade sustainment area to resupply brigade operations. Utilizing brigade and battalion  
 5595 assets, the distribution company provides fuel to all brigade aircraft within the assembly area.

5596 5-220. The distribution company also manages the SSA and is responsible for maintaining the authorized  
 5597 stockage list. During defensive operations, the flow of critical Class IX repair parts into the SSA is critical to  
 5598 enable the rapid repair of airframes and maintain or improve the combat power of the aviation brigade.

## 5599 **BRIGADE SIGNAL COMPANY**

5600 5-221. The brigade signal company operates under the technical control of the brigade S-6. The company  
 5601 installs, operates, maintains, and secures the brigade's network transport, automated information systems,  
 5602 and networks. The brigade's organic signal capabilities support command post operations at the halt. The  
 5603 brigade signal company has signal maintenance augmentation, spares management, and maintenance  
 5604 accountability from the brigade's organic communications-electronics maintenance element. Either the  
 5605 organic maintenance element or the support maintenance company provides remaining maintenance support  
 5606 for communications-electronics, COMSEC, automotive, power generation, and environmental control  
 5607 equipment.

5-222. The brigade signal company supports the brigade and subordinate battalion command posts. The brigade signal company also provides—

- Wideband and protected satellite communications transport to connect with the division portion of the DODIN.
- High-throughput line of sight transport to communicate between command posts.
- Line of sight and wideband satellite communications transport to support command and control on the move.
- DISN services-SIPRNET, NIPRNET, Joint Worldwide Intelligence Communications System, voice, and video.
- Single-channel radio and narrowband (single-channel) tactical satellite retransmission for the brigade and support elements.
- Global Broadcast Service capability to receive high bandwidth imagery, logistics data, and digital map information to support command and control.
- Wire, cable, and fiber optic systems to support the brigade and battalion command posts.

## **FORWARD SUPPORT COMPANY**

5-223. Aviation battalion FSCs are organized with a company headquarters, distribution platoon, and a ground maintenance platoon. The distribution platoon provides aircraft refuel capability, ammunition specialists, water, and transportation. All aviation battalions have an organic FSC. Attack and cavalry aviation battalions also have a Class V section. When missions dictate, FSCs can be augmented by the ASB with personnel and equipment.

5-224. During defensive operations, the FSC may be tasked with establishing and operating multiple FARPs to meet mission requirements and will require additional support from the ASB and DSSBs to distribute Class III (bulk and package) and Class V forward. The enemy situation will dictate the duration a FARP will remain operational; it will move often to avoid detection and improve survivability.

## **AVIATION MAINTENANCE COMPANY/TROOP**

5-225. The aviation maintenance company/troop manages the battalion/squadron maintenance program, operates a centralized tool room, and performs field-level maintenance and scheduled services. The primary mission of the aviation maintenance company/troop is to sustain combat power in support of the battalion/squadron mission. The aviation maintenance company/troop conducts field-level maintenance, troubleshoots airframe and component malfunctions, performs maintenance and repair actions, removes and replaces aircraft components, and performs maintenance test flights and maintenance operational checks.

5-226. The aviation maintenance company/troop provides sustainment support by processing, requesting, and storing Class IX shop stock and bench stock. Supply personnel operate unit-level Army logistics information systems and requisition and manage the battalion/squadron Class IX (Air) serviceable spares. The aviation maintenance company/troop performs unit-level repairs on aviation life support systems. Aviation maintainers operate and maintain assigned ground support equipment.

5-227. During defensive operations, the aviation maintenance company/troop must remain mobile and be prepared to move often to provide responsive support and repair to the supported battalion/squadron. The aviation maintenance company/troop possesses enough organic vehicles to transport 75 percent of its table of organization and equipment in a single lift and will require external support coordinated through the battalion and brigade staff to move the remaining 25 percent.

5-228. Maintenance assets will move as far forward as the tactical situation permits to repair unserviceable and damaged aircraft to return them to the fight as quickly as possible. The aviation maintenance company/troop utilizes field maintenance teams and split-based operations to conduct both scheduled and unscheduled maintenance to meet the maintenance requirements for their supported battalion/squadron. When mission requirements exceed aviation maintenance company/troop capacity, the company coordinates with the ASB to receive additional field maintenance teams from the ASB's aviation support company.

## AREA DEFENSE

5-229. *Area defense* is a 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 focus of the area defense is on retaining terrain where the bulk of the defending force positions itself in mutually supporting, prepared positions. Units maintain their positions and control the terrain between these positions.

## SUSTAINMENT SUPPORT DURING AREA DEFENSE

5-230. 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 requires less fuel consumption, provides more time for maintenance repairs, and requires less complex casualty evacuation procedures due to the static nature of this defense.

5-231. 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.

5-232. The supply of obstacle materials in a defense can be a significant problem that requires detailed coordination and 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.

5-233. The use of echelon support greatly enhances sustainment capabilities during the area defense. The sustainment commander ensures the echelon sustainment officers (G-1/S-1, G-4/S-4, G-8/S-8, and surgeon) and the commanders of the sustainment units supporting the defending force understand the commander's tactical intent. These officers and commanders can then establish support priorities IAW the commander's intent and plan sustainment operations to ensure the supportability of the operations.

## SUSTAINMENT PREPARATION FOR AREA DEFENSE

5-234. To the extent possible, operators deliver combat-configured loads to maneuver units on a scheduled basis during the area defense. Combat-configured loads are packages of potable and non-potable water; CBRN defense supplies; barrier materials; ammunition; POL; medical supplies; and repair parts tailored to a specific size unit. This eliminates the need to request supplies and reduces the chance that a lapse in communications will interrupt the sustainment flow and jeopardize the integrity of the defense. The commander resupplies the supported maneuver unit using this push system until it requests otherwise. Commanders use sustainment information systems to accurately tailor these combat-configured push packages to the demands of the supported maneuver units.

5-235. In contiguous operations, the commander positions echelon sustainment facilities farther away from the forward edge of the battle area in a defense than in the offense to avoid interfering with the movement of units between battle positions or the forward movement of counterattack forces. These facilities are located far enough behind friendly lines that likely enemy advances will not compel the relocation of critical sustainment capabilities at inopportune times. However, those sustainment capabilities supporting the unit are located close enough to provide responsive support. In noncontiguous operations, the commander positions sustainment facilities in bases and base clusters within the perimeters of ground maneuver units to provide security and avoid interrupting their sustainment functions.

5-236. Commanders provide maintenance support as far forward as possible at maintenance collection points to reduce the need to evacuate equipment. The thrust of the maintenance effort is to fix as far forward as possible those systems that can be quickly returned to the unit in combat-ready condition, as sustainers focus on preparing the defensive force to go on the attack. The commanders ensure that multifunctional

5703 forward logistics elements contain the maximum variety of maintenance personnel with appropriate  
5704 equipment, such as repair sets, kits, and outfits, to rapidly repair weapon systems.

5705 5-237. Medical support associated with the defense anticipates significant casualties, just as in the offense  
5706 during large-scale combat operations. The BSMC and medical company (area support) provide Role 1 and  
5707 Role 2 medical support. The BSMC provides support to BCTs, and the medical company (area support) is  
5708 and EAB asset operating under the command and control of the MMB. During large-scale combat operations,  
5709 the Role 2 medical companies prepare for the defense by positioning assets to best support the flow of patients  
5710 without impeding combat operations. The BSMC also reviews and integrates the medical evacuation and  
5711 casualty evacuation plans for units in the area defense.

5712 5-238. The conduct of troop movements and resupply convoys is critical to a successful defense. Staffs  
5713 balance terrain management, movement planning, and traffic-circulation control priorities. Staffs also plan  
5714 multiple routes throughout the AO and closely control their use. The commander may allocate mobility  
5715 resources to maintain main supply routes to support units and supplies moving forward and to evacuate  
5716 personnel and equipment to the rear. The commander coordinates air and ground movements supporting the  
5717 commander's scheme of maneuver with any other affected Services. Commanders also coordinate such  
5718 movements with any affected organic and external Army aviation, fire support, air defense, and ground  
5719 maneuver units.

5720 5-239. During the preparatory phase of the defense, sustainment operators normally pre-position supply  
5721 stocks, particularly ammunition and barrier materials, in the battle positions of defending forces. Sustainment  
5722 operators also establish maintenance and casualty collection points. Sustainment operators must address these  
5723 and other sustainment preparations in the planning process to avoid compromising the operation.

## 5724 **MOBILE DEFENSE**

5725 5-240. *Mobile defense* is a defensive operation that concentrates on the destruction or defeat of the enemy  
5726 through a decisive attack by a striking force (ADP 3-90). The mobile defense focuses on defeating or  
5727 destroying the enemy by allowing enemy forces to advance to a point where the enemy is exposed to a  
5728 decisive counterattack by the striking force. The *striking force* is a dedicated counterattack force in a mobile  
5729 defense constituted with the bulk of available combat power (ADP 3-90). A fixing force supplements the  
5730 striking force. The commander uses the fixing force to hold attacking enemy forces in position, to help  
5731 channel attacking enemy forces into ambush areas, and to retain areas from which to launch the striking force.

## 5732 **SUSTAINMENT SUPPORT DURING MOBILE DEFENSE**

5733 5-241. The sustainment mission of a mobile defense requires sustainment planners look beyond the fixing  
5734 force's shaping operations to support the striking force's decisive counterattack. The greater the distance the  
5735 striking force must cover when moving from its assembly area to its final objective, the greater the amount  
5736 of supplies needed to support that move. The mobile defense typically requires more fuel, provides less time  
5737 for maintenance repairs, and requires more complex casualty evacuation procedures due to the dynamic  
5738 nature of this defense.

5739 5-242. Commanders establish casualty evacuation procedures for both the fixing force and the striking force  
5740 and ensure that all unit personnel are trained in casualty response procedures, tactical combat casualty care  
5741 (self-aid, buddy aid, and combat lifesaver), evacuation of the sick and wounded, and medical aspects of injury  
5742 prevention. The fixing force will likely suffer a higher percentage of casualties than the striking force as it  
5743 absorbs the enemy's attack. When the striking force must move a considerable distance from its sustaining  
5744 base, the commander should consider establishing a forward logistics element that includes a medical  
5745 capability.

## 5746 **SUSTAINMENT PREPARATION FOR MOBILE DEFENSE**

5747 5-243. The main battle area is where corps and division commanders want to destroy an attacking enemy  
5748 force by employing a combination of fixing and striking forces. The sustainment commander supports main  
5749 battle forces by pre-positioning tailored supplies to expedite the construction of countermobility and

survivability positions, forward positioning maintenance and recovery assets to regenerate combat power, and expediting personnel fills and returns-to-duty to reconstitute fighting formations.

5-244. The fixing force typically consists of one-third to one-half of the defender's combat power. It shapes the enemy penetration or contains the enemy's advance through a combination of an area defense and a delaying action to establish conditions for a successful attack by the striking force. It typically has most of the counter mobility assets of the defending unit. The sustainment commander supports tempo by delivering mission essential tailored supplies and materiel as far forward as possible by employing unit distribution to deliver preplanned and preconfigured packages of essential items.

5-245. The striking force typically consists of one-half to two-thirds of the defender's combat power. It decisively engages the enemy as attacking forces become exposed in their attempt to overcome the fixing force. The striking force is normally fully tasked organized with all functional and multifunctional support and sustainment assets before its actual commitment. The sustainment element should be task organized into a forward logistics element resourced with fuel, munitions, medical treatment, medical evacuation, and maintenance recovery assets. The forward logistics element is capable and prepared to rapidly replenish the striking force prior to commitment, evacuate personnel and systems, and sustain mission essential capabilities throughout the battle. Additionally, sustainment must be prepared to support the transition to a spoiling attack with refueling, rearming, casualty evacuation, and battle damage assessment and repair of combat capability to extend operational reach.

## RETROGRADE

5-246. *Retrograde* is a type of defensive operation that involves organized movement away from the enemy (ADP 3-90). The enemy may force these operations, or a commander may execute them voluntarily. The higher commander of the force executing the retrograde must approve the operation before its initiation in either case. Retrograde is a transitional operation; it is not conducted in isolation. It is part of a larger maneuver scheme designed to regain the initiative and defeat the enemy.

## SUSTAINMENT SUPPORT DURING RETROGRADE

5-247. The sustainment mission 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 have contingency plans necessary to ensure an uninterrupted flow of support to the maneuver units tactically employed in defensive combat while at the same time displacing and/or preparing to displace the supporting unit. Plan for heavy equipment transportation assets to support the retrograde defense operations.

5-248. 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 combat, functional, and multifunctional support 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 prevent revealing friendly future operations to the enemy.

5-249. 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 makes providing this support more difficult. Retrograde operations generally require more Class III and possibly more Class V supplies than during the other defensive operations. 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.

**SUSTAINMENT PREPARATION FOR RETROGRADE**

5-250. The sustainment provided is mobile enough to cope with demands of the fluid tactical situation that typically occurs during a retrograde operation. The sustainment commander prevents unnecessary supplies from accumulating in areas that will be abandoned. Only essential medical and logistics support should be located in the area involved in the retrograde operation.

5-251. The maneuver commander establishes maintenance, recovery, and evacuation priorities and destruction criteria for inoperable equipment in the OPORD. Maintenance requirements generally overwhelm the organic capabilities of forward units during a retrograde operation. Forward units place as many maintenance, recovery, and evacuation assets forward as possible to augment or relieve combat elements of the burden of repairing unserviceable equipment. Recovery and evacuation vehicles position themselves at critical locations to keep disabled vehicles from blocking movement routes. Forward units use all available means to accomplish this, including using equipment transporters and armored vehicles with inoperative weapon systems. When recovery and evacuation are impossible, units destroy inoperable equipment to prevent capture. When possible, units destroy the same vital components in each type of system to prevent the enemy from rapidly exploiting captured friendly systems through battlefield cannibalization.

5-252. The commander assigns transportation priorities for the movement of combat troops and their supplies, the movement of obstacle materials to impede the enemy, and the evacuation of casualties and repairable equipment. The commander keeps main supply routes open and decontaminated as necessary. Units control the back-haul of transportation assets before the retrograde begins, reducing the amount of transportation needed to support the operation. Tasking of and coordination with movement control units for road usage or de-confliction during retrograde operations is critical to ensure the retrograde is not hindered by uncoordinated or conflicting unit movement on available routes.

5-253. Commanders designate and reserve routes for flow of dislocated civilians to mitigate interference and ensure freedom of action, retaining use of the unit's main supply routes as much as possible.

5-254. Assignment of medical evacuation precedence is necessary. The precedence provides the supporting medical unit and controlling headquarters with information to use in determining priorities for committing their evacuation assets. For this reason, correct assignment of precedence cannot be overemphasized; over classification has often been an issue during operations. Patients are evacuated as quickly as possible, consistent with available resources and pending missions. Medical elements supporting the retrograding force must provide rapid evacuation of casualties to medical facilities. Medical evacuation requirements are especially demanding in the large AOs common to the retrograde. Commanders may augment the ground ambulance capabilities of supporting forward medical units.

5-255. Military police elements are involved primarily in maneuver and mobility support operations to support and preserve the commander's freedom of movement. The commander may augment supporting military police forces to establish traffic control posts and route and convoy security. Military police also provide support through the execution of detainee and dislocated civilian operations.

5-256. FMSUs can send the workload from commercial vendor services and other functions back to units outside the immediate AO for processing. Payments and disbursements done remotely can be effective if needed during large-scale defensive operations and mobile defense. For additional details, see ADP 4-0 and FM 4-80.

**DEFENSIVE OPERATIONAL FRAMEWORK CONSIDERATIONS**

5-257. In the defense, commanders typically retain the deep and rear areas, but they divide the close area into two distinct portions: the security area and main battle area. Commanders use this approach to synchronize operations, including those in air, space, and cyberspace, to defeat an enemy force throughout its depth. See FM 3-0 for additional information on defensive operational framework considerations.

**EXTENDED DEEP OPERATIONS**

5-258. Operational and strategic-level deep operations are typically outside an assigned land AO for a corps or division, but parts fall within the senior Army formation's area of interest and area of influence. Army



5846 long-range fires, cyberspace, space, and other global capabilities support attacking targets in the extended  
 5847 deep area to set conditions for friendly defensive operations. Long-range artillery and ground-based missile  
 5848 capabilities can range enemy long-range missile batteries, manufacturing and economic nodes, critical  
 5849 infrastructure such as airfields and ports, strategic communications nodes, and strategic sustainment and  
 5850 reserve locations.

## 5851 **DEEP OPERATIONS**

5852 5-259. Deep operations are used to attrit, isolate, disrupt, and disorganize attacking formations and to create  
 5853 windows of opportunity in which to act decisively against lead enemy echelons. The Army employs rocket  
 5854 artillery, rotary-wing aviation, UASs, special operations forces, space and cyberspace capabilities,  
 5855 electromagnetic warfare, and influence activities to conduct deep operations.

5856 5-260. Sustainment capability employed to sustain deep operations is organic to Army organizations that  
 5857 execute long-range fires, rocket artillery, rotary-wing aviation, cyberspace, space and other multidomain  
 5858 effects that support attacking targets in the deep areas. Specific organizations include the multi-domain task  
 5859 force BSB, combat aviation brigade aviation support battalion, fires brigade BSB, and FSCs supporting the  
 5860 long-range fires battalion, rocket artillery, and rotary wing aviation.

## 5861 **SECURITY AREA OPERATIONS**

5862 5-261. During the defense, the security force occupies an assigned area far enough forward of the forward  
 5863 edge of the battle area to protect main battle area units from surprise. Security forces provide early warning  
 5864 to give main battle area units time to reposition forces against enemy maneuver and to mitigate the effects of  
 5865 enemy medium-range fires. The Army employs maneuver brigades task organized with fires, engineers, and  
 5866 aviation to increase the ability of guard or covering forces to slow and disorganize the enemy, degrade the  
 5867 enemy's security forces, and gain additional time for the defending commander.

5868 5-262. Sustaining security area operations is a challenge due to long lines of communication and tempo of  
 5869 operations. Sustainment capability employed to sustain security area operations is organic to Army maneuver  
 5870 brigades and organizations that provide fires, engineer, and aviation support in the security area. Specific  
 5871 organizations include the BCT BSBs and FSCs supporting the field artillery, aviation, and engineer  
 5872 battalions.

## 5873 **MAIN BATTLE AREA OPERATIONS**

5874 5-263. The main battle area is where the commander intends to deploy the bulk of the unit's combat power  
 5875 and defeat an attacking enemy force. The commander positions forces in the main battle area to block enemy  
 5876 penetrations, choosing terrain that puts enemy forces at the greatest possible disadvantage. The Army  
 5877 employs BCTs to defeat the enemy attacking force.

5878 5-264. Sustaining main battle area operations includes increased requirements in Class IV, V, and IX items  
 5879 to support the defensive effort and build Class III (bulk and package) stocks to prepare to transition to  
 5880 offensive operations. Sustainment capability is organic to BCTs, fires, engineer, and aviation support in the  
 5881 main battle area. Specific organizations include the BCT BSBs and FSCs supporting the field artillery,  
 5882 aviation, and engineer battalions.

## 5883 **REAR OPERATIONS**

5884 5-265. Rear operations maintain freedom of action in the security and main battle areas and prevent  
 5885 culmination. The rear command post enables this freedom of action by planning and directing sustainment,  
 5886 conducting terrain management, providing movement control, and providing area security of the rear area.

## 5887 **TRANSITION TO OFFENSE**

5888 5-266. The ultimate goal of defensive operations is to defeat the enemy's attacks and transition, or threaten  
 5889 to transition, to the offense. Transitions must be deliberately planned, and units must take actions to prevent  
 5890 the enemy from regaining momentum. As friendly forces meet their defensive objectives, forces consolidate

and reorganize for offensive operations or prepare to facilitate forward passages of lines for fresh formations. Sustainment forces must also be prepared to support the transition to offensive operations.

5-267. Sustainment commanders must be prepared to sustain offensive objectives established by maneuver commanders during transitions. Sustainment planners must understand that perfect conditions may not exist during a transition, but still be prepared to sustain combat power. During transitions, it is essential for sustainment planners to provide maneuver commanders with freedom of action and prolonged endurance necessary to sustain the pace of offensive operations.

### SECTION III – SUSTAINMENT OF OFFENSIVE OPERATIONS

5-268. This section provides an overview of sustainment of offensive operations and the fundamental principles of sustainment during the offense. It also covers additional sustainment planning considerations unique to offensive operations. It concludes with a discussion of sustainment support of offensive operations.

5-269. An *offensive operation* is an operation conducted to defeat and destroy enemy forces and gain control of terrain, resources, and population centers (ADP 3-0). The intent of an offensive operation is to impose the commander's will on the enemy. Against a capable, adaptive enemy, offensive operations are the most direct and sure means of seizing, retaining, and exploiting the initiative to achieve objectives.

5-270. The key to successful offensive operations is to achieve all desired objectives prior to culmination. This requires the force in the offense to have some combination of relative advantage in the physical, information, or human dimensions. Typically, offensive operations require advantages in multiple domains, but commanders may achieve those advantages through deception operations and surprise rather than the physical means of combat power alone.

### OVERVIEW OF SUSTAINING OFFENSIVE OPERATIONS

5-271. There are four types of offensive operations: movement to contact, attack, exploitation, and pursuit. These operations 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.

5-272. Sustainment commanders and their staffs prepare to support each offensive operation. Sustainment determines the depth, duration, and endurance of Army operations and plays a key role in enabling a successful attack. Failure to provide adequate sustainment during offensive operations can result in a tactical pause, culmination of offensive operations, and prevent consolidation of gains. Operational and sustainment planners at each echelon of command work closely to synchronize sustainment support to allow commanders the freedom of action to maneuver and provide extended operational reach for the offense.

### SUSTAINMENT FUNDAMENTALS FOR OFFENSIVE OPERATIONS

5-273. Offensive operations involve an intense tempo, requiring sustainers to continually update their running estimates to anticipate friction points on the battlefield. Sustainers need to be able to accurately envision the offensive operation in time and space to accurately forecast operational requirements. Continuous coordination between planners at the various echelons is required for mission success.

5-274. If offensive momentum is not maintained, the enemy may recover from the shock of the first assault, gain the initiative, and mount a successful counterattack. Maintaining an understanding of offensive operations and future operations allows sustainment planners to simultaneously transition between offensive operations and consolidation of gains. What starts out as a movement to contact could rapidly turn into a lengthy pursuit of enemy forces requiring extended operational reach to capitalize on opportunities. This requires robust

#### ***Sustaining Offensive Operations***

- Continually update running estimates.
- Simultaneously support the offense and consolidate gains.
- Understand enemy threat and challenges.
- Increased Class III (bulk and package) and Class IX requirements.
- Increased casualties and personnel replacements over extended battlefield.

5937 planning and consideration for all possible outcomes.

5938 5-275. Offensive operations require situational understanding of the enemy threat. Sustainment  
5939 commanders should not assume unobstructed LOCs and should anticipate challenges across multiple  
5940 domains. These commanders prepare for challenges of degraded sustainment systems, interdicted LOCs, and  
5941 challenges from an enemy that has equal or overmatch capabilities. Sustainment commanders and planners  
5942 prepare to push forward critical supplies in an OE where degraded systems and communications exist.

5943 5-276. The continued forward movement of units and sustainment support is critical if the force is to  
5944 maintain the initiative and combat power necessary for the successful execution of offensive operations.  
5945 Maintaining the initiative in the close area often results in significant numbers of bypassed enemy forces and  
5946 remnants of defeated units as friendly forces maneuver deep into enemy areas by avoiding enemy units in  
5947 well prepared positions. The fluidity and rapid tempo of operations pose challenges when planning for the  
5948 area security of support and consolidation areas.

5949 5-277. Enemy commanders look for opportunities to counter, or at least hinder, the performance of corps  
5950 and division offensive tasks. Enemy commanders attempt to strike deeply into friendly support and  
5951 consolidation areas using multiple combinations of lethal and nonlethal effects from multiple domains. The  
5952 enemy will seek to employ special purpose forces, irregular forces, electromagnetic warfare, long-range  
5953 artillery, rockets, missiles, information capabilities, and cyberspace electromagnetic activities to disrupt  
5954 sustainment activities. Sustainment commanders remain aware of conventional enemy units and other  
5955 elements bypassed during the advance of friendly forces and the threat presented by their presence in support  
5956 and consolidation areas.

5957 5-278. Sustainment units synchronize with maneuver units to ensure security of support and consolidation  
5958 areas. Corps and division headquarters must plan to keep CPs operating, sustainment capabilities functional,  
5959 respective LOCs open, and supply stocks at an acceptable level. The conduct of noncontiguous operations  
5960 increases the difficulty of these tasks, as does the lack of friendly host-nation security forces.

5961 5-279. Sustaining the offense is a high-intensity operation. Sustainment commanders and staffs must plan  
5962 for increased requirements in Class III (B), VIII, and IX and personnel replacements to sustain the pace and  
5963 tempo of operations. Plan and rehearse command and control, forward positioning, orders issuance, personnel  
5964 accounting, logistical support, processing, and transportation of replacements, and most critically, maneuver  
5965 unit rapid integration of replacements. Sustainment planners anticipate where the greatest need might occur  
5966 during offensive operations and consider positioning sustainment units in close proximity to operations to  
5967 reduce response times for critical support. Planners also consider alternative methods for delivering  
5968 sustainment in emergencies. Extended LOCs require analysis of how to best emplace forward sustainment  
5969 elements to support the commander. It is important to clearly lay out key actions for rehearsal during  
5970 offensive operations (for example, casualty evacuation routes, ambulance exchange or loading points,  
5971 logistics release points, support area displacement times and locations, detainee collection points and holding  
5972 areas, and fuel and ammunition resupply points) to foresee potential problems and develop means to mitigate  
5973 them.

## Defense and Large-scale combat operations in the Pusan Perimeter

On June 25, 1950, the 89,000 strong North Korean People's Army (NKPA) invaded the Republic of Korea (ROK) and quickly overwhelmed the ROK units. Throughout July, NKPA units pushed southward as the ROK army and recently arrived American units fought to slow their advance. By August 4, Eighth Army Commander, Lieutenant General Walton H. Walker, had established the 140-mile Pusan Perimeter which halted the NKPA. Walker's defensive line depended on holding the road and rail network that supplied the front. Over the course of the next 45 days, Walker had to hold the perimeter while his logistical support units re-established combat power to transition to the offensive and breakout of the perimeter.

The Pusan Logistical Command, established by Walker, served as the principal sustainment organization providing for all sustainment functions throughout the Battle of the Pusan Perimeter (August 4 - September 15). This logistical command centered on Pusan harbor, the most developed and biggest harbor on the peninsula. It was the center of the supply effort for United Nations forces within the Pusan Perimeter. Its four piers and intervening quays could berth 24-or-more deepwater ships and could handle a capacity of 45,000 tons daily. Pusan also had a good transportation system of railroads running from the port to points north; it formed the backbone of the transportation system in Korea. On August 30, the 714th Transportation Railway Operating Battalion arrived in Korea and became responsible for operating the 500 miles of railway line within the Pusan perimeter.

Necessary munitions for the build-up came either from Japan, as part of the refurbishment operation for WWII vehicles and munitions, or shipped directly from the United States. By August, an average of 4,000 vehicles a month cleared the repair shops in Japan and were transported to Pusan through an expedited rail-shipborne system to deliver them in two days. Additionally, the Army shipped equipment from the Continental United States. In early August, a cargo ship arrived with 80 U.S. medium tanks capable of defeating the NKPA's T-34 tanks. By the third week of August, through resupply and the deployment of armor units, American tanks outnumbered the NKPA tanks by at least 5 to 1.

To provide health service support for the high rate of casualties among American and ROK forces, the Army established Mobile Army Surgical Hospital (M.A.S.H.) units. The 8055th M.A.S.H. was assigned to the 24ID in July. Shortly thereafter, the 8063rd and 8067th began operations within the Pusan Perimeter. These units often received 100-200 casualties per day. From these units, hospital trains returned wounded soldiers to Pusan for further care. To provide for Class I supply, the Army had to rely on WWII-era K-rations available in Japan. None of the new C-rations were immediately available. The Quartermaster General issued orders that all available C-rations in the U.S were to be immediately shipped to Korea to feed U.S. and ROK personnel.

By September 1, United Nations Command (including ROK and British troops) had 180,000 men based in the Pusan Perimeter. Shortly after the landings at Inchon on September 15, Pusan Logistical Command was redesignated as the 2nd Logistical Command for the remainder of the war. On September 20, American and ROK units began to move forward and two days later, Walker issued his operations order for a full-scale breakout of the Pusan Perimeter.

## 6025 PLANNING CONSIDERATIONS FOR THE OFFENSE

6026 5-280. Sustainment planning is both a continuous and a cyclical activity of the operations process. For  
6027 sustainment planning, the most important factors are requirements, capabilities, and shortfalls. As outlined  
6028 in the paragraphs below, planning considerations assist planners in identifying specific support or operational  
6029 requirements based upon available information.

6030 5-281. Many planning considerations impact the ability to execute offensive operations. These  
6031 considerations should be recognized, analyzed in the time available, and prioritized based on the  
6032 commander's intent.

6033 5-282. Planning considerations must encompass all warfighting functions to ensure the plan is integrated  
6034 across all functions and domains. A planning consideration may have various levels of effects that drive  
6035 support requirements. Planning considerations for offensive operations should include, at a minimum, the  
6036 following considerations organized by warfighting function.

## 6037 SUSTAINMENT PLANNING CONSIDERATIONS

6038 5-283. The planning considerations listed below for sustainment are examples of what sustainment planners  
6039 may consider during offensive operations. This list is not considered all-inclusive, and considerations will  
6040 vary for individual operations. The list provides some common planning considerations for sustainment  
6041 during all offensive operations. If an offensive operation has a special consideration, it is indicated in the list:

- 6042 • Plan for execution of all sustainment functions and associated sub-functions at all echelons;  
6043 personnel services, financial management, HSS, and logistics. This includes personnel  
6044 replacement, casualty reporting, medical treatment, medical evacuation, medical logistics, and all  
6045 logistics functions.
- 6046 • Forecast expected number of casualties and prepare appropriate medical treatment, surgical, and  
6047 evacuation capabilities. Planners must also assess the best positioning of medical units to ensure  
6048 support to offensive operations.
- 6049 • Anticipate conducting large-scale personnel replacement operations in support of units with high  
6050 casualties.
- 6051 • Planners anticipate supporting reconstitution operations for maneuver units experiencing high  
6052 casualties and loss/damage of equipment.
- 6053 • Unit reorganization is a routine process that occurs on an objective. Reorganization activities  
6054 should include the integration of replacement personnel when able.
- 6055 • Continuous replacement operations during offensive operations are critical to maintaining  
6056 momentum and prolonging endurance.
- 6057 • Regeneration of units is an exceptionally intensive form of reconstitution requiring the direction  
6058 of maneuver commanders two levels up and substantial sustainment support.
- 6059 • Submit personnel replacement priority requests based on forecasted casualty estimates to enable  
6060 forward positioning of personnel replacements.
- 6061 • Commanders, staffs, and support operations officers at all echelons should weight the offensive  
6062 effort by cross leveling sustainment/logistics assets. This includes maintenance and recovery  
6063 capabilities.
- 6064 • Plan for all sustainment functions required to build combat power: personnel, supply,  
6065 maintenance, and medical. Preposition supply Classes I, water, IIIB/P, IV, V, VIII, and IX as far  
6066 forward as the tactical situation permits. Consider the use of combat configured loads. Balance  
6067 forward positioning of resupply and rapid mobility.
- 6068 • Expect high demand for Classes III (B), IX and V to support the offensive preparation efforts.  
6069 Ensure adequate transportation assets are available to move the required tonnage.
- 6070 • Plan for heavy equipment transportation assets to support retrograde. This transportation is  
6071 required to move unserviceable main battle tanks, infantry and/or cavalry fighting vehicles,  
6072 Stryker systems, and other heavy equipment to maintenance collection points located behind  
6073 offensive operations.

- 6074 • Ensure field maintenance capability is adequate to repair or evacuate damaged equipment to meet  
6075 the readiness requirements and the maneuver commander's intent. This requires planned  
6076 coordination between the maintenance and transportation units and likely requires movement  
6077 control points along routes.
- 6078 • Anticipate time needed to execute logistics as distances increase.
- 6079 • Anticipate requirements to provide subsistence, medical, transport, and shelter to detainees and  
6080 dislocated civilians.
- 6081 • Financial managers at each echelon are responsible for capturing increased costs, applying  
6082 available resources to validate requirements, identifying unfunded requirements, and securing  
6083 funding for reconstitution requirements.
- 6084 • Plan for increased consumption of fuel and ammunition by aviation brigades.
- 6085 • Forecast for placement of HR assets to support numerous functions to include intertheater and  
6086 intratheater transient personnel accountability, casualty tracking at Role 3 MTFs, and postal  
6087 operations where the operational environment allows. The theater gateway will typically be placed  
6088 by the ASCC at the primary intertheater APOD. TG PATs will be placed where the intertheater  
6089 transient passenger flow dictates. RSO activities will be supported by transportation and  
6090 sustainment capabilities.
- 6091 • Plan for the appropriate type of water distribution. During large-scale combat, sustainment  
6092 planners should expect to distribute only bulk water from the corps rear boundary forward to the  
6093 forward line of own troops. Bottled water requires contracted support and, if used, should only be  
6094 planned for the joint security area.
- 6095 • Commanders, staffs, and sustainment planners at all echelons must be prepared to support  
6096 regeneration and reorganization as part of reconstitution operations.
- 6097 • Plan for the execution of mortuary affairs operations for fatalities as a result of large-scale combat  
6098 operations. Planners should also prepare for temporary interment when directed by the CDR.

## 6099 **COMMAND AND CONTROL PLANNING CONSIDERATIONS**

- 6100 5-284. The planning considerations for command and control are listed below:
- 6101 • Expect enemy attacks on space and cyberspace domains to include the electromagnetic spectrum  
6102 that will degrade communications and digital information transmission. Attacks on these domains  
6103 affect sustainment operations in terms of satellite communications, positioning, navigation,  
6104 timing, information collection, internet operations, computer systems, and frequency modulation  
6105 communications. Commanders must develop and execute a primary, alternate, contingency, and  
6106 emergency communications plan ensuring redundancy.
  - 6107 • Identify sustainment forces that will support reserve forces in all types of offensive operations.  
6108 Commanders will determine acceptable levels of risks prior to attaching sustainment units to the  
6109 reserve.
  - 6110 • Understand how terrain and distance may limit/degrade communications and force utilization of  
6111 retransmission stations. This is important for Combat Service Support Automated Information  
6112 Systems Interface/Very Small Aperture Terminal operations.
  - 6113 • Assess sustainment task organization frequently to ensure it is adequate and positioned properly  
6114 to support the sustainment mission. Plan for replacement of units that are lost or degraded due to  
6115 enemy attack.

## 6116 **MOVEMENT AND MANEUVER PLANNING CONSIDERATIONS**

- 6117 5-285. The planning considerations for movement and maneuver are listed below:
- 6118 • Expect sustainment resupply and support elements to operate in the deep and close areas while  
6119 supporting offensive operations. Sustainment units must understand operational control measures  
6120 to include passage of lines and crossing of boundaries with maneuver forces in the offense.
  - 6121 • Understand and/or anticipate how terrain, enemy action, fire support coordination measures, and  
6122 movement restrictions will affect the methods of resupply. These factors must be considered in all  
6123 distribution management and movement control plans.

- 6124 • Expect increase in items (Class III, V, VIII, and IX) to support offensive operations. Ensure
- 6125 adequate transportation assets are available to move supplies and equipment forward in the
- 6126 operational area.
- 6127 • Coordinate with movement control units for road usage or de-confliction during offensive
- 6128 operations. Commanders must identify main and alternate movement routes.
- 6129 • Plan to support SOF at all echelons. This includes delivery of special ammunition and non-
- 6130 standard equipment maintenance.
- 6131 • Plan for support to attack helicopter operations at all echelons. This includes planning for fuel,
- 6132 maintenance, munitions, and placement of FARPs.
- 6133 • Coordination with the consolidation and support area terrain managers to coordinate and/or
- 6134 deconflict airspace for aerial delivery, Air Force airland delivery, and aeromedical evacuation
- 6135 requirements.
- 6136 • Prioritize the use of transportation assets needed to support movement and maneuver requirements
- 6137 against transportation assets needed for sustainment requirements.

## 6138 INTELLIGENCE PLANNING CONSIDERATIONS

6139 5-286. The planning considerations for intelligence are listed below:

- 6140 • Intelligence is critical for planning sustainment operations in support of the offense. It starts with
- 6141 an understanding of the overarching operational and mission variables but then extends to
- 6142 intelligence preparation of the operational environment products, detailed intelligence estimates,
- 6143 and other intelligence products that describe enemy capabilities and courses of action. From these
- 6144 products, planners can estimate friendly casualty rates and munition expenditure rates, plan
- 6145 protection operations, and have a better understanding of where and when sustainment capabilities
- 6146 are needed. See ADP 2-0 and FM 2-0 for more information on the intelligence warfighting
- 6147 function.
- 6148 • Like the other warfighting functions, there are some unique aspects of sustainment support to
- 6149 offensive operations that are critical to the intelligence warfighting function. Low-density
- 6150 intelligence and electromagnetic warfare maintenance is especially critical to the intelligence
- 6151 architecture and intelligence operations.

## 6152 FIRES PLANNING CONSIDERATIONS

6153 5-287. The planning considerations for fires are listed below:

- 6154 • Forecast increased consumption of long-range and precision munitions for maneuver units. The
- 6155 TSC must coordinate with the CCDR J-4 and strategic providers to ensure increased amounts of
- 6156 munitions are being distributed to the theater supporting offensive operations.
- 6157 • Anticipate frequent and rapid relocation of fires units to shift supporting units accordingly.
- 6158 • Ensure quantity and positioning of modular ammunition units at EAB are sufficient to support
- 6159 fires ammunition requirements.
- 6160 • Ensure that ammunition transportation assets are adequate and properly positioned to support
- 6161 ammunition distribution for fires operations. The TSC must coordinate with the CCDR J-4 and
- 6162 strategic providers to ensure required munitions are being prioritized and distributed to the theater.

## 6163 PROTECTION PLANNING CONSIDERATIONS

6164 5-288. To fully understand and inform the scheme of protection developed in the protection cell, planning

- 6165 considerations should include at a minimum:
- 6166 • Plan for CBRN. This includes increased requirements for non-potable water and CBRN defense
  - 6167 equipment. Planning must include detailed procedures for processing contaminated human
  - 6168 remains and equipment decontamination.
  - 6169 • Expect direct enemy attack by small unit and/or special operations ground forces, attack aircraft,
  - 6170 and long-range artillery. Commanders must ensure that sustainment units supporting offensive
  - 6171 operations are adequate to defeat enemy small unit operations (Level I or Level II threats).

- 6172 Dispersion mitigates effects of long-range fires and attack aircraft. See ADP 3-37 for more  
6173 information.
- 6174 • Plan for adequate convoy security for convoys supporting offensive operations. This may be from  
6175 internal sources or from coordinated external sources.
  - 6176 • Anticipate the hasty construction of detainee collection points and holding areas at sustainment  
6177 nodes. Maximize the use of all types of empty transportation returning to the rear for detainee  
6178 movement.

## 6179 ADDITIONAL PLANNING CONSIDERATIONS

6180 5-289. Sustainment forces must anticipate longer LOCs, potential degraded communications, bypassed  
6181 enemy forces, and movement restrictions during offensive operations. These factors should be considered in  
6182 all distribution management and movement control plans. This may require sustainment commanders to  
6183 weight the main offensive effort by prepositioning personnel replacements, Class III, V, VIII, and IX stocks,  
6184 as well as water centrally and well forward. The sustainment commander must balance forward positioning  
6185 of sustainment assets with the need for freedom of action and operational reach.

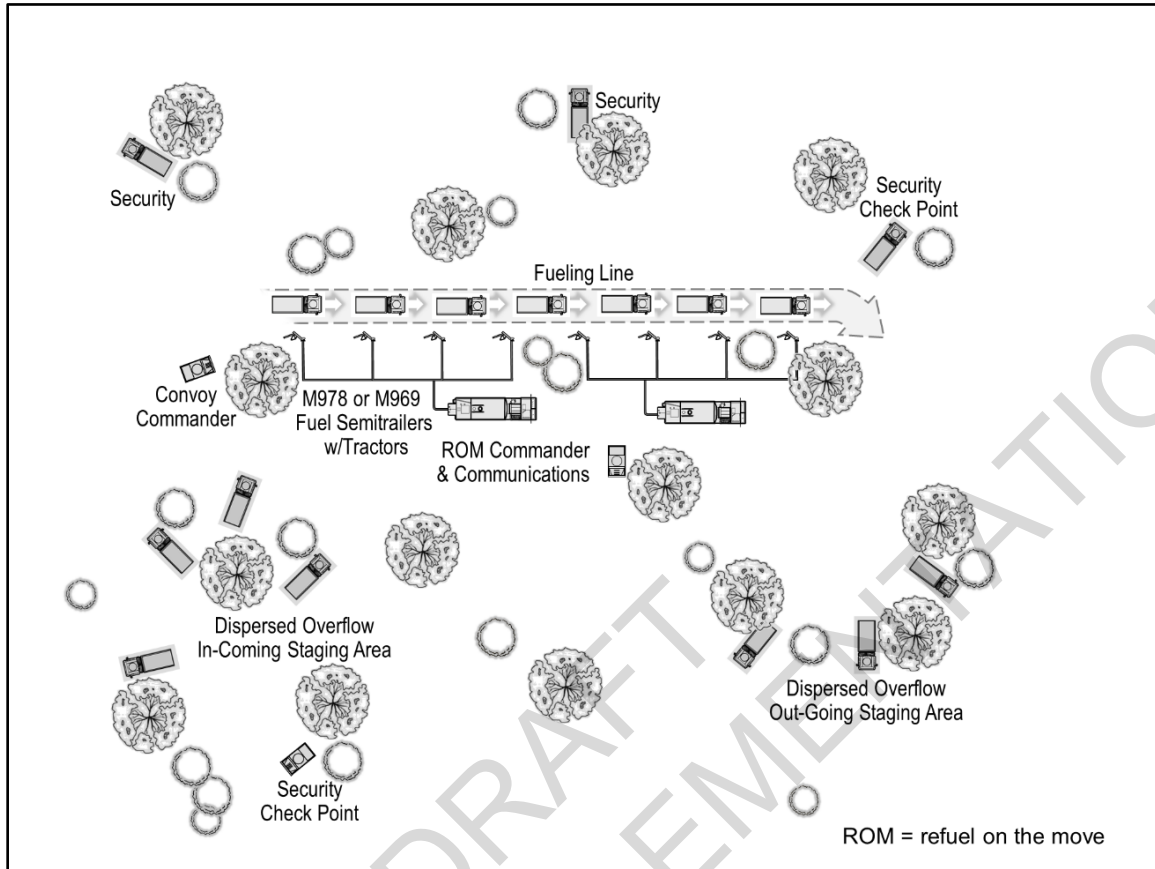
6186 5-290. Refuel on the move can be tailored to many tactical situations, but the primary purpose is to extend  
6187 reach and tempo for the offensive operation. The key to success in a refuel on the move is rapid simultaneous  
6188 execution. This means that units should organize their movement so that vehicles not receiving fuel can  
6189 remain outside the refuel on the move area. Vehicles that will receive fuel enter the area and quickly move  
6190 to their designated fuel points without dismounting ground guides. Once halted, vehicles rapidly refuel in  
6191 accordance with the plan and depart together once complete. Figure 5-10 displays an example of a long site  
6192 refuel on the move configuration.

6193 5-291. When vehicles enter a refuel on the move site for refueling, a predetermined amount of fuel is issued  
6194 (usually timed) and the vehicles move out to return to their convoy or formation. The rapid employment of  
6195 the refuel on the move distinguishes it from routine convoy refueling operations.

6196 5-292. Ideally, refuel on the move operations utilize rear fuel assets while forward assets remain full. In the  
6197 BCT concept, the distribution company would conduct the refuel on the move while the forward support  
6198 companies pass through remaining full. The concept can be extended based on the size and scope of the  
6199 operation; for example, the DSSB can be the force conducting the refuel on the move for the whole division,  
6200 while the entirety of the BCT's fuel assets push through remaining topped off.

6201 5-293. Any level unit can conduct refuel on the move operations to meet mission requirements. Typically,  
6202 an FSC will conduct refuel on the move operations to support maneuver units between engagements or to  
6203 increase time on target while maneuver units peel back and flow through the refuel on the move and return  
6204 to the current engagement. A refuel on the move can be as simple as utilizing heavy expanded mobility  
6205 tactical trucks or modular fuel systems, or as complex as needed, utilizing any equipment available to support  
6206 the largest of movements. For additional information on refuel on the move operations, see ATP 4-43.





**Figure 5-10. Example of a long site refuel on the move configuration**

5-294. Sustainment planners and maneuver commanders conducting offensive operations should be prepared to execute reconstitution operations to rebuild combat power. Commanders assess the unit's readiness capability and determine the most expedient method to bring the unit to an acceptable combat posture through reorganization or regeneration. For additional information on reconstitution, see ATP 3-94.4.

5-295. While it is advantageous to locate sustainment as far forward as possible in support of offensive operations, sustainment planners must be aware of various threats. Planners should anticipate encounters or direct action from bypassed enemy forces, SOF, and long-range artillery. Sustainment assets must be mobile and able to move with advancing maneuver forces. Planners must avoid large, consolidated bases and form dispersed, temporary base clusters. This applies to all bases in corps and brigade security areas.

5-296. The fluidity and rapid tempo of operations pose challenges when planning for the area security of support and consolidation areas. If the corps or division is to maintain the initiative and combat power necessary for the successful performance of offensive operations, the continued forward movement of units and sustainment support is critical. Sustainment personnel must also plan and prepare for supporting consolidation of gains and security of the support area. Maneuver commanders will assign the consolidation area to a BCT or division as an AO. Those forces will clear their AOs of stay-behind forces and bypassed enemy units to ensure friendly freedom of action as their parent corps or division continues to advance. These forces should be combined arms organizations specifically task organized for the consolidation of gains requirements in their AOs. These units begin performing selective stability tasks once the units establish area security within the consolidation area.

5-297. Risk, uncertainty, and chance are inherent in all military operations. Sustainment professionals must seek to understand, balance, and take risks rather than avoid risks to ensure sustainment of the operational

force. Sustainment commanders must assess and mitigate risk continuously throughout large-scale combat operations. The following is a sample list of risk considerations during offensive operations:

- Are sustainment forces properly dispersed and camouflaged? Are movements in and out of sustainment areas coordinated to avoid drawing attention to the area?
- Does the force have a sufficient number of mobile fueling vehicles to maintain offensive momentum? At what point will a loss of tankers cause mission failure?
- Are sufficient quantities of the correct Class V available for rapid replenishment? Are munition dumps established forward and their contents dispersed?
- Are sustainment systems hardened against cyber-attack? How do you validate requirements received through electronic systems? Does the threat have the capability to change information verses directed denial of service attacks?
- Do medical units have sufficient Class VIII to address mass casualty events?
- Are sufficient recovery vehicles available and placed to support rapid transportation of disabled vehicles to maintenance collection points?
- Does the enemy have plans to leave stay behind forces to interdict sustainment lines of supply? Do friendly forces have sufficient EOD assets available and positioned to remove enemy ordnance or improvised explosive devices emplaced on the MSRs?
- Are reinforcements available by skill/grade and accessible in sufficient quantity to replace losses and maintain units at strength? Which units are the resourcing priority at what points during the operation?

5-298. These considerations and others should be addressed, and mitigation strategies/alternatives developed as part of the sustainment plan.

5-299. Offensive operations place a burden on medical resources due to the magnitude and lethality of forces involved. Medical units and commanders at all levels must anticipate increased numbers of casualties as corps and division forces advance. Planning for casualty evacuation is a unit-level responsibility. Evacuation of the sick and wounded must occur concurrently with operations and requires total force participation or support in terms of transportation. Nonmedical vehicles (both air and ground) can be used to transport casualties with little or no change in configuration. Units should plan for and train on appropriate use of organic vehicles (both air and ground) and equipment (litters) for movement of casualties. See ATP 4-02.13 for additional information on casualty evacuation. Casualty liaison elements must coordinate with Role 3 hospitals to ensure accurate tracking and personnel accountability.

5-300. Explosive ordnance disposal commanders must provide support during large-scale offensive operations by detecting, identifying, evaluating, rendering safe, exploiting, and conducting disposal or disposition of explosive ordnance, including CBRN weapons of mass destruction. Planners should consider requirements to mitigate explosive ordnance encountered during offensive operations. Commanders and planners must incorporate EOD requirements within their Class V forecasts. Explosive ordnance filled with insensitive high explosives requires significantly more Class V for safe disposal.

## SUSTAINMENT DURING OFFENSIVE OPERATIONS

5-301. The objective of sustainment during the offensive is to support operations and enable maneuver forces to conduct the four offensive operations: movement to contact, attack, exploitation, and pursuit. Sustainment units supporting offensive operations are focused on sustaining and maintaining combat power necessary to defeat, destroy, or dislocate enemy forces. Successful sustainment commanders and planners will act, rather than react, during offensive operations. To support offensive operations, sustainment forces at all echelons consider echeloning support assets to expedite replenishment of critical support.

## ECHELONS ABOVE BRIGADE SUSTAINMENT

5-302. During the offense, LOCs lengthen and requirements for many classes of supply and replacement of personnel increase. Certain aspects of the distribution network like rail, pipelines, or inland waterways may not be feasible during the offense. The fast pace of the offense generally requires ground or air resupply. Offensive operations inherently create a need for emergency resupply, but it is vital that sustainers ensure the

economy and efficiency of the distribution network. Motor transport is the primary mode of transportation during the offense. Its flexibility in allowing multiple stops and rerouting assets enables dynamic battlefield support. Use of trailer transfer points can speed up throughput velocity of critical supplies to an offensive operation.

5-303. During the offense, Class V supply is critical for maintaining momentum. Depending on the operation, consumption rates may double or triple normal consumption. In addition to accounting for volume, sustainment planners also forecast the various types of ammunition used by the corps and division in the offense. For example, fighting a peer with air capabilities requires large quantities of air defense munitions. Units fighting enemy infantry in restricted and urban terrains use large quantities of small arms and artillery ammunition, as well as water. Units attacking enemy armored forces require large quantities of anti-armor munitions. Sustainment planners proactively prepare to support maneuver units in the offense with configured loads of ammunition, along with fuel and repair parts. Considerations for storage points include proximity to main and alternate supply routes, supported units, terrain, and security. Additionally, ammunition holding area personnel displace forward as the offense progresses to ensure responsive support as part of the concept of support.

#### ***Echelons Above Brigade Sustainment***

- Lengthening lines of communications.
- Critical need for Classes III, VIII, and IX.
- Increased use of aerial delivery.
- Coordinated medical support.
- Increased maintenance and recovery requirements.
- Transport, life support, and integration of personnel replacements.

5-304. In the offense, combat intensity and the depth of the AO increase. Aerial delivery may reduce the impact of these factors, allowing the combat commander to take the initiative while reducing the likelihood of overextending their supply lines. During periods of air superiority and while operating in areas with limited enemy air defense capability, the use of aerial delivery reduces the ground threat to transportation and distribution operations and can be used to extend LOCs. In addition, if forces become isolated, aerial delivery can be used as the primary means of resupply. It is also an effective method of resupplying combat outposts where it is difficult for ground transportation and distribution lines to reach.

5-305. Medical planners should closely coordinate with other sustainment planners when preparing for an offensive operation. Medical planners also work closely with staffs within the other warfighting functions to determine the scope of the operation, develop estimates for the quantity and types of support required, and develop a priority of support based on the anticipated need. Medical evacuation is an integral planning factor when preparing for an offensive operation. Two basic problems confront the supporting evacuation units in offensive operations: maintaining contact with the supported unit and maintaining mobility of the medical treatment facility supporting operational formations.

5-306. Logistics planners include shower and laundry as considerations in their planning. A field service company can be placed as far forward as the supported BCT. The goal is to provide a minimum of one shower and one change of clothing at least every seven days. Planners assess the feasibility of these provisions and implement them where and when the operation allows.

5-307. Maintenance personnel place maximum effort on preparing equipment for combat. The maintenance assets move closely behind the combat unit's main body to ensure rapid recovery, repair, and return of damaged and/or disabled equipment. Maintenance assets position themselves to support the combat units out of enemy observation. Risk is high when performing on-site maintenance and recovery operations as combat forces are advancing rapidly. Planners balance risk with support requirements to ensure critical capabilities are not lost.

5-308. Critical Class IX items should be identified and placed forward as far as possible to reduce the strain on transportation networks. Sustainers should anticipate increased consumption of Class IX items due to substantial maneuvering while on the offense. Logistics packages offer the most common and efficient means of Class IX resupply for tactical units. The increased requirement for transportation assets will inherently increase maintenance requirements across the board.

5-309. During offensive operations, financial management focuses on securing and safeguarding captured currency (enemy, allied, neutral, U.S., or mutilated currency) as well as supporting contracting and local procurements. This is accomplished by funding paying agents to pay local vendors for specific offensive operations requirements. LOCs between supported units can often be challenged during offensive operations, so financial management units and detachments must remain mobile and effectively respond to requests for support. Other tasks executed during offensive operations include commercial vendor services and contract payments, disbursing and funding support, controlling currency (U.S. or local), providing detainees pay support, special programs, and supporting monetary compensation and consolation.

5-310. Human resources planners should expect large numbers of casualties over extended battlefield depth during offensive operations and must be prepared to process mass casualties and large-scale personnel replacements to sustain combat power. Replacements must be forecasted, and any lack of replacement capacity briefed to maneuver commanders as risk to mission. A high tempo during large-scale combat operations, coupled with potentially degraded systems and communications, will negatively impact personnel status and casualty reporting.

5-311. Replacement operations entail the coordinated support, accountability, and delivery of individual replacements from the point of origin to requesting commanders in deployed units. The TSC commander ensures that replacements are delivered from higher to lower echelons as far forward on the battlefield as possible based on distribution priorities established by the theater commander. Normally, replacements are processed through the theater gateway under the command and control of the TSC. Allocation decisions are relayed from the ASCC through the TSC and ESC to the sustainment brigade responsible for theater distribution. The sustainment brigade then coordinates transportation for movement of replacements to prioritized units at echelon.

## **BRIGADE COMBAT TEAM SUSTAINMENT**

5-312. The BSB plans for increased requirements of fuel, ammunition, medical, and repair parts during offensive operations. It will prioritize support according to the division priorities, including transportation of replacements to attrited units. It will plan to support maintenance and recovery of division assets in the offense. Medical evacuation also poses significant challenges in the brigade AO. Sustainment planners must be prepared to support the ambulance shuttle system on any asset to reduce turnaround time of assets supporting medical evacuation. Increased distances due to rapid changes in the tactical situation will require the BSB to move with the offense.

5-313. Regularly scheduled combat configured loads with packages of potable and non-potable water, ammunition, fuel, and repair parts tailored to the BCT enable offensive momentum and freedom of action. If communications are degraded, the BSB will automatically push critical supplies to units in the offense.

## **Distribution Company**

5-314. The distribution company provides the vital link between the supported unit and the echeloned support above it. It executes a combination of supply and transportation functions to accomplish supply replenishment to support operations. During offensive operations, the distribution company delivers all classes of supplies. To shorten times between deliveries, the distribution company may pre-position sustainment stocks centrally as close as the tactical situation permits. The distribution company should expect to replenish mechanized units conducting offensive operations twice daily.

5-315. Continuous exchange of configured tactical logistics packages on BSB distribution company flatracks, water tank racks, tank rack modules, and multi-temperature refrigerated container systems should be employed within the distribution network to maintain the tempo and responsiveness needed during offensive operations.

5-316. Planners should coordinate EAB throughput directly to units to reduce transportation requirements of limited organic assets. The BSB commander sets priorities of support for the distribution company based on the concept of operations.

**Field Maintenance Company**

5-317. During offensive operations, the field maintenance company will be responsible for fixing or recovering damaged BSB equipment. Repairs will be conducted if the tactical situation permits and if the repair can immediately return equipment to the offensive operation. Commanders emphasize the use of self- and like-vehicle recovery methods to the greatest extent possible. These practices minimize the use of dedicated recovery assets for routine recovery missions. When priorities dictate, the BSB may coordinate with EAB to supplement BSB assets with additional repair part capabilities and combat spares.

5-318. The field maintenance company may be required to use recovery assets to help BSBs recover damaged vehicles and equipment to a maintenance collection point or BSA. Recovery and evacuation vehicles should position themselves at critical locations on the battlefield to keep disabled vehicles from blocking movement routes. This may also be accomplished by using equipment transporters and armored vehicles with inoperative weapon systems. Equipment such as radios and other electronics will be evacuated to the field maintenance company for repair.

**Brigade Support Medical Company**

5-319. Medical treatment and medical evacuation are more challenging due to the nature and tempo of the offensive operation. Medical evacuation from the BCT to the corps or division become more difficult due to lengthening LOCs, changes in the tactical situation, and changes in situational awareness. During movement to contact and attack, it is expected that more casualties will occur. The BSMC provides Role 2 medical treatment and evacuates patients from the lower roles of care. The BSMC is dependent on echelon above brigade medical evacuation units to evacuate patients to the Role 3 medical treatment facility. During large-scale combat, air and ground ambulances will be the primary method used to evacuate patients within the division close area of operation. The BSMC maintains situational awareness of ground and air ambulances in the brigade AO. Ambulance exchange points or ambulance loading points should be established to account for lengthened LOCs and reduce ambulance turnaround time.

**Forward Support Company**

5-320. The FSC will adapt to changing mission and operational variables during the offense. The commanders of the supported maneuver unit and BSB will determine the best placement of the FSC during the offense. The FSC should anticipate operating near the forward line of troops and beyond it if the tactical situation dictates. The extended distances at which the FSC must operate during the offense will impact operational readiness rates and place additional fatigue on equipment and personnel.

5-321. The FSC should plan for ongoing routine resupply while in the offense. Resupply during offensive operations should be planned and deliberately executed events to sustain the offense. In addition to planned resupply, both commanders and sustainers need to be alert to lulls in the fight which provide unplanned opportunities to resupply as well as other methods for resupply during the offense to maintain momentum. FSC commanders and S-4s must plan to synchronize consumption rates and execute planned resupply and be prepared to execute emergency resupply as required in support of the maneuver battalion. Leaders designate priorities of support to subordinate units against the operational plan. Priority of support should not be determined by who has the least amount of supplies, but by unit who is currently the main effort, or who will become the main effort for the next phase of the operation.

5-322. Sustainment planners should prepare tactical logistics packages and push packages containing fuel, ammunition, repair parts and water during offensive operations. During delivery of configured loads, return of vital distribution assets (for example, flat racks, containers) should be done through retrograde of materiel. This increases the supported maneuver commander's tactical flexibility and decreases the resupply time.

5-323. The FSC conducts repairs as far forward as possible. If the tactical situation permits and a repair can immediately return equipment to the offensive operation, it should be repaired at or just behind the forward line of own troops. If the equipment requires maintenance, then it may be evacuated to the maintenance collection point. If the tempo requires the maintenance collection point to displace, the decision has to be made by the commander whether to move the disabled equipment, leave it behind with a team of mechanics and security or destroy it. The latter is the least preferred method.

**AVIATION BRIGADE SUSTAINMENT**

5-324. The ASB plans for increased requirements of fuel, ammunition, and repair parts to meet the demands of the aviation brigade. The high tempo and dispersed formations will require the use of multiple FARPs to support aviation battalions/squadrons. To support the increased requirements, the ASB SPO officer coordinates with the DSB to conduct unit distribution directly to the FARPs or to predetermined logistics release points. Utilizing EAB throughput directly to a unit reduces transportation requirements of limited organic assets and will allow the distribution company to execute emergency resupply operations or prepare to relocate the ASB.

5-325. Downed aircraft recovery missions will exceed the capacity of the aviation maintenance and aviation support companies and require support from the DSB to assist with aircraft recovery and evacuation to sustainment-level maintenance activities as needed. The aviation maintenance company attempts to rapidly and accurately diagnose aircraft damage or serviceability to repair aircraft at forward locations with forward maintenance teams. When the time and situation allow, forward maintenance teams repair on site rather than evacuate aircraft; these repairs include battle damage assessment and repair.

**MOVEMENT TO CONTACT**

5-326. *Movement to contact* is a type of offensive operation designed to develop the situation and to establish or regain contact (ADP 3-90). Commanders conduct a movement to contact when an enemy situation is vague or not specific enough to conduct an attack. A movement to contact seeks to make contact with the enemy with the smallest friendly force possible. Movement to contact may result in a meeting engagement. A *meeting engagement* is a combat action that occurs when a moving force, incompletely deployed for battle, engages an enemy at an unexpected time and place (ADP 3-90).

**SUSTAINMENT SUPPORT DURING MOVEMENT TO CONTACT**

5-327. Movement to contact has the potential to place increased demands on BCT and EAB sustainment. Once forces make contact, the commander makes the decision to attack, defend, bypass, delay or withdraw, which allows sustainers to refine their running estimates. The security force and main body should be weighted with priority for sustainment support.

5-328. BCT sustainment support must be tailored to fit the mission and task organized appropriately. The distribution company anticipates requirements and consumption rates for fuel and ammunition. Support operations officers coordinate for unit distribution. Pre-positioned supplies 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. Sustainment planners should anticipate increased requirements for aviation fuel, ammunition, and maintenance during movement to contact. Sustainment planners must understand the tactical situation and place critical support assets in accordance with the corps and division plan for movement to contact to support the mission plan. Supporting forces should be placed at a distance that facilitates a flexible response to requests for support.

**PREPARATION FOR MOVEMENT TO CONTACT**

5-329. Sustainment forces should be within supporting distance to facilitate a flexible and mutually supporting response. Preparations should be made to push as far forward as possible those supplies that are needed by the covering, guarding, and screening forces of the security elements. Pre-positioned supplies along supply routes will provide options and flexibility to decrease the distance for echeloning sustainment support. Sustainment planners should anticipate increased requirements for fuel, munitions, and maintenance during movement to contact.

5-330. The division or corps headquarters staff coordinates with the supporting sustainment organization to ensure the tactical commander's sustainment requirements are met. The corps or division echelon staff informs the commander of any shortfalls in available sustainment support so the movement to contact concept of operations and tactical plan can be modified to meet sustainment capabilities.

5-331. With the BSB commander's recommendations, the BCT commanders tailor unit organic sustainment assets to the mission. Commanders decentralize the execution of sustainment, but that support must be

6473 continuously available to the main body. This includes using daily preplanned logistics packages with  
 6474 standardized allocation of supplies to replenish stocks. Special logistics packages can also be dispatched as  
 6475 needed.

6476 5-332. During a movement to contact, main supply routes frequently become extended as the operation  
 6477 proceeds. Aerial resupply may be necessary to support large-scale movement to contact or to maintain the  
 6478 momentum of the main body but is inadequate for a mechanized force on its own. Combat trains containing  
 6479 fuel, ammunition, medical, and maintenance assets move with their supported battalions or company teams.  
 6480 Fuel and ammunition stocks remain loaded on tactical vehicles in the combat trains to instantly move when  
 6481 necessary. Battalion field trains move with a higher support echelon, such as the BSB, in the main body of  
 6482 each BCT.

## 6483 **ATTACK**

6484 5-333. An *attack* is a type of offensive operation that destroys or defeats enemy forces, seizes and secures  
 6485 terrain, or both (ADP 3-90). Attacks incorporate coordinated movement supported by fires. A commander  
 6486 may describe an attack as hasty or deliberate, depending on the time available for assessing the situation,  
 6487 planning, and preparing.

## 6488 **SUSTAINMENT SUPPORT DURING AN ATTACK**

6489 5-334. Attacking forces place large demands on BCT and EAB sustainment. Sustainment units are placed  
 6490 as far forward as prudence allows. From these forward locations, sustainment units can sustain the attacking  
 6491 force and provide priority of support to the main effort.

6492 5-335. Sustainment planners must understand how a corps and division will conduct an attack. Operations  
 6493 will utilize capabilities ranging from long-range precision fires systems to attack helicopters and will employ  
 6494 the majority of combat power. Maintenance requirements and equipment readiness should be addressed prior  
 6495 to beginning an attack. Sustainment planners should anticipate placing fuel, ammunition, and repair parts as  
 6496 far forward as possible to support forces in an attack. As the attacking force advances, sustainment units and  
 6497 capabilities displace forward as required to shorten supply lines, using displacement techniques designed to  
 6498 ensure uninterrupted support to maneuver units. The size of the force a command devotes to the echelon  
 6499 support area security mission depends on the threat in the attacking force's support area.

## 6500 **PREPARATION FOR AN ATTACK**

6501 5-336. In an attack, the commander tries to position sustainment units well forward. From these forward  
 6502 locations, the units can sustain the attacking force and provide priority of support to the main effort. As the  
 6503 attacking force advances, sustainment units and capabilities displace forward as required to shorten supply  
 6504 lines, using displacement techniques designed to ensure uninterrupted support to maneuver units. The use of  
 6505 a forward logistics element can further ensure continuous support to maneuver units. See ATP 4-90 for  
 6506 additional information.

6507 5-337. Even in fluid situations, attacks are best organized and coordinated in assembly areas. Unless already  
 6508 in an assembly area, the attacking unit moves into one during the preparation phase. While in the assembly  
 6509 area, preparations are made to synchronize and coordinate the attack prior to moving into attack positions.  
 6510 Units should be replenished with fuel and ammunition as the unit moves in the assembly area or prior to  
 6511 movement into attack positions or crossing the line of departure. These preparations include protecting the  
 6512 force, performing reconnaissance, moving sustainment support forward, conducting rehearsals, refining the  
 6513 plan, and positioning the force and sustainment assets for subsequent actions to maintain momentum, prolong  
 6514 endurance, and ensure freedom of maneuver.

6515 5-338. The commander emphasizes simple and rapidly integrated fire support plans during rehearsals. This  
 6516 ensures overall coordination and synchronization with maneuver and sustainment assets. As part of the  
 6517 rehearsal process, the commander reviews the anticipated battle sequence with subordinate leaders to ensure  
 6518 all units understand the plan, the relationship between fire and movement, and the synchronization of  
 6519 sustainment assets to support.

5-339. During an attack, sustainment planners should anticipate increased requirements for fuel, ammunition, maintenance, casualty operations, and replacement operations due to the rapid tempo and violent nature of these operations. Aerial resupply may be necessary to support a large-scale attack or to maintain the momentum of the main body. Combat trains containing fuel, ammunition, medical, and maintenance assets move with their supported battalion or company team. These stocks remain loaded on tactical vehicles in the combat trains in order to instantly move when necessary.

5-340. The commander ensures that attacking maneuver forces have the functional and multifunctional support and sustainment assets necessary to conduct the operation and maintain the attack's momentum as part of the preparation process. That support and sustainment effort must anticipate branches and sequels to ensure the uninterrupted advance of the maneuver force.

## EXPLOITATION

5-341. *Exploitation* is a type of offensive operation that usually follows the conduct of a successful attack and is designed to disorganize the enemy in depth (ADP 3-90). Exploitation is the bold continuation of an attack to maximize success. Exploitation is an inherently dynamic task that requires a decentralized approach to execution. Sustainment commanders must understand the appropriate application of the mission command philosophy prior to execution and support of exploitation. Exploitation forces drive swiftly for deep objectives, seizing enemy CPs, severing enemy escape routes, and striking at enemy reserves, artillery, and logistics units to prevent the enemy from reorganizing an effective defense.

## SUSTAINMENT SUPPORT DURING EXPLOITATION

5-342. Sustainment support to exploitation forces continue to require large demands. 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. A commander may replace a unit during exploitation to maintain speed and momentum when it reaches a pre-established diminished combat power.

5-343. Transportation assets and supplies are necessary to sustain maneuver forces and become increasingly important as an exploitation progresses. As supply lines lengthen, security of routes 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.

5-344. When possible, EAB 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.

## PREPARATION FOR EXPLOITATION

5-345. The forces conducting an attack are also the forces that initially exploit that attack's success. An exploitation force proceeds directly from the attack and is normally planned as a sequel to an attack. Exploitation forces should be large and reasonably self-sufficient combined arms organizations, such as BCTs. Exploitation forces receive support from joint fires, Army aviation, and echelons above corps electromagnetic warfare and offensive cyberspace operations assets when striking at deep objectives to prevent the enemy from reorganizing an effective defense.

5-346. The units that create an opportunity to exploit should not be expected to continue the exploitation to an extended depth. If the initial attacking units incur significant loss of combat power, then the commander replaces them with other subordinate units to continue the exploitation. During exploitation preparation and execution, the commander balances the force conducting the exploitation's need for speed and momentum against its need for security as it begins to move beyond supporting range of the rest of the force. The commander must be careful not to allow a force conducting exploitation to move outside of supporting distance of the main body.

5-347. An exploitation demands a force with a significant mobility advantage over the enemy. This mobility advantage may be provided by forces with tracked or wheeled armored combat vehicles. Attack helicopters and air assault assets may constitute a portion of the exploiting force's combat power. These forces are



extremely useful in capitalizing on their mobility to attack and cut off disorganized enemy elements. Forces can also seize or control key terrain or vital enemy transportation nodes along the exploiting force's route of advance. The commander integrates combat engineers into the exploiting force to help breach obstacles, keep ground forces maneuvering, provide countermobility protection to the flanks, and to keep supply routes open.

5-348. The commander must anticipate the exploitation and ensure the sustainment plan supports the force throughout the duration of the exploitation. This includes designating future main supply routes, logistics release points, maintenance collection points, casualty collection points, MTFs, and ambulance exchange points. In sustaining the exploitation, fuel consumption and vehicle maintenance are primary concerns of sustainment planners. Supplies necessary to sustain the force and the transportation assets to carry those supplies become increasingly important as an exploitation progresses.

5-349. In an exploitation, security of routes will also become a problem as supply lines lengthen. 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. Aerial resupply may be necessary to move critical supplies forward during the exploitation. Aviation units will utilize FARP's to reduce aircraft turnaround times during these resupply missions.

5-350. The exploitation force typically covers a wider front than an attacking force. This may cause both sustainment support and fire support assets to operate outside of normal supporting range to their supported elements. Sustainment operators must be prepared to bound their sustainment assets farther forward and move them more often than in an attack. Like sustainment support, fire support assets must also displace forward to ensure the continued provision of fires on and beyond enemy formations. To provide the required support, these fire support units can be attached to subordinate elements of the exploiting force. The commander can also use available air interdiction and close air support by fixed-wing aircraft to augment or replace Army fire support assets during exploitation. Sustainers can normally plan on subordinate forces using less ammunition during an exploitation than in an attack because fleeing enemy forces are normally not in prepared positions.

## PURSUIT

5-351. *Pursuit* is an offensive operation designed to catch or cut off a hostile force attempting to escape, with the aim of destroying it (ADP 3-90). Pursuit is the relentless destruction of retreating enemy forces who have lost the capability to effectively resist. Pursuit is an inherently dynamic task that requires a decentralized approach to execution. Sustainment commanders must understand the appropriate application of the mission command philosophy prior to execution and support of pursuit. Pursuit requires great energy and resolution on the part of an attacking commander. Fatigue, dwindling supplies, diversion of friendly units to other tasks, and approaching darkness may all be reasons to discontinue an attack, but commanders must insist on continuous pursuit as long as the enemy is disorganized and friendly forces can continue.

## SUSTAINMENT SUPPORT DURING PURSUIT

5-352. 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 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 advise maneuver commanders of the limit of advance where the maneuver commander could outrun supply.

5-353. 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 gets to the enemy's rear area as swiftly as possible by the most advantageous routes to cut off the enemy's retreat and blocks the enemy's escape. The encircling force is required to be mobile to cut off the enemy's retreat. The encircling force will require increased amounts of fuel and repair parts.

**PREPARATION FOR PURSUIT**

5-354. Engineer mobility and countermobility assets are instrumental in sustaining the rate of advance and hindering the enemy's withdrawal, reposition, or counterattack. Engineers prepare the route of advance and support the lateral dispersion of units transitioning to the pursuit. During the pursuit, the commander must plan for engineers to provide assault bridging and emergency road repairs to sustain the tempo of the pursuit. The commander also plans to use engineer assets to block any bypassed enemy withdrawal routes by using antivehicle mines, demolitions, and obstacles. Heavy engineer breaching demands to support maneuver include increased amounts of demolitions, mine-clearing line charges, and special ammunition.

5-355. The commander uses all available sustainment assets to provide essential support to the force pursuing the enemy. Sustainment units should plan for increased demand for fuel and maintenance as the tempo of operations increases. Sustainment units should be highly mobile and able to provide prolonged endurance and reach during the pursuit. Priority for sustainment normally goes to units having the greatest success. Sustainment planners need to anticipate success since the depth of the pursuit depends on the capability of sustainment assets to support. Sustainment planners supporting the encircling force need to be prepared to provide casualty evacuation over possibly unsecured LOCs. The commander may also need aerial resupply or heavily guarded convoys to support this force. Security for sustainment convoys and LOCs becomes a major planning consideration.

5-356. Conducting a pursuit is a prudent risk. Once the pursuit begins, the commander maintains contact with the enemy and pursues retreating enemy forces without further orders. The commander maintains the pursuit as long as the enemy appears disorganized and friendly forces continue to advance. Sustainment capabilities will have a tremendous impact on the ability to mount a successful pursuit. Like exploitation, pursuit tests the audacity and endurance of those capabilities. Pursuit requires great energy and resolution on the part of the attacking force. Extraordinary physical and mental effort is necessary to sustain the pursuit, transition to other operations, and translate tactical success into operational or strategic victory.

**OPERATIONAL FRAMEWORK CONSIDERATIONS**

5-357. In the offense, commanders must design attacks that defeat enemy forces across all echelons while enabling subordinate disciplined initiative. When designing attacks, commanders divide the task of defeating an enemy force and maintain an integrated approach through deep, close, and rear operations including air, space, cyberspace, and maritime capabilities across the operational framework. See FM 3-0 for additional information on offensive operational framework considerations.

**EXTENDED DEEP AREA**

5-358. The extended deep area is an important part of any formation's area of interest because it contains enemy capabilities that can inflict damage on friendly forces and affect friendly forces' operational reach and endurance. Commanders integrate the effects and activities of special operations forces and partner irregular forces in extended deep areas.

**DEEP OPERATIONS**

5-359. Deep operations focus on parts of an assigned area that are not in direct fire contact with the main body of the formation but may be in the future. At division and corps, which have assigned and attached long-range fires capabilities, the deep area extends beyond the forward line of troops to a distance that corresponds with the ability of Army and joint capabilities to reach. Divisions and corps integrate special operations forces, depending on C2 relationships, with deep operations to degrade the enemy's will to fight, destroy high-payoff targets, and disrupt enemy defensive infrastructure and sustainment.

5-360. Sustainment capability is organic to Army organizations that execute long-range fires, rocket artillery, rotary wing aviation, cyberspace, space, multidomain effects and special operations that support attacking targets in the deep areas. Specific organizations include the ARSOF GSB, multi-domain task force BSB, combat aviation brigade aviation support battalion, fires brigade BSB, and FSCs supporting the long-range fires battalion, rocket artillery, rotary-wing aviation and special forces battalions.

**CLOSE OPERATIONS**

5-361. Close operations occur where forces at divisions and lower echelons maneuver and where forces at the BCT and lower echelons conduct most direct fire engagements. BCTs and lower echelon formations destroy or render enemy forces combat ineffective through movement and fires during close operations.

5-362. Close operations require graphic control measures to synchronize the application of combat power, to ensure integration of subordinate units, to maintain maximum pressure on the enemy, and to mitigate the risk of fratricide within the friendly force. BCTs have limited ability to control long lines of communication, and their tempo and endurance is affected by time and distance of resupply, casualty evacuation, and other sustainment considerations.

5-363. Sustainment capability is organic to Army organizations that execute close operations to destroy or render enemy forces combat ineffective. Specific organizations include the BCT BSBs and FSCs supporting combined arms battalions, infantry battalions, and cavalry squadrons.

**TRANSITION TO DEFENSE AND STABILITY**

5-364. When offensive operations culminate before enemy forces are defeated, friendly forces rapidly transition to the defense. Commanders may deliberately transition to the defense when enemy forces are incapable of fully exploiting an opportunity, or when they believe they can build combat power to resume the offense before enemy forces can react effectively. Depending on where culmination occurs, friendly forces may have to reposition forces on defensible terrain and develop a form of defense and scheme of maneuver based on an assessment of the mission variables.

5-365. Successful offensive operations end because Army forces have achieved their assigned objectives. A successful offense can also require a transition to a defensive posture dominated by stability operations and a strategic environment moving toward post-conflict political goals. As a transition to stability operations occurs, leaders focus on stability tasks and information activities to inform and influence populations and conduct security force assistance. Effective collaboration with diplomatic and humanitarian organizations enhances the ability to achieve stability mechanisms.

**TRANSITION TO POST-CONFLICT COMPETITION**

5-366. Army forces conclude armed conflict by establishing conditions that are favorable to the United States on the ground. Army forces support these conditions throughout armed conflict by consolidating gains and prosecuting operations with desired end state in mind. As hostilities end, stability tasks dominate operations with the purpose of transitioning responsibilities to legitimate authorities in a secure environment. Army forces provide the joint force with the option of establishing a military transitional government before transitioning full governing responsibility to host-nation or other provisional governments.

5-367. To achieve unity of effort, sustainment commanders synchronize efforts with U.S. and foreign government agencies, international agencies, nongovernmental organizations, other unified action partners, and contractors. As the security situation improves, Army forces may transfer responsibility for minimum-essential stability operations to other forces or appropriate civilian organizations while transitioning to the performance of primary stability tasks. Sustainment forces should anticipate this transition to avoid mission failure. Sustainment forces must be prepared to support the Department of State as the lead agency in stabilization activities transition to post-conflict competition. For additional information on stability operations and interorganizational coordination, see JP 3-07, JP 3-08, and ADP 3-0.

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## Chapter 6

# Sustainment Operations in a Maritime Environment

This chapter describes sustainment operations in a maritime environment. It begins with a discussion on the characteristics of the maritime environment and the challenges they pose. It also discusses planning considerations for sustainment in a maritime environment.

## SECTION I – MARITIME ENVIRONMENT OVERVIEW

6-1. The *maritime domain* is the oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these, including the littorals (JP 3-32). Sustainment operations within the maritime environment will pose significant challenges and require significant synchronization and coordination.

6-2. Successful movement and maneuver between the oceans, seas, bays, estuaries, islands, and coastal areas will require support of joint, allied, and multinational partners. The oceans of the world are connected by various waterways, straits, and sea lines of communication. These can become avenues of approach or chokepoints and enable or hinder sustainment operations and movement and maneuver. Leaders must understand this challenge and work with joint, allied, and multinational partners to overcome this possibility. Control of these waterways, straits, and certain critical land masses will be essential to the sustainment of operations in the maritime environment.

## CHARACTERISTICS OF THE MARITIME ENVIRONMENT

6-3. The maritime environment contains various land masses, with some being as large as the British Isles in the North Atlantic and others being as small as the Marshall Islands in the South Pacific. Islands within the maritime environment can have varying environmental conditions that range from jungle to Arctic conditions. Mountains can be found in all environmental conditions. Leaders and forces must understand and be prepared for the various environmental conditions and the challenges each present. Leaders must also understand and prepare for the increased distance between maneuver forces and sustainment forces when operating in a maritime environment. The varying environmental conditions and distances through which forces must be sustained may require increased reliance on joint, allied, and multinational partners for support.

6-4. In the maritime environment, occupying any land mass or island may provide a position of relative advantage by either force. Leaders must account for extended distances when providing materiel and services to allied and friendly forces. The increased operational distances in a maritime environment may reduce or slow support operations and provide opportunities for counteraction by adversaries. Sustainment planners must be closely linked to operational planning and anticipate support requirements to ensure commanders maintain freedom of action when operating in a maritime environment.

## LITTORAL REGIONS

6-5. The littoral region comprises two segments of the OE: seaward and landward. The seaward segment is the area from the open ocean to the shore, which must be controlled to support operations ashore. The landward segment is the area inland from the shore that can be supported and defended directly from the sea (JP 3-32). FM 3-0 provides additional detail on the five categories of littorals listed below:

- Enclosed and semi-enclosed seas.
- Islands.
- Archipelagoes.

- 6745 ● Open seas.
- 6746 ● Marginal seas.

6747 6-6. Army landing craft are specifically designed to dramatically increase the ability to access austere points  
 6748 in the littorals that are currently unavailable to land forces. They can deliver cargo from advanced bases and  
 6749 deep-draft strategic sealift ships to harbors, inland waterways, remote or unimproved beaches and coastlines,  
 6750 and denied or degraded ports (ATP 4-15). The vessels' shallow draft, adaptable cargo space, and ramp support  
 6751 delivery and follow-on support of land forces at a wide variety of points and locations. Army landing craft  
 6752 can accomplish this without the need for improved port facilities and the added footprint of terminal service  
 6753 operators. These vessels include the following:

- 6754 ● Logistics Support Vessel.
- 6755 ● Landing Craft, Utility 2000.
- 6756 ● Landing Craft, Mechanized 8.
- 6757 ● Maneuver Support Vessel-Light.

6758 6-7. Mines are one of the greatest threats Army watercraft may encounter while operating in the littorals.  
 6759 There are many varieties of shallow water, magnetic influence, and bottom mines that pose risks for  
 6760 watercraft. Leaders must account for these and other threats and plan measures to mitigate these risks. ATP  
 6761 4-15 provides additional information on threats faced by watercraft. Potential sources for security in the  
 6762 littorals and mine clearance services include the U.S. Coast Guard, U.S. Army divers, the U.S. Navy, and the  
 6763 host nation. Additional threats that landing craft may face include—

- 6764 ● Small watercraft armed with weapons.
- 6765 ● Vessel ramming.
- 6766 ● Aircraft.
- 6767 ● Stand-off attacks (snipers, missiles, torpedoes).

## 6768 ARCTIC REGION

6769 6-8. The maritime environment includes littoral regions within the Arctic. Title 15 USC, Section 4111  
 6770 defines the Arctic as all U.S. and foreign territory north of the Arctic Circle and all U.S. territory north and  
 6771 west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including  
 6772 the Arctic Ocean and the Beaufort, Bering, and Chukchi Seas; and the Aleutian Islands chain. The vastness  
 6773 of the Arctic can be described as including eight countries, three combatant commands, and two primary  
 6774 transit routes (the Northwest Passage and the Northern Sea Route. Harsh environmental conditions in the  
 6775 land, sea, and air domains present challenges for the conduct of sustainment operations. Some of the  
 6776 environmental conditions include, but are not limited to—

- 6777 ● Extreme cold temperatures.
- 6778 ● Seasonal changes in terrain.
- 6779 ● Unpredictable and rapidly changing weather.

6780 6-9. The extreme cold temperatures in the Arctic can slow the pace of sustainment operations and impact  
 6781 personnel by causing cold weather injuries. Sustainment leaders must understand the requirements and  
 6782 conduct extensive planning to protect personnel and materiel from the effects of cold weather. Buildings,  
 6783 shelters, and tents used for maintenance and storage operations will have increased heating requirements.  
 6784 Sustainment operations in the extreme cold of the Arctic requires special POL products, traction enhancement  
 6785 devices (for example, chains and snow tires), and crew heaters. Embarked vehicles and equipment must be  
 6786 prepared for Arctic operations prior to arrival, and considerations must be given to keeping engines warm  
 6787 and out of the weather, started at regular intervals, or the additional fuel additives or recirculation cycles that  
 6788 may be needed to prevent congealing of fuel. Vessels may also require special preparation for Arctic  
 6789 operations, and planners must consider the maritime ice capabilities and restrictions of vessels and crew.

6790 6-10. Seasonal changes provide another challenge to sustainment operations in the Arctic. Mobility is at its  
 6791 highest during the winter months when the ground lines of communication are frozen solid. During the spring  
 6792 thaw, many of the roads become nearly impassable due to melting snow and ice and thawing permafrost.  
 6793 These challenges with roads continue in the summer months as well. Regardless of season, sustainment  
 6794 leaders must be aware of the mobility challenges in the Arctic.

6-11. Sustainment operations in the Arctic can be severely impacted when ports of debarkation become unusable or unavailable due to changing conditions. Changes in sea ice can either reduce availability of ports or open additional passageways for transit through the Arctic. The ability of Army watercraft to execute logistics over-the-shore operations provides sustainment planners with options to overcome loss of port facilities in the Arctic. Army watercraft also provide the ability to support the maneuver of forces and materiel along open waterways, rivers, and estuaries in the Arctic. This capability is only increased when Army watercraft are combined with watercraft capabilities from joint, allied, and multinational partners.

## PLANNING CONSIDERATIONS FOR THE MARITIME ENVIRONMENT

6-12. Sustainment operations in a maritime environment come with additional planning considerations not always present in other environments or domains. These considerations include planning for deployment of Army watercraft and actions to counter enemy threats.

### CONSIDERATIONS FOR EMPLOYING ARMY WATERCRAFT

6-13. Employing Army watercraft will be dependent on all or parts of our joint, allied, and multinational partners for success. Army forces must be able to maintain control of land and air domains in order to successfully operate in the maritime environment. Control of the air and land domains is key to generating, applying, and sustaining combat power. Army watercraft and other sustainment forces must have a common operational picture that can be shared between allies and partners in order to maintain situational understanding and enable decision making. Sustainment planners must be prepared to execute primary, alternate, contingency, and emergency communications plans to maintain situational awareness between allies and partners during crisis and conflict.

6-14. Sustainment leaders must consult maritime subject matter experts to understand navigation requirements for inland waterways and understand tidal information and its effect on employment of watercraft. The maritime operational environment and vessel support requirements are complex and require expertise for planning and execution of sustainment in and across the maritime domain. Such expertise can be found in SDDC and the TBX. TSC and ESC SPOs may also have Army maritime subject matter experts assigned. Sustainment leaders must also consider impacts of population density on watercraft employment. In a maritime environment, civilian populations using inland waterways and littoral regions for commerce, trade, and transit may slow the pace and speed at which watercraft may operate. Poor soil composition, steep coastal terrain, and densely populated areas along inland waterways and in the littorals have the potential to change or limit where vessels can discharge, or logistics over-the-shore operations can occur.

6-15. Army watercraft capabilities are essential for sustainment operations in a maritime environment. Seaport opening operations facilitate the arrival and throughput of equipment and units and are conducted in coordination with strategic and theater resources. USTRANSCOM and MSC support the flow of personnel and materiel into a theater. SDDC supports all aspects of strategic seaport operations in a permissive maritime environment and provides asset visibility information per the CCDR's priorities. Capabilities available to the CCDR for austere seaport operations in a nonpermissive maritime environment are the JTF-PO and TBX.

6-16. JTF-PO is a USTRANSCOM capability that is available to CCDRs to execute limited capability rapid port opening activities during contingency operations. The TBX is a FORSCOM organization that may be attached to a TSC to work in coordination with the regionally aligned SDDC brigade to support port management for an operation at the strategic port. (For additional information, see JP 3-02, JP 3-32, JP 3-36, JP 4-0, JP 4-18, FM 3-0, ATP 4-15, and ATP 4-13.)

6-17. Leaders and planners must plan for the execution of all sustainment elements (logistics, financial management, personnel services, and HSS) and all sub-functions during operations in a maritime environment. The logistics element of sustainment involves planning and executing the movement and support of forces. The financial management element of sustainment leverages fiscal policy and economic power to sustain military operations. The personnel services element mans the force and maintains Soldier and family readiness. The HSS element of sustainment ensures the behavioral and physical well-being of forces during operations.

**PLANNING CONSIDERATIONS FOR ARMY WATERCRAFT**

6-18. Planning considerations for the use of Army watercraft must encompass all warfighting functions to ensure the plan is integrated. The following discussion describes considerations that must be taken into account while planning watercraft operations in a maritime environment.

**Sustainment Planning Considerations**

6-19. The following are sustainment planning consideration examples that sustainment leaders must consider for operations in a maritime environment. The following examples are not all-inclusive, and considerations will vary based on operational requirements:

- Plan for delivery of all elements of the sustainment warfighting function (logistics, financial management, personnel services, and health service support) required to build and sustain combat power.
- Preposition supply Classes I, water, IIIB/P, IV, V, VIII, and IX as far forward in the maritime environment as the tactical situation permits.
- Consider maximizing the use of combat configured loads to deliver combat power in a maritime environment.
- Anticipate time needed to execute logistics as distances increase.
- Ensure watercraft maintenance capability is adequate to sustain and repair watercraft to meet the readiness requirements and the maneuver commander's intent.
- Plan for continuous replacement operations, specifically the transportation and integration of replacement personnel into units in the tactical close area.
- Submit personnel replacement priority requests based on forecasted casualty estimates to enable forward positioning of personnel replacements.
- Plan for primary, alternate, contingency, and emergency communications plans to ensure effective personnel asset visibility and delivery of LOGSTAT reports.
- 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 operations.
- Utilize sea-basing to facilitate support operations over strategic distances.

**Command and Control Planning Considerations**

6-20. Planning considerations for command and control are listed below:

- Expect enemy attacks on space and cyberspace domains to include the electromagnetic spectrum that will degrade communications and digital information transmission. Attacks on these domains affect sustainment operations in terms of satellite communications, positioning, navigation, timing, information collection, internet operations, computer systems, and frequency modulation communications.
- Develop and execute primary, alternate, contingency, and emergency communications and navigation plans ensuring redundancy.
- Understand how the maritime environment impacts communications and may limit transmission of information. Operations in maritime environments may occur over vast distances. Actions by the enemy, degraded communications, and loss of satellites may disrupt command and control of dispersed forces.
- Assess task organization to ensure watercraft capabilities are positioned properly to support the mission. Leaders must understand watercraft capabilities to match them against requirements.

**Movement and Maneuver Planning Considerations**

6-21. Planning considerations for movement and maneuver are listed below:

- Expect watercraft to operate over extended distances and understand the impacts of turnaround times on operations.



- 6891 • Understand how enemy action, enemy fire, and obstacles will impact movement of watercraft.
- 6892 • Prioritize use of watercraft needed to support movement and maneuver requirements against
- 6893 watercraft needed to support sustainment requirements.
- 6894 • Plan to support the movement of forces and cargo along inland waterways.

## 6895 Intelligence Planning Considerations

6896 6-22. Some planning considerations for intelligence are listed below:

- 6897 • Understand intelligence preparation of the operational environment products, detailed intelligence
- 6898 estimates, and other intelligence products that describe enemy capabilities and courses of action
- 6899 within a maritime environment.
- 6900 • Ensure intelligence estimates are used in planning operations in a maritime environment.

## 6901 Fires Planning Considerations

6902 6-23. Some planning considerations for fires are listed below:

- 6903 • Anticipate supporting required relocation of fires units between land masses to support operational
- 6904 requirements.
- 6905 • Ensure that watercraft transporting ammunition are properly positioned to support fires operations
- 6906 in a maritime environment.
- 6907 • Anticipate increased requirements to move munitions for maneuver units in a maritime
- 6908 environment.
- 6909 • Ensure that watercraft transporting ammunition have the correct documentation and approval for
- 6910 partner nation port entry.

## 6911 Protection Planning Considerations

6912 6-24. Some planning considerations for protection are listed below:

- 6913 • Expect attack using artillery, aircraft, mines, and ground forces. Commanders must ensure defense
- 6914 forces are adequate to survive effects.
- 6915 • Plan for convoy security along the sea lines of communications. This must include attacks from
- 6916 the air as well as water.
- 6917 • Plan for dispersion as much as possible to accommodate operations.

## 6918 SUSTAINMENT ACTIONS TO COUNTER ENEMY THREATS

6919 6-25. Leaders must understand enemy courses of action and how they can be used to disrupt sustainment in  
 6920 a maritime environment. Potential employment of capabilities across all domains will challenge sustainment  
 6921 forces from home station to forward locations. Enemy forces may use submarine or mine warfare to interdict  
 6922 or disrupt watercraft operations. Leaders must be prepared to coordinate with joint, allied, and multinational  
 6923 partners for assistance with securing sea lines of communications. Types of capabilities that joint, allied, and  
 6924 multinational partners can provide include mine sweeping, sensor technology, and aerial reconnaissance.

6925 6-26. Leaders must understand that gains in development of precision sustainment and predictive logistics  
 6926 technologies can increase decision dominance and responses to potential enemy threats. The ability to deploy  
 6927 autonomous watercraft for resupply can impose dilemmas on enemy targeting and cause diversions from  
 6928 intended actions. Predictive logistics will also drive development of advanced power solutions that enable  
 6929 employment of autonomous vehicles in support of maritime operations.

6930 6-27. Leaders must also understand the use of antiaccess and area denial techniques in the maritime  
 6931 environment to disrupt sustainment operations. These techniques can range from use of missile defense and  
 6932 artillery systems to deny access to key terrain or waterways to using enemy special operations and naval  
 6933 forces. Use of special operations forces to destabilize or disenfranchise regional partners can impact  
 6934 employment of Army watercraft and sustainment forces in a maritime environment. Additional details for  
 6935 enemy antiaccess and area denial techniques can be found in FM 3-0.

6-28. Leaders must consider deception as a way to impose multiple dilemmas on the enemy. Deception contributes to creating multiple dilemmas, achieving operational surprise, and maintaining the initiative. Deception efforts by tactical formations seek to delay enemy decision making until it is too late to matter, or to cause an enemy commander to make the wrong decision. Deception requires an understanding of how to surprise enemy forces; time to plan, prepare, execute, and assess a deception operation; and the ability to properly resource the deception effort. The use of autonomous aerial delivery systems and future development of autonomous watercraft can be used as part of deception in the maritime environment. Leaders can employ autonomous vehicles in locations other than where operations are intended to cause the enemy to react in an unplanned manner. See JP 3-13.4 and FM 3-13.4 for information on deception. See FM 3-0 for more information on imposing dilemmas.

## THE OPERATIONAL FRAMEWORK IN A MARITIME ENVIRONMENT

6-29. The operational framework also applies to the maritime environment. Varying distances of maritime surface areas and sizes of land masses in a maritime environment challenge what constitutes deep, close, and rear operations. Sustainment of operations in a maritime environment will be noncontiguous with sustainment and operational forces physically separated by bodies of water. Sustainment forces must be prepared to simultaneously support offensive and defensive operations in the maritime environment. Army watercraft may be required to support amphibious landings and RSOI operations while defending against surface and sub-surface threats. Coordination with joint, allied, and multinational partners will be essential in sustaining operations across the operational framework in a maritime environment.

6-30. The unified command plan designates the AOR. Within that AOR, a larger maritime OE might have several JOAs to facilitate C2 and resource prioritization. A JOA is established for operations within an AOR that is specialized or limited in its scope or duration. The JFC will designate joint security areas and direct military operations as a joint task force (JTF). In a maritime environment, JSAs can be separated by water over a large distance and may not be in areas that are actively engaged in combat. A theater Army headquarters or TSC may be required to conduct theater sustainment operations from a single designated JSA or from multiple locations, depending on mission requirements.

## ASSIGNING AN AREA OF OPERATIONS

6-31. An *area of operations* is an operational area defined by a commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces (JP 3-0). Sustainment forces must be prepared to support multiple AOs within a maritime environment. Large islands may allow a contiguous AO with forces operating adjacent to one another. Smaller islands may require a noncontiguous AO with forces operating in a dispersed nature.

## SUSTAINING DEEP OPERATIONS

6-32. Sustaining deep operations in a maritime environment will require sustainment forces to be prepared to support information collection, special operations forces, and fires. Sustainment leaders must be prepared for employment of enemy antiaccess and area denial capabilities such as aerial assets, mines, submarines, and the use of fires to limit or restrict movement of sustainment forces. Sustainment planners should plan for increased ammunition requirements for long range fires to negate enemy actions and the use of joint and other assets to maintain freedom of movement and access to sea lines of communications.

## SUSTAINING CLOSE OPERATIONS

6-33. Sustaining close operations will require sustainment planners to support corps and division units executing offensive operations. The use of joint, allied, and multinational assets will be key in sustaining close operations that may be conducted in multiple locations within a maritime environment. Close operations may have some forward forces operating isolated and disconnected from support. Sustainment planners must consider this condition and develop methods to sustain these units. Methods could include increasing combat loads, using aerial delivery, and staging supplies using intermediate staging bases.

## SUSTAINING REAR OPERATIONS

6-34. Sustaining rear operations will require sustainment planners to be prepared to set and sustain theater operations. Rear operations in a maritime environment will present unique sustainment challenges and circumstances to Army forces. Sustainment leaders must understand that time and distance will impact the ability to sustain forces separated by distance and water. RSOI could occur thousands of miles away from where a unit would be employed in combat. The use of intermediate staging bases may shorten distances between rear operations and forward-located forces. The use of aerial delivery may prove essential in providing critical supplies. Sustainment planners should also consider coordination with joint, allied, and multinational partners for use of watercraft and aerial assets to support operations in a maritime environment.

6-35. Protection of sustainment forces operating in the maritime environment will be a critical consideration for planners. Sustainment operations in the rear will face challenges from both waterborne and airborne threats in the maritime environment. Potential means of interdicting or disrupting rear operations include the use of mines and submarine warfare to disrupt sea lines of communications and the use of air assets and missiles to attack from a distance. Sustainment leaders must consider methods for securing sea and aerial lines of communications from the rear area. These methods may include incorporation of naval assets to protect sea lines of communications and air and missile defense systems to protect against aerial threats.

## SUPPORT AREA OPERATIONS

6-36. Support area operations are a critical part of rear operations. A support area is where units position, employ, and protect base sustainment assets and lines of communications required to sustain, enable, and control operations. Support area operations include sustainment for the echelon and relevant security operations. Support area operations enable the tempo of deep and close operations. Support area operations require detailed planning to coordinate among the various units providing sustainment, protection, and security.

6-37. In a maritime environment, the support area may be on an island where operations are occurring, or it may be separated by water and located on a different island. Support area operations in a maritime environment require detailed planning. Commanders must balance requirements to protect rear and support area operations with the tempo and needs of units in close and deep area operations. See FM 3-0 for additional considerations when conducting support area operations. These critical areas in a maritime environment may be vulnerable to enemy attack, and they require increased protection from potential enemy fires, submarines, and air threats. Some planning considerations for establishing support areas in a maritime environment include, but are not limited to—

- Enemy maneuver and fires units that threaten current and future support area operations.
- Additional forces required to protect the support area.
- C2 nodes that will occupy the support area.
- Command and support relationships between units in the support area.
- Transportation networks (road, rail, inland waterways, and air) into and out of the area.
- Protection from enemy indirect fire assets.
- Survivability.
- Dispersion, terrain management, and defensive responsibilities.

## SECTION II – SUSTAINMENT CONSIDERATIONS FOR THE MARITIME ENVIRONMENT

6-38. Operations in a maritime environment will more than likely be joint in nature and involve naval and air components. Such operations provide unique considerations for sustainment units. Sustainment forces must be prepared to operate in a dispersed nature on individual islands. Sustainment leaders must be prepared for the challenges of command and control, supporting joint offensive operations, and sustaining large-scale combat operations.

## MARITIME COMMAND AND CONTROL

6-39. The theater Army will continue to be the senior Army headquarters in the combatant command. Its operational responsibilities include command of forces, direction of operations, and control of assigned operational areas. In a maritime environment, the theater Army will serve as the joint force land component commander for joint operations and provide the joint force commander with recommendations on allocation and employment of Army forces in the AOR. Given the size of an AOR for most maritime environments and the distance between land areas, there may be multiple active JOAs, each with separate headquarters.

6-40. The theater Army will continue to provide mobility to maneuver forces and conduct sustainment operations in the maritime environment through its assigned JTF HQ or TSC. The HQ supporting operations must be prepared for the challenges of lengthened lines of communications and the dispersed nature of sustainment operations in the maritime environment. Sustainment leaders must be prepared to command and control sustainment units that may be supporting either offensive, defensive, or stability operations within the maritime environment.

6-41. Sustainment leaders must also be prepared for the communication and information challenges of operating in a maritime environment. Lengthened lines of communications and activities of our adversaries may impact communications and the ability to command and control sustainment forces. Leaders must understand these challenges and come up with unique solutions to overcome them.

## SUPPORT OF JOINT OFFENSIVE OPERATIONS

6-42. Sustainment forces, particularly Army watercraft, must be prepared to support the JFC in execution of certain offensive operations. In a maritime environment, sustainment forces will more than likely be expected to support forcible entry operations and amphibious operations. For additional information, see FM 3-0.

## FORCIBLE ENTRY OPERATIONS

6-43. Forcible entry operations in any OE follow the same phasing model. Those phases are preparation and deployment, assault, stabilization of the lodgment, introduction of follow-on forces, and termination or transition operations. Army sustainment forces should be prepared to support any phase of the operation.

- Preparation and deployment phase. Sustainment forces must be prepared to support movement planning. Movement support during this phase may include conducting site surveys by watercraft or aircraft and movement from marshalling areas to intermediate staging bases and ports of debarkation.
- Assault phase. Naval, air, and special operations forces will comprise the initial entry forces responsible for seizing airfields and ports. Army sustainment forces must be prepared to support movement of reinforcing entry forces to support initial entry forces.
- Stabilization of the lodgment phase. During this phase, sustainment forces must be prepared to support increasing logistics requirements as the lodgment becomes stabilized and follow-on forces continue to arrive. Army watercraft will be essential in supporting this phase in the maritime environment.
- Introduction of follow-on forces. Once the lodgment has been established, follow-on forces will continue to flow into the area. Army sustainment forces should be prepared to support not only the follow-on forces moving into the lodgment, but also forces already on ground and future operations.

6-44. JP 3-18 provides additional information on forcible entry operations and requirements for the joint force in each phase.

## AMPHIBIOUS OPERATIONS

6-45. *Amphibious operations* are military operations launched from the sea by an amphibious force to conduct landing force operations within the littorals (JP 3-02). Amphibious operations are joint in nature and comprised of an amphibious task force and landing force. The amphibious task force is comprised of naval, Military Sealift Command, and Maritime Administration assets. The landing force is comprised of Army and

Marine Corps assets. Amphibious operations can be conducted during any part of a joint operation or campaign.

6-46. Planning for an amphibious operation is continuous, and it requires collaborative, parallel, and detailed planning by all participating forces. The organization of any amphibious operation should be sufficiently flexible to meet the planned objectives in each phase of the operation and account for unforeseen developments. Army sustainment forces should be prepared to support any phase of an amphibious operation. This support can be in the form of logistics over-the-shore operations, port operations, movement control, and medical support to forces that are part of the amphibious operation. Army sustainment also plans and prepares to support during operations by providing intratheater ship-to-shore transport, to include coordinating for fires support from joint forces during resupply and rearming of amphibious and landing forces while contested.

## **SUSTAINING LARGE-SCALE COMBAT OPERATIONS IN A MARITIME ENVIRONMENT**

6-47. Movement via water remains the principal method for moving military equipment and materiel in support of operations. In a maritime environment, maneuver via water will also be required to support and sustain operations. Sustaining large-scale combat operations in a maritime environment will present unique challenges to sustainment forces. The availability of shipping assets and the capability to transfer or move materiel and personnel between land masses or from ship to shore will be critical in the maritime environment. Army watercraft assets are suited for movement of materiel between ports, from a port into an austere port or bare beach, or from ship to shore through logistics over-the-shore operations. Sustainment planners must also be prepared for the potential requirement to move personnel from ship to shore via watercraft in support of operations and support multiple logistics over-the-shore operations over greater distances in a maritime environment. MSC and merchant marine vessels, which transport cargo and materiel, require secure facilities that allow for discharge of materiel and cargo. In addition to infrastructure requirements, the security and vulnerabilities of ports of debarkation must be considered and continually assessed in order to support operations in a maritime environment.

6-48. Sustainment of large-scale combat operations in a maritime environment will require innovative ways and means of conducting sustainment operations. Sustainment leaders cannot assume secured port facilities or modern infrastructure will be available. The following paragraphs will describe how sustainment planners should be prepared to conduct RSOI and theater sustainment.

### **RECEPTION, STAGING, ONWARD MOVEMENT, AND INTEGRATION**

6-49. The theater Army will be responsible for controlling theater opening and RSOI in a maritime environment. The theater Army executes RSOI through the TSC and its subordinate sustainment organizations. Sustainment planners executing RSOI in a maritime environment must be prepared for the unique challenges of a non-permissive OE. Secured infrastructure, staging areas, and tactical assembly areas may not be available or accessible. Sustainment planners must be prepared to consider other courses of action to conduct RSOI, enabling the joint force to deploy and then rapidly posture for employment. These courses of action include, but are not limited to—

- Conducting reception and staging activities prior to entry into the theater or JOA.
- Using intermediate staging bases to facilitate combat configuration of forces enroute to port of debarkation (POD).
- Using agile or offshore basing options to facilitate RSOI.
- Conducting onward movement of forces directly from home station after integration (for example, conducting expeditionary deployment, such as the Global Response Force).

### **THEATER SUSTAINMENT OPERATIONS**

6-50. In a maritime environment, the combatant commander exercises DAFL over assigned forces and can assign lead Service responsibilities. When this responsibility is designated to the Army, the TSC and/or ESC is capable of leading the synchronization and integration of common support capabilities for the joint force.

To do this, the TSC may establish boards, bureaus, centers, cells, and working groups to assist with synchronization and integration of capabilities. These boards, bureaus, centers, cells, and working groups will be essential in managing the dispersed sustainment operations conducted in the maritime environment.

These operations include—

- Executing JLOTS operations.
- Conducting intertheater and intratheater transportation.
- Conducting maintenance operations.
- Conducting general engineering operations.
- Providing health service support.

### Joint Logistics Over-The-Shore

6-51. JLOTS operations will be the key to sustaining operations in a maritime environment. Sustainment leaders and planners in the boards, bureaus, centers, cells, and working groups at the TSC must be prepared to monitor JLOTS operations that may be occurring on multiple islands. Planners should always consider potential peer threat methods and the capacity of the JLOTS operation. JLOTS may be challenged by the peer threat methods of systems warfare and preclusion. Peer threats may employ systems warfare to destroy key port infrastructure capabilities and access points needed for successful JLOTS operations. Preclusion methods such as antiaccess and area denial may be employed to limit projection of forces into an area and reduce freedom of action.

6-52. Bulk petroleum may need to be received via JLOTS operations. Such operations use an offshore petroleum discharge system (OPDS) or other bulk liquids transfer system to deliver fuel to tactical storage facilities located immediately ashore. The offshore system delivers fuel to a tactical or commercial terminal, normally operated by a petroleum pipeline and terminal operating company. Fuel may then be moved forward through the use of trucks, rail, or installed pipeline systems that can quickly establish inland product distribution. If the theater is not an active theater of war, it should have an established operating stocks (OS) level and pre-positioned war reserve stock (PWRS). The USA manages overland petroleum distribution support. For additional information see JP 4-03.

6-53. Interoperability of fuel transfer systems should be considered and resolved in the planning process for at least the following interfaces:

- It is the Navy's Title 10 responsibility to have bulk fuel available at the high-water mark.
- Tanker or oiler to Navy receiving ship, United States Coast Guard receiving ship, seaport load and off-load facilities, and JLOTS systems.
- Airbase fuel storage and dispensing systems to receive fuel from commercial or military sources and issue fuel to Service component and multinational aircraft.
- Shore distribution systems to tactical fuel systems and equipment such as the Inland Petroleum Distribution System and the Early Entry Fluid Distribution System, amphibious assault fuel system, and fuel tanker vehicles.
- No system or set of systems should be planned to be utilized together without proper interoperability validation through the appropriate spill contingency plan.

6-54. Planners should also be prepared for the challenges of bringing APS ashore in a maritime environment. APS downloads will require deep draft facilities. These facilities may not be present at desired locations within the maritime environment. When access to secure port facilities is unavailable, sustainment planners should consider plans to use offshore anchorages, unimproved port facilities, and bare beaches and shallow draft lighterage to download and convey APS in maritime environments.

### Intertheater and Intratheater Transportation

6-55. The maritime environment will present challenges in managing intertheater and intratheater assets, requiring the simultaneous management of air, land, and maritime transportation assets. Maritime transportation capabilities enable the ability to sustain port and inland waterway operations during RSOI, sustainment, and contingency operations. The TMCE is assigned to a TSC DMC, normally augmenting the transportation operations branch. The TMCE provides movement management, container management,

7173 highway regulation and coordination for personnel and materiel movements into, within, and out of the  
 7174 theater for the theater Army or joint force commander. For additional information on the TMCE, see ATP  
 7175 4-16.

7176 6-56. Effective management and employment of intertheater and intratheater transportation assets in a  
 7177 maritime environment will be critical, and both branches within the TMCE will play a vital role. The  
 7178 intertheater operations branch plans, coordinates, implements, and monitors intertheater movement programs  
 7179 while serving as a liaison between strategic transportation partners and the TSC and ESC. The intertheater  
 7180 operations branch provides representation on intertheater transportation coordination boards and meetings,  
 7181 conducts transportation planning, and coordinates exceptional movement requirements. The intratheater  
 7182 operations branch plans, implements, and monitors intratheater movement programs and commits  
 7183 transportation surface, ground, and air assets in support of RSOI operations and contingency operations. The  
 7184 intratheater operations branch conducts transportation planning, supports contingency operations, and  
 7185 conducts exceptional movement requirements.

7186 6-57. To manage daily transportation requirements in maritime environments, movement and distribution  
 7187 boards will be essential. These boards should cover major internal and external movement requirements to  
 7188 plan and coordinate for maritime transportation capabilities to support deployment, onward movement,  
 7189 inland waterway operations, redeployment, and distribution operations. Distribution boards receive input  
 7190 from movement boards, which then update theater movement controllers on distribution priorities, major unit  
 7191 moves, changes to MSRs and ASRs, and area security status to include security challenges associated with  
 7192 water transport movements. Ultimately, both boards play a critical role in ensuring the safety and timely  
 7193 distribution of personnel and supplies within the maritime operating environment.

## 7194 **Maintenance Operations**

7195 6-58. Sustainment leaders must be prepared for supporting maintenance operations in a maritime  
 7196 environment. Most of the maintenance conducted in the maritime environment may be field maintenance  
 7197 conducted on dispersed islands. Successful maintenance operations will depend on the ability to anticipate  
 7198 maintenance requirements, track and analyze maintenance reports, properly identify and diagnose  
 7199 maintenance faults, apply the appropriate maintenance capability, and manage Class IX. Maintenance  
 7200 managers must accurately report Class IX requirements, and distribution managers must be prepared to  
 7201 support providing Class IX using available assets to overcome separation by distance and water.

## 7202 **General Engineering**

7203 6-59. General engineering in a maritime environment will consist of activities that improve infrastructure  
 7204 and modify, protect, and maintain the physical environment. General engineering capabilities can be  
 7205 employed to improve port facilities, airfields, and other basing requirements needed for operations. Leaders  
 7206 must prioritize requirements for general engineer support and synchronize distribution capabilities to ensure  
 7207 materials are available for support.

## 7208 **Health Service Support**

7209 6-60. As with other environments, planning HSS support in maritime-dominated environments should  
 7210 address relevant aspects that may affect support to friendly forces. Medical treatment facilities positioned at  
 7211 existing bases within the range of adversary long-range fires should establish primary and alternate  
 7212 survivability positions that will provide for the defense of themselves and their patients. Role 2 personnel  
 7213 may be required to defend themselves and their patients against amphibious assaults and vertical  
 7214 envelopments by enemy forces seeking to control a particular land mass as well. Role 2 MTFs operating on  
 7215 islands with austere infrastructure and resources require significant sustainment during prolonged operations  
 7216 that may delay MEDEVAC. Every opportunity to clear patients from the MTF must be taken advantage of  
 7217 to prevent the MTF from being inundated with patients in a prolonged care situation.

7218 6-61. Scarcity of land may make it difficult for MTFs to maintain proximity to the force they are supporting.  
 7219 Additionally, MTFs may not have the space available to set up as they would in another environment. Site  
 7220 layout and selection are critical because the AHS principles and medical functions do not change, but they  
 7221 must adapt to the environment. For example, the Role 2 may still conduct MEDEVAC from the Role 1 MTF

with their DS ambulance squad. However, instead of the evacuation going from the Role 1 MTF to a traditional land ambulance exchange point, the ambulance exchange point may occur on the beach front with the ambulance offloading patients to a landing craft or aeromedical evacuation platform that then moves the patients to a hospital afloat. If aeromedical evacuation is used, aviators must become deck certified. Medical regulating and resupply of Class VIII stocks from the U.S. Navy requires a more joint perspective. The principles and techniques are the foundation of planning; however, the execution is adapted to the environment. For additional information, see FM 4-02 and ATP 4-02.6.

### SECTION III – ARMY WATERCRAFT OPERATIONS

6-62. Army watercraft support the CCDRs' requirements by maintaining the desired flow of forces, cargo, and sustainment into a theater in a maritime environment. Army watercraft expand CCDRs' ability to move and maneuver through the maritime environment by enabling and sustaining operations through fixed, degraded, and austere ports and inland waterways, including utilizing LOTS operations. The following paragraphs describe the capabilities of Army watercraft in the maritime environment followed by a notional example of watercraft supporting operations in the corps area. See ATP 4-15 for additional information on Army watercraft and their capabilities.

### NOTIONAL ARMY WATERCRAFT OPERATIONS IN THE CORPS AREA

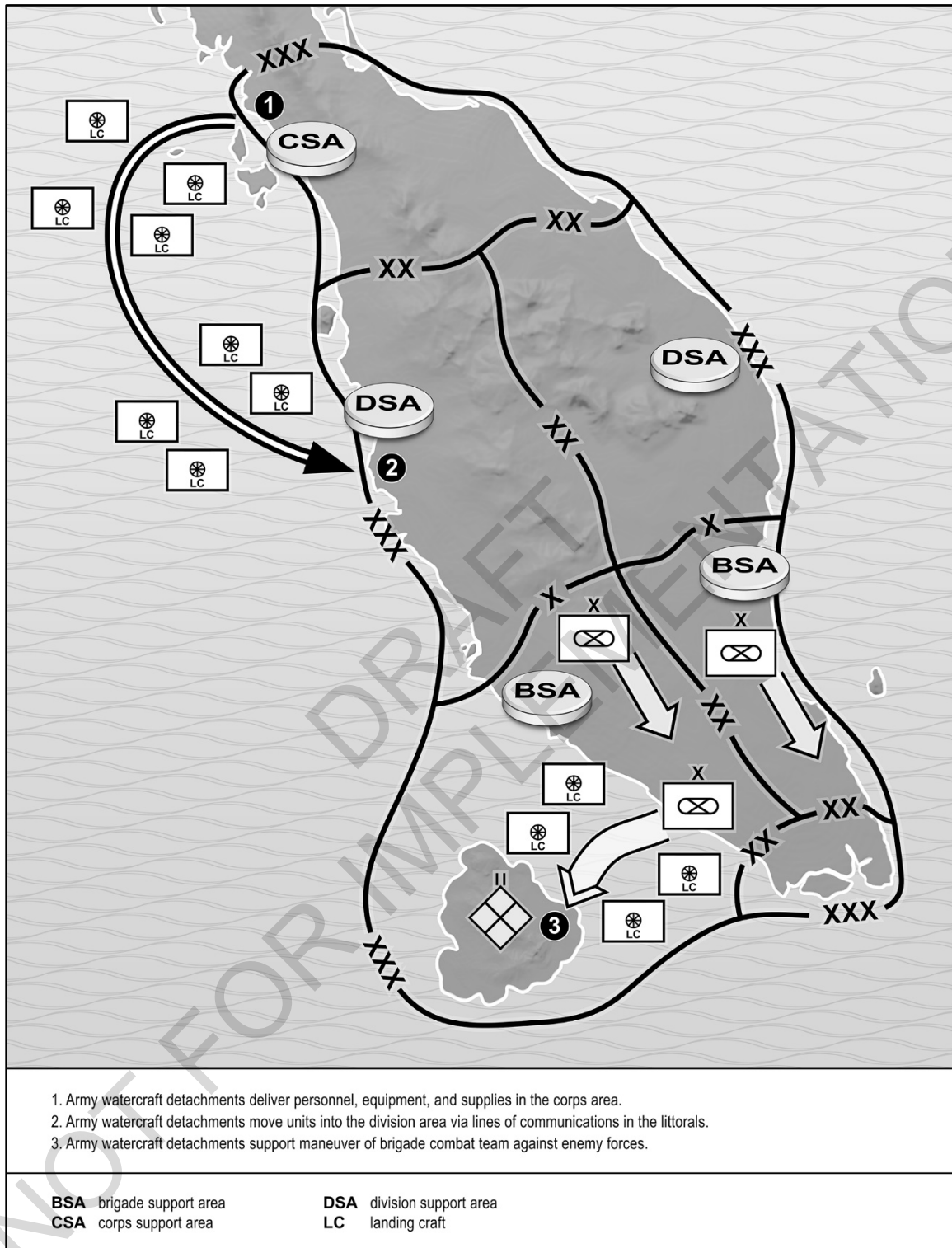
6-63. Army watercraft are essential for conducting sustainment operations in a maritime environment as they are designed to perform missions specifically related to intratheater movement of combat power and sustainment. Army watercraft are a critical link between maritime strategic lift and land-oriented tactical movements.

6-64. Figure 6-1 provides a notional example of Army watercraft providing support in the corps area of operations. In location one, Army watercraft support the onshore delivery of personnel, equipment, and supplies onto land into the corps area as part of rear operations. In this example, the composite watercraft company establishes operations on shore and provides maintenance support for LOTS operations. The harbormaster command and control center provides C2 and utilizes a vessel queue to manage movement of watercraft to and from the strategic platform for loading. The logistics support vessel; landing craft, utility-2000; maneuver support vessel (light); and landing craft, mechanized-8 provide ship to shore transport of personnel, equipment, and supplies. After discharge of cargo via the beach or causeway, watercraft return to the vessel cue for continued operations.

6-65. Location two depicts an example of Army watercraft supporting movement of forces into the division area of operations. Army watercraft provide the ability to move forces through sea lines of communications and along the littorals while creating multiple dilemmas for enemy forces, as they can support movement of forces in support of close operations and rear operations. The logistics support vessel; landing craft, utility-2000; and maneuver support vessel (light) provide the best capabilities to conduct this movement due to their range and payload capabilities. A harbormaster command and control center provides C2 of Army watercraft conducting operations in the division area.

6-66. Location three depicts Army watercraft supporting maneuver of Army forces against enemy forces in the brigade area of operations. LOTS operations in this scenario would be via bare beach due to the anticipated threat posed by enemy forces. Use of indirect fires, air support, and cyber attacks against enemy forces would be essential to the success of the operation. The logistics support vessel; landing craft, utility-2000; and maneuver support vessel (light) provide the best capabilities to support maneuver due to their range, defensive, and payload capabilities. C2 of watercraft would be provided by the harbormaster command and control center from either the division or brigade area of operations.





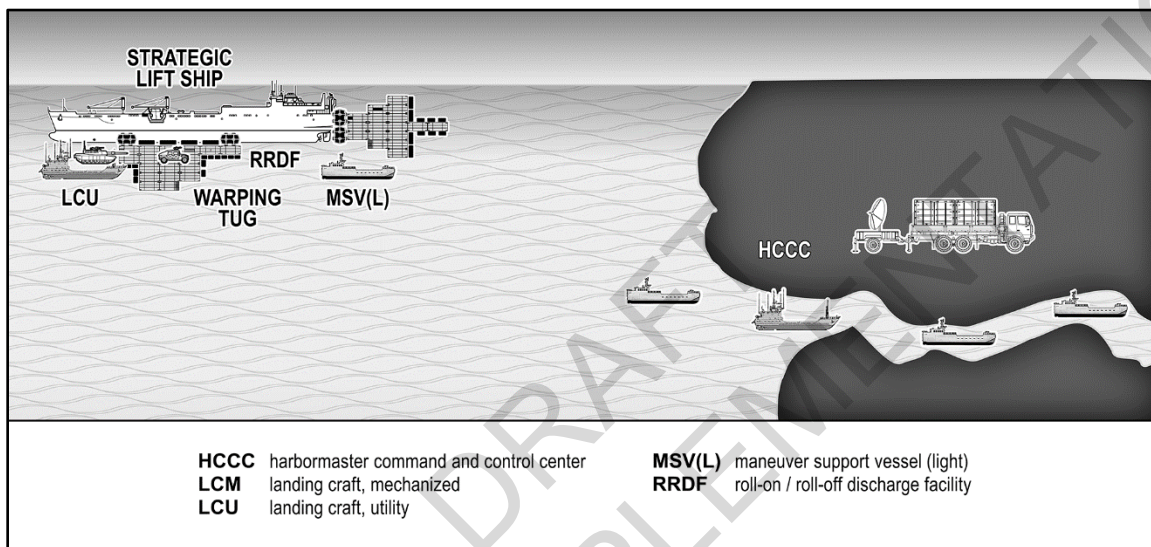
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Figure 6-1. Notional Army watercraft operations in the corps area

## NOTIONAL RIVERINE OPERATIONS

6-67. *Riverine operations* are operations conducted by forces organized to cope with the unique characteristics of a riverine area and/or to achieve or maintain control of the riverine area (JP 3-32). Riverine operations can originate from an existing area of operations, an afloat base at sea, or from the littorals. Riverine operations can be conducted jointly or individually by Army and Navy forces. See ATP 3-18.12, ATP 4-15, and JP 3-32 for additional information on riverine operations.

6-68. Figure 6-2 depicts a notional example of Army watercraft executing riverine operations from the littorals in a maritime environment. In this example, the landing craft, utility and maneuver support vessel, light demonstrate the Army's ability to conduct riverine operations to move troops and cargo from afloat and the littorals to inland locations. Army watercraft also provide the capability to support the egress of troops and cargo using inland waterways once operations are complete.



**Figure 6-2. Notional Army watercraft conducting riverine operations**

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## Chapter 7

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# Leadership and Training for Sustainment Operations

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This chapter describes the operations process and the sustainment commander's importance in driving the operations process. It describes how sustainment commanders use operational art. The chapter also discusses how sustainment commanders can adapt their formations for missions and transitions. It concludes with training considerations for sustainment units and sustainment leader development.

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## THE OPERATIONS PROCESS

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7-1. The operations process is the Army's framework for planning and organizing operations. Sustainment commanders must be familiar with every aspect of the operations process and ensure it is fully executed within the time available. Using the operations process ensures sustainment commanders drive the detailed planning necessary to understand, visualize, and describe the OE. It also allows commanders to make critical decisions to direct, lead, and assess synchronized and integrated operations. The following paragraphs provide additional information on the operations process. For detailed information, refer to JP 5-0, ADP 5-0, and FM 5-0.

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## PLANNING

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7-2. *Planning* is the art and science of understanding a situation, envisioning a desired end state, and determining effective ways to bring that future about (ADP 5-0). Planning can be both conceptual and detailed. Conceptual planning involves developing an understanding of the OE, defining the end state, and developing an operational approach to achieve that end state. Detailed planning develops the operational approach into a complete plan. Sustainment commanders must be skilled in the art and science of planning. They must understand the maneuver objectives and be able to conceptualize a sustainment plan that supports those objectives. They must also be able to quickly translate the conceptual plan into a detailed plan for subordinates to follow. Sustainment commanders and planners must identify potential frictions and codify them into a decision support matrix. Also, developing pre-determined branches and sequels to the plan can expedite the implementation of changes. Planners should also seek to clearly define, and receive approval for, delegation of authority as it pertains to some of the decisions on the decision support matrix. Commanders must exercise their discretion when delegating authorities, but doing so can rapidly enhance the responsiveness of executing changes to the established plan.

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7-3. Planning is continuous. During preparation and execution, sustainment commanders will be required to assess and continually update and refine orders as the tactical situation and OE change. Input received from subordinate leaders on how things can be done differently also influences how commanders plan and prepare.

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## PREPARATION

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7-4. *Preparation* consists of those activities performed by units and Soldiers to improve their ability to execute an operation (ADP 5-0). Preparation creates conditions that improve opportunities for success. Sustainment commanders and leaders at all levels can improve sustainment support through rehearsals, training, and inspections. Sustainment commanders use preparation to move from planning to execution of operations.

## EXECUTION

7-5. *Execution* is the act of putting a plan into action by applying combat power to accomplish the mission and adjusting operations based on changes in the situation (ADP 5-0). Commanders, staffs, and subordinate leaders focus on translating decisions into actions during execution. Sustainment commanders must ensure that the actions executed by sustainment forces support the operational plan and provide freedom of action, operational reach, and prolonged endurance. Sustainment commanders and their staffs must continually assess the effectiveness of support and adjust as necessary.

## ASSESSMENT

7-6. Assessment is a continuous activity that supports decision making throughout the operations process. Sustainment commanders and their staffs are required to continually assess the situation before and throughout operations to understand conditions and required decisions. Sustainment commanders should use continuous assessment to make decisions and anticipate and adapt to changes in the OE and operations. Effective sustainment commanders communicate up and down the chain of command to share information and observations and maintain situational awareness. They use assessments to review assumptions, revise running estimates, and understand risk. Sustainment commanders must also understand the importance of assessing operations in other domains to anticipate and prevent issues that could impede operations.

## SUSTAINMENT COMMANDER'S ROLE IN THE OPERATIONS PROCESS

7-7. The sustainment commander's role in the operations process is to lead Soldiers and organizations while providing purpose, direction, and motivation to accomplish operations. Commanders accomplish this through understanding the problem, visualizing the end state, describing the visualization, and directing actions. Commanders must use running estimates throughout the operations process to support understanding, visualizing, describing, and directing. Figure 7-1 describes the operations process and the commander's role.

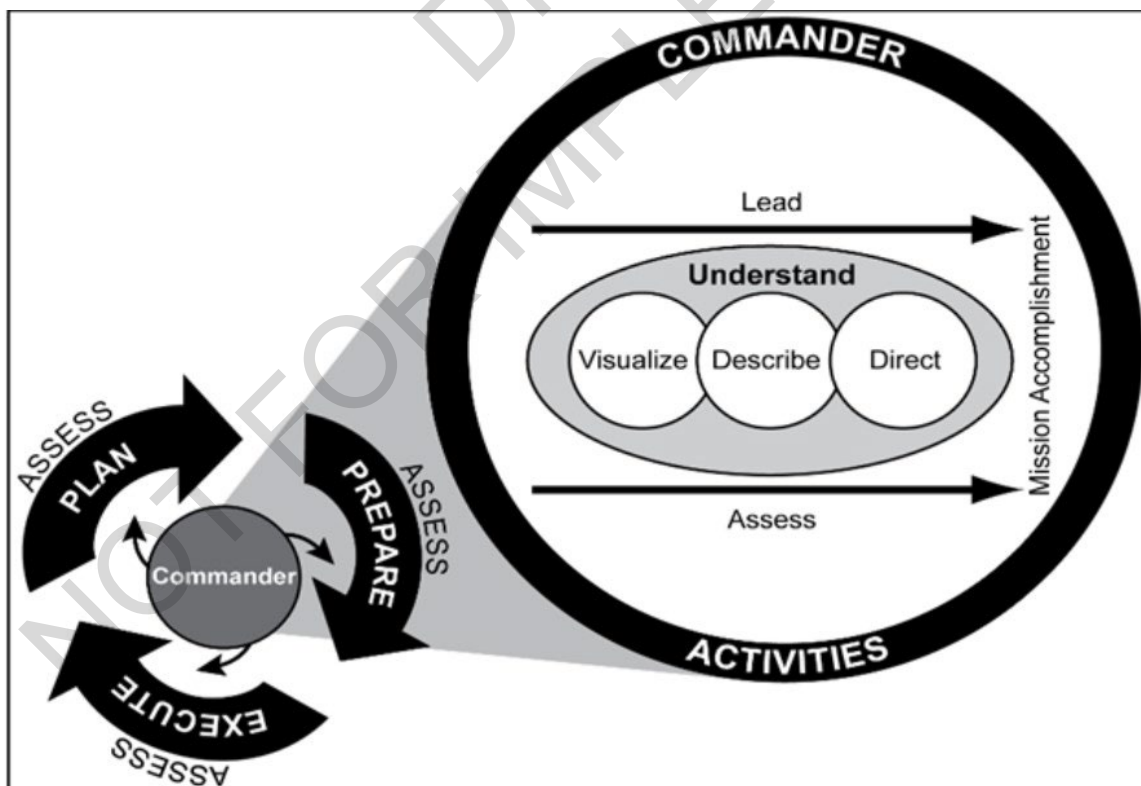


Figure 7-1. The operations process

## 7345 UNDERSTAND

7346 7-8. Sustainment commanders collaborate with their staffs, other commanders, and unified action partners  
7347 to build a shared understanding of their OEs and associated problems. The OE includes portions of all five  
7348 domains and all three dimensions—human, physical, and information. Sustainment commanders must  
7349 understand how sustainment capabilities are employed across the domains and the effects they produce across  
7350 the dimensions. Commanders must continually assess their understanding of the OE and problem and adjust  
7351 as necessary. A commander must understand the OE and accurately frame the problem to effectively visualize  
7352 the desired end state and operational approach.

## 7353 VISUALIZE

7354 7-9. As sustainment commanders build understanding about their OEs, they start to visualize the desired  
7355 end state and the operational approach to achieve it. Sustainment commanders use the shared understanding  
7356 they gained with their staff to effectively visualize the desired end state and how the operational approach  
7357 they envision their organization taking will achieve it.

## 7358 DESCRIBE

7359 7-10. Sustainment commanders must be able to describe the purpose and intent of operations to their staff  
7360 and subordinate commanders to create a shared understanding. They can use collaboration and dialogue to  
7361 ensure subordinate commanders understand the visualization well enough to plan and conduct operations.  
7362 Sustainment commanders should continue to refine visualization during the planning and execution of  
7363 operations. Updates to the visualization must be communicated and balanced with the time subordinate  
7364 leaders have to understand and act.

## 7365 DIRECT

7366 7-11. Sustainment commanders direct operations to achieve results and accomplish missions. Effective  
7367 decision making and timely sharing of information ensures sustainment provides maneuver commanders with  
7368 freedom of action to act decisively. Sustainment commanders who can quickly sense, understand, decide,  
7369 act, and assess provide maneuver commanders with the prolonged endurance and operational reach to  
7370 challenge enemy forces when they choose. A knowledgeable and capable staff are essential to effective  
7371 decision making and directing operations.

## 7372 LEAD

7373 7-12. Leadership is the most essential dynamic of combat power. Sustainment commanders lead by the  
7374 personal example they set, the quality of guidance they provide, and the actions they take during operations.  
7375 Sustainment commanders must be able to lead and make decisions in situations that require rapid adjustment  
7376 in brief periods of time. Will and personal presence are required of sustainment commanders when making  
7377 challenging decisions and help overcome the friction inherent in all military operations.

## 7378 ASSESS

7379 7-13. Commanders, supported by their staffs, assess the situation before execution and throughout operations  
7380 to understand conditions and determine what decisions they must or are likely to make. These decisions are  
7381 facilitated by commander's critical information requirements that identify critical information needed for  
7382 decision making. Sustainment commanders must be able to compare the current operation to what was  
7383 anticipated, remain alert to variance from expectations, and watch for information indicating threats or  
7384 opportunities. The ability to continually assess sustainment operations is essential in anticipating changes  
7385 and quickly adapting forces and support provided to counter those changes.

## 7386 SUSTAINMENT COMMANDER AND OPERATIONAL ART

7387 7-14. Army commanders, both maneuver and sustainment, must use operational art to develop a vision of  
7388 how to establish conditions that accomplish their assigned missions and objectives. Commanders and staffs

use operational art to develop strategies and operations to organize and employ tactical forces. Using their collective skill, knowledge, experience, creativity, and judgement, commanders and staffs integrate ends, ways, and means, to achieve objectives. Army commanders use operational art to pursue strategic objectives through the arrangement of tactical action in time, space, and purpose all while accepting and accounting for risk. Operational art is what allows commanders to translate their operational approach into a clear and concise concept of operations that is disseminated in an operation order.

7-15. The Army design methodology can be used to shape an operational approach. Through this methodology, commanders and staffs gain an understanding of the current state of the OE to include current conditions. It allows them to envision a desired end state that must be achieved, identify problems that will prevent achieving the end state, and then develop a broad, general plan to solve those problems. From this point, commanders use the military decision-making process to develop a detailed plan which includes a concept of operations. Maneuver and sustainment commanders use the elements of operational art to understand the OE and develop a concept of operations. These elements can be used selectively in any operation as required and not all apply at all levels of warfare. The elements are—

- End state and conditions.
- Center of gravity.
- Decisive points.
- Lines of operation and lines of effort.
- Tempo.
- Phasing and transitions.
- Culmination.
- Operational reach.
- Basing.
- Risk.

7-16. Commanders, both maneuver and sustainment, must consider these elements in planning. With proper consideration, each element can be used to develop a concept of operations that synchronizes and integrates sustainment with the other warfighting functions. Examples of how this can be done are shown below:

- Determine what sustainment capability is required and where it must be located in order to achieve the desired end state. Establish desired conditions such as required quantities of supplies or operational readiness rate.
- Determine if sustainment should be considered a critical requirement for the operation. Identify the components of the sustainment support structure such as supply storage and distribution that are critical and could cause failure if destroyed. Apportion protection to the sustainment assets as required.
- Analyze the effects of sustainment in allowing a commander to maintain combat power and reach decisive points. An example might consist of analyzing the CL III(B) and CL V status or maintenance and personnel status and determining if the status is adequate to reach the point.
- Determine how sustainment affects both lines of operation and lines of effort. Ask if sustainment will impact the ability to reach and control a geographic objective. The same should be done for lines of effort. Commanders should analyze how sustainment affects fires, protection, and movement and maneuver. Furthermore, commanders should determine if sustainment support is a line of effort required to establish the desired end state.
- Analyze how sustainment will affect the desired tempo of the operation and if sustainment will allow maneuver forces to maintain a higher tempo than the enemy. Understanding the status of CL III(B) is critical to controlling the tempo since fuel directly impacts movement and maneuver. Commanders must also ensure the maneuver tempo does not outpace the sustainment support.
- Analyze the effect sustainment has on completing the current phase of an operation and transitioning to the next phase. The commander and staff should use sustainment estimates to determine if the support concept is achieving the desired results in terms of the operational objectives. Identify the changes to the plan and the specific support required to complete the phase.
- Know the point at which the operation will culminate due to sustainment limitations or inadequate sustainment support. As an example, lack of personnel replacement might cause the operation to

culminate sooner than planned and be unable to complete the assigned mission. Sustainment commanders and staffs should be able to determine the culmination point and communicate it to the maneuver commander for consideration. This information can be used to plan a deliberate transition from offense to defense.

- Know the culminating points for supply since the culmination point is normally the limit of a unit's operational reach. Supply, maintenance, personnel replacements, and medical support all directly affect endurance and the ability to employ combat power for extended periods.
- Consider what types of basing, such as an intermediate staging base or temporary base camps, are required to execute sustainment support. This includes proper positioning, dispersion, protection, and command and control required to control the bases.
- Determine the amount of risk to accept when committing sustainment forces. Commanders must balance the risk with the potential favorable outcome. As an example, a commander might commit an entire fleet of tactical fuel vehicles to reach a decisive point in the operation, but must accept the fact that doing so jeopardizes future operations if the fuel assets are destroyed by enemy action.

## ADAPTING SUSTAINMENT FORMATIONS FOR MISSIONS AND TRANSITIONS

7-17. Conducting successful sustainment operations requires commanders, staffs, and subordinate leaders that can anticipate changes and quickly adapt formations and operations to meet those changes. The responsibility for anticipating and quickly adapting to changes begins with the sustainment commander. Sustainment commanders develop staffs and subordinate leaders that create agile and adaptive units, inspire resilience in assigned personnel, and maintain focus on the mission in the face of adversity. (See Chapter 2, section V for various command and support relationships that can be used when adapting formations.)

7-18. Quickly changing conditions and sudden transitions in operations may impact the teamwork and cohesion of a formation. Both require adaptation and sustainment leader attention. Examples of changes and adaptations include—

- Changes to sustainment task organization.
- New sustainment missions or changes in guidance.
- Periods of intense hardship and fatigue.
- Sustainment mission failures or setbacks.
- Reconstitution.

7-19. Sustainment commanders must develop subordinate leaders that can adapt to the changes in the OE and the nature of large-scale combat operations. Training is the vessel to prepare for these changes and sustainment leaders must be adept at training task-organized formations and subordinate leaders. Sustainment units that can successfully adapt to changing situations depend on leader development and a command climate that encourages subordinate leader learning, independent thinking, and taking the initiative. (FM 6-22 provides additional information on leader development in a learning environment.) Sustainment leaders establish conditions for subordinate adaptation by—

- Developing sustainment leadership experience.
- Fostering shared understanding.
- Communicating with staff and subordinates.
- Developing teams.

## DEVELOPING SUSTAINMENT LEADERSHIP EXPERIENCE

7-20. The Army develops leaders who are agile, adaptive, and innovative through a mix of education, training, and experience. This encourages leaders who act with boldness and initiative to execute missions according to doctrine and orders. The goal is to develop Army leaders who clearly provide purpose, direction, motivation, and vision to their teams and subordinates while executing missions to support their commander's intent. Sustainment commanders and leaders develop subordinates by preparing them and challenging them with greater responsibility, authority, and accountability. Sustainment leaders should prepare subordinates to succeed at the next level of responsibility, since large-scale combat operations may

require them to replace sustainment leaders above them. It is the professional responsibility of all sustainment leaders to develop subordinates. See FM 6-22 for more information on leader development.

7-21. Sustainment commanders and leaders can develop subordinates during training by accepting subordinates' risk and providing accurate feedback at the conclusion of training. Sustainment leaders should allow subordinates to accept risk on their behalf during training. They should also ensure subordinates make analytic risk decisions while informing higher headquarters of the risks they are accepting. Sustainment leaders should allow subordinates to take excessive tactical risk during training. Doing so provides a valuable teaching tool to learn what risks are acceptable, which are not, and how to better analyze and assess risk.

7-22. This method of coaching builds a leaders trust in a subordinate's judgement and initiative. It also builds a subordinate's trust in the leader. During operations, sustainment leaders must intervene when subordinates take risks that exceed potential benefits. Sustainment leaders must inform leaders either at the time of the decision or during an after-action review.

7-23. Instilling risk acceptance into sustainment leaders at all levels comes with accepting mistakes made in sincerity during training. Sustainment commanders that allow subordinates to learn from bad decisions create a learning climate that allows learning while gaining experience to thrive under pressure. Sustainment leaders should enforce the importance of bias towards action by highlighting decision making during operations. However, commanders should not constantly endorse or support mistakes that result from repeated lack of judgement or inability to learn. Commanders must not tolerate subordinates repeatedly failing to exercise the initiative and constant errors or inaction. To ensure subordinates learn from mistakes, sustainment commanders must—

- Publicly discuss a mistake during after-action reviews; this includes the mistakes of the leader as well.
- Make an immediate correction to enable a shared understanding by the team when there is no time for an after-action review.
- Correct systemic problems that enabled the mistake.

7-24. Sustainment commanders must prepare subordinates to take their place as required. Training events, exercises, and professional development sessions are ways to reinforce the vision and need for initiative. Over time, this prepares leaders for assumption of greater responsibility during combat. Sustainment leaders must also create a climate that fosters a shared understanding of the intent and desired end state.

## FOSTERING SHARED UNDERSTANDING

7-25. A shared understanding enables a mission command approach to C2. Sustainment commanders should communicate intention two levels down and sustainment leaders must look two levels up to understand the commander's intent, priorities of effort, and end state. Sustainment commanders can ensure a shared understanding of their intent through a continuous dialogue with subordinates. When done in an environment of mutual trust and understanding, the sustainment commander's intent frees them up to move about the battlefield knowing that subordinates understand the end state and what must be done. A shared understanding allows sustainment leaders to operate knowing subordinates will report information promptly and accurately.

7-26. Sustainment leaders must educate themselves and subordinates in Army, joint, and multinational doctrine. Training using the applicable tactics, techniques, and procedures creates a shared understanding, develops the team, and builds trust commanders need to achieve unity of effort. This will be essential when units are placed with different task organizations and command structures during an operation.

## COMMUNICATING WITH STAFF AND SUBORDINATES

7-27. Sustainment commanders must be proficient in the use of written orders when exercising C2 of forces. Written orders before and during early stages of an operation promote consistency, provide a common frame of reference, and support a shared understanding between staff and subordinates. During operations, oral communications can be of more importance when time and the changing situation dictate speed of decision making. Oral communication also offers sustainment commanders an opportunity for personal interaction while leading. Face-to-face communication with staff and subordinates is the most effective means of



communication but is not always practical. The pace of operations and changes in the OE can limit face-to-face interaction. Communications at the tactical level during large-scale combat operations will be mostly dependent on radio communications. Sustainment commanders must understand that the military bearing they display and the tone of voice will impact subordinates.

7-28. Effective sustainment leaders should take steps to encourage communication between subordinates and staff. Leaders should make themselves open to receiving new information, good or bad, without harsh or over reactions. These types of barriers can reduce the ability to receive accurate and timely information. Failure to receive and act on this information can lead to mission and operational failure.

## DEVELOPING TEAMS

7-29. Developing successful sustainment teams is a continuous process that begins at home station and continues through deployment and operations. For sustainment commanders, developing an effective team requires a shared understanding across all domains and effective communications with their staff and subordinates. Often, sustainment units serve or are deployed with different subordinate units or placed under an unfamiliar higher echelon. Sustainment leaders can build trust in these situations through interaction with subordinates and higher echelons to collaborate and get a shared understanding of each other's capabilities.

7-30. Sustainment units may be in operations with different command structures than home station. Sustainment commanders must be prepared to communicate with those command structures to share vision and understanding. This communication between leaders and staffs can foster team building. It also provides an opportunity to identify scenarios where they may train together in the early stages of an operation.

7-31. Sustainment commanders should circulate with subordinate units to assess capabilities and readiness, learn task organizations, and motivate Soldiers. Sustainment commanders that build relationships with subordinate units and unified action partners also increase situational understanding while strengthening the team. This increased situational understanding is essential in visualizing and describing the end state.

7-32. Different cultures and levels of training between the Army and unified action partners can impact building successful teams. Sustainment leaders should strive to understand these differences in order to build civil-military teams. To assist with building these partnerships, sustainment leaders should—

- Have unified action partners represented, integrated, and actively involved in planning and coordinating activities.
- Share an understanding of the situation and problem.
- Collectively determine resources, capabilities, and activities required to achieve goals.
- Work for unity of effort towards a common goal.

7-33. Successful sustainment operations require sustainment leaders working with partners to develop a shared understanding and commitment to the solution. Achieving unity of effort and building a successful team requires sustainment leaders with cultural understanding and the ability to communicate. Without those skills, collaboration and team building with unified action partners will be difficult.

## TRAINING CONSIDERATIONS FOR SUSTAINMENT UNITS

7-34. Sustainment forces at each level of warfare continue to operate in complex and uncertain environments that present a number of challenges that leaders need to incorporate into training, embracing the principle of train as you fight.

## SURVIVABILITY

7-35. Survivability is a key objective in all training, especially for sustainment formations, which are vulnerable due to size, limited protection resources, and the requirement to continue sustainment operations while simultaneously conducting force protection tasks. To increase survivability, sustainment units must focus training on defense of the support area, cover and concealment, aggressive reconnaissance and security operations, selection of terrain that masks sustainment formations visually and electronically, electromagnetic protection and emissions control measures, and dispersion.

7-36. Training in the protection function of unit and convoy defense on local and area security tasks is also critical in ensuring the survivability of sustainment units in an environment where there are no safe areas. Sustainment units must be equipped, structured, trained, and prepared to execute these tasks to ensure units can complete sustainment missions when military police are unavailable.

7-37. The ability of sustainment units to defend the support area is a critical enabling task for conducting sustainment operations. Units cannot conduct support if they cannot defend the support area. Sustainment leaders must prioritize training to focus on the fundamentals of unit defense such as establishing a perimeter defense, developing engagement areas, integrating fires, employing obstacles, constructing fighting positions, and using camouflage for concealment and cover.

7-38. Sustainment forces should assume that they are under constant observation from one of the enemy's land, maritime, air, and space-based reconnaissance and surveillance capabilities. Therefore, sustainment units must implement electromagnetic protection and emissions control measures to reduce and obscure emissions and signatures that the enemy can detect. The likelihood of enemy massed long-range fires increases during large-scale combat operations, particularly against command and control, sustainment nodes, and critical infrastructure. To survive and operate against massed long-range fires and in contaminated environments, commanders must plan for establishing base cluster operations to create dispersion. Leaders only concentrate forces when necessary and balance the survivability benefits of dispersion with the negative impact dispersion has on mission effectiveness. Dispersed formations improve survivability by complicating targeting and making it more difficult for enemy forces to identify lucrative targets.

## MOBILITY

7-39. Operations over extended distances require all sustainment units be mobile. Sustainment units must be able to rapidly deploy, operate, and displace to complicate enemy targeting efforts and increase survivability in a widely dispersed, fast paced, chaotic, and highly lethal operational environment. Sustainment commanders must plan for and maintain continuity of command and control during displacement or catastrophic loss. Leaders must ensure units replicate frequent survivability moves and split-based operations of sustainment units and headquarters on a continual basis during training. In addition, measures to reduce the sustainment footprint also improve the mobility of sustainment forces. Movements of large numbers of vehicles cannot be adequately trained by simulation alone.

## DISTRIBUTION

7-40. Large-scale combat operations will require the distribution system to move a greater volume of personnel, equipment, and supplies than in other types of operations. The ability to synchronize the distribution system to deliver the right things to the right place at the right time is critical to enabling freedom of action, operational reach, and prolong endurance. To be effective, commanders and staff must conduct distribution management to synchronize and optimize transportation, its distribution networks, and materiel management with the supported unit's concept of operation.

7-41. Operating in extreme geography and climate conditions and around dense urban terrain presents many challenges to sustainment units. Units must train for OEs characterized by congested and constrained routes, damaged infrastructure, and 360-degree threats from above and below ground. This may include the use of autonomous aerial or ground delivery systems, provisioning of special equipment and ammunition requirements to supported SOF, and support to the local populace and unified action partners. Sustainment Soldiers train to analyze and predict the demand shifts in a dense urban environment; for example, fuel demand for ground forces may decrease in an AO, while ammunition requirements (particularly small-arms and terminally guided and precision munitions) greatly increase. Understanding distribution modes and how to request them is a critical part of sustainment flexibility. Distributing supplies by air or waterway may be a better option in a situation when motor transport is not feasible. Sustainment forces cache commodities to maintain flexibility. The sustainment force also trains to sustain the force in austere areas where pre-positioning of equipment may not be feasible, adequate bases may not be available, and the industrial base and infrastructure are poorly developed.

## COMMUNICATIONS

7-42. Adversaries will attempt to disrupt, degrade, manipulate, or curtail communications and access to sustainment enterprise systems. In response to this threat, sustainment units train to operate during degraded or denied communications by using redundant manual and digital control systems. To maintain command and control with degraded communications, sustainment units should be trained and proficient in employing all available C2 systems, managing information with analog processes, maintaining manual running estimates, and maintaining an analog common operational picture. Developing and maintaining good staff estimates provides sustainment staff flexibility to anticipate requirements during degraded or denied communications. Sustainment operations rely on effective enterprise resource planning systems which require access to the DOD Information Network. Degraded connectivity to a secure communications network poses risks to situational understanding, C2, mission accomplishment, and continuity of operations. Setup of communications to gain access is an essential task that must be trained.

## OPERATIONAL ENERGY

7-43. Planning for the effective use of operational energy is an essential consideration. *Operational energy* is the energy required for training, moving, and sustaining military forces and weapons platforms for military operations (JP 4-0). Commanders at all levels must reinforce behaviors, and plan for and employ technical solutions that reduce the amount of energy consumed and make more effective use of energy. Energy considerations should be included during mission planning and resourcing and then monitored during mission execution. Commanders should seek out and plan for the use of energy-saving technologies and use other techniques that will reduce both the unit and AO operational energy footprint. One such technique is using common/efficient power sources shared by multiple units where possible. Energy conservation practices reduce logistics requirements, increase operational reach and freedom of action, and prolong endurance.

## CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR

7-44. Operations must account for possible enemy use of CBRN weapons. Sustainment units must be prepared to operate in, around, and through contaminated environments. This is fundamental to deterring adversaries from employing weapons of mass destruction. Sustainment units should incorporate CBRN into all training facets as a condition on the battlefield that the enemy will leverage to establish and maintain a position of relative advantage. Commanders incorporate CBRN conditions into training to ensure mission essential task proficiency in a contested CBRN environment.

## TRAINING SUSTAINMENT FORMATIONS

7-45. Unit commanders at all levels are the critical link for implementing unit training management to ensure progressive readiness and unit proficiency within their formations. Sustainment commanders achieve unit readiness through progressive, rigorous, and repetitive training conducted in a challenging and uncertain training environment. A commander's unit training plan must use a crawl-walk-run approach that progressively and systematically builds on successful task performance before progressing to more complex tasks. A progressive approach enables a logical succession, builds skills and knowledge from basic to advance tasks, and sets conditions for individual and collective training.

7-46. With the majority of the sustainment force structure being in the Reserve Component, commanders must ensure these formations are well trained and integrated into the multi-component sustainment force structure prior to deployment. Commanders also leverage opportunities to strengthen sustainment training relationships with other Services, interagency organizations, private industry, and multinational partners whenever feasible.

7-47. Sustainment units do not operate independently, but as part of a larger force. Commanders must integrate and synchronize the employment of sustainment capabilities with the rest of the force to maximize combat power and achieve the overall objective of the operation. Commanders do not train sustainment units in isolation. Rather, commanders develop organizational proficiency as part of a combined arms or joint team, supporting other warfighting functions to achieve specified outcomes by conducting multi-echelon training. Maneuver units and their supporting sustainment elements routinely train on resupply (including delivery of logistics packages), vehicle recovery, convoy operations, unit maintenance, casualty collection,

HR support, and financial management team missions. Establishing FARPs and conducting refuel on the move operations to support extended moves for operations like attacks, mobile defenses, and defensive retrograde are other examples of key sustainment activities integrated into maneuver unit collective training events.

7-48. Commanders maximize institutional and operational training opportunities at home station and ensure use of current tools such as HQDA-approved mission essential task lists (METL), proponent-approved combined arms training strategies, individual critical task lists, unit task lists, and associated training and evaluation outlines for collective tasks. The technical nature of sustainment core functions requires constant engagement and maintenance to prevent skill atrophy. Sustainment units strive for mastery-level proficiency of these essential tasks through multiple iterations of training events. That concept applies to not only the actual technical functions, but also to staff activities and basic field craft.

7-49. Sustainment unit leaders plan, prepare, execute, and assess unit training in accordance with FM 7-0. Collective training events are conducted in accordance with combined arms training strategies. The combined arms training strategies are unit-specific training strategies that recommend a path for units to achieve and sustain training proficiency by identifying collective tasks to train and recommending training events to train those tasks using a crawl-walk-run approach.

7-50. The Army's standardized METL defines the essential tasks a unit must perform to be considered proficient in its core mission. Soldiers leave the institutional domain with foundational individual competencies; unit commanders build on that technical foundation while also training the collective skills required by the unit's METL. Commanders use the mission essential tasks and their associated training and evaluation outlines to assess unit collective training proficiency. These tasks have been developed and approved by the Army Training Development Capability and hosted on the Central Army Registry to develop unit training plans. They can be found on the Army Training Network via <https://atn.army.mil/>.

7-51. Sustainment commanders and leaders must ensure that their units train the way they will fight in large-scale combat operations. The training and evaluation outline is the Army's source for individual and collective task training standards. It consists of task, conditions, and standards, to include major procedures (steps or actions) that a unit or individual must accomplish to perform a task to standard. Additionally, it is important for leaders to know that each collective task also lists other tasks that may need to be trained prior to execution or in conjunction with it; these tasks are prerequisite collective tasks, supporting collective tasks, and supporting individual tasks. During training events, sustainment commanders and evaluators use training and evaluation outlines to measure observed task proficiency.

7-52. Sustainment commanders execute every training event within a realistic, doctrinally based training environment that ties task accomplishment (individual, leader, and collective) to successful unit mission support through executing unit capabilities successfully. Training events must present conditions that replicate the complexities of the ever-changing OE with the physical and mental rigor necessary to challenge units, leaders, and Soldiers to excel in critical thinking and complex problem solving. It is especially important that commanders plan training for supporting operations the Army has not had to conduct recently, such as RSOI and reconstitution.

## 7720 SUSTAINMENT LEADER DEVELOPMENT

7721 7-53. Successful support of large-scale  
 7722 combat operations requires Army sustainers  
 7723 who are technically and tactically proficient,  
 7724 adaptive, and innovative. Sustainers must  
 7725 possess the ability to lead, plan, and support  
 7726 global readiness in complex operational and  
 7727 strategic environments. Developing leaders  
 7728 encompasses training and professional military  
 7729 education as the primary means by which  
 7730 leaders combine experiences gained during  
 7731 operational assignments with doctrine in  
 7732 preparation for large-scale combat operations.  
 7733 However, unit commanders also plan,  
 7734 resource, and execute professional  
 7735 development programs for leaders within their  
 7736 organization to build on the foundation formed  
 7737 during training and professional military education opportunities. Additional considerations for sustainment  
 7738 leader development are discussed in the paragraphs below.

Sustainment is a tough and demanding task in peacetime, made even more challenging under combat conditions. No one knew this better than Major General Robert Littlejohn, who served as General Dwight Eisenhower's Chief Quartermaster in the European Theater of Operations during World War II. He told his soldiers in no uncertain terms they were expected to be dedicated, physically fit, and ready to sacrifice at all times. Littlejohn held himself to the same tough standards. Above all, he hoped they would exhibit drive and determination and adopt the can-do attitude needed to overcome the many hurdles that logisticians inevitably face in war. Littlejohn made the unofficial motto of his sustainment organization focused on mission accomplishment, translated into his own language: "It Will Be Done".

## 7739 TOTAL FORCE SUSTAINMENT INTEGRATION

7740 7-54. This sustainment competency involves two aspects: integrating the varied sustainment functions and  
 7741 integrating sustainment formations across the Active Army, Army Reserve, Army National Guard, and Army  
 7742 Civilian workforce. Sustainers need to understand the various sustainment functions and be able to integrate  
 7743 them to create a holistic sustainment plan. Sustainers must also understand other components' capabilities  
 7744 and establish partnerships to effectively integrate them to provide optimal support to the force. Integrated  
 7745 training exercises can increase understanding of sustainment functions and foster relationships that increase  
 7746 understanding of capabilities between components.

## 7747 STRATEGIC SUSTAINMENT ENTERPRISE OPERATIONS

7748 7-55. As sustainment leaders develop, they progress from the start point of understanding their roles in  
 7749 enabling tactical-level operations through an operational perspective to strategic enterprise operations.  
 7750 Leaders require an understanding of strategic roles, systems, and capabilities at the enterprise level and how  
 7751 the links work across the levels of warfare.

## 7752 UNIFIED ACTION PARTNER INTEGRATION

7753 7-56. Unified action partners are those military forces, governmental and nongovernmental organizations,  
 7754 and elements of the private sector with whom Army forces plan, coordinate, synchronize, and integrate during  
 7755 the conduct of operations (ADP 3-0). Unified action partners include joint forces and components,  
 7756 multinational forces, and U.S. Government agencies and departments. Ultimately, all sustainment is aimed  
 7757 at ensuring the success of multidomain operations, so sustainment leaders consider the capabilities and  
 7758 requirements of unified action partners and establish appropriate relationships with them. As discussed earlier  
 7759 in this chapter, Army sustainers will be both supporting and receiving support from unified action partners.

## 7760 SUSTAINMENT INFORMATION SYSTEMS

7761 7-57. Sustainment information systems provide the visibility required for sustainment decision making. It is  
 7762 important that Army sustainers understand what enterprise resource planning programs are, what enterprise  
 7763 resource planning programs the Army has, and how these are integrated. See appendix E for more information  
 7764 on sustainment information systems.

## 7765 OPERATIONAL CONTRACT SUPPORT

7766 7-58. OCS is the process of planning for and obtaining supplies, services, and construction from commercial  
 7767 sources in support of joint operations. While varying in scope and scale, OCS is a critical force multiplier  
 7768 across all phases and types of operations. Sustainment commanders, all primary staff, and most special staff  
 7769 plan for, integrate, execute, and manage contracts and contractor personnel within the OE. On the Army staff,  
 7770 the G-1/S-1 is responsible for contractor reporting and accountability; the G-2/S-2 is responsible for  
 7771 contractor threat assessment and vetting; the G-3/S-3 is responsible for organization of contractor personnel  
 7772 and integration into the operation; the G-4/S-4 is responsible for OCS planning and coordination; and the  
 7773 G-8/S-8 is responsible for resourcing and financial management. For additional information on OCS, see ATP  
 7774 4-10.

7775 7-59. The dynamic OE requires an agile, flexible approach to contracting. Planners should conduct risk  
 7776 analysis for OCS and consider operational and contractor risk as well as performance, schedule, and cost  
 7777 risks. Contractor support is important to sustaining Army forces across the range of military operations.

## 7778 PLANNING CONSIDERATIONS FOR SUSTAINMENT LEADERS

7779 7-60. Sustainment is inherently a simultaneous requirement in terms of execution to support a scheme of  
 7780 maneuver and a sequential requirement in terms of positioning and moving capabilities/commodities in time  
 7781 and space. There is no escaping the linear nature of time and its impact on the effectiveness of sustainment.  
 7782 However, effective use of the mission command philosophy, the orders process, and correct task organization  
 7783 can mitigate potential impacts on sustainment.

7784 7-61. Sustainment commanders utilize the operations process to develop an effective task organization. The  
 7785 task organization identifies the units with the necessary capabilities required to support the mission. This  
 7786 ensures that—

- 7787 • The correct number of the right types of units are available.
- 7788 • Correct command relationships are established to determine authorities.
- 7789 • Correct support relationships are established as required.

7790 7-62. Once command and control relationships are established, sustainment commanders and their planners  
 7791 select locations for units to best support the operation. The placement of units must be coordinated with the  
 7792 unit assigned the area of operation within which the sustainment units are located. Commanders and planners  
 7793 must consider all mission variables to include analysis of how each will affect the placement of units. Critical  
 7794 mission variables include mission (to include priority of support), enemy, terrain and weather, troops and  
 7795 support available, time available, and civil considerations, each of which have informational considerations.  
 7796 Applicable operational variables should also be considered. Sustainment support normally has an associated  
 7797 execution cycle. Some examples (though not all inclusive) include the following:

- 7798 • For unit distribution, a cycle is the time it takes for a distribution platform to move from a supply  
 7799 support activity (SSA) to the supported unit and back to the SSA.
- 7800 • For supply point distribution, a cycle is the time it takes for a supported unit to move from the unit  
 7801 location to the SSA and back to the unit.
- 7802 • For a medical unit, when prepositioning ambulances forward, a cycle is the time it takes for an  
 7803 ambulance to move from ambulance loading point to the medical treatment facility and back to  
 7804 the ambulance loading point.

7805 7-63. Optimal physical placement has a positive effect on the timing of support and ensures support missions  
 7806 can be executed to meet requirements. Commanders must physically locate sustainment units in a position  
 7807 that is close enough to the supported unit that an execution cycle is not inordinately long or time consuming.  
 7808 The time it takes to execute a cycle directly affects the overall time to execute support. Sustainment units  
 7809 with GS relationships support multiple units, each of which may be at a different distance. In this situation,  
 7810 planners must strike a balance when determining placement of sustainment units.

7811 7-64. Another consideration for physical placement is the type of support provided by a unit. As an example,  
 7812 a composite supply company providing water treatment support to a BCT may be positioned within the BCT  
 7813 AO to minimize the time required to produce and distribute the treated water to the BSB.

7814 7-65. Commanders at all Army echelons, theater Army to company, must ensure operations planned and  
7815 executed contribute to and support the mission, commander's intent, and concept of operations of the higher  
7816 headquarters. Continuous coordination, cooperation, and collaboration with higher and lower headquarters  
7817 ensures all operations are fully synchronized, integrated, and achieve unity of effort.

7818 7-66. Theater enabling commands, such as the TSC, are integrated into operations by the theater Army as  
7819 well as multifunctional and functional sustainment brigades, battalions, and companies. Commanders must  
7820 ensure that operations conducted by these commands are synchronized to ensure all contribute to and achieve  
7821 the CCDR objectives. The theater Army, in conjunction with the TSC, ensures proper support relationships  
7822 are established between sustainment organizations and theater enabling command organizations.

7823 7-67. There are various mechanisms available to commanders to enable them to achieve unity of effort.  
7824 Mechanisms can be physical activities or processes commanders must understand in order to use them  
7825 effectively. To gain a more comprehensive understanding of these mechanisms, refer to JP 6-0, ADP 6-0,  
7826 and FM 6-0.  
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## Appendix A

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# Contested Logistics

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This appendix describes considerations for conducting logistics operations when contested by a peer threat. It begins with an overview of peer threat capabilities that affect logistics, then provides planning considerations for conducting logistics in a contested environment, and concludes with logistics considerations for RSOI in a contested environment.

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## LOGISTICS THREATS

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A-1. Sustainment forces must be prepared to operate in a contested logistics environment. Peer adversaries possess the capability and capacity to observe, disrupt, delay, and attack U.S. forces, infrastructure, and operations in all domains within the United States, abroad, and while in transit. Sustainment commanders and staffs must therefore plan and execute logistics with the assumption that sustainment forces are always under observation, in contact, and contested. Contested logistics involve planning, executing, and enabling the movement and support of military forces across multiple domains (air, land, sea, space, cyber/information, EMS) in a contested environment. A contested logistics environment is an environment in which the armed forces engage in conflict with an adversary that presents challenges in all domains and directly targets logistics operations, facilities, and activities in the United States, abroad, or in transit from one location to another (10 USC § 2926[h]).

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A-2. Peer adversaries possess air, space, and cyberspace capabilities, increasing the likelihood that threat forces can gain and maintain continuous visual and electromagnetic contact with Army forces. Sustainment leaders must assume they are under constant observation from one or more domains and continuously ensure they are not providing lucrative targets for the enemy to attack. FM 3-0 describes nine forms of contact in multiple domains that sustainment forces may face: direct, indirect, non-hostile, obstacle, CBRN, aerial, visual, electromagnetic, and influence.

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A-3. Sustainment forces must anticipate being under continuous visual, electromagnetic, and influence contact with adversaries during logistics operations. Peer adversaries will deploy persistent visual surveillance through space and other capabilities to detect and target logistics operations. Peer adversaries are capable of persistently probing and disrupting logistics operations through the deployment of space and cyberspace capabilities to maintain contact with logistics forces. Logistics operations are subject to adversary influence through disinformation and misinformation campaigns targeting Soldiers, their Families, and friends.

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A-4. Sustainment forces must understand that a peer adversary can deploy capabilities that may impact logistics operations during competition. A peer adversary's capability to employ effects across multiple domains can disrupt critical infrastructure at home and locations abroad. This infrastructure includes civilian transportation infrastructure, power, communications, fuel, water, and other life support. Interdiction of these types of infrastructure can disrupt, delay, and potentially deny military operations.

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A-5. During crisis and armed conflict, sustainment forces should expect an enemy that contest logistics activities in all domains by employing means to detect and rapidly target sustainment forces and resources. Forces and resources that are concentrated and static are easy for enemy forces to detect and destroy. Dispersing these assets has multiple survivability benefits. Sustainment forces must be prepared to operate dispersed, quickly mass, and then rapidly disperse again to increase survivability. Constant dispersion of sustainment forces and resources can be used as a form of deception and help to conceal intentions and capabilities. Dispersion also creates targeting dilemmas for the adversary by reducing the effect enemy strikes can have on U.S. forces. See ATP 3-37.34 for information on survivability positions and FM 3-13.4 for more information on deception.

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A-6. Adversaries will employ predatory economics, economic coercion, economic warfare, misinformation, and other means to achieve their objectives short of conflict in competition and set conditions for their advantage in conflict. Although the Army does not have direct influence over this domain of competition, the Army and joint force are heavily reliant on contracted good and services, host-nation support, and access to host-nation infrastructure. Moreover, peer adversaries have vastly more ability in scope and scale to render contractors and vendors unable or unwilling to support the US, or to deny them access to required materials.

## CONTESTED LOGISTICS CHALLENGES AND PLANNING CONSIDERATIONS

### SETTING THE THEATER

A-7. Adversary actions aim to deny U.S. forces the ability to set the theater by challenging access and movement, thereby limiting the ability to establish a relevant forward presence of resources and caches. Potential ways to overcome this include—

- **Tailoring regional posture (forward posturing).** Forward-postured regional resources reduce risk and mitigate the severity of loss and impact when adversaries A2/AD efforts target and successfully impact the force at strategic maneuver distances. Increasing forward sustainment posture imposes targeting challenges on the adversary.
- **Increasing survivability of sustainment modes and nodes.** Protection requirements are increased with the expanded future operational environment. Protecting sustainment resources is achieved in part through increased organic lethality, communications, redundancy, survivability, deception, and dispersion. Protection of sustainment nodes, capabilities, and capacities requires the integration and synchronization of sustainment and other forces.
- **Building partner capacity and leveraging regional resources.** Limited access and competition over regional resources poses a challenge for the joint force's ability to leverage local area resources needed to support ASOS and Title 10 missions. Adversaries are using diplomacy, economic power, and irregular warfare, and weaponizing information and posturing conventional forces, creating stand-off to fracture U.S. alliances and partnerships. These actions can diminish and deny the U.S. the ability to contract the required sustainment functions and capabilities to support the joint force. Building regional partnerships while understanding the region's economic environment and infrastructure complexities is critical to gaining access to resources. During competition, Army forces must build relationships, agreements, and contracts to shape regional capabilities and security requirements. Army forces will not win a conflict alone and must shape the sustainment environment during competition to meet Army, joint, and unified action partner requirements.

### ENABLING POWER PROJECTION

A-8. Peer adversaries will contest U.S. power projection capabilities to delay, disrupt, and interdict Army forces from rapidly transitioning to conflict. Army forces must develop and maintain a resilient SSA, balance sustainment force posture, and modernize rapid response capabilities, creating multiple dilemmas to counter adversary efforts. Ways to achieve this may include—

- **Ready a resilient SSA:** The Army must inform DOD prioritization regarding U.S. and partner infrastructure enhancements while increasing manned and unmanned lift assets capable of transporting supplies that require special handling (such as unique CL V missiles for long-range and air defense artillery). Augmentation provided through these relationships must not translate to overestimating their capabilities, thus leading to an unacceptable increase in strategic and operational risks. During competition, Army forces must work with commercial entities and unified action partners in potential operating theaters to understand their capacities and the duration of support that would be afforded to U.S. forces and incorporate these into planning.
- **Balanced total force sustainment:** The total force sustainment posture must be optimized globally to contribute to deterrence operations in competition and be responsive to sustain large-scale combat operations. The Army's contribution to power projection will rely heavily on policy, resourcing, and planning initiatives to balance the total force to meet rapid deployment timelines.

## DEPLOYMENT

A-9. **Fort-to-Port:** As part of the strategic support area, home station installations, Reserve Centers, National Guard Armories, and other designated points of origin such as unit motor pools are where force projection begins. They present targets that enemy forces may attack to delay, disrupt, and degrade force flow into theater. Deployment disruption mitigation planning requires partnerships between Army staffs, local governments and agencies, and Services to maximize lift assets and other resources. Planning considerations for fort-to-port operations require agile nodes, accurate and timely information, trained movement personnel at all levels, and the timely arrival of throughput enablers. In addition, planners should consider maintaining unit integrity and delivering capabilities rather than entire formations and incorporating force tracking capabilities. Additional fort-to-port planning considerations include the following:

- Coordinate with local, state, and federal authorities to mitigate deployment disruptions.
- Ensure that units can provide combat-configured forces for worldwide deployment with limited notice within required times.
- Ensure that unit deployment plans and procedures adequately support limited no-notice deployment.
- Ensure that installation plans and procedures adequately support limited no-notice deployments.
- Ensure unit readiness and establishment of pre-positioned stocks.
- Identify and secure primary and alternate movement nodes to reach ports of embarkation.
- Plan to use alternate and multiple lines of communications.
- Incorporate C2 and ITV capabilities.
- Establish specific cyber defenses for systems and associated data used to support movement.
- Conduct threat planning and mitigation.
- Maximize liaisons.

A-10. **Port-to-Port:** Port-to-port operations are likely targets of kinetic and non-kinetic attacks to reduce capabilities or capacity as U.S. forces deploy to the theater. Enemy forces may target ports or vessels while in-transit with long-range fires, special operations forces, cyberspace attacks, space capability degradation or denial, and other capabilities. Whether conducting operations at a port during competition, crisis, or armed conflict, Army forces coordinate with the relevant authorities to mitigate potential complications at or enroute to the port. This includes—

- Coordinating with host-nation and local authorities to mitigate deployment disruptions at the POD/POE.
- Establishing OCS and security cooperation for port operations.
- Assembling and organizing personnel into units and force packages to build combat power in anticipation of a contested environment.
- Understanding port authority structure and capabilities.
- Anticipating problems with frustrated cargo, efficient cargo handling, vessel turnaround, and reasonable utilization of port facilities.
- Conducting threat planning and mitigation.
- Identifying potential redundancies (for example, if power is lost, can port gantry cranes load containers).
- Anticipating performing LOTS in austere environments or degraded ports.
- Incorporating C2 and ITV capabilities.
- Planning RSOI.

A-11. **RSOI:** The theater Army has primary responsibility for conducting RSOI for all joint land forces. Setting the theater for RSOI operations should not rely solely on organic capabilities, but also consider host-nation support, contractor support, and after initial entry, the COMPO 2 and 3 forces. This is meant to fill required gaps in mobility, both sequentially and simultaneously. Once hostilities begin, the risk posed to strategic lift by a peer adversary may degrade the ability of vessels to deliver equipment and forces very far into theater. This may result in the transition from intertheater to intratheater lift being farther away from the fight and necessitate reception and staging to take place outside the theater. This will cause onward movement

to occur over extended, contested LOCs of operational and strategic distances. Further complicating the challenge could be operations that must occur in a largely maritime environment.

A-12. The need for dispersion and disaggregation of forces will cause Army equipment to arrive in numerous smaller ports. Because 80 percent of sustainment capabilities are in the COMPO 2 and 3 organizations, it is important for planners to understand the mobilization and TPFDD requirements to synchronize force flow into the theater. Additional ACSAs enable rapid deployment of combat forces to help bridge gaps of capabilities currently not in theater. As designated by the CCDR, the TSC transfers TACON of units to the gaining JFC in preparation for onward movement. Additional planning considerations during RSOI include, but are not limited to—

- Planning for risks against velocity.
- Maintaining asset visibility (ITV) of equipment and personnel.
- Identifying threat mitigations of A2D2.
- Planning to utilize multiple geographically dispersed nodes (personnel and equipment).
- Understanding and planning for the synchronization of force flow (knowing the friction points).
- Anticipating use of APS equipment, load reconfiguration, and integration of capabilities.
- Planning to mitigate class III (bulk), maintenance, and transportation gaps that may impact transition from movement to maneuver.
- Conducting threat planning and mitigation required to support RSOI operations.
- Understanding critical infrastructure vulnerable to sabotage and unsuited for the movement of heavy equipment along surface lines of communications (both road and rail).
- Establishing fuel, maintenance, and rest locations along lines of communications.
- Establishing security for LOCs to achieve freedom of movement.
- Planning and integrating OCS and host-nation logistics infrastructure support.
- Planning for destroyed, delayed, frustrated, and non-mission capable equipment arriving in theater.
- Incorporating liaison and unit personnel at theater nodes to facilitate onward movement.

## ECHELONED SUSTAINMENT FOR DISTRIBUTED OPERATIONS

A-13. The application and tactics of widely distributed operations will increase the demands on the sustainment enterprise at all echelons. As a result, sustainment forces must maintain effectiveness in supporting distributed operations at the cost of efficiency. Ways to achieve this may include—

- **Increased mobility:** Sustaining division-focused, widely distributed operations across domains requires modernized logistics capabilities operating over diverse, reliable, robust, and resilient transportation and distribution systems and networks which consist of multiple modes, multiple nodes, and multiple sources.
- **Demand management:** Demand management is an essential component of sustainment in the context of echeloned sustainment for distributed operations. Echeloned operations refer to the deployment of military forces in a series of phases or echelons, with each phase building on the previous one to create a layered interdependence towards a defined military outcome. It involves managing the flow of resources to ensure that they are available when and where they are needed. The goal being to balance or manage the frequency, volume and responsiveness of supply, distribution, redistribution and retrograde. This is the “art and science” of demand management during echeloned operations. This is the most essential component of echeloned sustainment to maneuver during large-scale combat operations. It reduces the risk to sustainment forces. Innovative measures must reduce reliance on the supply chain, enhance self-sufficiency, and extend operational reach as the requirements to conduct regular supply is reduced. Additionally, demand reduction applies to materiel design for reduced weight, energy efficiencies as well as commodities and lift. Sustainers must exploit technologies to meet requirements at the point of need reducing delivery times and burdens on the distribution network.
- **Active and passive survivability measures:** Adversaries will target sustainment forces, units, nodes, and capabilities at all echelons. Army forces must adapt operational tactics, techniques, and procedures to support operations by improving active and passive measures of protection. At each

echelon, sustainment forces must integrate with their respective commands' planning processes. To support this, logisticians must develop capabilities for smaller stockpiles, resupply on the move, and preposition caches for maneuvering formations. For a division-focused force, organic sustainment redundancy at echelon is necessary to meet increased support requirements, complicate the adversary's targeting calculus, preserve combat power, and facilitate persistent sustainment.

## RESILIENT, INTEGRATED SUSTAINMENT COMMAND AND CONTROL

A-14. Army sustainment C2 requires resilient information capabilities that are agile, integrated, predictive, near-real-time, and inform sustainment decisions to meet the operational tempo (OPTEMPO). Ways to achieve this may include—

- **Data automation, prognosis, and prediction:** Multidomain operations challenge the Army's ability to manage and exploit the massive amount of sustainment data from the point of need to the SSA and the defense industrial base with relevant speed. Management of the abundance of sustainment data relies on a common data repository and automation to perform predictive analysis and near-real-time assessments. Exploiting information through robotics and other tools will drive anticipatory sustainment decisions, with commensurate authorities at echelon to act upon timely and relevant information.
- **Accessible, protected, and integrated information:** Army forces must integrate and synchronize sustainment and other Service, unified action partner, and commercial partner information to achieve better interoperability, visibility, and functionality. Critical sustainment information must be secure, protected, defensible within the Army communications network, and capable of withstanding or mitigating attacks. In the future, sustainment data resides on both commercial, unclassified networks and a unified and protected Army communications network. Future enterprise resource planning (ERP) information, information management, and battle management systems must have the ability to connect to and interoperate with the other Services as part of the overall joint logistics enterprise, along with allies and other joint, interagency, and multinational partners.
- **Informed C2:** Leaders base timely decisions on accurate and actionable information. Future Army forces achieve sustainment decision advantage on the battlefield by increasing the speed of the decision cycle for commanders at all echelons. Sustainment information (for example, location, consumption, quantity, current capacity, projected capacity, and availability) must be integrated and governed by command relationships, authorities, and regulations at echelon to enable decisions.
- **Joint and combined interoperability:** The Army must integrate sustainment systems, capabilities, and practices with private industry partners, and coalition forces to economize capabilities through shared geographic resources.

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## Appendix B

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# Quartermaster Operations

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The Quartermaster Corps was founded on 16 June 1775, two days after the Continental Congress authorized the formation of the Continental Army. The Quartermaster regimental motto is “Supporting Victory.” This appendix begins with a description of the mission and functions of the Quartermaster Corps. It continues by describing the quartermaster role in the sustainment warfighting function and concludes with a description of supply and field services.

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## MISSION AND FUNCTIONS

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B-1. The U.S. Army Quartermaster Corps mission is to support the development, production, acquisition, and sustainment of general supply, mortuary affairs, subsistence, and petroleum and water; and materiel and distribution management. These tasks are performed during both peace and war to provide combat power to the U. S. Army.

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B-2. Quartermaster operations are comprised of two functions: supply and field services. From an operational perspective, supply enables freedom of action, extends operational reach, and prolongs endurance. Field services provide quality of life for Soldiers conducting operations in any operating environment.

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## QUARTERMASTER IN THE SUSTAINMENT WARFIGHTING FUNCTION

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B-3. Quartermasters support the sustainment warfighting function and provide both supply and field services through various formations. Quartermaster units provide support to Army and joint forces at all echelons across the range of military operations.

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## SUPPORT TO OPERATIONS

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B-4. Quartermasters play a critical role in supporting the Army during multidomain operations by providing the supplies and field services to maintain the force. Materiel managers ensure materiel is available and mission capable in order to ensure commanders have the required combat power to employ. Quartermasters mass logistics effects where and when they are needed in combat. They are prepared to provide sustainment across wide distances, operate in noncontiguous areas, and remain flexible in order to react to developments on the battlefield during multidomain operations.

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## SUPPLY

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B-5. Supply is the process of providing all items necessary to equip, maintain, and operate a military command. It involves requesting, receiving, issuing, and maintaining or establishing accountability of individual, organizational, and expendable/durable supplies and equipment that are required to execute a unit's assigned mission.

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B-6. Supply support to operations begin at the DOD level and continue to the end user through each Service's supply support system. The DOD supply chain is a global network that delivers materiel to the joint force. Its fundamental goal is to maximize force readiness while optimizing the allocation of resources. The logistics capabilities that contribute to the DOD supply chain include fulfillment of commodity requisitions from supply, the distribution capabilities from deployment and distribution, and movement and retrograde of repairable items to support maintenance activities. Additionally, multinational and interagency partners,

8107 HNs, NGOs, and other organizations may be segments within or end users of the supply chain. Supply chain  
 8108 responsiveness and reliability are critical to the overall success of joint operations. For more information see  
 8109 JP 4-0.

8110 B-7. The Army supports the DOD supply chain management system through distribution management. To  
 8111 be effective, distribution management must be integrated into all phases of the operations process. The  
 8112 distribution management process applies to all commodities and at all echelons. The distribution management  
 8113 process includes materiel management, transportation management, and distribution integration functions:

- 8114 • Materiel management is the continuous situational understanding, planning, and execution of  
 8115 supply and maintenance capabilities to anticipate, synchronize, and direct all classes of supply to  
 8116 maximize combat power and enable freedom of action in accordance with the supported  
 8117 commander's priorities.
- 8118 • Transportation management is planning, prioritizing, directing, and executing associated functions  
 8119 to transport materiel and personnel by air, ground, and water assets, based on situational  
 8120 understanding of operational requirements and resources, in accordance with commander's  
 8121 priorities.
- 8122 • Distribution integration aligns personnel, equipment, and materiel requiring distribution (in terms  
 8123 of commodity, quantity, and priority) with adequate transportation capabilities to synchronize  
 8124 distribution to support the concept of operations.

8125 B-8. For more on the distribution management process, see ATP 4-42.

## 8126 CLASSES OF SUPPLY

8127 B-9. There are ten classes of supply in the Army supply system. The following list describe each class of  
 8128 supply:

- 8129 • **Class I.** Consists of water and perishable and semi-perishable subsistence items or rations that are  
 8130 packaged as individual or group meals.
- 8131 • **Class II.** Consists of common consumable items such as clothing, individual equipment, tentage,  
 8132 tool sets and kits, maps, administrative, and housekeeping supplies. This includes items of  
 8133 equipment, other than major items, prescribed in authorization/allowance tables and items of  
 8134 supply (not including repair parts).
- 8135 • **Class III.** Consists of petroleum, oils, and lubricants: petroleum and solid fuels, including bulk  
 8136 and packaged fuels, lubricating oils and lubricants, petroleum specialty products; solid fuels, coal,  
 8137 and related products.
- 8138 • **Class IV.** Consists of fortification, barrier, and construction materials.
- 8139 • **Class V.** Consists of ammunition of all types, bombs, explosives, mines, fuses, detonators,  
 8140 pyrotechnics, missiles, rockets, propellants, and other associated items.
- 8141 • **Class VI.** Consists of personal demand items (such as health and hygiene products, soaps, and  
 8142 toothpaste, writing materials, snack food, and beverages) and other items that are non-military  
 8143 sales items.
- 8144 • **Class VII.** Consists of major end items such as weapon systems and vehicles. Major end items are  
 8145 a final combination of end products that are ready to use.
- 8146 • **Class VIII.** Consists of medical materiel and supplies to include medical device repair parts,  
 8147 blood, and blood products.
- 8148 • **Class IX.** Consists of any repair part, subassembly, assembly, or component required in the  
 8149 maintenance or repair of an end item, subassembly, or component. They support the maintenance  
 8150 and repair functions performed throughout the theater on all materiel except medical.
- 8151 • **Class X.** Consists of items that support nonmilitary programs such as agricultural and economic  
 8152 development.



## 8153 FIELD SERVICES

8154 B-10. Field services include the following: aerial delivery, food services, shower and laundry, mortuary  
8155 affairs, and water purification. This sub-function is performed at the operational and tactical levels. Field  
8156 services are essential to enhancing Soldiers' quality of life while deployed.

8157 B-11. Field services enhance unit effectiveness and mission success by providing an adequate quality of life  
8158 for Soldiers in the field. The type and level of field services support provided differs depending upon a  
8159 supported commander's requirements and the existing infrastructure in a theater, theater of operations, or  
8160 JOA.

8161 B-12. Field services enhance unit effectiveness and mission success by providing for Soldier basic needs.  
8162 Quartermaster Soldiers provide these services through a variety of organizations that provide field service  
8163 support at the tactical and operational levels.

## 8164 AERIAL DELIVERY

8165 B-13. Aerial delivery includes airland, airdrop, and sling-load operations. Airland and airdrop operations are  
8166 joint operations (Army and Air Force) that require large fixed-wing aircraft. Sling-load operations are usually  
8167 Army operations conducted using utility and cargo helicopters. For information on aerial delivery see ATP  
8168 4-48.

## 8169 ARMY FOOD PROGRAM AND ARMY FIELD FEEDING SYSTEM

8170 B-14. The Army Food Program and the Army Field Feeding System provide commanders with flexible Class  
8171 I support and field feeding systems that can be tailored to tactical situations and unit missions in both training  
8172 and operational environments. For information on food services, see AR 30-22, DA Pam 30-22, and ATP  
8173 4-41.

## 8174 SHOWER AND LAUNDRY

8175 B-15. Shower and laundry services must be provided on a timely, efficient basis in accordance with the  
8176 supported unit's needs. Shower and laundry support is provided from the operational level with projection as  
8177 far forward as the brigade area. The goal is to provide Soldiers with two showers each week. In addition,  
8178 soldiers will be provided up to 15 pounds of laundered clothing each week. Soldiers receive their clothing  
8179 back from the tactical laundry within a 24-hour period. For more information on shower and laundry services  
8180 see ATP 4-42.

## 8181 MORTUARY AFFAIRS

8182 B-16. Mortuary affairs provides the necessary care and disposition of missing and deceased personnel,  
8183 including personal effects. The Army Mortuary Affairs Program provides theater-level MA support to the  
8184 CCMDs for the care and disposition of deceased personnel and the handling of personal effects across a  
8185 continuum of conflict ranging from peace to war. For more information, see ATP 4-46.

## 8186 WATER PURIFICATION

8187 B-17. Water purification reduces the concentrations of health-related contaminants in water to a level that  
8188 makes the water potable. Purification is also used to improve the aesthetic characteristics of water to make it  
8189 palatable. Water purification operations are conducted at the operational and tactical levels. Water quality  
8190 monitoring is primarily the responsibility of preventive medicine personnel of the TMC. For more  
8191 information on water purification, see ATP 4-44.  
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## Appendix C

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# Transportation Operations

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This appendix outlines Transportation Corps operations, including mode operations, intermodal operations, movement control, theater distribution, in-transit visibility, and asset visibility.

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C-1. Army transportation is one of the seven logistics elements and a crucial part of the sustainment warfighting function. It supports the movement of units, cargo, and materiel from their origins to final destinations globally. These operations encompass fort-to-port, port-to-port, port-to-end user, and return movements. Army transportation supports theater distribution and maneuver units, requiring integration with joint and strategic partners.

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C-2. Army transportation offers primary transportation support for the joint logistics enterprise, including Services and strategic partners. It encompasses mode operations, intermodal operations, movement control, and theater distribution, aiding combat power and unified action partners in multidomain operations.

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## MODE OPERATIONS

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C-3. *Mode operations* are the execution of movements using various conveyances (truck, lighterage, railcar, aircraft) to transport cargo (ADP 4-0). Two transportation modes are available: surface and air.

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## SURFACE MODES OF TRANSPORTATION

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C-4. Surface modes consist of motor, waterway, and rail transportation. The motor mode utilizes ground assets, while the waterway mode employs ships, boats, and barges. The rail mode involves railways or railroads for cargo and passenger transport.

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## Motor Transport Operations

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C-5. *Motor transport operations* are a ground support function that includes moving and transferring units, personnel, equipment and supplies by vehicle (ATP 4-11). It is the primary land surface movement provider in the joint force, offering flexibility, multi-stop scheduling, and rerouting options. It sustains forces, enhances endurance, and supports the Army's force sustainment.

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## Watercraft Operations

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C-6. The Army employs lighterage and floating utility watercraft for water transport landing craft and personnel transfer. See ATP 4-15 for more on Army watercraft operations.

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## Rail Operations

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C-7. Rail is a cost-effective way to transport large cargo quantities, based on fixed routes beyond the noncontiguous OE protected by combat forces. The expeditionary railway center assesses rail capabilities and advises on employment. ATP 4-14 provides more on rail operations.

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## AIR MODES OF TRANSPORTATION

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C-8. Air transport consists of fixed and rotary-wing assets. Fixed and rotary-wing airlift assets have size and weight limits for moving personnel and equipment. Air transport is rapid but costly.

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8228 **Fixed Wing**

8229 C-9. Air Mobility Command offers fixed-wing assets (C-130, C-5, C-17) for strategic and theater airlift  
8230 needs, supporting rapid force deployment.

8231 **Rotary Wing**

8232 C-10. Rotary-wing aircraft serve short-range, tactical transport missions, carrying equipment and relief  
8233 supplies directly to forward areas. Assets like the UH-60 and CH-47 provide this support. FM 3-04 has more  
8234 details.

8235 **INTERMODAL OPERATIONS**

8236 C-11. Intermodal operations use various modes and conveyances to move troops, supplies, and equipment  
8237 through expeditionary entry points to sustain land forces. This enhances distribution effectiveness and  
8238 efficiency. See ATP 4-13 for additional information.

8239 **PORT/TERMINAL OPERATIONS**

8240 C-12. Port/terminal operations include reception, processing, staging, loading/unloading, and forwarding of  
8241 passengers and cargo. There are two types of ports: aerial ports and seaports. An *aerial port* is an airfield  
8242 designated for the sustained air movement of personnel and materiel and authorized port for entrance into or  
8243 departure from the country where located (JP 3-36). A seaport is a land facility designated for reception of  
8244 personnel or materiel moved by sea. Aerial and seaports differ in their functions, serving as vital distribution  
8245 network nodes.

8246 C-13. Terminals transfer cargo between conveyances, playing a key role in distribution. They are essential  
8247 for force projection and may be seized by US forces in operations. For additional information on terminal  
8248 operations, see ATP 4-13.

8249 **CONTAINERIZATION**

8250 C-14. Containerization involves transporting cargo in standardized containers without handling contents—it  
8251 is crucial for efficient and cost-effective transport. Containerization benefits include increased cargo capacity,  
8252 protection, and interoperability. Additional information on containerization and container management can  
8253 be found in ATP 4-12.

8254 C-15. Container management maintains visibility and accountability of cargo containers in the Defense  
8255 Transportation System. It supports various military operations.

8256 **MOVEMENT CONTROL**

8257 C-16. Movement control allocates and regulates transportation assets to synchronize distribution flow. This  
8258 ensures efficient deployment, redeployment, and distribution operations. See ATP 4-16 for additional  
8259 information on movement control.

8260 **THEATER DISTRIBUTION**

8261 C-17. Theater distribution coordinates personnel, equipment, and materiel flow within a theater to meet  
8262 combatant commander missions. It is a continuous process involving analysis, evaluation, and coordination  
8263 with various stakeholders. For additional information on theater distribution, see ATP 4-93.

8264 **IN-TRANSIT VISIBILITY**

8265 C-18. In-transit visibility tracks the status and location of DOD units, cargo, passengers, and personal  
8266 property across military operations.

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## **ASSET VISIBILITY**

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C-19. Asset visibility provides information on units, personnel, equipment, and supplies, enhancing logistics performance.

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## Appendix D

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# Ordnance Operations

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The three functions of the Ordnance Corps are munitions, maintenance, and explosive ordnance disposal. Each of these functions has a critical role ensuring operational commanders and forces have the required combat power for mission accomplishment.

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These functions provide for equipment serviceability, munitions availability, readiness, and protection that directly support and tenets operations.

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## MISSION AND FUNCTIONS

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D-1. The Ordnance Corps provides munitions, maintenance, explosive ordnance disposal, and explosive safety support to generate and maintain combat power. The corps provides these functions to Army, joint, intergovernmental, interagency, and multinational forces. These functions provide for equipment serviceability, munitions availability, readiness, and protection that directly support operations. Each of these functions has a critical role ensuring operational commanders and forces have the required combat power for mission accomplishment.

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## ORDNANCE IN THE SUSTAINMENT WARFIGHTING FUNCTION

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D-2. Warfighting functions are not confined to a single domain, and they generally include capabilities from multiple domains. The Army developed warfighting functions to provide an intellectual organization for common critical capabilities available to commanders and staffs at all echelons and levels of warfare. A warfighting function is a group of tasks and systems (people, organizations, information, and processes) united by a common purpose that commanders use to accomplish missions. Commanders use the warfighting functions to help them exercise command and control to meet operational objectives.

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D-3. All ordnance operations must be accomplished by planning and executing missions within the context of the sustainment warfighting function. Commanders and staffs apply the principles of sustainment when executing ordnance functions in support of operations. This implies a need to understand and embrace the sustainment warfighting function and its tasks. Throughout operations, ordnance commanders must evaluate the performance of support provided to the force and determine if it meets the intent of the sustainment warfighting function.

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D-4. Ordnance operations are planned and executed by applying the principles of sustainment. When applied properly, the principles of sustainment provoke thought and allow commanders and staffs to use their knowledge, experience, and judgment to effectively employ their capabilities. Application of the principles of sustainment should be considered throughout planning, reevaluated during operations, and reviewed following operations. Improvisation is the ability to adapt sustainment operations to unexpected situations or circumstances affecting a mission.

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## SUPPORT TO OPERATIONS

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D-5. Ordnance leaders must assess the execution of ordnance functions to ensure they fully support the imperatives and apply the tenets of multidomain operations. Imperatives are actions Army forces must take to defeat enemy forces and achieve objectives at acceptable cost. The tenants of operations are desirable attributes that should be built into all plans. The tenets (agility, convergence, endurance, and depth) are closely aligned with and complement the principles of sustainment. Ordnance leaders and Soldiers provide sustainment to Army forces by employing capabilities in a combined arms approach that creates complementary and reinforcing effects through multiple domains.

## 8312 MUNITIONS OPERATIONS

8313 D-6. The munitions function provides the correct type and quantity of munitions from the industrial base to  
 8314 the tactical point of need with minimal handling and reconfiguration. Class V munitions includes fixed  
 8315 cartridges for small arms, cannon, and main battle tanks; separate projectiles, propellant charges, rockets and  
 8316 missiles, and fuses for artillery; projectiles and charges for mortars; and grenades, missiles, rockets, bombs,  
 8317 and explosives. Ordnance munitions organizations must effectively and efficiently handle, store, secure,  
 8318 distribute and account for munitions in support of operations to joint or multinational partners when directed.  
 8319 Throughout operations, strict explosives safety guidelines must be applied to ensure adequate safety to all  
 8320 personnel. Munitions support must be executed within the context of the sustainment warfighting function.  
 8321 Leaders must apply the principles of sustainment throughout munitions operations planning and execution to  
 8322 balance competing mission requirements against available assets and resources. Effective munitions  
 8323 operations at all echelons support the combatant commander's desired end state and ability to effectively  
 8324 seize, retain, and exploit the initiative.

## 8325 SUPPORT STRUCTURE

8326 D-7. Most Soldiers and units in the Army have a munitions requirement. The type of munitions required  
 8327 and the urgency of need varies based upon the mission and operational environment. Commanders visualize  
 8328 a logical arrangement of operations, allocate resources, and assign tasks to the appropriate command.  
 8329 Ammunition support activities are established within a theater and provide a suite of ammunition logistics  
 8330 services. Ammunition support activities are locations that are designated to receive, store, maintain, and  
 8331 provide munitions support to Army forces (ATP 4-35). An ammunition support activity is normally operated  
 8332 by one or multiple modular ammunition platoons. U.S. Federal or State Government employees, contractors,  
 8333 or a combination thereof that are designated to receive, store, maintain, and provide direct or general support  
 8334 may also be assigned to operate an ammunition supply area to support Army and joint forces.

## 8335 EXPLOSIVE ORDNANCE DISPOSAL OPERATIONS AND MISSION

8336 D-8. The EOD function provides integrated and layered protection support to forces, civil authorities, and  
 8337 critical infrastructure in support of operations. EOD detects, identifies, evaluates, renders safe, and conducts  
 8338 exploitation, disposal, or other disposition of explosive ordnance, including weapons of mass destruction.  
 8339 Additionally, EOD provides support to joint, interagency, intergovernmental, and multinational operations  
 8340 as required and is tasked to render safe all types of explosive hazards to include improvised explosives. EOD  
 8341 is a combat multiplier that facilitates decisive operations and provides Army operational commanders at  
 8342 every echelon freedom of action in the OE.

8343 D-9. The mission of EOD is to support operations by detecting, identifying, evaluating, rendering safe, and  
 8344 performing final disposition of all explosive ordnance. This includes improvised explosive devices,  
 8345 unexploded ordnance, and weapons of mass destruction. EOD has four functional areas:

- 8346 • Render Safe. The application of special explosive ordnance disposal methods and tools to provide  
 8347 for the interruption of functions or separation of essential components of unexploded explosive  
 8348 ordnance to prevent an unacceptable detonation.
- 8349 • Technical Intelligence. Derived from the exploitation of foreign material, collected exploitable  
 8350 material, and scientific information. The process begins with the acquisition and recovery of a  
 8351 piece of foreign equipment or foreign scientific/technological information, followed by  
 8352 exploitation of the item and assessment of the threat.
- 8353 • Protection. Preservation of the effectiveness and survivability of mission-related military and  
 8354 nonmilitary personnel, equipment, facilities, information, and infrastructure.
- 8355 • Disposal. Final disposition of explosive ordnance and components, which may include detonation  
 8356 or a controlled burn.

## 8357 EXPLOSIVE ORDNANCE DISPOSAL SUPPORT STRUCTURE

8358 D-10. EOD support crosses all warfighting functions, with an emphasis on protection, intelligence, and  
 8359 sustainment. EOD capabilities primarily support the protection warfighting function. EOD companies  
 8360 providing direct support to maneuver units provide commanders a rapid response force which has the



8361 capability to render safe, exploit, and dispose of all explosive ordnance. Due to the likelihood of encountering  
8362 unexploded ordnance and other explosive hazards, EOD teams may be integrated into all operations.

8363 D-11. Results of on-scene exploitation conducted by the EOD team after the rendering safe of unexploded  
8364 ordnance or improvised explosive devices are immediately reported to the on-scene commander. EOD teams  
8365 operating within an AO are the best sources of information related to explosive hazards. Explosive hazards  
8366 present a condition where danger exists because explosives are present that may result in a mishap. EOD  
8367 teams act to avoid potential unacceptable effects to people, property, operational capability, or the  
8368 environment. See ATP 4-32, ATP 4-32.1, ATP 4-32.2, and ATP 4-32.3 for more information on EOD  
8369 operations and units.

## 8370 MUNITIONS SAFETY

8371 D-12. The Army's Ordnance Corps is the DOD proponent for explosive ordnance safety. Munitions and  
8372 explosives safety is a priority consideration shared across the DOD. The primary focus of munitions and  
8373 explosives safety is to reduce the probability and limit damage caused by unintended initiation of munitions.  
8374 Application of explosives safety techniques is based on effective risk management. This includes the  
8375 functions and skill sets of the munitions logistics planners, logistics managers, modular munitions units,  
8376 Army Civilians, contractors, technical munitions safety experts, and the EOD units.

8377 D-13. The most basic and important fundamental of the munitions function is to take all measures possible  
8378 to minimize risk to personnel, material, facilities, and stocks. Personnel must ensure they adhere to the  
8379 munitions and explosive cardinal rule of exposing the minimum number of people to the minimum amount  
8380 of explosives for the minimum amount of time consistent with safe and efficient operations.

8381 D-14. The following explosives safety rules apply to all munitions storage and handling operations:

- 8382 ● Understand explosives safety responsibilities.
- 8383 ● Know explosives safety points of contact and how to contact them.
- 8384 ● Train personnel to properly perform their munitions missions; have policies/procedures/standard  
8385 operating procedures in place that cover munitions missions.
- 8386 ● Ensure munitions locations are properly sited and have current licenses; prepare certificates of risk  
8387 acceptance to authorize any explosives storage safety deviations.
- 8388 ● Know where you can find geospatial data and information depicting munitions locations with  
8389 associated quantity distance arcs, and exclusion and clear zones.
- 8390 ● Know the outcome of the most recent internal and higher headquarters explosives safety  
8391 assessment. Institute corrective measures as required.
- 8392 ● Be aware of any new construction or modification plans that impact explosive safety clear zones.
- 8393 ● Know local policies and procedures for munitions amnesty programs (location of collection points,  
8394 responsibilities for collection, and frequency of collection).
- 8395 ● Know proper response procedures in the event of a munitions mishap (notification, evacuation  
8396 procedures, personnel accountability, unexploded explosive ordnance, EOD support, accident  
8397 reporting, and malfunction reporting).
- 8398 ● Learn what munitions risks exist that could adversely affect mission capability and mitigate those  
8399 risks.

8400 D-15. Munitions doctrine is found in ATP 4-35. Munitions safety doctrine is found in ATP 4-35.1.

## 8401 MAINTENANCE OPERATIONS

8402 D-16. Maintenance generates and regenerates combat power and helps preserves the capital investment in  
8403 weapons systems and equipment. Maintenance is the logistics function that directly provides equipment  
8404 serviceability and operational readiness to commanders for mission accomplishment. Maintenance occurs at  
8405 every level of operations and is performed by operators, assigned maintenance personnel, or by maintenance  
8406 units. Units that lack organic maintenance personnel are assisted by maintenance units specifically designated  
8407 by order to provide support.

## TWO-LEVEL MAINTENANCE

D-17. Army maintenance is a two-level system consisting of field and sustainment maintenance. Field maintenance is performed by maintainers assigned to operational units. Maintainers at this level are focused on rapidly returning unserviceable equipment to a serviceable state as quickly and as close to the point of failure as possible. Sustainment maintenance is performed by strategic organizations (primarily from USAMC) and is focused on rebuilding and resetting severely damaged equipment to a national military standard and returning it to the supply system. For test, measurement, and diagnostic equipment serviceability, the United States Army Test, Measurement, and Diagnostic Equipment Activity performs field and sustainment-level calibration and repair support.

D-18. Effective maintenance management includes anticipating maintenance requirements, tracking and analyzing maintenance reports, properly identifying and diagnosing maintenance faults, applying the appropriate maintenance capability, and managing class IX. As in the munitions function, proper allocation of maintenance units is essential in ensuring adequate support is provided to the force. Army maintenance organizations also support joint and multinational partners during operations as required. Maintenance doctrine is found in ATP 4-33 and ATP 4-31.

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## Appendix E

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# Army Sustainment Information Systems

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This appendix discusses information systems in two contexts. First, it covers automated information systems that specifically support sustainment functions. Then it talks about how sustainment information systems are integrated in the overall command and control system. ATP 4-0.6 has additional information on sustainment information systems.

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## ARMY SUSTAINMENT INFORMATION SYSTEMS

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E-1. Army sustainment information systems provide commanders and staffs situational understanding—building the COP and improving the quality and effectiveness of Army readiness by enhancing the decision support process. Sustainment information systems receive, house, and present the data that become the information, which in turn, sustainment leaders use to build and maintain combat power to ensure mission success for the Soldier. Current sustainment information systems include the Aircraft Notebook; Standard Army Ammunition System-Modernization; Transportation Coordinator's Automated Information for Movement System II; Army Food Management System; Test, Measurement, and Diagnostic Equipment Management Information System; and a host of HR systems. Even though some of these non-enterprise resource planning legacy systems are web-based, these do not leverage the integrated efficiencies of enterprise resource planning systems. Army sustainment enterprise resource planning systems include Global Combat Support System-Army (GCSS-Army) with its hubs Army Enterprise Systems Integration Program, Integrated Personnel and Pay System-Army, General Fund Enterprise Business System, and Logistics Modernization Program (LMP). As the Army continues its transition to enterprise resource planning systems, the advantages accruing to the supported commander as identified in chapter 1 will continue to grow. This section lays out current systems and those coming online in the short term.

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## GLOBAL COMBAT SUPPORT SYSTEM-ARMY

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E-2. GCSS-Army subsumed multiple legacy Standard Army Management Information Systems to combine ground maintenance, unit supply, property management, warehouse management, and finance into an enterprise resource planning system. As such, it is the principal system for logisticians to achieve readiness and support operations across multiple domains. Having a consolidated, integrated database for those functions gives both sustainers and supported commanders up-to-date visibility of the resources that can be used to weight the operation. GCSS-Army uses a commercial off-the-shelf system run on system applications and products-based software. GCSS-Army meets congressionally mandated auditability requirements and provides the logistician with total tactical-level supply chain and equipment health visibility. The product has been fully fielded but continues to add improved functionality to the baseline. Sustainment automation support management offices provide tactical support to GCSS-Army systems.

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## INTEGRATED PERSONNEL AND PAY SYSTEM-ARMY

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E-3. The Integrated Personnel and Pay System-Army is an on-line human resource system that provides integrated personnel, pay, and talent management capabilities in a single system. It provides end-to-end tracking of pay and personnel data and gives individual Soldiers access their Soldier record. The system will automate the pay process while linking human resource transactions such as dependent changes and promotions. Integrated Personnel and Pay System-Army also provides integrated access by granting visibility and transaction functionality to commanders, Soldiers, and Army HR professionals. Embedded security and common access card restrictions will ensure safeguarding of critical information. This support system gives commanders visibility and transaction role authority over their personnel and improves readiness by

8467 synchronizing personnel movement and deployment status. Integrated Personnel and Pay System-Army uses  
8468 a commercial off-the-shelf system run on Oracles' PeopleSoft-based software. Sustainment automation  
8469 support management offices provide tactical support to Integrated Personnel and Pay System-Army systems.

#### 8470 **GENERAL FUND ENTERPRISE BUSINESS SYSTEM**

8471 E-4. The General Fund Enterprise Business System is the Army's accounting system of record. General  
8472 Fund Enterprise Business System provides accurate, timely, and reliable cost information and makes the  
8473 information available to all users on a real-time basis. General Fund Enterprise Business System enables the  
8474 Army to comply with current statutory and regulatory requirements. It interfaces with GCSS-A to create a  
8475 financial system of record. Under accounting management, GCSS-A leverages the General Fund Enterprise  
8476 Business System core design template, providing a single business process that allows the Army to integrate  
8477 logistics, financial, maintenance, property accountability of assets, and accounting data.

#### 8478 **LOGISTICS MODERNIZATION PROGRAM**

8479 E-5. The LMP is one of the largest integrated supply chain, overhaul, and maintenance enterprise resource  
8480 planning systems in the world and provides true visibility of the national-level logistics production baseline.  
8481 Sustainers use it to build, sustain, and maintain national-level combat power at the strategic level. The LMP  
8482 maintains data for assets entering the Army system through commercial vendors and contractors and  
8483 accommodates depot to shop-floor-level maintenance status. It is the primary sustainment system for  
8484 USAMC's depots and arsenals and is the entry point for supply parts fulfillment with DLA. The LMP  
8485 manages the Army's industrial base and tracks schedule, cost planning, production orders, and procurement.  
8486 The LMP's Enterprise Data Warehouse provides data to the Army Enterprise Systems Integration Program,  
8487 which gives sustainment leaders strategic planning visibility. The LMP uses a commercial off-the-shelf  
8488 system run on system applications and products-based software.

#### 8489 **ARMY ENTERPRISE SYSTEMS INTEGRATION PROGRAM**

8490 E-6. The Army Enterprise Systems Integration Program is not an enterprise resource planning system. It  
8491 serves as an integrator between multiple enterprise resource planning systems and stand-alone sustainment  
8492 systems and acts as a data-brokering hub between those systems. Army Enterprise Systems Integration  
8493 Program's brokering translates and synchronizes different data formats and multiple operating systems.  
8494 Those transactions that are able to pass from enterprise resource planning system to enterprise resource  
8495 planning system do not need Army Enterprise Systems Integration Program resolution and do not engage the  
8496 data hub, but many transactions do require such brokering. Army Enterprise Systems Integration Program is  
8497 also the single authoritative data source for catalog, material, and vendor data. It is the portal for non-standard  
8498 item entrance into the Army supply system. Army Enterprise Systems Integration Program uses Army  
8499 Centralized Business Analytics to provide business intelligence analysis and tailored visualizations for  
8500 readiness decision making. Army Enterprise Systems Integration Program uses a commercial off-the-shelf  
8501 system run on system applications and products-based software.

#### 8502 **AUTOMATED MILITARY POSTAL SYSTEM**

8503 E-7. The Automated Military Postal System connects military post offices and other military postal  
8504 activities around the world directly to the Military Postal Service Agency via the worldwide web. Instead of  
8505 relying on telephone messages, e-mails, or other secondhand communication methods, Automated Military  
8506 Postal System users can view the information about their military post offices on their own desktops and  
8507 make changes or corrections to the information themselves.

#### 8508 **DEFENSE CASUALTY INFORMATION PROCESSING SYSTEM – PERSONNEL CASUALTY** 8509 **REPORTING**

8510 E-8. The Defense Casualty Information Processing System-Personnel Casualty Reporting is an automated  
8511 system used to record and report casualty data. The system is employed by HR units—typically casualty  
8512 liaison elements, battalion and brigade level S-1 sections, and G-1s/adjutant generals performing casualty  
8513 reporting missions. While not required, battalion S-1 sections may use the Defense Casualty Information

8514 Processing System-Personnel Casualty Reporting to submit their casualty reports to higher HQ. When  
8515 adequate Nonclassified Internet Protocol Router Network access is available, the web-based component of  
8516 the Defense Casualty Information Processing System-Personnel Casualty Reporting should be used for  
8517 casualty reporting. Gaining access and configuring the web-based component of Defense Casualty  
8518 Information Processing System-Personnel Casualty Reporting requires prior coordination with the casualty  
8519 and mortuary affairs operation center and the casualty reporting chain of command. The web-based  
8520 component of Defense Casualty Information Processing System-Personnel Casualty Reporting is available  
8521 only on Non-classified Internet Protocol Router Network.

## 8522 **DEPARTMENT OF THE ARMY MOBILIZATION PROCESSING SYSTEM**

8523 E-9. Department of the Army Mobilization Processing System is a SECRET Internet Protocol Router  
8524 network-hosted business process application that takes a force request for a unit mobilization from initiation,  
8525 through required Department of the Army staff review, and to the Assistant Secretary of the Army for  
8526 Manpower and Reserve Affairs—the Army principal delegated the authority to order units to involuntary  
8527 mobilization. For more information, refer to FM 1-0.

## 8528 **DEFENSE ENROLLMENT ELIGIBILITY REPORTING SYSTEM**

8529 E-10. The Defense Enrollment Eligibility Reporting System is a database maintaining personnel and benefits  
8530 information for Active and Reserve Component Soldiers, retired uniformed service members, eligible family  
8531 members, and other DOD personnel and DOD contractors requiring logical access. It verifies eligibility when  
8532 producing common access cards and supports benefit delivery including medical, dental, and life insurance  
8533 and educational benefits. In addition, the Defense Enrollment Eligibility Reporting System enables DOD  
8534 e-business (including providing identity management), reduces fraud and abuse of government benefits, and  
8535 supports medical readiness.

## 8536 **DEPLOYABLE REAL-TIME AUTOMATED PERSONNEL IDENTIFICATION SYSTEM**

8537 E-11. The Deployable Real-Time Automated Personnel Identification System workstation is a laptop  
8538 workstation designed for use in both tactical and non-tactical environments. It provides Defense Enrollment  
8539 Eligibility Reporting System updates and issues common access cards to Soldiers at home station or in a  
8540 deployed environment. It also provides the user with a common access card personal identification number  
8541 reset capability. This system works only when connected to the Defense Enrollment Eligibility Reporting  
8542 System and has the same operational capability as the standard desktop version of the Real-Time Automated  
8543 Personnel Identification System workstation.

## 8544 **TACTICAL PERSONNEL SYSTEM**

8545 E-12. This stand-alone database provides an ad-hoc ability to create a temporary system to account for unit  
8546 personnel. It has limited ability to perform robust personnel accountability or strength reporting. Human  
8547 resource professionals use the Tactical Personnel System primarily to create manifests for transportation by  
8548 air. It produces automated manifests that can be loaded in Air Force manifesting systems and deployed theater  
8549 accountability systems.

## 8550 **ARMY DISASTER PERSONNEL ACCOUNTABILITY AND ASSESSMENT SYSTEM**

8551 E-13. The Army Disaster Personnel Accountability and Assessment System is a web-based application  
8552 designed to augment the disaster accountability process by aiding in the determination of the status and  
8553 locations of all Army affiliated personnel—Soldiers, Army Civilians, contractors authorized to accompany  
8554 the force, and family members when directed by the Secretary of Defense. It is the official tool for personnel  
8555 accountability during natural or manmade disasters. The system provides DOD and Army leaders a means  
8556 of determining the status of Army personnel and family members in an affected area and facilitates decisions  
8557 on allocating resources for recovery and reconstitution.

**8558 DEPLOYED THEATER ACCOUNTABILITY SYSTEM**

8559 E-14. The Deployed Theater Accountability System establishes and maintains personnel accountability. It is  
8560 a classified system fielded to all human resource commanders, personnel, and organizations and consists of  
8561 three distinct levels: mobile, major command, and enterprise. It provides reliable, timely, and efficient  
8562 accountability for Soldiers, DOD Civilians, contractors authorized to accompany the force, and foreign  
8563 nationals, enabling commanders at all echelons to track their personnel by name, unit, location, and date. It  
8564 also allows commanders to track their personnel while in transit, populating duty status changes by  
8565 synchronizing to the major command system. The major command system transfers historical records to the  
8566 enterprise server daily.

**8567 INTERACTIVE PERSONNEL ELECTRONIC RECORDS MANAGEMENT SYSTEM**

8568 E-15. The Interactive Personnel Electronic Records Management System is the document repository of Army  
8569 military human resource records and legal artifacts for all components. The Army military HR record  
8570 contains a copy of all permanent documents. Documentation is placed into the Soldier's Army military record  
8571 in accordance with AR 600-8-104. For family members, accuracy of information is critical for next-of-kin  
8572 notification.

**8573 REGIONAL LEVEL APPLICATION SOFTWARE**

8574 E-16. The U.S. Army Reserve uses the Regional Level Application Software as a client-server, web-enabled  
8575 application for the management of personnel and resources. It shows the overall readiness posture of a unit  
8576 by Soldier and generates Total Army Personnel Database-Reserves transactions and electronically transmits  
8577 the data to HRC.

**8578 MORTUARY AFFAIRS REPORTING AND TRACKING SYSTEM**

8579 E-17. The Mortuary Affairs Reporting and Tracking System is an Army web-based application used by all  
8580 Services in a theater of operations to facilitate the tracking of human remains and personal effects from a  
8581 mortuary affairs collection point to a final destination, such as the Dover Air Force Base Port Mortuary or  
8582 the Joint Personal Effects Depot (CONUS). Mortuary affairs specialists electronically generate standard  
8583 DOD forms to facilitate the shipment, documentation, identification, processing, and tracking of human  
8584 remains and property. The Joint Mortuary Affairs Center, on behalf of the HQDA G-4, provides functional  
8585 oversight and expertise for the Mortuary Affairs Reporting and Tracking System. When requested, the Joint  
8586 Mortuary Affairs Center provides training to the Services to support the theater mortuary affairs mission,  
8587 deployment requirements, and annual training. Mortuary affairs operators requiring access to the Mortuary  
8588 Affairs Reporting and Tracking System must request access through their theater mortuary affairs officer.

**8589 ARMY FOOD MANAGEMENT INFORMATION SYSTEM**

8590 E-18. The Army Food Management Information System is not an enterprise resource planning system, but  
8591 rather a highly developed web-based system that provides an automated Army worldwide food service  
8592 program. Army Food Management Information System provides users the capability to order, receive,  
8593 inventory, and invoice Class I supplies to include field rations. It also supports the operations of dining  
8594 facilities for menu planning, production and recipe management, automated head count, labor scheduling,  
8595 cash collection, and equipment replacement. The Army Food Management Information System is a  
8596 centralized repository that eliminated batch processing and meets the web-based requirement. It also reduces  
8597 overhead for each installation contract and ensures integrated and coordinated improvements.

**8598 TRANSPORTATION AND AMMUNITION SYSTEMS**

8599 E-19. Sustainment information systems include both enterprise resource planning systems and stove-piped  
8600 legacy Standard Army Management Information Systems. Currently, the Transportation Coordinator's  
8601 Automated Information for Movements System II enables users to manage all aspects of transportation  
8602 operations. It provides automated support to functions performed by a wide range of users from unit

8603 movement officers to installation transportation officers, to mode managers responsible for transportation  
8604 and distribution.

8605 E-20. The Standard Army Ammunition System-Modernization system is the Army's web-based  
8606 management, reporting, and accounting system for retail Class V ammunition receipt, store, maintain, and  
8607 issue operations performed by tactical units and installation activities. It employs barcode and radio frequency  
8608 identification technology to support these tasks.

## 8609 AVIATION LOGISTICS INFORMATION SYSTEM

8610 E-21. The Aircraft Notebook platform provides a single point access to the maintainer at the aircraft in the  
8611 form of software applications necessary for completing and recording maintenance activities on U.S. Army  
8612 aircraft. The Aircraft Notebook's interface applications provide an electronic, automated, and fully integrated  
8613 solution for maintainers to record and report maintenance activities. The Platform Maintenance Application  
8614 implements the requirements of DA PAM 738-751 and readiness reporting in accordance with AR 700-138.  
8615 The Platform Maintenance Application implements controls that comply with TM 1-1500-328-23 and  
8616 support the tasked-based and conditions-based maintenance processes. The Platform Maintenance  
8617 Application gathers requirements for the platform project manager offices and implements needed interfaces  
8618 with numerous Army information systems such as platform ground station software, the Centralized Aircrew  
8619 Flight Records System, Maintenance Consolidated Database System, and Enterprise Material Status  
8620 Reporting, providing a family of systems synchronization. The Aircraft Notebook software will also be the  
8621 bridging software for the GCSS-Army Increment 2 solution.

## 8622 OPERATIONAL MEDICAL INFORMATION SYSTEM-ARMY

8623 E-22. Operational Medical Information System-Army is a system of systems containing medical software  
8624 packages for medical data collection throughout the continuum of medical care, from the point of injury to  
8625 Role-3 medical treatment facility for comprehensive lifelong electronic health records. Operational medical  
8626 forces will use this system to gain quick access to patient histories and tactical combat casualty care provided.

## 8627 DEFENSE MEDICAL LOGISTICS STANDARD SUPPORT CUSTOMER ASSISTANCE MODULE 8628 MEDICAL

8629 E-23. The Defense Medical Logistics Standard Support Customer Assistance Module Medical is an  
8630 information system within the Defense Medical Logistics-Enterprise Solution portfolio. The portfolio  
8631 provides a continuum of medical logistics support for the Defense Health Agency. It allows customers to  
8632 download medical supply catalogs and place orders for medical supplies. The Defense Medical Logistics  
8633 Standard Support Customer Assistance Module Medical is a medical logistics ordering application that runs  
8634 on the desktop allowing users to view their supplier's catalog and generate electronic orders. It automates the  
8635 Class VIII supply process at the lower roles of care and enables logisticians and non-logisticians to  
8636 electronically exchange catalog, order, and status information with their supply activity. The desktops are  
8637 within enclaves for each of the Services. The Defense Healthcare Management Systems Program Executive  
8638 Office Joint Operational Medicine Information Systems Program Management Office manages the Theater  
8639 Medical Information Program-Joint legacy suite of software.

8640 E-24. Phased enhanced medical logistics functional capabilities are being deployed beginning in 2024 to the  
8641 GCSS-Army. GCSS-Army is replacing the Defense Medical Logistics Standard Support Customer  
8642 Assistance Module as the primary system used for Army operational unit Class VIIIA requisition, materiel  
8643 management, and medical equipment set and assembly management. GCSS-Army medical logistics  
8644 functions data interfaces inform Army common operating picture systems and enable visibility of medical  
8645 equipment maintenance and materiel status at echelon for decision support.

## 8646 DEFENSE MILITARY PAY OFFICE SOFTWARE SUITE

8647 E-25. The Defense Military Pay Office software suite provides processing access to the military pay system  
8648 to facilitate pay support. This software is provided for all components (Active, National Guard, and Reserve)  
8649 IAW Defense Finance and Accounting Service policies and procedures for contingency operations. Access  
8650 to the military pay system of record depends on the availability of dedicated communications. If online query

8651 capability is not available, a batch process Defense Military Pay Office download provides near-time query  
8652 capability. In addition, the Defense Military Pay Office Standard Inquiry System provides the capability to  
8653 download and archive pay data for an individual or entire unit to facilitate offline pay support.

#### **8654 DEPLOYABLE DISBURSING SYSTEM**

8655 E-26. Deployable Disbursing System provides automated disbursing support. The system provides the  
8656 capability to write Department of the Treasury or Limited Depository Account checks, plus the daily  
8657 accountability and reconciliation for all transactions. Deployable Disbursing System receives information  
8658 from the commercial vendor support and travel modules, which allows the writing of checks to pay vendors  
8659 and travel claimants. It is capable of being used in remote military operations within contingency locations  
8660 with foreign currency. Deployable Disbursing System integrates with General Fund Enterprise Business  
8661 System to enable deployed disbursing functions. Deployable Disbursing System creates pay vouchers and  
8662 formatted output for upload to the military pay system for payment.

#### **8663 ACQUISITION CROSS-SERVICING AGREEMENT GLOBAL AUTOMATED TRACKING AND 8664 REPORTING SYSTEM**

8665 E-27. ACSA Global Automated Tracking and Reporting System is a DOD system of record for the Office of  
8666 the Secretary of Defense, joint staff, CCMDs, and Service components to manage and track all ACSA  
8667 transactions. ACSA Global Automated Tracking and Reporting System serves as a repository for concluded  
8668 ACSAs and implementing arrangements. The system is required to close out all ACSA transactions and  
8669 reconcile ACSA bills for both the United States and ACSA countries and organizations.

#### **8670 TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT MANAGEMENT INFORMATION 8671 SYSTEM**

8672 E-28. Test, Measurement, and Diagnostic Equipment Management Information System is designed,  
8673 managed, and maintained by United States Army Test, Measurement, and Diagnostic Equipment Activity  
8674 and dedicated to the total test, measurements, and diagnostic equipment calibrations and repairs support data  
8675 collection, storage, and analysis. The system also provides the software programming needs for production  
8676 control processes, financial management, and management data information requirements in support of the  
8677 test, measurement, and diagnostic equipment calibration and repair support program.

#### **8678 TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT INTEGRATED MATERIEL 8679 MANAGEMENT SYSTEM**

8680 E-29. As an integral part of Test, Measurement, and Diagnostic Equipment Management Information  
8681 System, the United States Army Test, Measurement, and Diagnostic Equipment Activity-managed test,  
8682 measurement, and diagnostic equipment integrated materiel management system provides the calibration and  
8683 repair support activities with site-specific software to identify test, measurement, and diagnostic equipment  
8684 for recall, provide customer notification of equipment readiness, process equipment through the calibration  
8685 and repair support shops, account for customer equipment while in the shop, and identify repair parts and  
8686 associated cost.

#### **8687 SUSTAINMENT INFORMATION SYSTEMS INTEGRATED INTO 8688 COMMAND AND CONTROL**

8689 E-30. Sustainment information systems are essential for providing commanders and staffs situational  
8690 understanding and building the common operational picture. These systems enable command and control and  
8691 support the centralized planning and decentralized execution of operations. The paragraphs below describe  
8692 these systems.



8693 **STRATEGIC SUPPORT AREA BUSINESS REPORTING ENVIRONMENT**

8694 E-31. The Strategic Support Area Business Reporting Environment provides a tool that allows Army leaders  
8695 to see exactly where supplies are worldwide, what parts are needed, projections and demands, all in one  
8696 system in almost real time. Information within the Strategic Support Area Business Reporting Environment  
8697 is verified by the Logistics Data Analysis Center. The platform also supports modeling and simulation that  
8698 enhances decision support using common tools in a common language.

8699 **COMMANDER'S ACTIONABLE READINESS DASHBOARD**

8700 E-32. The Commander's Actionable Readiness Dashboard is a suite of data analytic tools that facilitates  
8701 rapid understanding of tactical logistics information derived from GCSS-Army data in near-real time. Army  
8702 logistics data exists in one of two modes: historical and live. Historical data allows commanders and other  
8703 leaders, for example, to determine operational readiness rates for monthly reporting periods. Live data allows  
8704 leaders to understand how many tanks, howitzers, and other vehicles can cross the line of departure right  
8705 now. The Commander's Actionable Readiness Dashboard contains a dashboard that displays live logistics  
8706 data that enhances decision support.

8707 **ENTERPRISE RESOURCE PLANNING SYSTEMS IN SUSTAINMENT ESTIMATES AND THE**  
8708 **MILITARY DECISION-MAKING PROCESS**

8709 E-33. Accurate sustainment estimates are critical in assessing the supportability of courses of action for the  
8710 concept of operations/operation orders. These estimates are the analytical result of how sustainment factors  
8711 affect mission accomplishment by detailing the requirements and capabilities, conclusions, and  
8712 recommendations on the feasibility of specified courses of action. These estimates are also used to continue  
8713 to sustain current operations as they progress.

8714 E-34. Historically, sustainment planners have used some combination of historical data and planning tools  
8715 to determine requirements and capabilities, along with data from stove-piped sustainment automated systems  
8716 to compute what resources were on hand. The movement to enterprise resource planning systems is greatly  
8717 enhancing the ability to see availability of resources across the force. Without them, sustainment planning is  
8718 based on pulling historical information from multiple, often conflicting data sets to project support  
8719 requirements for future courses of action. The lack of clarity and associated mistrust have led to  
8720 overestimating logistics requirements to make sure operational forces do not run out of key supplies and  
8721 services. As a result, the logistics footprint grows, along with a negative impact on survivability and mobility.  
8722 With shared databases and near-real time data, planners have a far better picture of capabilities.

8723 **Joint Battle Command-Platform Logistics**

8724 E-35. Joint Battle Command-Platform Logistics is a satellite-based command and control platform system.  
8725 Joint Battle Command-Platform Logistics is part of the Joint Battle Command-Platform Family of Systems  
8726 under the Mission Command Mounted Computing Environment. Joint Battle Command-Platform Logistics  
8727 is the successor to Joint Capability Release Logistics and provides commanders with near real-time data on  
8728 the location and status of movements. This visibility enables effective and efficient use of limited distribution  
8729 platforms. It can re-route supplies to users with higher priority needs, direct platforms to avoid identified  
8730 hazards, display unit location changes, and provide near real-time traffic regulation and control. All CUL  
8731 transport vehicles, selected maneuver support and sustainment tactical wheeled vehicles, and some Army  
8732 watercraft are fitted with the Joint Battle Command-Platform Logistics hardware.

8733 **Last Tactical Mile**

8734 E-36. Enterprise resource planning systems that share databases across multiple functions substantially  
8735 reduce the requirement to enter data multiple times. However, enterprise resource planning systems do not  
8736 eliminate all requirements for data entry. Some data is entered via scanning devices and some transactions  
8737 are generated automatically when other actions are taken. Work continues on mechanisms to reduce input  
8738 requirements. This includes reducing the steps required to process a transaction within the system by  
8739 "bundling" steps and increasing sensors on platforms to automatically sense fails or anything requiring  
8740 attention.

8741 **Operational Logistics Planner**

8742 E-37. Operational Logistics Planner is the dissemination platform used for Army logistics planning factors.  
8743 It is a stand-alone program approved for use on Army computers by the Network Enterprise Center. There  
8744 are two editions of the tool, one for unclassified work and the other for installation on the SECRET internet  
8745 protocol router computers for classified work. In compliance with AR 700-8, the U.S. Combined Arms  
8746 Support Command manages the collection, development, maintenance, validation, review, and dissemination  
8747 of Army logistics planning data and factors.

8748 E-38. The data for all classes of supply have been collected from current and historical operations, which is  
8749 provided by six Department of the Army proponents and three joint proponents. The data describes how units  
8750 use their vehicles under the six joint operations phases and the four military operations to inform Class III  
8751 (P) and (B) estimates. HQDA G-4 approves the data and processes annually for Army planning, and the  
8752 HQDA G-3 Force Management uses it in the Total Army Analysis.  
8753

## Appendix F

# LOGSTAT and PERSTAT Reporting

This appendix describes the LOGSTAT and PERSTAT reports used by units operating within the corps and division areas. The reports are used to identify each unit's specific logistics and personnel requirements.

F-1. LOGSTATs are a snapshot taken in time. LOGSTAT reports account for each unit's specific requirements based on task organization, equipment density, and assigned mission. They include the unit's on-hand stockage levels and what the unit expects to have over the next 24, 48, and 72 hours. The reports must be detailed enough to be useful but simple enough for everyone to prepare and understand. Logistics reporting can easily become an overwhelming task for the staff and result in information overload for the battalion and brigade commanders.

F-2. Reports may be in different formats, but every leader must know the status of equipment and on-hand supplies, particularly of ammunition, food, water, and fuel. In order to provide support, BSB commanders, in conjunction with the brigade S-4, use the LOGSTAT report to coordinate with supporting and supported units. The LOGSTAT report enables the higher command and support units to make timely decisions and prioritize, cross-level, and synchronize the distribution of supplies to sustain units at their authorized levels.

F-3. The LOGSTAT report is an internal status report that identifies logistics requirements, provides visibility on critical shortages, allows commanders and staff to forecast future support requirements, projects mission capability, and informs the common operational picture. This report provides planners at the battalion and brigade levels with the information necessary to forecast future support requirements and coordinate appropriate resupply to the maneuver forces. Accurately reporting logistics and AHS support status is essential for keeping units combat ready. Brigade SOPs establish report formats, reporting times, and analog and digital redundancy requirements. Units must also establish and rehearse effective primary, alternate, contingency, and emergency communication plans with task organization changes.

F-4. The LOGSTAT report is the primary product used throughout the brigade and at higher levels of command to provide a logistics snapshot of current stock status, on-hand quantities, and future requirements. It is a compilation of data that requires analysis before action. Providing the commander a bunch of numbers with percentages and colors is useless—the commander requires analysis of the data and a recommendation for action.

F-5. The brigade commander's preferences and the mission determine what the logistics status report looks like and what it contains. The LOGSTAT report is customizable to the commander's preferences, and units do not necessarily have to produce logistics status reports from a logistics information system. The format presented to the commander must be easy to understand and act on.

## TIMELY AND ACCURATE REPORTING

F-6. Planners base the data collection for the LOGSTAT report on operational and mission variables and should not overwhelm subordinate units with submission requirements. A report that grows too cumbersome will overwhelm staffs and fail in a high operational tempo. It is important the brigade standardizes the logistics status report throughout all units and that each unit consistently provides input, regardless of their level of support. The brigade S-4 decides the logistics status report format, ensuring the data the BSB requires is included. In some cases, a higher-level S-4 will determine the logistics status report format. It is important to note that the brigade tracks the higher-level requirements as well as any specific brigade commander requirements.

F-7. The brigade and battalion S-4s should ensure the data requested is sufficient to answer applicable CCIR. Some possible details to include in a LOGSTAT are gallons of fuel on hand and projected usage,

Class I and water status, changes to anticipated expenditure rates, Class V status, and any incident having significant impact on the operational capability of a logistics unit or logistics posture of any tactical unit. Capturing the status of weapons systems and critical equipment is also necessary. Some commanders track special event meals or the status of critical low-density equipment. The battalion must clearly define the reported metric criteria, such as percentages or colors, and define them in unit SOP. Typical reporting metrics include cases, number of items, gallons, liters, and other specific metrics. The BSB may include information such as logistics information systems' connectivity status, route and transportation node status, and distribution platform capabilities.

F-8. The frequency of LOGSTAT report submission varies. Units often complete the report twice daily, but the commander may require status updates more frequently during periods of increased intensity. Reports relayed via near-real time automation (if available) provide the commander with the most up-to-date data.

F-9. The organization's battle rhythm is critical when considering report cut-off times, as of times, and reporting times. Automated feeds will offer near real-time data, 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 brigade. If logistics updates are part of the brigade commander's daily battle rhythm or part of an update briefing, the brigade should make 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 in order to provide the commander with a considered recommendation on future courses of action.

F-10. The BSB must be mindful of internal and external stockage of supplies and their accurate reporting. Unit on-hand supplies are those items for BSB internal consumption. Supply point items are those items that are for distribution to the BCT, including resupplies to companies in the BSB. It is important the BSB S-4, S-3, and SPO officer account for these two groups of supplies separately to ensure the accuracy of the reports.

## LOGISTICS STATUS REPORT FLOW

F-11. The command relationship of units within the brigade determines who reports to whom. Although the unit SOP should address how attached or OPCON elements within the brigade report their LOGSTAT, mission orders must delineate relationships and establish reporting requirements. Normally, logistics reporting parallels logistical support responsibility, but the requirement may change throughout the mission. Lack of clarity could result in a unit getting too much or not enough of a critical class of supply or the unnecessarily tasking valuable distribution assets.

F-12. 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. For example, a unit first sergeant would cross-level supplies within a company, and the battalion S-4 cross-levels supplies within the battalion. The battalion S-4 submits a consolidated logistics status report to the brigade S-4.

F-13. The brigade S-4 receives the logistics status report from all subordinate units. The brigade S-4, with the brigade XO's concurrence, determines which units receive designated supplies and shares that information with the BSB SPO officer. The BSB SPO officer acknowledges required supply actions per the brigade S-4, synchronizes distribution, updates the supply point on-hand status, forecasts resupply requirements for the brigade, and plans resupply. The section updates the LOGSTAT report with the BSB supply points' adjusted balances and additional or new forecasted requirements. The BSB SPO officer forwards the entire report to the brigade S-4 and provides a courtesy copy to the supporting DSB SPO officer.

F-14. Figures F-1 and F-2 on pages F-3 and F-4 display the LOGSTAT format minimum requirements. Commanders may add unit-specific information based on type of unit, on-hand equipment, type or phase of an operation, mission requirements, and commanders' requirements.



Logistics Status Report (LOGSTAT)									
Unit:					Date/Time:				
Location:					Headcount:				
Line 9	Class IX								
Line 10	Class X								
Additional Remarks:									
<b>Legend:</b> FMC: Fully Mission Capable MRE: Meal Ready-to-Eat OR%: Operational Readiness Percentage UGR: Unitized Group Ration									
<b>Instructions:</b> Daily Suspense Is: Submit To: Overall Status:									

POC

Page \_ of \_

**Figure F-2. Notional example of a LOGSTAT report page 2**

F-15. Personnel status reports, also commonly referred to as PERSTAT reports, are a snapshot taken in time. PERSTAT reports account for each unit's personnel. Figures F-3 and F-4 on pages F-5 and F-6 display the PERSTAT format minimum requirements. Commanders may add unit-specific information based on commanders' requirements.

Personnel Status Report (PERSTAT)			
REPORT NUMBER: P005 (USMTF # G880)			
GENERAL INSTRUCTIONS: Use to report the status of the unit's personnel. Reference: FM 1-0.			
Line 1	Date and Time:		DTG.
Line 2	Unit:		Unit making report.
Line 3	From:		DTG for the beginning of period applying to personnel information.
Line 4	To:		DTG for the end of report period.
Line 5	Unit:		Designated unit for which the personnel status information is submitted.
Line 6	Authorized:		Number of personnel authorized by personnel classification.
Line 7	Assigned:		Number of personnel assigned by personnel classification.
Line 8	On Hand:		Number of personnel on hand by personnel classification.
Line 9	Gains:		Number of personnel gains by personnel classification.
Line 10	Replacements:		Number of personnel gained that are replacements by personnel classification.
Line 11	Returned To Duty:		Number of personnel gained duty through medical channels by personnel classification.
Line 12	Killed:		Number of personnel KIA by personnel classification.
Line 13	Wounded:		Number of personnel WIA by personnel classification.
Line 14	Non-battle Loss:		Number of disease non-battle injury losses by personnel classification.
POC			Page _ of _

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Figure F-3. Notional example of a PERSTAT report page 1

Personnel Status Report (PERSTAT)			
REPORT NUMBER: P005 (USMTF # G880)			
GENERAL INSTRUCTIONS: Use to report the status of the unit's personnel. Reference: FM 1-0.			
Line 15	DUSTWUN/Missing:		Number of DUSTWUN/MIA by personnel classification.
Line 16	Deserters:		Number of Deserters by personnel classification.
Line 17	AWOL:		Number absent without leave by personnel classification.
Line 18	Captured:		Number of personnel captured during report period.
<p>**Repeat lines 5 through 18 to report the personnel summary for additional units. Assign sequential lines to succeeding iterations. For example, first iteration is 5 through 18; second iteration is 5a through 18a; third iteration is 5b through 18b; and so on.</p>			
Line 19	Narrative:	Free text for additional information required for report clarification.	
Line 20	Authenticate:		Report authentication.
Personnel Status Report Abbreviation Key:			
AWOL      absent without leave			
DTG      date-time group			
DUSTWUN      dust status-whereabouts unknown			
KIA      killed in action			
MIA      missing in action			
OH      on hand			
WIA      wounded in action			
POC			
Page _ of _			

Figure F-4. Notional example of a PERSTAT report page 2



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## Appendix G

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# Sustainment Symbols

8854

This appendix depicts and describes the unit symbols used in FM 4-0. Readers should refer to MIL-STD 2525D and FM 1-02.2 for more information about military symbols.

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H-1. Military symbols are governed by the rules in MIL-STD 2525D. FM 1-02.2 is the Army proponent publication for all military symbols and complies with MIL-STD 2525D.

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H-2. FM 1-02.2 provides a single standard for developing and depicting hand-drawn and computer-generated military symbols for situation maps, overlays, and annotated aerial photographs for all types of military operations. A military symbol is a graphic representation of a unit, equipment, installation, activity, control measure, or tactical task relevant to military operations that is used for planning or to represent the common operational picture on a map, display, or overlay. Table G-1 contains examples of select sustainment symbols used in FM 4-0.

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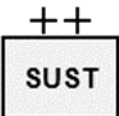
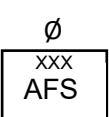
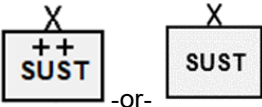
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**Table G-1. Sustainment symbols**

<b>Unit</b>	<b>Unit Symbol</b>	<b>Staff Representation:</b> <i>The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i>
Theater Sustainment Command		
Expeditionary Sustainment Command		
Corps Logistics Support Element		
Sustainment Brigade		

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Table G-1. Sustainment symbols (*continued*)

<i>Unit</i>	<i>Unit Symbol</i>	<i>Staff Representation:</i> <i>The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i>
Division Logistics Support Element		
Division Sustainment Brigade		
Combat Sustainment Support Battalion		
Division Sustainment Support Battalion		
Brigade Support Battalion		
Special Troops Battalion		
Headquarters and Headquarters Company		
Human Resources Sustainment Center		 -OR- 
Financial Management Support Center		 -OR- 

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Table G-1. Sustainment symbols (*continued*)

<i>Unit</i>	<i>Unit Symbol</i>	<i>Staff Representation:</i> <i>The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</i>
Theater Petroleum Center		-or-
Petroleum Liaison Team		
Transportation Brigade Expeditionary		
Movement Control Battalion		
Theater Movement Control Element		-or-
Expeditionary Rail Center		-or-
Railway Planning and Advisory Team		
Theater Medical Command		
Medical Logistics Management Center		The size of this element (and its echelon marker) is based on the volume of activity


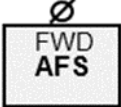



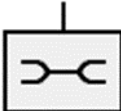

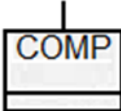
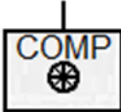
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Table G-1. Sustainment symbols (*continued*)

<b>Unit</b>	<b>Unit Symbol</b>	<b>Staff Representation: The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.</b>
Medical Company (Area Support) - Or – Medical Company, BSB		
Contracting Support Brigade		
Contracting Battalion		
Army Field Support Brigade		
Theater Army Field Support Brigade		
Corps Army Field Support Brigade		
Army Field Support Battalion		
Theater Army Field Support Battalion		
Divisional Army Field Support Battalion		

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Table G-1. Sustainment symbols (*continued*)

Unit	Unit Symbol	Staff Representation: The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.
APS Army Field Support Battalion		
LOGCAP Forward Team		
Army Special Operations Forces Support Cell		
Rations Supply Section		
Field Feeding Team		
Maintenance Company		
Maintenance Recovery Teams		
Composite Supply Company		
Composite Truck Company		

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Table G-1. Sustainment symbols (*continued*)

Unit	Unit Symbol	Staff Representation: The author of staff illustrations has a lot of discretion in depiction, but should avoid mixing staff elements with MIL-STD-2525D symbols.
Mortuary Affairs Collection Point Squad		
Defense Logistics Agency		-or-
Joint Deployment and Distribution Operations Center		-or-
<div>  64<sup>th</sup> TSC  26<sup>th</sup> ESC 64<sup>th</sup> TSC  32<sup>nd</sup> Sust Bde 26<sup>th</sup> ESC  US Army 189<sup>th</sup> CSSB 32<sup>nd</sup> Sust Bde Area Spt </div> <p>Examples of sustainment units with side text amplifiers.</p> <p>1. A "task force" amplifier is not placed over sustainment unit echelon markers since sustainment units are inherently modular, and a task force by definition.</p> <p>2. Staff elements, such as centers, agencies, bureaus, and cells, are only for staff charts. Staff charts are intended to display the organization or element either spelled out or abbreviated. Staff charts are not governed by ADP 1-02. Do not mix staff representations with unit icons. Field units should use icons as per FM 1-02.2 when graphically depicting units on a map. Where a staff element is depicted using FM 1-02.2 rules, it is depicted as subordinate to a special troops battalion, and not within the command staff.</p> <p>3. Units with icons in a border-box and an echelon marker are inherently expeditionary.</p> <p>4. Echelon marker relates to the number of people, not the title of the organization. For example, a team of 15 personnel is depicted with two or three pips.</p>		

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## Source Notes

8874 This division lists sources by page number. Where material appears in a paragraph, it  
8875 lists both the page number followed by the paragraph number.

8876 1-1 Example: “[We will] foster ...”: General Raymond T. Odierno, 38th CSA, *Marching Orders:*  
8877 *America’s Force of Decisive Action, January 2012* (Washington, DC: Government Printing  
8878 Office, 2012), 2.  
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8880  
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NOT FOR IMPLEMENTATION  
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## Glossary

8885 The glossary lists acronyms and terms with Army or joint definitions. Where Army and  
 8886 joint definitions differ, (Army) precedes the definition. The proponent publication for  
 8887 each term is listed in parentheses after the definition.

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### SECTION I – ACRONYMS AND ABBREVIATIONS

<b>ABCT</b>	armored brigade combat team
<b>ACC</b>	Army Contracting Command
<b>ACSA</b>	acquisition and cross servicing agreement
<b>ACOS</b>	Assistant Chief of Staff
<b>ADCON</b>	administrative control
<b>ADP</b>	Army doctrine publication
<b>AFSB</b>	Army field support brigade
<b>AFSBn</b>	Army field support battalion
<b>AHS</b>	Army Health System
<b>AMEDD</b>	Army Medical Department
<b>AO</b>	area of operations
<b>AOR</b>	area of responsibility
<b>APOD</b>	aerial port of debarkation
<b>APS</b>	Army pre-positioned stock
<b>AR</b>	Army regulation
<b>ARSOF</b>	Army special operations forces
<b>ASB</b>	aviation support battalion
<b>ASC</b>	Army Sustainment Command
<b>ASCC</b>	Army Service component command
<b>ATP</b>	Army techniques publication
<b>BCT</b>	brigade combat team
<b>BSA</b>	brigade support area
<b>BSB</b>	brigade support battalion
<b>BSMC</b>	brigade support medical company
<b>CAB</b>	combat aviation brigade
<b>CBN</b>	contracting battalion
<b>CBRN</b>	chemical, biological, radiological, and nuclear
<b>CCDR</b>	combatant commander
<b>CCMD</b>	combatant command
<b>CLSE</b>	corps logistics support element
<b>CLT</b>	casualty liaison team

<b>CONUS</b>	continental United States
<b>COP</b>	common operating picture
<b>CP</b>	command post
<b>CSB</b>	contracting support brigade
<b>CSSB</b>	combat sustainment support battalion
<b>CUL</b>	common-user logistics
<b>DAFL</b>	directive authority for logistics
<b>DLA</b>	Defense Logistics Agency
<b>DMC</b>	distribution management center
<b>DOD</b>	Department of Defense
<b>DODD</b>	Department of Defense Directive
<b>DSB</b>	division sustainment brigade
<b>DSSB</b>	division sustainment support battalion
<b>DSTB</b>	division sustainment troops battalion
<b>EA</b>	executive agent
<b>EAB</b>	echelons above brigade
<b>EOD</b>	explosive ordnance disposal
<b>ESC</b>	expeditionary sustainment command
<b>FARP</b>	forward arming and refuel point
<b>FORSCOM</b>	Forces Command
<b>FM</b>	field manual
<b>FMSC</b>	financial management support center
<b>FSC</b>	forward support company
<b>G-1</b>	assistant chief of staff, personnel
<b>G-2</b>	assistant chief of staff, intelligence
<b>G-3</b>	assistant chief of staff, operations
<b>G-4</b>	assistant chief of staff, logistics
<b>G-5</b>	assistant chief of staff, plans
<b>G-8</b>	assistant chief of staff, financial management
<b>GCC</b>	geographic combatant commander
<b>GS</b>	general support
<b>GCSS-Army</b>	Global Combat Support System-Army
<b>GSB</b>	group support battalion
<b>HNS</b>	host-nation support
<b>HQ</b>	headquarters
<b>HQDA</b>	Headquarters Department of the Army
<b>HR</b>	human resources
<b>HROB</b>	human resources operations branch
<b>HRSC</b>	human resources sustainment center
<b>HSS</b>	health service support
<b>IAW</b>	in accordance with

<b>IBCT</b>	infantry brigade combat team
<b>IMCOM</b>	Installation Management Command
<b>ISB</b>	intermediate staging base
<b>J-4</b>	logistics directorate of a joint staff, logistics staff section
<b>JDDOC</b>	joint deployment and distribution operations center
<b>JFC</b>	joint force commander
<b>JOA</b>	joint operations area
<b>JP</b>	joint publication
<b>JTF</b>	joint task force
<b>LCMC</b>	life cycle management command
<b>LOC</b>	line of communications
<b>LOGCAP</b>	Logistics Civil Augmentation Program
<b>LOGSTAT</b>	logistics status report
<b>LRC</b>	logistics readiness center
<b>MEB</b>	maneuver enhancement brigade
<b>MEDBDE (SPT)</b>	medical brigade (support)
<b>METL</b>	mission essential task list
<b>MLMC</b>	medical logistics management center
<b>MMB</b>	multifunctional medical battalion
<b>MTF</b>	medical treatment facilities
<b>NATO</b>	North Atlantic Treaty Organization
<b>OCONUS</b>	outside the continental United States
<b>OCS</b>	operational contract support
<b>OE</b>	operational environment
<b>OPCON</b>	operational control
<b>OPLAN</b>	operation plan
<b>OPORD</b>	operation order
<b>PAT</b>	personnel accountability team
<b>PERSTAT</b>	personnel status
<b>POD</b>	port of debarkation
<b>POL</b>	petroleum, oils, and lubricants
<b>PPP</b>	power projection platform
<b>RSOI</b>	reception, staging, onward movement, and integration
<b>RTF</b>	regeneration task force
<b>S-1</b>	battalion or brigade human resource staff officer
<b>S-4</b>	battalion or brigade logistics staff officer
<b>SBCT</b>	stryker brigade combat team
<b>SDDC</b>	Military Surface Deployment and Distribution Command
<b>SJA</b>	Staff Judge Advocate
<b>SOF</b>	special operations forces
<b>SPOD</b>	seaport of debarkation

<b>TACON</b>	tactical control
<b>TB MED</b>	technical bulletin medical
<b>TBX</b>	transportation brigade expeditionary
<b>TG</b>	technical guide
<b>TMC</b>	theater medical command
<b>TPFDD</b>	time-phased force deployment data
<b>TM</b>	technical manual
<b>TMCE</b>	theater movement control element
<b>TSC</b>	theater sustainment command
<b>U.S.</b>	United States
<b>USAMC</b>	United States Army Materiel Command
<b>USSOCOM</b>	United States Army Special Operations Command
<b>USTRANSCOM</b>	United States Transportation Command

## SECTION II – TERMS

8889	
8890	<b>administrative control</b>
8891	Direction or exercise of authority over subordinate or other organizations in respect to administration
8892	and support. (JP 1, Volume 2)
8893	<b>agility</b>
8894	The ability to move forces and adjust their dispositions and activities more rapidly than the enemy.
8895	(FM 3-0)
8896	<b>amphibious operation</b>
8897	A military operation launched from the sea by an amphibious force to conduct landing force operations
8898	within the littorals. (JP 3-02)
8899	<b>area defense</b>
8900	A defensive operation that concentrates on denying enemy forces access to designated terrain for a
8901	specific time rather than destroying the enemy outright. (ADP 3-90)
8902	<b>area of operations</b>
8903	An operational area defined by a commander for land and maritime forces that should be large enough
8904	to accomplish their missions and protect their forces. (JP 3-0)
8905	<b>assessment</b>
8906	A continuous process that measures the overall effectiveness of employing capabilities during military
8907	operations. (JP 1-02)
8908	<b>attack</b>
8909	An offensive operation that destroys or defeats enemy forces, seizes and secures terrain, or both. (ADP
8910	3-90)
8911	<b>common-user logistics</b>
8912	Materiel or service support shared with or provided by two or more Services, DOD agencies, or
8913	multinational partners to another Service, DOD agency, non-DOD agency, and/or multinational partner
8914	in an operation. (JP 4-0)
8915	<b>consolidate gains</b>
8916	Activities to make enduring any initial operational success and to set the conditions for a sustainable
8917	security environment, allowing for a transition of control to other legitimate authorities. (ADP 3-0)

- 8918 **convergence**  
8919 An outcome created by the concerted employment of capabilities from multiple domains and echelons  
8920 against combinations of decisive points in any domain to create effects against a system, formation,  
8921 decision maker, or in a specific geographic area. (FM 3-0)
- 8922 **coordinating authority**  
8923 Authority delegated to a commander or individual for coordinating specific functions or activities  
8924 involving forces of two or more military departments, two or more joint force components, or two or  
8925 more forces of the same Service. (JP 1, Volume 2)
- 8926 **crisis**  
8927 An emerging incident or situation involving a possible threat to the United States, its citizens, military  
8928 forces, or vital interests that develops rapidly and creates a condition of such diplomatic, economic, or  
8929 military importance that commitment of military forces and resources is contemplated to achieve  
8930 national and/or strategic objectives. (JP 3-0)
- 8931 **defensive operation**  
8932 An operation to defeat an enemy attack, retain key terrain, gain time, and develop conditions  
8933 favorable for offensive operations or stability operations. (ADP 3-0)
- 8934 **deployment**  
8935 The movement of forces into and out of an operational area. (JP 3-35)
- 8936 **depth**  
8937 The extension of operations in time, space, or purpose to achieve definitive results. (ADP 3-0)
- 8938 **direct liaison authorized**  
8939 That authority granted by a commander (any level) to a subordinate to directly consult or coordinate an  
8940 action with a command or agency within or outside of the granting command. Also called  
8941 DIRLAUTH. (JP 1, Volume 2)
- 8942 **distribution management**  
8943 Synchronizes and optimizes transportation, its networks, and materiel management with the  
8944 warfighting functions to move personnel and materiel from origins to the point of need in accordance  
8945 with the supported commander's priorities. (ADP 4-0)
- 8946 **endurance**  
8947 The ability to persevere over time throughout the depth of an operational environment. (FM 3-0)
- 8948 **execution**  
8949 The act of putting a plan into action by applying combat power to accomplish the mission and  
8950 adjusting operations based on changes in the situation. (ADP 5-0)
- 8951 **executive agent**  
8952 A delegation of authority by the Secretary of Defense to a subordinate to act on behalf of the Secretary  
8953 of Defense. (JP 1, Volume 2)
- 8954 **exploitation**  
8955 A type of offensive operation that usually follows the conduct of a successful attack and is designed to  
8956 disorganize the enemy in depth. (ADP 3-90)
- 8957 **forcible entry**  
8958 Seizing and holding of a military lodgment in the face of armed opposition or forcing access into a  
8959 denied area to allow movement and maneuver to accomplish the mission. (JP 3-18)
- 8960 **force projection**  
8961 The ability to project the military instrument of national power from the United States or another  
8962 theater in response to requirements for military operations. (JP 3-0)

- 8963 **foreign internal defense**
- 8964 Participation by civilian and military agencies of a government in any of the action programs taken by
- 8965 another government or other designated organization to free and protect its society from subversion,
- 8966 lawlessness, insurgency, terrorism, and other threats to its security. (JP 3-22)
- 8967 **health service support**
- 8968 Support and services performed, provided, and arranged by the U.S. Army Medical Command to
- 8969 promote, improve, conserve, or restore the behavioral and physical well-being of personnel by
- 8970 providing direct patient care that include medical treatment (organic and area support) and
- 8971 hospitalization, medical evacuation to include medical regulating, and medical logistics to include
- 8972 blood management. (FM 4-02)
- 8973 **host-nation support**
- 8974 Civil and/or military assistance rendered by a nation to foreign forces within its territory during
- 8975 peacetime, crises or emergencies, or war based on agreements mutually concluded between nations.
- 8976 (JP 4-0)
- 8977 **large-scale combat operations**
- 8978 Extensive joint combat operations in terms of scope and size of forces committed, conducted as a
- 8979 campaign aimed at achieving operational and strategic objectives. (ADP 3-0)
- 8980 **lead Service or agency for common-user logistics**
- 8981 A Service component or Department of Defense (DOD) agency that is responsible for execution of
- 8982 common-user item or service support in a specific CCMD or multinational operation as defined in the
- 8983 combatant or subordinate JFC's operation plan, operation order, and/or directives. (JP 4-0)
- 8984 **level I threat**
- 8985 An small enemy force that can be defeated by those units normally operating in the echelon support
- 8986 area or by the perimeter defenses established by friendly bases and base clusters. (ATP 3-91)
- 8987 **level II threat**
- 8988 An enemy force or activities that can be defeated by a base or base cluster's defensive capabilities
- 8989 when augmented by a response force. (ATP 3-91)
- 8990 **level III threat**
- 8991 An enemy force or activities beyond the defensive capability of both the base and base cluster and any
- 8992 local reserve or response force. (ATP 3-91)
- 8993 **levels of warfare**
- 8994 A framework for defining and clarifying the relationship among national objectives, the operational
- 8995 approach, and tactical tasks. (ADP 1-01)
- 8996 **maritime domain**
- 8997 Te oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these, including the
- 8998 littorals. (JP 3-32)
- 8999 **mass casualty**
- 9000 Any number of human casualties produced across a period of time that exceeds available medical
- 9001 support capabilities. (JP 4-02)
- 9002 **military engagement**
- 9003 Routine contact and interaction between individuals or elements of the Armed Forces of the United
- 9004 States and those of another nation's armed forces, or foreign and domestic civilian authorities or
- 9005 agencies, to build trust and confidence, share information, coordinate mutual activities, and maintain
- 9006 influence. (JP 3-0)
- 9007 **mobile defense**
- 9008 A defensive operation that concentrates on the destruction or defeat of the enemy through a decisive
- 9009 attack by a striking force. (ADP 3-90)

- 9010 **mode operations**
- 9011 The execution of movements using various conveyances (truck, lighterage, railcar, aircraft) to transport
- 9012 cargo. (ADP 4-0)
- 9013 **motor transport operations**
- 9014 A ground support function that includes moving and transferring units, personnel, equipment and
- 9015 supplies by vehicle. (ATP 4-11)
- 9016 **movement to contact**
- 9017 A type of offensive operations designed to develop the situation and to establish or regain contact.
- 9018 (ADP 3-90)
- 9019 **multidomain operations**
- 9020 The combined arms employment of joint and Army capabilities to create and exploit relative
- 9021 advantages to achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force
- 9022 commanders. (FM 3-0)
- 9023 **national strategic level of warfare**
- 9024 The level of warfare at which the U.S. government formulates policy goals and ways to achieve them
- 9025 by synchronizing action across government and unified action partners and employing the instruments
- 9026 of national power. (FM 3-0)
- 9027 **offensive operation**
- 9028 An operation conducted to defeat and destroy enemy forces and gain control of terrain, resources, and
- 9029 population centers. (ADP 3-0)
- 9030 **operational environment**
- 9031 The aggregate of the conditions, circumstances, and influences that affect the employment of
- 9032 capabilities and bear on the decisions of the commander. (JP 3-0)
- 9033 **operational framework**
- 9034 A cognitive toll used to assist commanders and staffs in clearly visualizing and describing the
- 9035 application of combat power in time, space, purpose, and resources in the concept of operations. (ADP
- 9036 1-01)
- 9037 **operational level of warfare**
- 9038 The level of warfare in which campaigns and operations are planned, conducted, and sustained to
- 9039 achieve operational objectives to support achievement of strategic objectives. (JP 3-0)
- 9040 **operational reach**
- 9041 The distance and duration across which a force can successfully employ military capabilities. (JP 3-0)
- 9042 **personnel services**
- 9043 Sustainment functions that man the force, maintain Soldier and Family readiness, promote the moral
- 9044 and ethical values of the nation, and enable the fighting qualities of the Army. (ADP 4-0)
- 9045 **planning**
- 9046 The art and science of understanding a situation, envisioning a desired end state, and determining
- 9047 effective ways to bring that future about. (ADP 5-0)
- 9048 **port support activity**
- 9049 A tailorable support organization composed of mobilization station assets that ensures the equipment
- 9050 of the deploying units is ready to load. Also called PSA. (JP 3-35)
- 9051 **\*precision sustainment**
- 9052 The delivery of required capabilities to the point of employment to maintain operations until successful
- 9053 mission completion.
- 9054 **\*predictive logistics**
- 9055 The capabilities and decision support tools that improve operational readiness in multidomain
- 9056 operations.

9057	<b>preparation</b>
9058	Consists of those activities performed by units and Soldiers to improve their ability to execute an
9059	operation. (ADP 5-0)
9060	<b>principle</b>
9061	A comprehensive and fundamental rule or an assumption of central importance that guides how an
9062	organization or function approaches and thinks about the conduct of operations. (ADP 1-01)
9063	<b>pursuit</b>
9064	An offensive operation designed to catch or cut off a hostile force attempting to escape, with the aim of
9065	destroying it. (ADP 3-90)
9066	<b>rear operations</b>
9067	Tactical actions behind major subordinate maneuver forces that facilitate movement, extend
9068	operational reach, and maintain desired tempo. (FM 3-0)
9069	<b>redeployment</b>
9070	The transfer or rotation of forces and materiel to support another commander's operational
9071	requirements, or to return personnel, equipment, and materiel to the home and/or demobilization
9072	stations for reintegration and/or out-processing. (JP 3-35)
9073	<b>retrograde</b>
9074	A type of defensive operation that involves organized movement away from the enemy. (ADP 3-90)
9075	<b>riverine operations</b>
9076	Operations conducted by forces organized to cope with the unique characteristics of a riverine area
9077	and/or to achieve or maintain control of the riverine area. (JP 3-32)
9078	<b>security assistance</b>
9079	A group of programs authorized by federal statutes by which the United States provides defense
9080	articles, military training, and other defense-related services by grant, lease, loan, credit, or cash sales
9081	in furtherance of national policies and objectives, and those that are funded and authorized through the
9082	Department of State to be administered by Department of Defense/Defense Security Cooperation
9083	Agency, which are considered part of security cooperation. Also called SA. (JP 3-20)
9084	<b>security cooperation</b>
9085	All DOD interactions with foreign security establishments to build security relationships that promote
9086	specific U.S. security interests, develop allied and partner nation military and security capabilities for
9087	self-defense and multinational operations, and provide U.S. forces with peacetime and contingency
9088	access to allied and partner nations. (JP 3-20)
9089	<b>security force assistance</b>
9090	The DOD activities that support the development of capacity and capability of foreign security forces
9091	and their supporting institutions. (JP 3-20)
9092	<b>striking force</b>
9093	A dedicated counterattack force in a mobile defense constituted with the bulk of available combat
9094	power. (ADP 3-90)
9095	<b>support area operations</b>
9096	The tactical actions securing lines of communications, bases, and base clusters that enable an echelon's
9097	sustainment and command and control. (FM 3-0)
9098	<b>sustainment</b>
9099	The provision of logistics, financial management, personnel services, and health service support
9100	necessary to maintain operations until successful mission completion. (ADP 4-0)
9101	<b>sustainment warfighting function</b>
9102	The related tasks and systems that provide support and services to ensure freedom of action, extend
9103	operational reach, and prolong endurance. (ADP 3-0)



- 9104 **tactical level of warfare**
- 9105 The level of warfare at which forces plan and execute battles and engagements to achieve military
- 9106 objectives. (JP 3-0)
- 9107 **tactical mobility**
- 9108 The ability of friendly forces to move and maneuver freely on the battlefield relative to the enemy.
- 9109 (ADP 3-90)
- 9110 **theater closing**
- 9111 The process of redeploying Army forces and equipment from a theater, the drawdown and removal or
- 9112 disposition of Army non-unit equipment and materiel, and the transition of materiel and facilities back
- 9113 to host nation or civil authorities. (ADP 4-0)
- 9114 **theater distribution**
- 9115 The flow of equipment, personnel, and materiel within theater to meet the combatant commander's
- 9116 mission. (JP 4-09)
- 9117 **theater opening**
- 9118 The ability to establish and operate ports of debarkation (air, sea, and rail), to establish a distribution
- 9119 system and sustainment bases, and to facilitate throughput for reception, staging, and onward
- 9120 movement of forces within a theater of operations. (ADP 4-0)
- 9121 **theater strategic level of warfare**
- 9122 The level of warfare at which combatant commanders synchronize with unified action partners and
- 9123 employ all elements of national power to fulfill policy aims within the assigned theater in support of
- 9124 the national strategy.
- 9125 **threat**
- 9126 Any combination of actors, entities, or forces that have the capability and intent to harm U.S. forces,
- 9127 U.S. national interest, or the homeland. (ADP 3-0)
- 9128 **troop movement**
- 9129 The movement of Soldiers and units from one place to another by any available means. (FM 3-90)
- 9130 **unified action**
- 9131 The synchronization, coordination, and/or integration of the activities of governmental and
- 9132 nongovernmental entities with military operations to achieve unity of effort. (JP 1, Volume 2)
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