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Sustainment
(ADRP 4-0)

Sustainment
Commands
(TSC/ESC)

Sustainment
Brigade

Brigade Support
Battalion (BSB)

Sustainment of
Decisive Action

Sustainment
Planning

Joint
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Sustainment multifunctional & LOGISTICS

Guide to Logistics, Personnel Services, & Health Services Support

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Fourth Edition



Sustainment & LOGISTICS

Guide to Logistics, Personnel Services & Health Services Support

Fourth Edition with Change 1 (Mar 2018)

The Lightning Press
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Fourth Edition (w/Change 1) (SMFLS4) The Sustainment & Multifunctional Logistics SMARTbook

Guide to Logistics, Personnel Services & Health Services Support

This is the fourth revised edition of The Sustainment & Multifunctional Logistics SMARTbook. In addition to the most current versions of ADP/ADRP 4-0 Sustainment (Jul '12), SMFLS4 incorporates the full scope of new material from ATP 4-94 Theater Sustainment Command (Jun '13), ATP 4-93 Sustainment Brigade (Apr '16), ATP 4-90 Brigade Support Battalion (Aug '14), Sustainment Planning, JP 4-0 Joint Logistics (Oct '13), ATP 3-35 Army Deployment and Redeployment (Mar '15), and more than a dozen new/updated Army sustainment references to include ATP 4-33, ATP 4-42, ATP 4-16, ATP 4-0.1, ATP 4-34.40, ATP 4-92, FM 1-0, FM 1-04, FM 1-05, FM 1-06, FM 4-01, FM 4-02, and FM 4-30!

** Change 1 to SMFLS4 (Mar 2018) incorporates new material from ATP 4-93 Sustainment Brigade (Apr '16) and minor text edits from ADRP 3-0 (Nov '16). An asterisk marks changed pages.*

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(SMFLS4) Notes to Reader

Guide to Logistics, Personnel Services & Health Services Support

The **sustainment warfighting function** is related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance. The sustainment warfighting function consists of three major elements: **logistics, personnel services, & health service support.**

Unified land operations acknowledges that strategic success requires fully integrating U.S. military operations with the efforts of interagency and multinational partners. The sustainment of unified land operations requires a continuous link between the strategic, operational, and tactical levels. It also requires close coordination and collaboration with other Services, allies, host nation, and other governmental organizations.

Decisive action is the continuous, simultaneous combinations of offensive, defensive, and stability or defense support of civil authorities tasks. Commanders seek to seize, retain, and exploit the initiative while synchronizing their actions. Sustainment, through mission command, enables decisive action. Sustainment provides the operational commander with **operational reach, freedom of action and endurance.**

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Army Doctrinal Publications (ADPs) and Army Doctrinal Reference Publications (ADRP)

ADRP 1-02*	Feb 2015	Terms and Military Symbols
ADP/ADRP 3-0*	Nov 2016	Operations
ADP/ADRP 4-0	Jul 2012	Sustainment
ADP/ADRP 5-0*	May 2012	The Operations Process
ADP/ADRP 6-0*	May 2012	Mission Command

Army Techniques Publications (ATPs)

ATP 1-19*	Feb 2015	Army Music
ATP 3-34.40 (FM)*	Feb 2015	General Engineering
ATP 3-35 (FM 3-35)*	Mar 2015	Army Deployment and Redeployment
ATP 4-0.1*	Oct 2014	Army Theater Distribution
ATP 4-11*	Jul 2013	Army Motor Transport
ATP 4-16*	Apr 2013	Movement Control
ATP 4-31*	Aug 2014	Recovery & Battle Damage Assessment and Repair
ATP 4-33*	Apr 2014	Maintenance Operations
ATP 4-42*	Jul 2014	General Supply and Field Services Operations
ATP 4-90 (FM 4-90)*	Apr 2014	Brigade Support Battalion
ATP 4-92 (FM 4-92)*	Oct 2014	Contracting Support to Unified Land Operations
ATP 4-93*	Apr 2016	Sustainment Brigade
ATP 4-94 (FM 4-94)*	Jun 2013	Theater Sustainment Command
ATP 5-19*	Apr 2014	Risk Management (w/change 1)

Field Manuals (FMs)

FM 1-0*	Apr 2014	Human Resources Support
FM 1-04*	Mar 2013	Legal Support to the Operational Army
FM 1-05	Oct 2012	Religious Support
FM 1-06*	Apr 2014	Financial Operations Operations
FM 4-01*	Apr 2014	Army Transportation Operations
FM 4-02 (ATTP 4-02)*	Aug 2013	Army Health System
FM 4-30*	Apr 2014	Ordnance Operations
FM 6-0*	Apr 2016	Commander and Staff Organization and Operations (w/change 2)

Joint Publications (JPs)

JP 3-35*	Jan 2013	Deployment and Redeployment Operations
JP 4-0*	Oct 2013	Joint Logistics

* New/updated references in this edition.



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Sample

The Sustainment Warfighting Function

Ref: ADP 4-0, Sustainment (Jul '12) and ADRP 3-0, (Nov '16), pp. 5-5 to 5-6.

The sustainment warfighting function is related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance (ADP 3-0). The endurance of Army forces is primarily a function of their sustainment. Sustainment determines the depth and duration of Army operations. Successful sustainment enables freedom of action by increasing the number and quality of options available to the commander. It is essential to retaining and exploiting the initiative. The sustainment warfighting function consists of three major elements: logistics, personnel services, and health service support.

Elements of Sustainment



Logistics (pp. 1-37 to 1-56)



Personnel Services (pp. 1-57 to 1-66)



Health Service Support (pp. 1-67 to 1-74)

A. Logistics

Logistics is planning and executing of the movement and support of forces. It includes those aspects of military operations that deal with: design and development; acquisition, storage, movement, distribution, maintenance, and disposition of materiel; acquisition or construction, maintenance, operation, and disposition of facilities; and acquisition or furnishing of services. Explosive ordnance disposal is a function of logistics. However, EOD tasks are discussed under the protection warfighting function (Refer to FM 3-37 and ATTP 4-32). Logistics consists of the following:

- Maintenance (ATTP 4-33)
- Transportation (FM 55-1)
- Supply (FM 10-1)
- Field services (FM 10-1)
- Distribution (ATTP 4-0.1)
- Operational contract support (ATTP 4-10)
- General engineering support (FM 3-34)

See pp. 1-37 to 1-56 for further discussion.

II. Sustainment Overview

Ref: ADP 4-0, Sustainment (Jul '12).

For the Army, sustainment is the provision of logistics, personnel services, and health service support necessary to maintain operations until successful mission completion.

Sustainment of Unified Land Operations

Army forces are employed within a strategic environment. Army forces operate as part of a larger national effort characterized as unified action. Unified action is the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve a unity of effort (JP 1). Unified land operations acknowledge that strategic success requires fully integrated U.S. military operations to include the efforts of unified action partners.

Joint Interdependence

Joint interdependence is the purposeful reliance by one Service's forces on another Service's capabilities to maximize the complementary and reinforcing effects of both (JP 3-0). Army forces operate as part of an interdependent joint force. For example:

The United States Air Force through the Air Mobility Command, provides worldwide cargo and passenger airlift, air refueling, and aeromedical evacuation. Air Mobility command also provides Contingency Response Elements that provide enroute ground support for airlift operations.

Joint logistics over-the-shore operations occur when Navy and Army forces conduct logistics over-the-shore operations together under a joint force commander. The Navy's cargo off-load and discharge system is comprised of the container off-loading and transfer system and the offshore bulk fuel system. Army provides lighterage, roll-on/rolloff discharge facilities, causeway systems, and shore-based water storage systems.

The Army plays a critical role in setting the theater and is the primary Service with a sustainment capability to conduct this mission on a large and long term scale. The Army is responsible for theater opening; port and terminal operations; conducting reception, staging, onward movement, and integration; force modernization and theater-specific training; and common-user logistics to joint and multinational forces.

Army Sustainment Responsibilities

Title 10, U.S. Code, specifies that individual Services retain sustainment responsibility. As such, each Service retains responsibility for the sustainment of forces it allocates to a joint force. The Secretary of the Army exercises this responsibility through the Chief of Staff of the Army and the Theater Army assigned to each combatant command.

The Theater Army is responsible for the preparation and administrative support of Army forces assigned or attached to the combatant command. However, the purposeful combination of service capabilities to create joint interdependent forces is often the most effective and efficient means by which to sustain a joint force. The options for executing sustainment of a joint force may include any combination of Directive Authority for Logistics, Executive Agency, lead service and/or establishing a joint command for logistics. In order for the joint command for logistics to succeed, the CCDR must augment it with the capabilities needed to integrate and control the delivery of theater support to meet the joint force requirements. If the Army is designated for establishing a joint command for logistics, the Army Theater Sustainment Command will fulfill that role.

The Secretary of Defense may designate the head of a DOD component (such as Chief of a Service, CCDR, or director of a Combat Support Agency) as an Executive Agent for specific responsibilities, functions, and authorities. When designated as an Executive Agent, the Army is specifically tasked by the Secretary of Defense for certain responsibilities sometimes limited by geography, sometimes for a particular operation, and sometimes for the entire DOD on a continuing basis.

Sustainment Underlying Logic

ADP 4-0 Underlying Logic

Anticipated Operational Environment

- US must project power into region, opposed
- US must seize at least one base of operations (maybe more)
- Threat of WMD will require dispersion of US forces and decentralized operations
- Size of theater (space and population) will exceed US ability to control

Sustainment in Joint Operations

Sustainment is the provision of logistics and personnel services necessary to maintain and prolong operations until successful mission completion. Sustainment in joint operations provides the JFC flexibility, endurance, and the ability to extend operational reach. (JP 4-0)

Unified Action

Central idea: synchronization, coordination, and/or integration of the activities of governmental and non-governmental entities with military operations to achieve unity of effort (JP 1)

Sustainment of Unified Action

Joint Interdependence: The purposeful reliance by Service forces on another Service's capabilities

Unified Land Operations

Seize, retain, and exploit the initiative to gain and maintain a position of relative advantage in sustained land operations through simultaneous offensive, defensive, and stability operations in order to prevent or deter conflict, prevail in war, and create the conditions for favorable conflict resolution.

ADP 4-0, Sustainment

Principles of Sustainment

- Integration
- Anticipation
- Responsiveness
- Simplicity
- Economy
- Survivability
- Continuity
- Improvisation

Joint Doctrine

ADP 4-0 Sustainment

Decisive Operations

Enabling
CCDR and ARFOR to conduct...

Sustainment HQ cognitively link strategic capability with tactical success

Intrinsically Linked

Strategic Base leverages National capability to generate Theater capabilities

Operational Reach

Freedom of Action

Endurance

TSC ESC SB AFSB

Synchronizing Strategic and Operational Support Occurs through Mission Command

FMC MEDCOM (DS) HRSC

Joint Interdependence

- Joint Deployment and Distribution Enterprise (JDDE)
- Common User Logistics (CUL)
- Army Support to Other Services (ASOS)

Logistics

- Maintenance
- Transportation
- Supply
- Field Services
- Distribution
- Operational Contracting
- General Engineering

Personnel Services

- Human Resources Support
- Financial Management Operations
- Legal Support
- Religious Support
- Band

Health Service Support

- Casualty Care
 - Organic and Area Medical Support
 - Hospitalization
 - Dental Care
 - Behavioral Health/Neuropsychiatric Treatment
 - Clinical Laboratory Services
 - Treatment of CBRN Patients
- Medical Evacuation
- Medical Logistics

Sustainment Capabilities

Ref: ADP 4-0, Sustainment, fig. 1, p. iv.



Refer to AODS5: The Army Operations & Doctrine SMARTbook (Guide to Unified Land Operations and the Six Warfighting Functions) for discussion of the fundamentals, principles and tenets of Army operations, plus chapters on each of the six warfighting functions: mission command, movement and maneuver, intelligence, fires, sustainment, and protection.

B. Personnel Services

Personnel services are sustainment functions that man and fund the force, maintain Soldier and Family readiness, promote the moral and ethical values of the nation, and enable the fighting qualities of the Army. Personnel services provide economic power at the operational and tactical levels. Personnel services complement logistics by planning for and coordinating efforts that provide and sustain personnel. Personnel services consist of the following:

- Human resources support (FM 1-0)
- Financial management operations (FM 1-06)
- Legal support (FM 1-04)
- Religious support (FM 1-05)
- Band support (ATTP 1-19)

See pp. 1-57 to 1-66 for further discussion.

C. Health Service Support

Health service support encompasses all support and services performed, provided, and arranged by the Army Medical Department to promote, improve, conserve, or restore the mental and physical well being of personnel in the Army and, as directed, in other Services, agencies, and organizations (ATTP 4-02). Army Health System support includes both health service support and force health protection. The health service support mission is a part of the sustainment warfighting function. The force health protection mission falls under the protection warfighting function and will not be covered in this publication. Health service support consists of the following medical functions:

- Casualty care, which encompasses a number of Army Medical Department functions, to include —
 - Organic and area medical support
 - Hospitalization
 - Dental care (treatment aspects)
 - Behavioral health/neuropsychiatric treatment
 - Clinical laboratory services
 - Treatment of chemical, biological, radiological, and nuclear patients
- Medical evacuation
- Medical logistics

See pp. 1-67 to 1-74 for further discussion.

I. Sustainment of Unified Land Operations

Ref: ADRP 4-0, Sustainment (Jul '12). chap. 2.

Unified action is the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve a unity of effort (JP 1). Unified land operations acknowledges that strategic success requires fully integrating U.S. military operations with the efforts of interagency and multinational partners. The sustainment of unified land operations requires a continuous link between the strategic, operational, and tactical levels. It also requires close coordination and collaboration with other Services, allies, host nation, and other governmental organizations. This chapter demonstrates the important roles that the U.S. military and intergovernmental partners play during the sustainment of Army forces. It also builds the doctrinal bridge between our strategic and inter-organizational partners and sustainment of Army forces conducting operations.

I. Strategic Context

In the U.S., sustainment originates at the strategic base. The strategic base consists of the Department of Defense and industrial base. The DOD acquisition(s) sustainment resources and capabilities and then provide(s) them for use in support of national strategic objectives. The industrial bases, privately and government-owned capabilities, manufactures, maintains, modifies, and repairs resources required by U.S. forces. The strategic base generates Army capabilities which are employed across the strategic environment. Army forces through joint interdependence rely upon joint capabilities, air and maritime, to deliver sustainment to a theater of operations. Through coordination and collaboration between strategic and operational partners, a continuous and accountable flow of sustainment is provided to achieve national military objectives. Also through coordination, collaboration, and agreements with host nation, allies and intergovernmental organizations certain sustainment efficiencies are achieved to facilitate a unity of effort.

II. Joint Interdependence

Joint interdependence is the purposeful reliance by one Service's forces on another Service's capabilities to maximize the complementary and reinforcing effects of both. Army forces operate as part of an interdependent joint force.

There are many services that joint forces provide each other. The U.S. Air Force (USAF) provides lift capabilities to quickly move Army forces across strategic lines of communication to theater operations. In emergency situations, the USAF may aerial deliver sustainment to forward areas or areas where terrain may be too restrictive for ground operations. The USAF through the Air Mobility Command (AMC) provides worldwide cargo and passenger airlift, air refueling, and aeromedical evacuation. AMC also provides Contingency Response Elements that provide enroute ground support for airlift operations.

The Naval Forces provide critical sustainment support to Army operations. Naval forces provide essential joint logistics over the shore (JLOTS) support ensuring sustainment is provided to land forces when ports may be austere, damaged, or non-existent. Naval forces may be responsible for removing sustainment from vessels and delivering them to port operations for release to Army forces. The Naval Construction Force provides port construction such as warehouses, storage facilities. The Navy also provides explosive ordnance disposal support to locate and dispose of mines along ports and channels.

V. Operating Forces

Ref: ADRP 4-0, Sustainment (Jul '12), pp. 2-8 to 2-12.

The operating forces are those forces whose primary missions are to participate in combat and the integral supporting elements thereof (FM 1-01). Operational Army units are typically assigned to CCDRs. The Army normally executes its responsibilities to organize, train, and equip operational Army units through ASCCs.

1. Army Service Component Command /Theater Army

When an Army Service component command (ASCC) is in support of a GCC, it is designated as a Theater Army (TA). The Theater Army is the primary vehicle for Army support to joint, interagency, intergovernmental, and multinational forces (MNFs). The TA HQ performs functions that include reception, staging, onward movement, and integration; logistics over-the-shore operations; and security coordination.

The Theater Army is responsible for providing support to Army forces and common sustainment/support to other Services as directed by the CCDR and other authoritative instructions. The Theater Sustainment Command (TSC) is assigned to the Theater Army and is the Army's senior logistics headquarters (HQ) within the theater of operations. When directed, the TSC provides lead Service and executive agency support for designated logistics and services to other government agencies, MNFs, and nongovernmental organizations (NGO). When directed, the MEDCOM (DS) provides AHS support to other services.

The TA exercises administrative control over all Army forces in the area of responsibility unless modified by DA. This includes Army forces assigned, attached, or OPCON to the combatant command. The TA coordinates with the TSC for operational sustainment planning and management. The TA defines theater policies and coordinates with the TSC for technical guidance and execution of force projection and sustainment.

2. Corps

The corps provides a HQ that specializes in operations as a land component command HQ and a joint task force for contingencies. When required, a corps may become an intermediate tactical HQ under the land component command, with OPCON of multiple divisions (including multinational or Marine Corps formations) or other large tactical formations. Its primary mission command is land combat operations. The corps HQ has the capability to provide the nucleus of a joint HQ.

3. Division

Divisions are the Army's primary tactical war fighting HQ. Their principal task is directing subordinate brigade operations. Divisions are not fixed formations. Therefore, they may not have all types of Brigade Combat Teams (BCT) in an operation or they may control more than one of a particular type of BCT. A division can control up to six BCTs with additional appropriate supporting brigades during major combat operations. The types of support brigades are combat aviation, fires, maneuver enhancement, battlefield surveillance, and sustainment. The sustainment brigade normally remains attached to the TSC or ESC but supports the division. The division may have OPCON of a SUSTAINMENT BRIGADE while conducting large-scale exploitation and pursuit operations.

4. Brigade Combat Team (BCT)

As combined arms organizations, Brigade Combat Teams (BCT) form the basic building block of the Army's tactical formations. They are the principal means of executing engagements. Three standardized BCT designs exist: armor, infantry, and Stryker. Battalion-sized maneuver, fires, reconnaissance, and Brigade Support Battalion (BSB) are organic to BCTs.

5. Theater Sustainment Command (TSC)

The Theater Sustainment Command (TSC) serves as the senior Army sustainment HQ (less medical) for the Theater Army. The TSC provides mission command of units assigned, attached, or OPCON. The mission of the TSC is to provide theater sustainment (less medical).

The Theater Sustainment Command is capable of planning, preparing, executing, and assessing logistics and human resource support for Army forces in theater. It provides support to unified land operations. As the distribution coordinator in theater, the TSC leverages strategic partnerships and joint capabilities to establish an integrated theater-level distribution system that is responsive to Theater Army requirements. It employs sustainment brigades to execute theater opening (TO), theater sustainment, and theater distribution operations.

The TSC includes units capable of providing multifunctional logistics: supply, maintenance, transportation, petroleum, port, and terminal operations. Other specialized capabilities, such as mortuary affairs (MA), aerial delivery, human resources, sustainment to interment/resettlement operations, and financial management, are available from the force pool. The combination of these capabilities gives the TSC commander the ability to organize and provide tailored support.

6. Expeditionary Sustainment Command (ESC)

Expeditionary Sustainment Commands (ESC) are force pooled assets. They are normally under the mission command of the TSC. The ESC provides mission command of sustainment units (less medical) in designated areas of a theater. The ESC plans, prepares, executes, and assesses sustainment, distribution, theater opening, and reception, staging, and onward movement operations for Army forces in theater. It may serve as a basis for an expeditionary command for joint logistics when directed by the GCC or designated multinational or joint task force commander. It normally deploys when the TSC determines that a forward command presence is required. This capability provides the TSC commander with the regional focus necessary to provide effective operational-level support to Army or JTF missions.

7. Theater Engineer Command (TEC)

The Theater Engineer Command (TEC) is designed to mission command engineer capabilities for all assigned or attached engineer brigades and other engineer units and missions for the joint force land component or Theater Army commander. It is the only organization designed to do so without augmentation and can provide the joint force commander with an operational engineer headquarters or augment an engineer staff for a JTF. The TEC is focused on operational-level engineer support across all three of the engineer disciplines and typically serves as the senior engineer headquarters for a Theater Army, land component headquarters, or potentially a JTF (see FM 3-34).

8. Human Resource Sustainment Center (HRSC)

The Human Resource Sustainment Center (HRSC) is a multifunctional, modular organization (staff element), and theater-level center assigned to a TSC that integrates and ensures execution of Personnel Accountability (PA), casualty, and postal functions throughout the theater as defined by the policies and priorities established by the ASCC G-1/AG. The HRSC, in coordination with the TSC, has a defined role to ensure that the theater HR support plan is developed and supported with available resources within the TSC. This includes collaborating with the ASCC G-1/AG and TSC to ensure appropriate HR support relationships are established and properly executed through the OPORD process.

Operating Forces (Continued)

Ref: ADRP 4-0, *Sustainment* (Jul '12), pp. 2-8 to 2-12.

9. Financial Management Center (FMC)

The Financial Management Center (FMC) is a modular and tailorable operational financial management unit whose mission is inextricably linked to the TA G-8. In order to provide adequate theater and national-provider responsiveness and support, the FMC maintains visibility of all financial management operations and placement of all operational and tactical financial management units in theater. The primary mission of the FMC is to provide technical coordination of all theater finance operations and serve as the principal advisor to the TA G-8 and the TSC commander on all aspects of theater finance operations. Technical coordination of theater financial management units (financial management companies and their subordinate detachments) encompasses the provision of recommendations and advice to theater commanders and staff regarding the employment, integration, direction, and control of their financial management forces for the accomplishment of assigned missions. Other missions include but are not limited to: negotiations with host nation banking facilities, advising unit commanders on the use of local currency, and coordination with national providers (e.g., Department of the Treasury, DFAS, Assistant Secretary of the Army Financial Management & Comptroller, USAFMCOM) and the ECC to establish financial management support requirements (FM 1-06).

10. Army Field Support Brigade (AFSB)

The Army Field Support Brigade (AFSB) is assigned to the ASC and when deployed, is placed OPCON to the supported theater Army. This OPCON relationship is normally delegated to the supporting TSC or ESC as appropriate. An AFSB provides materiel readiness focused support to include coordination of acquisition logistics and technology actions, less theater support contracting and medical, to Army operational forces. AFSBs serve as ASC's link between the generating force and the operational force. AFSBs are also responsible to integrate LOGCAP support into contract support integration plans, in coordination with the theater Army G-4 and the supporting CSB (ATP 4-91).

11. Sustainment Brigade

When deployed, the sustainment brigade is a subordinate command of the TSC, or by extension the ESC. The sustainment brigade is a flexible, multifunctional sustainment organization, tailored and task organized according to mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC). It plans, prepares, executes, and assesses sustainment operations within an area of operations. It provides mission command of sustainment operations and distribution management.

See chap. 3, *Sustainment Brigade*, for further discussion.

12. Combat Sustainment Support Battalion (CSSB)

The Combat Sustainment Support Battalion (CSSB) is a flexible and responsive unit that executes logistics throughout the depth of an area of operations including transportation, maintenance, ammunition, supply, MA, airdrop, field services, water, and petroleum. The CSSB is attached to a sustainment brigade and is the building block upon which the sustainment brigade capabilities are developed. The CSSB is tailored to meet specific mission requirements. Employed on an area basis, the CSSB plans, prepares, executes, and assesses logistics operations within an area of operations. The CSSB also supports units in or passing through its designated area.

13. Medical Command (Deployment Support)

The Medical Command (Deployment Support) (MEDCOM [DS]) serves as the senior medical command within the theater in support of the CCDR. The MEDCOM (DS) pro-

vides the mission command for medical units delivering health care in support of deployed forces. The MEDCOM (DS) is a regionally focused command and provides subordinate medical organizations to operate under the medical brigade (MEDBDE) and/or multifunctional medical battalion (MMB). The Medical Command (Deployment Support) is a versatile, modular mission command structure composed of a main command post (MCP) and an operational command post (OCP). Refer to FM 4-02.12 for more information.

14. Medical Brigade (MEDBDE)

The Medical Brigade (MEDBDE) provides a scalable expeditionary mission command capability for assigned and attached medical functional organizations task-organized for support of the BCTs and supported units at echelons above brigade (EAB). The MEDBDE provides all of the mission command and planning capabilities necessary to deliver responsive and effective AHS support. The MEDBDE ensures the right mixture of medical professional (operational, technical, and clinical) expertise to synchronize the complex system of medical functions.

The Medical Brigade has the capability to provide an early entry module, an expansion module, and the campaign module, thus enabling its capability to be tailored to METT-TC factors of a specific operation. As the supported forces grow in size and complexity, the MEDBDE can deploy additional modules that build upon one another to support unified land operations.

15. Multifunctional Medical Battalion (MMB)

The Multifunctional Medical Battalion (MMB) is designed as a multifunctional HQ. It can also be deployed to provide mission command to expeditionary forces in early entry operations and facilitate the RSOI of theater medical forces. All EAB medical companies, detachments, and teams in theater may be assigned, attached, or placed under the OPCON of an MMB. The MMB is under the mission command of the MEDBDE/MEDCOM (DS).

16. Sustainment Brigade (Special Operations) (Airborne)

The Sustainment Brigade (Special Operations) (Airborne) is a subordinate command of the U.S. Army Special Operations Command. Its mission is to provide limited sustainment, medical, and signal support to Army Special Operations Forces (ARSOF). ARSOF are not logistically self-sufficient. ARSOF units rely upon the GCC theater infrastructure for virtually all of their support above their organic capabilities. The planning and execution of logistics support to ARSOF must be nested within the GCC's concepts of operation and support, as well as tailored to interface with the theater logistics structures. For further information on ARSOF logistics capabilities refer to FM 3-05.140.

17. Brigade Support Battalion (BSB)

The Brigade Support Battalion (BSB) is an organic component of BCT, fires, and maneuver enhancement brigades. The BSB is tailored to support the particular brigade to which it is organic. For example, the BSB of an armor brigade combat team (HBCT) has more fuel distribution capabilities and maintenance than does a fires brigade BSB. The BSB provides supply, maintenance, motor transport, and medical support to the supported brigade. The BSB plans, prepares, and executes, logistics operations in support of brigade operations. See chap. 4, *Brigade Support Battalion (BSB/BSA)*, for further discussion.

18. Aviation Support Battalion (ASB)

The Aviation Support Battalion is the primary aviation logistics organization organic to Combat Aviation Brigade and the Theater Aviation Brigade. The Aviation Support Battalion performs the BSB mission. It provides aviation and ground field maintenance, brigade-wide satellite signal support, replenishment of all supplies, and medical support to the aviation brigade. The Aviation Support Battalion has been optimized to support the Combat Aviation Brigade's forward support companies, aviation maintenance companies, and the brigade HQ and HQ company.

Sustainment of Decisive Action

Ref: ADP 4-0, Sustainment (Jul '12), pp. 10 to 15.

Sustainment is one of the elements of sustaining operations. Sustaining operations, typically address important sustainment and protection actions essential to the success of decisive and shaping operations. A sustaining operation is an operation at any echelon that enables the decisive operation or shaping operations by generating and maintaining combat power and is inseparable from decisive and shaping operations.

Sustainment is a critical and essential enabler that allows the U.S. forces to deploy long distances (operational reach), conduct operations across the depth and breadth of the operational area (freedom of action), and maintain operations for extended durations (prolong endurance).

I. Operational Reach

Operational reach is a necessity for successful operations. Operational reach is the distance and duration across which a unit can successfully employ military capabilities (JP 3-0). The limit of a unit's operational reach is its culminating point. Operational reach is facilitated by prepositioning stocks; capability to project Army forces and sustainment to an operational environment; to open theater ports; establish forward bases; and to close a theater upon conclusion of an operation.

See p. 1-26 for further discussion.

II. Freedom of Action

Freedom of action enables commanders with the will to act, to achieve operational initiative and control and maintain operational tempo. Enabling freedom of action requires that sustainment commanders synchronize the sustainment plan with the operations plan to ensure supported commanders can operate freely and unencumbered by limited resources. Sustainment commanders can enable freedom of action through preparing and putting in place sustainment capabilities.

Sustainment Preparation. Preparation for the sustainment of operations consists of activities performed by units to improve their ability to execute an operation. Preparation includes but is not limited to plan refinement, rehearsals, information collection, coordination, inspections, and movements. For sustainment to be effective, several actions and activities are performed across the levels of war to properly prepare forces for operations.

Sustainment Execution. Execution is putting a plan into action by applying combat power to accomplish the mission (ADP 5-0). It focuses on actions to seize, retain, and exploit the initiative.

See p. 1-34 for further discussion.

III. Endurance

Endurance refers to the ability to employ combat power anywhere for protracted periods (ADRP 3-0). Endurance stems from the ability to maintain, protect, and sustain forces, regardless of how far away they are deployed, how austere the environment, or how long land power is required.

Distribution. Distribution is key for endurance. Endurance is enabled by an Army distribution system (referred to as theater distribution) that provides forces with a continuous flow of sustainment. The distribution system is a complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military resources between point of receipt into the military system and point of issue to using activities and units (refer to ATTP 4-0.1). An important aspect of distribution is intransit visibility.

See p. 1-34 for further discussion.

Sustainment determines the **depth and duration** of Army operations. It is essential to retaining and exploiting the initiative and it provides the support necessary to maintain operations until mission accomplishment. Failure to provide sustainment could cause a pause or culmination of an operation resulting in the loss of the initiative. It is essential that sustainment planners and operation planners work closely to synchronize all of the war fighting functions, in particular sustainment, to allow commanders the maximum freedom of action.

Sustainment plays a key role in enabling **decisive action**. For example, general engineering support provides construction support to protect key assets such as personnel, infrastructure, and bases. Horizontal and vertical construction enables assured mobility of transportation networks and survivability operations to alter or improve cover and concealment to ensure freedom of action, extend operational reach, and endurance of the force. Legal personnel supporting rule of law activities may find themselves working closely with host nation judicial, law enforcement, and corrections systems personnel.

Sustaining Offensive Tasks

An offensive task is a task conducted to defeat and destroy enemy forces and seize terrain, resources, and population centers (ADRP 3-0). Sustainment operations in support of offensive tasks are high in intensity. Commanders and staffs plan for increased requirements and demands, anticipate where the greatest need might occur, and develop a priority of support. Sustainment planners may consider positioning sustainment units in close proximity to operations to reduce response times for critical support.

Sustaining Defensive Tasks

A defensive task is conducted to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability tasks (ADRP 3-0). For sustainment, the movement of materiel and troops within the area of operation has to be closely and continuously coordinated, controlled, and monitored. Distribution managers direct forecasted sustainment to designated units. Army health system support assets should be placed within supporting distance of maneuver forces but not close enough to impede ongoing operations.

Sustaining Stability Tasks

Stability tasks are tasks conducted as part of operations outside the United States in coordination with other instruments of national power to maintain or reestablish a safe and secure environment, provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief. Sustainment of stability tasks often involves supporting U.S. and unified action partners in a wide range of missions and tasks. It will almost always require interaction with other governmental agencies and nongovernmental organizations.

Sustaining Defense Support of Civil Authorities Tasks

Defense Support of Civil Authorities is support provided by U.S. Federal military forces, DOD civilians, DOD contract personnel, DOD component assets, and National Guard forces (when the Secretary of Defense, in coordination with the Governors of the affected States, elects and requests to use those forces in Title 32, USC, status) in response to requests for assistance from civil authorities for domestic emergencies, law enforcement support, and other domestic activities, or from qualifying entities for special events.



See chap. 5 for related discussion of sustainment of decisive action. Army forces demonstrate the Army's core competencies through decisive action—the continuous, simultaneous combinations of offensive, defensive, and stability or defense support of civil authorities tasks. Refer to *The Army Operations & Doctrine SMARTbook (Guide to Army Operations and the Six Warfighting Functions)* for further discussion.

Army Prepositioned Stocks (APS)

Ref: ADRP 4-0, Sustainment (Jul '12), pp. 3-5 to 3-7.

Army Prepositioned Stocks (APS) is essential in facilitating strategic and operational reach. The APS program is a key Army strategic program. The USAMC manages and the ASC executes the APS program and provides accountability, storage, maintenance, and transfer (issue and receipt) of all equipment and stocks (except medical supplies and subsistence items) (ATTP 4-15). Medical APS stocks are managed by U.S. Army Medical Materiel Agency for the Office of the Surgeon General and subsistence items are managed for the Army by DLA.

Prepositioning of stocks in potential theaters provides the capability to rapidly resupply forces until air and sea lines of communication are established. Army pre-positioned stocks are located at or near the point of planned use or at other designated locations. This reduces the initial amount of strategic lift required for power projection, to sustain the war fight until the line of communication with CONUS is established, and industrial base surge capacity is achieved (FM 3-35.1). The four categories of APS are:

Prepositioned Unit Sets

Prepositioned unit sets consist of pre-positioned organizational equipment (end items, supplies, and secondary items) stored in unit configurations to reduce force deployment response time. Materiel is pre-positioned ashore and afloat to meet the Army's global prepositioning strategic requirements of more than one contingency in more than one theater of operations.

Operational Projects Stocks

Operational projects stocks are materiel above normal table of organization and equipment, table of distribution and allowances, and common table of allowance authorizations, tailored to key strategic capabilities essential to the Army's ability to execute force projection. They authorize supplies and equipment above normal modified table of organization and equipment authorizations to support one or more Army operation, plan, or contingency. They are primarily positioned in CONUS, with tailored portions or packages pre-positioned overseas and afloat. The operational projects stocks include aerial delivery, mortuary affairs, and Force Provider base camp modules.

Army War Reserve Sustainment Stocks

Army war reserve sustainment stocks are acquired in peacetime to meet increased wartime requirements. They consist of major and secondary materiel aligned and designated to satisfy wartime sustainment requirements. The major items replace battle losses and the secondary items provide minimum essential supply support to contingency operations. Stocks are pre-positioned in or near a theater of operations to reduce dependence on strategic lift in the initial stages of a contingency. They are intended to last until resupply at wartime rates or emergency rates are established.

War Reserve Stocks For Allies

War reserve stocks for allies is an Office of the Secretary of Defense –directed program that ensures U.S. preparedness to assist designated allies in case of war. The United States owns and finances war reserve stocks for allies and prepositions them in the appropriate theater.

Land-based APS in Korea, Europe, or Southwest Asia allows the early deployment of a BCT to those locations. These pre-positioned sets of equipment are essential to the timely support of the U.S. national military strategy in the areas of U.S. national interest and treaty obligations. Fixed land-based sites store Army pre-positioned sets of BCT equipment, operational projects stocks, and sustainment stocks. Land based sets can support a theater lodgment to allow the off-loading of Army pre-positioned afloat equipment and can be shipped to support any other theater worldwide.

Basing

Ref: ADRP 4-0, Sustainment (Jul '12), pp. 3-9 to 3-10.

Basing directly enables and extends operational reach, and involves the provision of sustainable facilities and protected locations from which units can conduct operations. Army forces typically rely on a mix of bases and/or base camps to deploy and employ combat power to operational depth. Options for basing range from permanent basing in CONUS to permanent or contingency (non-permanent) basing OCONUS. A base camp is an evolving military facility that supports military operations of a deployed unit and provides the necessary support and services for sustained operations.

Bases or base camps may be joint or single service and will routinely support both U.S. and multinational forces, as well as interagency partners, operating anywhere along the range of military operations. Commanders often designate a single commander as the base or base camp commander that is responsible for protection, terrain management, and day-to-day operations of the base or base camp. This allows other units to focus on their primary function. Units located within the base or base camp are under the tactical control of the base or base camp commander for base security and defense.

Within large echelon support areas, controlling commanders may designate base clusters for mutual protection and mission command. Within a support area, a designated unit such as a brigade combat team or maneuver enhancement brigade provides area security, terrain management, movement control, mobility support, clearance of fires, and required tactical combat forces.

1. Intermediate Staging Bases

An intermediate staging base (ISB) is a tailorable, temporary location used for staging forces, sustainment and/or extraction into and out of an operational area (JP 3-35). While not a requirement in all situations, the intermediate staging base may provide a secure, high-throughput facility when circumstances warrant. The commander may use an ISB as a temporary staging area en route to a joint operation, as a long-term secure forward support base, and/or secure staging areas for redeploying units, and noncombatant evacuation operations.

An intermediate staging base is task organized to perform staging, support, and distribution functions as specified or implied by the CCDR and the theater Army operations order. The intermediate staging base task organization is dependent on the operational situation and the factors of METT-TC. It may provide life support to staging forces in transit to operations or serve as a support base supporting the theater distribution plan.

As a support base, an intermediate staging base may serve as a transportation node that allows the switch from strategic to intratheater modes of transportation. Whenever possible an intermediate staging base takes advantage of existing capabilities, serving as a transfer point from commercial carriers to a range of tactical intratheater transport means that may serve smaller, more austere ports. Army forces may use an intermediate staging base in conjunction with other joint force elements to pre-position selected sustainment capabilities.

See p. 8-37 for further discussion of intermediate staging bases.

2. Forward Operating Bases

Forward operating bases extend and maintain the operational reach by providing secure locations from which to conduct and sustain operations. They not only enable extending operations in time and space; they also contribute to the overall endurance of the force. Forward operating bases allow forward deployed forces to reduce operational risk, maintain momentum, and avoid culmination.

Forward operating bases are generally located adjacent to a distribution hub. This facilitates movement into and out of the operational area while providing a secure location through which to distribute personnel, equipment, and supplies.

A. Theater Opening

Ref: ADRP 4-0, Sustainment (Jul '12), pp. 3-7 to 3-10.

Theater opening (TO) is the ability to establish and operate ports of debarkation (air, sea, and rail) to establish a distribution system and sustainment bases, and to facilitate port throughput for the reception, staging, onward movement and integration of forces within a theater of operations (ADP 4-0). Preparing for TO operations requires unity of effort among the various commands and a seamless strategic-to-tactical interface. It is a complex joint process involving the GCC and strategic and joint partners such as USTRANSCOM and DLA. TO functions set the conditions for effective support and lay the groundwork for subsequent expansion of the theater distribution system.

When given the mission to conduct TO, a sustainment brigade, designated a sustainment brigade (TO), and a mix of functional battalions and multi-functional CSSBs are assigned based on mission requirements. The sustainment brigade HQ staff may be augmented with a Transportation Theater Opening Element to assist in managing the TO mission. The augmentation element provides the sustainment brigade with additional manpower and expertise to command and control TO functions, to conduct transportation planning, and provide additional staff management capability for oversight of RSOI operations, port operations, node and mode management, intermodal operations, and movement control. The sustainment brigade will participate in assessing and acquiring available HN infrastructure capabilities and contracted support and coordinating with military engineers for general engineering support.

See related discussion on pp. 2-10 and 3-10.

Port Opening

Port opening is a subordinate function of theater opening. Port opening is the ability to establish, initially operate and facilitate throughput for ports of debarkation (POD) to support unified land operations. The port opening process is complete when the POD and supporting infrastructure is established to meet the desired operating capacity for that node. Supporting infrastructure can include the transportation needed to support port clearance of cargo and personnel, holding areas for all classes of supply, and the proper in-transit visibility systems established to facilitate force tracking and end to end distribution.

Port opening and port operations are critical components for preparing TO. Commanders and staffs coordinate with the HN to ensure sea ports and aerial ports possess sufficient capabilities to support arriving vessels and aircraft. USTRANSCOM is the port manager for deploying U.S. forces.

Joint Task Force Port Opening (JTF-PO)

The Joint Task Force Port Opening (JTF-PO) is a joint capability designed to rapidly deploy and initially operate aerial and sea ports of debarkation, establish a distribution node, and facilitate port throughput within a theater of operations (JP 4-0). The JTF-PO is a standing task force that is a jointly trained, ready set of forces constituted as a joint task force at the time of need. The Army contribution to the JTF-PO is the Rapid Port Opening Element (RPOE) which deploys within hours to establish air and sea ports of debarkation in contingency response operations. The RPOE also provides in-transit visibility and cargo clearance.

The Joint Task Force Port Opening facilitates joint RSOI and theater distribution by providing an effective interface with the theater JDDOC and the sustainment brigade for initial aerial port of debarkation (APOD) operations. The JTF-PO is designed to deploy and operate for up to 60 days. As follow-on theater logistics capabilities arrive, the JTF-PO will begin the process of transferring mission responsibilities to arriving sustainment brigade forces or contracted capabilities to ensure the seamless continuation of airfield and distribution operations.

Seaports

Surface Deployment and Distribution Command is the single port manager (SPM) for all common user seaports of debarkation (SPOD) and as the SPM it develops policy and advises the GCC on port management, recommends ports to meet operational demands, and is primarily responsible for the planning, organizing, and directing the operations at the seaport. The TSC and its subordinate Sustainment Brigades, Terminal Battalions and Seaport Operating Companies perform the port operator functions at SPODs. These functions can include port preparations and improvement, cargo discharge and upload operations, harbor craft services, port clearance and cargo documentation activities. If the operational environment allows, SDDC may have the ability to contract locally for port operator support eliminating or decreasing the requirement for the TSC and its subordinate units.

The single port manager may have OPCON of a port support activity which is an ad hoc organization consisting of military and/or contracted personnel with specific skills to add in port operations. The TSC and SDDC will coordinate the PSA requirement. The PSA assists in moving unit equipment from the piers to the staging/marshaling/loading areas, assisting the aviation support element with movement of helicopters in preparation for flight from the port, providing limited maintenance support for equipment being offloaded from vessels, limited medical support, logistics support, and security for port operations. Ideally, the SPOD will include berths capable of discharging large medium speed roll-on/roll-off ships. The SPOD can be a fixed facility capable of discharging a variety of vessels, an austere port requiring ships to be equipped with the capability to conduct their own offloading, or beaches requiring the conducting of JLOTS operations. Whatever the type of SPOD, it should be capable of accommodating a HBCT.

The Theater Gateway Personnel Accounting Team and supporting HR company and platoons will normally operate at the SPOD as well as movement control teams to facilitate port clearance of personnel and equipment. The movement control team that has responsibility for the SPOD, coordinates personnel accounting with the supporting CSSB or sustainment brigade for executing life support functions (billeting, feeding, transportation, and so forth) for personnel who are transiting into or out of the theater.

Aerial Ports

Airfields supporting strategic air movements for deployment, redeployment, and sustainment are designated aerial ports. Aerial ports are further designated as either an aerial port of embarkation (APOE) for departing forces and sustainment, or as an aerial port of debarkation (APOD) for arriving forces and sustainment. Reception at the APOD is coordinated by the senior logistics commander and executed by an Air Force contingency response group/element and an arrival/departure airfield control group (A/DACG). The A/DACG is an ad hoc organization established to control and support the arrival and departure of personnel, equipment, and sustainment cargo at airfields and must be a lead element when opening an APOD. Elements of a movement control team and an inland cargo transfer company typically operate the A/DACG however the mission can be performed by any unit with properly trained personnel and the appropriate equipment.

USTRANSCOM's Air Mobility Command (AMC) is the single port manager for all common user APODs. Ideally, the APOD will provide runways of varying capacity, cargo handling equipment, adequate staging areas, multiple links to the road and rail network, and a qualified work force. The single port manager works with the service provided A/DACG of offload aircraft and assists in moving unit equipment to the staging/marshaling/loading areas. The A/DACG also assists the aviation support element with movement of helicopters in preparation for flight from the APOD.

Basing

A base camp is an evolving military facility that supports military operations of a deployed unit and provides the necessary support and services for sustained operations.

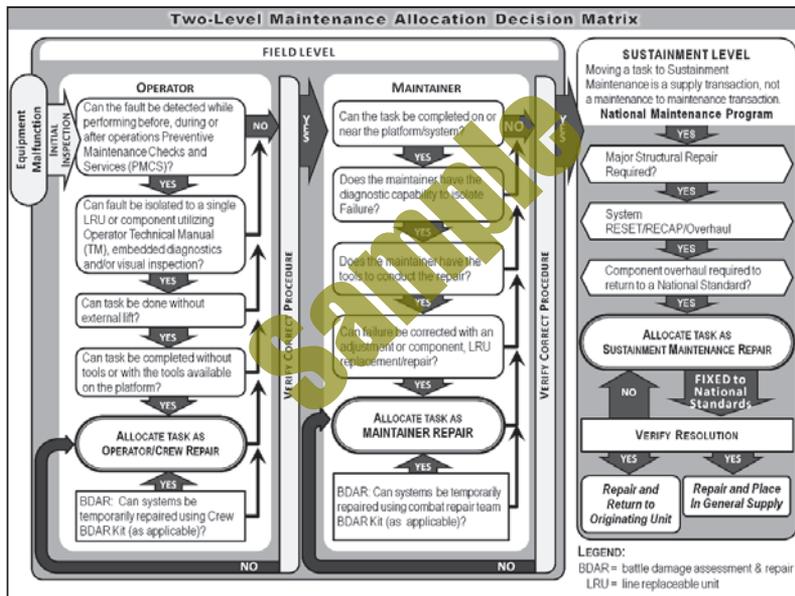
See p. 1-29 for further discussion.

Two-Level Maintenance

Ref: ATP 4-33, *Maintenance Operations* (Apr '14), pp. 1-2 to 1-4.

Field Maintenance

Field maintenance is on-system maintenance, repair and return to the user, including maintenance actions performed by operators. Field maintenance is often performed on or near the unserviceable piece of equipment or weapon system utilizing line replaceable units or modules and component replacement or repair. It is most often performed by the owning or support unit using tools and test equipment found in the unit. Field maintenance is not limited to simply remove and replace actions. Field maintenance allows for repair of components or end items on or near the system if the maintainers possess the requisite skills, proper tools, proper repair parts, references, and adequate time. Field maintenance also includes adjustment, alignment, service, applying approved field level modification work orders, fault/failure diagnoses, battle damage assessment and repair, and recovery. Field maintenance is always repair and return to the user and includes maintenance actions performed by operators.



Ref: ATP 4-33, *Maintenance Operations* (Apr '14), fig. 1-1, p. 1-4.

Operator and Crew maintenance

It is the responsibility of the using organization's operators and crews to perform maintenance on its assigned equipment. These operators/crews receive formal training from their proponent (normally advanced individual training, new equipment training) on a specific system. Tasks normally consist of inspecting, servicing, lubricating, adjusting, replacing minor components/assemblies as authorized by the Maintenance Allocation Chart using basic issue items and onboard spares. The remove and replace authority for this level of maintenance is indicated by the letter "C" in the third position of the source, maintenance, and recoverability code. A "C" appearing in the fourth position of the source, maintenance, and recoverability code, though rare, would indicate complete repair is possible at the crew maintenance level.

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C. Supply

Supply is essential for enhancing Soldiers' quality of life. Supply provides the materiel required to accomplish the mission. Supply includes ten classes of supply.

Supply operations include the requisitioning, receipt, storage, issue, distribution, protection, maintenance, retrograde, and redistribution of supplies. Levels of supply are broadly classified under the levels of war as tactical, operational, and strategic.

See pp. 5-11 to 5-26 for discussion of supply operations in support of decisive operations.

1. Tactical-Level Supplies

Tactical level supplies are those items provided to and carried within each maneuver or support brigade to sustain operational endurance. They also consist of those supplies held by sustainment brigades to provide area support.

See following pages (1-48 to 1-49) for a discussion of supply in tactical operations to include night and NBC operations, jungle operations, urban operations, desert operations, cold weather and mountain operations.

2. Operational-Level Supplies

Operational supplies are theater stocks positioned to replenish tactical stocks, when strategic replenishment is not feasible.

3. Strategic-Level Supplies

Strategic supplies are items under the control of strategic managers and are available for worldwide materiel release. These supplies are considered inventory in motion and part of the distribution system.

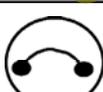
Supply operations with total asset visibility enablers merge the tactical, operational, and strategic levels into a seamless supply system. The automated management systems allow units to place their requests and assists sustainment units in providing responsive support in a timely manner.

While munitions is a class of supply, it is unique due to the complexities of activities associated with its handling. Munitions are a dominant factor in determining the outcome of full spectrum operations. Munitions provide the means to defeat and destroy the enemy. Planning munitions support is considered and synchronized from strategic to tactical levels. The results of planning and integrating munitions operations is to ensure munitions arrive in the right quantities and proper types where and when needed.

Classes of Supply

Ref: ADRP 1-02, Operational Terms and Military Symbols (Feb '15, p. 8-10).

The Army divides supply into ten classes for administrative and management purposes.

Class I		Subsistence, including health and welfare items.
Class II		Clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, administrative and housekeeping supplies and equipment (including maps).
Class III		POL, petroleum and solid fuels, including bulk and packaged fuels, lubricating oils and lubricants, petroleum specialty products; solid fuels, coal, and related products.
Class IV		Construction materials, to include installed equipment and all fortification/barrier materials.
Class V		Ammunition of all types (including chemical, radiological, and special weapons), bombs, explosives, mines, fuses, detonators, pyrotechnics, missiles, rockets, propellants, associated items.
Class VI		Personal demand items (nonmilitary sales items).
Class VII		Major items: A final combination of end products which is ready for its intended use.
Class VIII		Medical material, including medical peculiar repair parts.
Class IX		Repair parts and components, including kits, assemblies and subassemblies, repairable and non repairable, required for maintenance support of all equipment.
Class X		Material to support nonmilitary programs; such as, agricultural and economic development, not included in Class I through Class IX.

(III. Elements of Sustainment)

B. Personnel Services

Ref: ADRP 4-0, Sustainment (Jul '12), pp. 4-6 to 4-11.

Personnel services relate to personnel welfare (i.e. readiness, quality of life) and economic power. Personnel services facilitate the Army's capability to achieve endurance. Personnel services include: human resources, financial management, legal, religious, and band support.

Personnel Services

- A** Human Resources (HR) Support (FM 1-0)
- B** Financial Management (FM) (FM 1-06)
- C** Legal Support (FM 1-04)
- D** Religious Services (FM 1-05)
- E** Band Support (ATP 1-19)

Ref: ADRP 4-0, Sustainment, chap. 4.

A. Human Resources Support

Human resources support maximizes operational effectiveness and facilitates support to Soldiers, their families, Department of Defense civilians, and contractors authorized to accompany the force. Human resources support includes personnel readiness management; personnel accountability; strength reporting; personnel information management; casualty operations; essential personnel services, band support, postal operations; reception, replacement, return-to-duty, rest and recuperation, and redeployment operations; morale, welfare, and recreation (MWR); and human resource planning and staff operations.

See p. 1-59 for an overview of the principles of personnel services, and p. 1-60 for an overview of human resources support from FM 1-0.

1. Personnel Accountability

Personnel accountability is the process for recording by-name data on Soldiers, Department of the Army civilians, and contractors when they arrive and depart from units; when their location or duty status changes (such as from duty to hospital); or when their grade changes. These activities include the reception of personnel, the assignment and tracking of replacements, return-to-duty, rest and recuperation, and redeployment operations.

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2. Strength Reporting

Strength reporting is a numerical end product of the accounting process, achieved by comparing the by-name data obtained during the personnel accountability process (faces) against specified authorizations (spaces or in some cases requirements) to determine a percentage of fill. Strength reporting relies on timely, accurate, and complete personnel information into the database of record. It is a command function conducted by the G1/S1 to enable them to provide a method of measuring the effectiveness of combat power.

3. Personnel Information Management

Personnel information management encompasses the collecting, processing, storing, displaying, and disseminating of information about Soldiers, units, and civilians. Personnel information management is the foundation for conducting or executing all human resources functions and tasks.

4. Personnel Readiness Management

Personnel readiness management involves analyzing personnel strength data to determine current combat capabilities, projecting future requirements, and assessing conditions of individual readiness. Personnel readiness management is directly inter-related and interdependent upon the functions of personnel accountability, strength reporting, and personnel information management.

5. Casualty Operations Management

The casualty operations management process includes the recording, reporting, verifying, and processing of information from unit level to HQ, Department of the Army. The process collects casualty information from multiple sources and then collates, analyzes, and determines the appropriate action.

6. Essential Personnel Services

Essential personnel services provide Soldiers and units timely and accurate personnel services that efficiently update Soldier status, readiness and quality of life. It allows the Army leadership to effectively manage the force, including actions supporting individual career advancement and development, proper identification documents for security and benefits entitlements, recognition of achievements, and service. It also includes personal actions such as personnel support.

7. Personnel Support

Personnel support encompasses command interest/human resources programs, MWR, and retention functions. Personnel support also includes substance abuse and prevention programs, enhances unit cohesion, and sustains the morale of the force.

8. Postal Operations

The Military Postal Service serves as an extension of the U.S. Postal Services; therefore, its services are regulated by public law and federal regulation. Postal operations require significant logistics and planning for air and ground transportation, specialized equipment, secured facilities, palletization crews, and mail handlers.

9. Morale, Welfare, and Recreation and Community Support

Morale, welfare, and recreation (MWR) and community support provide Soldiers, Army civilians, and other authorized personnel with recreational and fitness activities, goods, and services. The morale, welfare, and recreation support network provides unit recreation, library books, sports programs, and rest areas for brigade-sized and larger units. Community support programs include the American Red Cross, Army Air Force Exchange System, and family support system. They capital-

(III. Elements of Sustainment)

C. Health Service Support

Ref: ADRP 4-0, Sustainment (Jul '12). pp. 4-11 to 4-12.

Under the Army sustainment warfighting function, the health service support provides continual, flexible, and deployable medical support designed to sustain a force projection Army and its varied missions. The health service support mission includes—casualty care, medical evacuation, and medical logistics.

Health Services Support



Casualty Care



Medical Evacuation



Medical Logistics

Ref: ADRP 4-0, Sustainment, chap. 4.

A. Casualty Care

Casualty care encompasses all issues pertaining to the provision of clinical services for the treatment of Soldiers from the point of injury to successive roles of care. Casualty care includes the following sub-functions: organic and area medical support, hospitalization, the treatment aspects of dental care and behavioral health/neuropsychiatric treatment, clinical laboratory services, and treatment of chemical, biological, radiological, and nuclear patients.

1. Organic and Area Medical Support

The medical treatment function encompasses Roles 1 and 2 medical treatment support. Role 1 medical treatment is provided by the combat medic or by the physician, the physician assistant, or the health care specialist in the battalion aid station/Role 1 medical treatment facility. Role 2 medical care provides greater resuscitative capability than is available at Role 1 and is rendered by the medical company (brigade support battalion) or by the medical company (area support), which is an echelon above brigade asset. These roles of care are provided by organic assets or on an area support basis from supporting medical companies or detachments. The area support function encompasses emergency medical treatment, advanced trauma management, routine sick call, emergency dental care, preventive medicine, and combat and operational stress control support.

2. Hospitalization

The Army's hospitalization capability consists of Role 3 combat support hospitals purposely positioned to provide support in the area of operations. At Role 3, the combat support hospital expands the support provided at Role 2 and is staffed and equipped to provide care for all categories of patients, to include resuscitation, initial wound surgery, damage control surgery, and postoperative treatment. Hospitaliza-

I. Role of the Sustainment Command

Ref: ATP 4-94 (FM 4-94), *Theater Sustainment Command (Jun '13)*, chap. 1.

Sustainment commands provide mission command and operational-level sustainment support to an Army, joint or multinational force in support of unified land operations. It provides centralized mission command and decentralized operations throughout the theater in order for Army forces to sustain unified land operations. Unified land operations describe how the Army operates through simultaneous offensive, defensive and stability operations. The theater sustainment command provides the sustainment needed by Army forces to enable Operational Reach, Freedom of Action, and Prolonged Endurance, thereby enabling Army forces to conduct Decisive Action.

I. Theater Sustainment Command (TSC)

The Theater Sustainment Command (TSC) and its subordinate units are assigned to an Army Service Component Command (ASCC) supporting a geographical combatant commander (GCC). The TSC is a fixed headquarters organization comprised of a command group, staff and special troop's battalion. It can deploy an expeditionary sustainment command (ESC) when the TSC determines that a forward command is required, or when task organized directly under the mission command of a Corps or Army forces (ARFOR). This capability provides the TSC commander with the regional focus necessary to provide effective operational-level support to Army or joint task force (JTF) missions.

The TSC is focused on strategic and operational sustainment management. The command ensures the information flow from strategic deployment, distribution, and sustainment partners is accurate, timely, and adequate to support the actions of the theater sustainment forces providing movement control for reception, staging, onward-movement and integration (RSOI) and all other sustainment operations.

The TSC is a HQ that provides mission command of subordinate organizations and functional units executing theater opening, theater distribution and sustainment operations to include supply, maintenance, transportation, petroleum and port and terminal operations in support of the ASCC/GCC objective. The TSC is the senior Army sustainment headquarters within an area of responsibility (AOR). The TSC is responsible for sustainment support to Army forces, and when directed, to joint or multi-national forces.

As an in-transit visibility (ITV) gatekeeper, the TSC assures the strategic to operational linkage of critical information and notifies strategic partners if ITV data is not accurate or provided. The TSC ensures the physical flow of inbound forces and non-unit cargo is meeting the priorities and timeline established by the ASCC, and resolves issues with timing if unforeseen events interfere with the planned timing of strategic to theater deliveries.

The TSC monitors the operation of the theater ports of debarkation and the theater distribution network to ensure there are no bottleneck to impede the flow of cargo and forces into and through the theater. The TSC supports the RSOI at the theater level based on GCC guidance. Consequently, they may be involved in resolving theater level issues with host nation, joint, interagency, multinational, commercial, and private organizations in the negotiations for joint use of assets available. The TSC plans for common user logistics that are provided by Army forces in the theater and notifies the ASCC if the Army forces are inadequate for the expected workload.

Role Of The Sustainment Command Supporting Unified Land Operations

Unified land operations are the Army's operational concept and the Army's contribution to unified action: synchronization, coordination, integration of government and non government authorities'. A complete description of unified land operations is in ADRP 3-0. The goal of unified land operations is to defeat the enemy on land and establish the conditions to meet the joint commander's end state. The formation of unified land operations is described in ADRP 3-0. The sustainment of unified land operations requires a continuous link between the strategic, operational and tactical levels. It requires close coordination and collaboration with other services, allies, host nation and other governmental organizations. Sustainment commands are the mission command sustainment linkage to achieve unified land operation success.

Theater sustainment commands and expeditionary sustainment commands must understand the doctrinal foundations and tenants of unified land operations to ensure integration of sustainment in decisive actions. Detailed discussion can be found in ADRP 3-0, chapter 2. Each foundation and tenet should be analyzed in two ways:

- Analyze each to ensure proper support is in place to allow the operational commander to integrate it or apply them to the overall operation to achieve success.
- Analyze each from a TSC or ESC perspective to ensure that each is incorporated into the theater support concept. This ensures theater sustainment is operating within the Army's operational concept and applying the same principles as the operational commanders.

Unified land operations have four foundations: initiative, decisive action, Army core competencies and mission command. By integrating these foundations commanders can achieve success.

Decisive action is the continuous simultaneous combinations of offensive, defensive, stability or defense support to civil authorities and allies. Each of these tasks had specific support requirements. Sustainment command commanders and staffs must understand the decisive actions tasks and their purpose. They must also understand support requirements and the simultaneity of operations to develop viable and effective support plans. The theater sustainment commander must task organize his command accordingly to meet the varying mission requirements.

Theater sustainment commanders must understand that while all operations consist of simultaneous combined arms maneuver and wide area security in various proportions, most operations will be predominantly characterized by one or the other, and ultimately determining the TSC and ESC missions and task organization.

Theater Sustainment Command Strategic Partners

The theater sustainment command normally provides support from the strategic to the operational level, and must be familiar with joint, and U.S. governmental partners. Sustaining unified land operations requires synchronization with higher, adjacent, and joint enabling agencies. It is imperative that the command and staff understand what each partner provides to support the ASCC/GCC objectives. The theater sustainment command will likely be required to communicate and coordinate directly with strategic partners to synchronize and integrate their support.

See following pages (pp. 2-3 to 2-5) for an overview of key TSC strategic partners.

II. TSC/ESC Mission, Roles, and Organization

Ref: ATP 4-94 (FM 4-94), Theater Sustainment Command (Jun '13), chap. 2.

I. Theater Support Command (TSC)

The TSC is responsible for providing sustainment support for an area of responsibility. The ESC is responsible for providing sustainment support for a joint operations area or specified area of operations. The sustainment commands are task organized with sustainment brigades and other modular sustainment forces structure to accomplish the mission. The combination of these capabilities gives the sustainment commander the ability to organize and provide tailored support such as theater opening, theater distribution and sustainment support to forces, and the theater closing within an area of responsibility (AOR).

A. TSC Mission

The sustainment warfighting function is the related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance. The endurance of Army forces is primarily a function of their sustainment. Sustainment determines the depth and duration of Army operations. It is essential to retaining and exploiting the initiative. Sustainment is the provision of the logistics, personnel services, and health service support necessary to maintain operations until mission accomplishment.

TSC Operational Responsibilities

The TSC has three operational responsibilities to forces in theater:

- 1 Theater Opening**
- 2 Theater Distribution**
- 3 Sustainment**

The mission of the TSC is to provide mission command for operational level logistics within an assigned AOR. The TSC is capable of planning, controlling, and synchronizing operational-level Army deployment and sustainment for the ASCC, joint force commander (JFC), or multi-national joint force commander. It provides a centralized sustainment mission command structure for the ASCC; and supports all phases of operations from phase 0 to phase 5.

The TSC executes its mission through human resource sustainment centers, financial management centers, and the use of modular forces, to include expeditionary sustainment commands (ESC), sustainment brigades, combat sustainment support battalions (CSSB), and other modular sustainment formations. Sustainment brigades, CSSBs, and functional sustainment units serve as the building blocks of the force structure designed to execute TSC missions within the theater.

Port Operations

Ref: ATP 4-94 (FM 4-94), Theater Sustainment Command (Jun '13), pp. 2-2 to 2-3.

Port operations units may include (but are not limited to) a Transportation Brigade (Expeditionary), Terminal Transportation Battalion, SDDC Transportation Battalion, Joint Task Force-Port Opening, Air Mobility Command Contingency Response Groups, Navy Cargo Handling Battalions, and Movement Control Teams.

Joint Task Force – Port Opening (Aerial Port of Debarkation)

The JTF-PO (APOD) is a joint capability provided by USTRANSCOM that is designed to rapidly establish and initially operate an APOD, establish a distribution node, and facilitate port throughput within an AOR. The JTF-PO (APOD) is not a standing task force, but is a jointly trained, ready set of forces constituted as a joint task force at the time of need. The JTF-PO (APOD) is normally mission commanded by an Air Force AMC Contingency Response Wing or Group commander. Army elements of a JTF-PO (APOD) will normally include a transportation detachment (rapid port opening). The detachment includes limited movement control functions, cargo transfer capabilities, and transportation assets. It does not include heavy equipment truck, Rough Terrain Cargo Handler equipment, or crane assets.

The JDDOC must request JTF-PO from USTRANSCOM. When they are deployed, they serve a direct support role to the GCC, and can serve as the initial theater opening capability for up to 60 days, or when relieved by follow on forces. The TSC or ESC should work closely with the JTF-PO in order to seamlessly transfer robust theater opening capabilities within the AO/JOA.

Joint Task Force – Port Opening (Seaport of Debarkation)

The JTF-PO (SPOD) is a joint capability provided by USTRANSCOM that is designed to rapidly establish and initially operate an SPOD, establish a distribution node, and facilitate port throughput within a theater of operations. Its design and capabilities are similar to those of the JTF-PO (APOD). The JTF-PO (SPOD) is mission commanded by an Army SDDC battalion or Navy Expeditionary Port Unit commander. Like the JTF-PO (APOD), the JTF-PO is a jointly trained ready set of forces constituted in a time of need. They are comprised of Army and Navy elements, and may be augmented by additional port opening enablers such as expeditionary contracting, SDDC subject matter experts, and ship husbandry subject matter experts.

The JTF-PO (SPOD) does not have organic cargo handling capability, and must rely on contracted assets/personnel, or theater opening forces provided by the GCC.

Transportation Brigade (Expeditionary)

The Transportation Brigade (Expeditionary) or TBX, is normally assigned to a FORSCOM unit to provide mission command of assigned and attached port, terminal and watercraft units conducting expeditionary intermodal operations in support of unified land operations. This unit is normally employed in a theater of operation to provide mission command for port opening and operation of inland waterway, bare-beach, degraded and improved seaports.

SDDC Transportation Brigade

SDDC Transportation Brigades are GCC aligned and provide single port management functions in an area of operations. SDDC serves as the Army Service component command of US Transportation Command, and is a major subordinate command to Army Materiel Command. This relationship allows the SDDC Transportation Brigade to establish linkage to the joint deployment and distribution enterprise and Army Materiel Command's Materiel Enterprise. The brigade also works with commercial transportation industry as a coordinating link between DoD surface transportation requirements and the capability industry provides.

combatant commander must specify the control and tasking authorities bestowed on the TSC as well as the command relationships it will have with the Service components. The primary element of the TSC for theater distribution is within the support operations (SPO). Within the SPO, the distribution management center (DMC) becomes the center of gravity to sustain distribution within the theater.

See pp. 1-51 to 1-53 for further discussion.

3. Sustainment

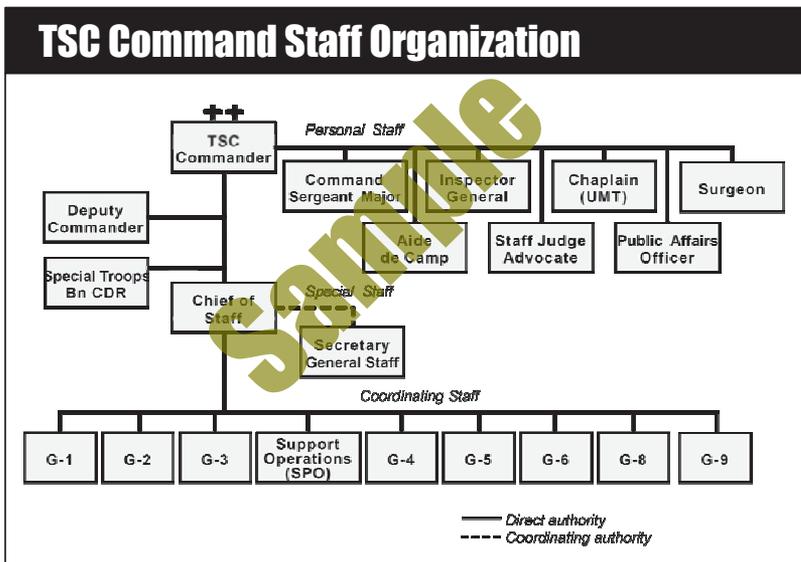
Unified land operations require commanders to generate and maintain combat power to execute operations. The TSC is responsible for army theater sustainment enabling the GCC/JFC to apply combat power. Sustainment comprises of logistics, personnel services, and health service support.

The TSC and ESC is able to provide the sustainment warfighting function through the means of the support operations.

See pp. 2-27 to 2-44 for further discussion of support operations.

C. TSC Organization

The TSC consists of three staff elements: personal, special, and coordinating.



Ref: ATP 4-94, Theater Sustainment Command (Jun '13), fig. 2-1, p. 2-6.

The command sergeant major, aide-de-camp, staff judge advocate, inspector general, chaplain, surgeon, and public affairs officer comprise the personal staff. The special staff is comprised of the secretary of the general staff, and the knowledge management officer. Special staff officers provide technical advice and planning assistance to the TSC commander and staff. The coordinating staff is comprised of the G-1– G-6, G-8, and support operations (SPO). The coordinating staff develops plans and policies in their respective areas and provides guidance, priorities, and allocations to subordinate commands/units.

I. Sustainment Brigade

Ref: ATP 4-93, Sustainment Brigade (Apr '16), chap. 1.

The sustainment brigade is a multifunctional headquarters integrating and employing all assigned and attached units while planning and synchronizing sustainment operations. It is the Army's primary brigade level sustainment headquarters. Sustainment brigades are usually assigned or attached to a sustainment command. The sustainment brigade and its attached units will normally have a general support relationship with supported organizations.

The sustainment brigade executes logistics and personnel services functions associated with theater opening, sustainment, distribution, and theater closing missions.

The sustainment brigade headquarters plans, coordinates, synchronizes, monitors, and controls sustainment operations within its support area.

I. Sustainment Brigade Capabilities

The sustainment brigade supports Army forces at the tactical and operational levels, providing support to brigade combat teams (BCTs), multifunctional and functional support brigades, deployable, self-contained division and corps headquarters, and other units operating in its assigned support area. Depending upon operational and mission variables, the sustainment brigade commands between three and seven battalions. Sustainment brigades are usually assigned or attached to a sustainment command. The sustainment brigade and its attached units will normally have a general support relationship with supported organizations.

The sustainment brigade is expeditionary, inter-operable and agile. These characteristics describe the attributes that the organization requires to be effective. The sustainment brigade is expeditionary as it can deploy task organized forces on short notice to austere locations and conduct sustainment operations immediately upon arrival. The sustainment brigade is inter-operable as it can task organize rapidly and integrate joint, inter-organizational and multinational requirements and capabilities. The sustainment brigade is agile as it can transition sustainment support across all decisive action tasks.

The sustainment brigade is task organized with units required to execute logistics and personnel services. Logistics includes; supply, maintenance, transportation, field services, distribution, and operational contract support. Personnel services are sustainment functions that fund and man the force.

The combat sustainment support battalion (CSSB) is the building block upon which the sustainment brigade capabilities are developed. The organization and operations of most functional logistics battalions are addressed in specific functional Army techniques publications. Organizational information about functional logistics battalions is available in unit authorization documents and from force design resources located at the Combined Arms Support Command Sustainment Unit One Stop website.

A financial management support unit and a human resources company may be attached or assigned to the sustainment brigade.

The sustainment brigade headquarters is designed to operate as a single command element without the ability to conduct split based operations. The sustainment brigade cannot create or operate a tactical command post (CP) without accepting risk in other areas.

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The sustainment brigade headquarters plans and conducts base security and protection against level I threats. Level II and III threats require coordination with designated combat reaction forces. The sustainment brigade cannot be assigned an area of operations or manage terrain.

A task organized sustainment brigade is dependent on the following organizations:

- Sustainment brigade signal network support company for signal support.
- Area support medical company for Role 2 medical support.

II. Role and Functions

The role of a sustainment brigade commander and staff is to exercise mission command for task organized sustainment brigades. Mission command is the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders in the conduct of unified land operations (ADP 6-0).

The sustainment brigade executes logistics and personnel services functions associated with theater opening, sustainment, distribution, and theater closing missions. A function is a practical grouping of tasks and systems (people, organizations, information, and processes) united by a common purpose (ADP 1-01). Properly task organized, a sustainment brigade could be conducting theater opening tasks, sustainment and theater distribution tasks during the early phases of an operation or if it is the only sustainment brigade in the joint operations area (JOA). This same sustainment brigade, with a different task organization, can transition to conducting a theater distribution mission or sustainment mission.

III. Relationships

Commanders task organize the force to provide specific capabilities in support of mission requirements. They task organize the force by establishing command and support relationships. These relationships establish clear responsibilities and authorities between subordinate and supporting units. For every operation, the sustainment brigade commander and subordinate commanders must make every effort to ensure command and support relationships are clearly expressed in orders; their own and those of their higher headquarters and supported organizations. Doctrine sets general guidelines; mission orders will determine the details of the relationships.

Doctrinal relationships are defined and explained in ADRP 5-0, The Operations Process, and FM 6-0, Commander and Staff Organization and Operations.

Sustainment brigade commanders closely evaluate the outcome they wish to achieve and then decide which combination of command and support relationships to assign subordinate units. The relationships must accommodate the known situation and empower subordinate leaders to respond to the unknown. Changes in command relationships do not necessarily require changes in support relationships, especially if the nature of the support does not change. Simple command and support relationships increase the likelihood of success.

The sustainment brigade commander also establishes informal relationships. The informal relationship between the sustainment brigade and the division G-4 (assistant chief of staff, logistics) provides another source of information for the sustainment brigade commander to consider when determining appropriate command and support relationships and internal task organization. A description of the relationship between the division G-4 and sustainment brigade support operations (SPO) is in the organization discussion later in this chapter.

A. Command Relationships

Command relationships define command responsibility and authority. Army command relationships are: organic, assigned, attached, operational control, and tactical

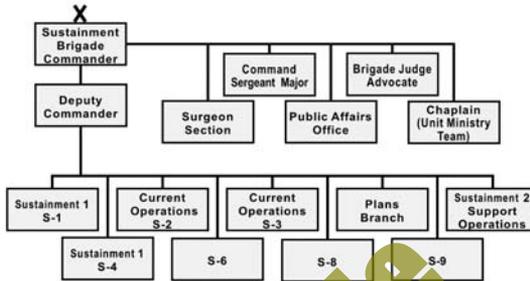
IV. Sustainment Brigade Organization

Ref: ATP 4-93, *Sustainment Brigade* (Apr '16), pp. 1-9 to 1-16.

The sustainment brigade is a headquarters organization comprised of a command group, staff and a special troops battalion.

Staff Organization

The sustainment brigade headquarters plans, coordinates, synchronizes, monitors, and controls sustainment operations within its support area. Figure 1-1, depicts the recommended sustainment brigade staff organization.

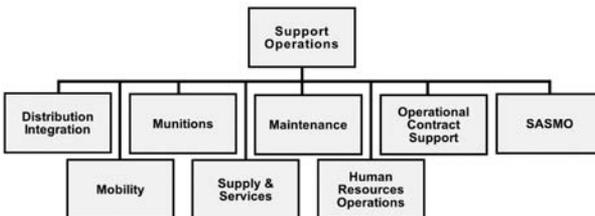


ATP 4-93, fig. 1-1. *Sustainment brigade staff organization.*

Support Operations (SPO)

The brigade support operations plans and coordinates support operations. Support Operations is the staff function of planning, coordinating, and synchronizing sustainment in support of units conducting decisive action in an area of operations. It is performed by support operations coordinating staff of a sustainment unit. The brigade support operations balances external sustainment support requirements with sustainment capabilities. The SPO conducts distribution operations, maintenance management, operational contract support and commodity management of general supplies, ammunition, fuel and water.

The sustainment brigade SPO executes materiel priorities established by the sustainment command's distribution management center in accordance with the ASCC policy and priorities. The SPO manages internal supplies and stocks as well as supervise distribution, maintenance, and materiel management functions within the brigade's geographic support area.



ATP 4-93, fig. 1-2. *Sustainment brigade support operations.*

Special Troops Battalion (STB)

See pp. 3-9 to 3-12 for discussion of the *Special Troops Battalion (STB)*.

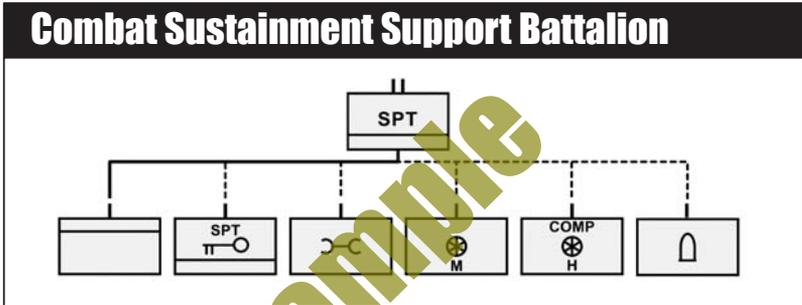
Sustainment
Brigade

III. Combat Sustainment Support Battalion (CSSB)

Ref: ATP 4-93, Sustainment Brigade (Apr '16), chap. 4.

I. CSSB Capabilities

The combat sustainment support battalion is a flexible and versatile headquarters that controls execution and synchronizes logistics support in a designated area of operations. The CSSB can be task organized with functional companies, teams and detachments that execute transportation (mode, terminal and movement control) operations, maintenance operations, ammunition operations, supply support activity operations, water operations, petroleum operations, aerial delivery operations and mortuary affairs. The CSSB is the building block upon which the sustainment brigade capabilities are developed.



ATP 4-93, fig. 3-3. Notional combat sustainment support battalion.

The combat sustainment support battalion employs and controls up to seven company-sized assigned and attached units conducting logistics operations and support. The CSSB staff establishes a command post, executes the operations process and synchronizes logistics operations in support of mission requirements. The CSSB supports brigade combat teams, multifunctional support brigades, and other units operating in its assigned support area.

The CSSB is task organized with units required to support logistics requirements. A task organized CSSB is dependent on the following organizations:

- The sustainment brigade for administrative support.
- Support maintenance company for field maintenance and recovery support.
- Area support medical company for Role 2 medical support.

The CSSB executes and synchronizes logistics functions as required to support units in its assigned support area. It is task organized to provide specific types of logistics functions support depending on its assigned mission. The CSSB usually has a general support relationship with its supported organization.

II. CSSB Organization

The CSSB is a logistics headquarters with a command group, coordinating staff and a headquarters company. The CSSB is task organized with logistics capabilities to support specific requirements. These logistics companies, platoons or detachments include maintenance, supply, transportation mode, terminal and movement control, mortuary affairs and field services.

IV. Mission Command

Ref: ATP 4-93, Sustainment Brigade (Apr '16), chap. 4.

Mission command is both a philosophy of command and a warfighting function. Applying the mission command philosophy helps commanders exercise authority skillfully and master the systems and procedures that help forces accomplish missions. They use the mission command warfighting function to help them integrate and synchronize operations. Mission command (as opposed to detailed command) tends to be decentralized and flexible. This uncertain nature requires an environment of mutual trust and shared understanding among commanders, subordinates, and partners.

I. Mission Command Tasks

The commander is the central figure in mission command. While staffs perform essential functions that amplify the effectiveness of operations, commanders are ultimately responsible for accomplishing assigned missions. Throughout operations, commanders encourage disciplined initiative through a clear commander's intent while providing enough direction to integrate and synchronize the force at the decisive place and time. To this end, commanders perform three primary mission command warfighting function tasks. The commander's tasks are:

- Drive the operations process through their activities of understanding, visualizing, describing, directing, leading, and assessing operations.
- Develop teams, both within their own organizations and with joint, interagency and multinational partners.
- Inform and influence audiences, inside and outside their organizations.

Sustainment brigade commanders collaborate with supported maneuver commanders, their staff, and strategic partners to create a shared understanding. As sustainment brigade commanders begin to develop an understanding of the operational environment, they start visualizing the operation's end state and potential solutions to solve sustainment problems. Based on this understanding, commanders make decisions and direct action throughout the operations process.

Sustainment brigade commanders cannot always rely on habitual relationships established in garrison. They use team building skills to form effective teams and foster unity of effort across all components of the Army and joint, interagency and multinational partners.

Sustainment brigade commanders use inform and influence activities to ensure actions, themes, and messages compliment and reinforce each other to accomplish objectives. An information theme is a unifying or dominant idea or image that expresses the purposes for an action. Messages support themes. They can be verbal, written, or electronic communications that supports a theme focused on an audience. Messages are tailored to specific audiences.

Staffs support commanders in the exercise of mission command by performing four primary mission command warfighting function tasks. The staff tasks are—

- Conduct the operations process: plan, prepare, execute and assess.
- Conduct knowledge management and information management.
- Synchronize information-related capabilities.
- Conduct cyber electromagnetic activities.

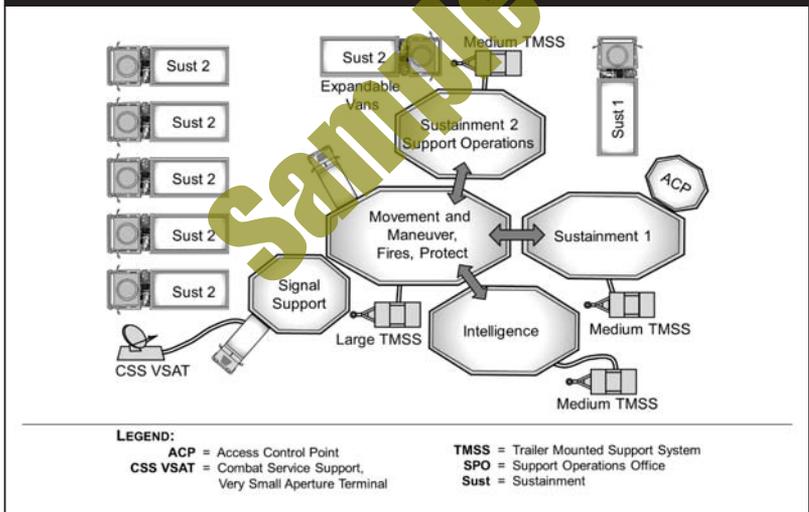
II. Command Post Cells And Staff Elements

The sustainment brigade and its subordinate unit's command post conduct activities supporting sustainment tasks, tasks the commander assigns and tasks common to all command posts. The deputy commander establishes and leads command post operations. A command post is a unit headquarters where the commander and staff perform their activities (FM 6-0). The sustainment brigade and its subordinate unit's command post functions include:

- Plan and prepare for operations.
- Control operations, integrate resources and synchronize current operations.
- Receive, analyze and disseminate information.
- Prepare reports.

There are three types of command post; main command post, tactical command post and early entry command post. The main command post is a facility containing the majority of the staff designed to control current operations, conduct detailed analysis, and plan future operations (FM 6-0). The tactical command post is a facility containing a tailored portion of a unit headquarters designed to control portions of an operation for a limited time (FM 6-0). An early entry command post is a lead element of a headquarters designed to control operations until the remaining portions of the headquarters are deployed and operational (FM 6-0).

Sustainment Bde Command Post (Example)



ATP 4-93, fig. 4-1. Example sustainment brigade command post.

The sustainment brigade's headquarters' design and its organic communications capability provides commanders a flexible mission command structure to support a main CP and an early entry command post. The sustainment brigade's main CP includes representatives of all staff sections and a full suite of information systems to plan, prepare, execute, and assess operations. The commander considers the size, location and mobility requirements of the CP and then configures the command post.

A. Sustainment Brigade Functional & Integrating Cells

Ref: ATP 4-93, Sustainment Brigade (Apr '16), pp. 4-6 to 4-8.

Functional Cells

Functional cells coordinate and synchronize forces and activities by warfighting function. The functional cells within the sustainment brigade CP are intelligence, movement and maneuver, fires, protection, and sustainment. The functional cells provide a standardized method of vertically integrating closely related tasks. The commander is responsible for ensuring all command post functions are executed. This is a challenge for sustainment units since they do not have all the warfighting functions represented on their staffs. The functional cell descriptions below include staffing recommendations.

Intelligence Cell

The sustainment brigade CP intelligence cell includes the brigade S-2, current operations and the brigade S-2, geospatial. They coordinate activities and systems that help commanders understand the threat, terrain and weather, and civil considerations. The intelligence cell requests, receives, and analyzes information from all sources to produce and distribute intelligence products. This includes tasks associated with the intelligence process, intelligence preparation of the battlefield/battlespace, MDMP, information collection and targeting.

Movement and Maneuver Cell

The sustainment brigade CP movement and maneuver cell is the brigade S-3, operations. It coordinates activities and systems that position forces to support mission requirements. The brigade S-3 maintains synchronization by continuously updating running estimates, the synchronization matrix, and the decision support template, to effectively arrange mission command activities across time, space, purpose, and warfighting functions, to accomplish the mission.

Fires Cell

The fires cell coordinates, plans, integrates, and synchronizes the employment and assessment of fires in support of current and future operations. The sustainment brigade operations staff includes an operations officer with an infantry additional skill identifier who could be the brigade S-3 CP fires cell.

Protection Cell

The sustainment brigade CP protection cell is the brigade S-3 operations support cell. This cell coordinate the activities and systems that preserve the force through risk management. This includes tasks associated with protecting personnel, physical assets, and information. Elements of the following staff sections form this cell: chemical, biological, radiological, and nuclear; engineer; and operations security.

Sustainment Cell

The sustainment brigade CP has two sustainment cells. The brigade S-1, brigade S-4, brigade S-8 and brigade surgeon sections form one of the sustainment cells. This cell is responsible for coordinating activities and systems that provide personnel management, logistics support, financial management, and Army Health System support for units assigned and attached to the sustainment brigade. The brigade support operations forms the second sustainment cell. This cell is responsible for coordinating activities and systems that provide support and services to the supported force to ensure freedom of action, extend operational reach, and prolong endurance of a supported maneuver commander.

Integrating Cells

Horizontal integration occurs in three integrating cells that synchronize across three planning horizons (or by the phases of the operation). A planning horizon is a point in time commanders use to focus the organization's planning efforts to shape future events. The planning horizons are short, mid, and long and correspond to the integrating cells within a headquarters: current operations cell, future operations cell, and plans cell.

The sustainment brigade has a small plans branch, usually used as the long range planning cell. The majority of the sustainment brigade staff balance their efforts between the current operations and the plans cells. Mid-range planning (future operations) is accomplished by integrating members from the SPO distribution plans and integration branch with staff representatives as required. The S-3 conducts many of the tasks associated with short range planning and execution (current operations), but not all. Representative from the functional cells and special staff assist with short range planning and execution as required.

Current Operations Integration Cell

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

Future Operations Cell

The future operations cell is responsible for planning operations in the mid-range planning horizon. The sustainment brigade commander must execute mid-range planning tasks. This includes considering the requirement for convoy support centers or centralized receiving and shipping points and other tasks that facilitates continuation of the current operation. The future operations cell serves as a fusion cell between the plans and current operations integration cells. The future operations cell monitors current operations and determines implications for operations within the mid-range planning horizon. In coordination with the current operations integration cell, the future operations cell assesses whether the ongoing operation must be modified to achieve the current phase's objectives.

The brigade SPO distribution plans and operations branch, updates and adds details to the distribution plan and human resources plan supporting the current operation. The brigade S-3 operations section updates and adds details to the branch plans foreseen in the current operation and prepares any orders necessary to implement a sequel to the operation. They develop the fragmentary order necessary to implement the change.

Plans Cell

The sustainment brigade CP plans cell is responsible for planning operations for the long-range planning horizons. It prepares for operations beyond the scope of the current order by developing plans and orders, including branch plans and sequels. The brigade S-3 plans develops plans for future operations. All staff sections of the sustainment brigade balance their efforts between the current operations integration and plans cells. The brigade SPO develops the concept of support which is included in plans and orders. The distribution plans and integration section is the SPO integrator to the plans cell.

IV. Theater Closing

Theater closing is the process of redeploying Army forces and equipment from a theater, the drawdown and removal or disposition of Army non-unit equipment and materiel, and the transition of materiel and facilities back to host nation or civil authorities (ADP 4-0). Theater closing begins with the termination of operations.

Termination criteria accounts for a wide variety of operational tasks that the joint force may need to accomplish, including disengagement, protection (including force health protection support to conduct retrograde cargo inspections and pest management operations), transition to post-conflict operations, and redeployment. Planning for the transition from sustained combat operations to the termination of operations, and then a complete handover to civil authority, begins during plan development and continues throughout all phases of a campaign or major operation.

During theater closing the sustainment command coordinates with the JFC's planning team. Sustainment decisions should always consider the eventuality of redeploying Army forces and equipment from a theater. The execution of theater closing tasks is synchronized with tactical commanders, base commanders and strategic partners, including supporting contractors.

If the sustainment brigade is designated as the headquarters responsible for overseeing theater closing tasks, it will focus on redeployment, drawdown of non-unit materiel, and transitioning of materiel, facilities and capabilities to HN or civil authorities. Considerations include:

- What were the property accountability policies during the operation?
- How long was the operation?
- What classes of materiel are part of the retrograde of materiel?
- Does retrograde of materiel include containers? How many?
- Who else is conducting theater closing tasks?
- Which strategic partners are identified (USAMC, DLA or U.S. Transportation Command [USTRANSCOM])?
- Are there clear lines of property accountability?
- Is the sustainment bde responsible for theater closing tasks in their assigned support area, throughout the entire JOA, or some other geographic area?
- What is designated for foreign military sales?
- Has the GCC staff identified which real property transfers to local government?

The CSSB and its subordinate units, execute the redeployment plan as directed by the sustainment brigade. Planners in the sustainment brigade ensure there are dedicated units redeploying forces, equipment, and retrograde of materiel while another unit is focused on continued area support. Key functions during this phase are transportation support, staging and upload of strategic lift, movement control, maintenance and recovery support, and field services. Examples of teams organized to accomplish base closure and transfer, redistribution, retrograde, and disposal of materiel are outlined in appendix A.

Transitioning facilities to HN or civil authorities is another aspect of theater closing. Although basing is an engineer responsibility, a sustainment brigade could be assigned as the headquarters responsible for closing bases in a joint operational area. *Refer to ATP 3-37.10, Base Camps, for more information.*

Strategic partners are critical to theater closing. The USAMC is responsible for pre-positioned materiel and theater provided equipment (TPE). The AFSB and the defense logistics agency are responsible for identifying where equipment requiring sustainment maintenance is shipped. The USAMC representative provides disposal codes and a DLA representative identifies locations where equipment and materiel are disposed.

*3-32 (Sustainment Brigade) V. Employment

VI. Protection Considerations

Ref: ATP 4-93, *Sustainment Brigade* (Apr '16), chap. 5 (protection responsibilities). The remainder of material in this section is retained from previous SMFLS editions (adaptations from FMI 4-93.2, *Sustainment Brigade*, Feb '09, app. B and JP 3-11).

Protection consists of those actions taken to prevent or mitigate hostile actions against DOD personnel (to include family members), resources, facilities, and critical information. Additionally, counter proliferation and consequence management actions associated with chemical, biological, radiological, nuclear, and high yield explosive weapons, which includes toxic industrial material and improvised explosive devices (IED) should be addressed.

I. Responsibilities of the Sustainment Brigade

Sustainment brigade and CSSB commanders ensure the protection tasks are integrated into all aspects of operations to safeguard personnel, systems, and physical assets. Personnel includes combatants and noncombatants (contractors, host nation support and refugees). Commanders and staffs synchronize, integrate, and organize capabilities and resources throughout the operations process in order to preserve combat power and mitigate the effects of threats and hazards.

Sustainment commanders plan for all the supporting tasks of the protection warfighting function but often focus on coordinating security operations conducted to protect friendly forces, installations, and routes in their assigned support area. Sustainment brigade and CSSB commanders dedicate assets to protection tasks and systems based on an analysis of the operational environment, the likelihood of threat action, and the relative value of friendly resources and populations. Criticality, vulnerability, and recoverability are some of the most significant considerations in determining protection priorities. The list below includes some of the activities sustainment commanders consider as protection priorities:

- Base and base camp defense
- Critical asset security
- Node protection
- Response force operations. The sustainment brigade establishes a response force to protect the base it is occupying and coordinates for additional security.
- Lines of communication security. The sustainment brigade coordinates this with the terrain owner.
- Convoy security

Base camps may evolve from unit locations established during major combat or other military operations. These base camps may start out as a single unit or very small number of units that are capable of providing protection for their assets with organic and attached supporting capabilities. In these cases, the senior commander



The protection warfighting function is the related tasks and systems that preserve the force so that commanders can apply maximum combat power to accomplish the mission (ADRP 3-0). Protection is integrated throughout the operations process to provide a synchronization of efforts and an integration of capabilities. Refer to AODS5: The Army Operations & Doctrine SMARTbook (Guide to Army Operations and the Six Warfighting Functions) for further discussion of protection.

I. Brigade Support Battalion (BSB)

Ref: ATP 4-90 (FM 4-90), *Brigade Support Battalion* (Apr '14), chap. 1.

The brigade combat team (BCT) and support brigades provide commanders with ready and relevant warfighting capabilities that are mission-tailored and scalable. The BSBs provide capabilities that can be task organized to support decisive action tasks. This chapter provides an overview of the BSB role and describes how the BSB supports its supported brigades. Organizations without a BSB will be supported by a sustainment brigade.

I. BSB Role

Brigade combat teams are the primary combined arms force that executes decisive actions for the Army. Brigade combat teams provide the land component or joint task force commander with unique capabilities in support of unified land operations. There are three standard types of BCTs—the armored brigade combat teams (ABCT), the infantry brigade combat team (IBCT), and the Stryker brigade combat team (SBCT). All six warfighting functions; mission command, movement and maneuver, intelligence, fires, sustainment, and protection, are organic to a brigade combat team. Support brigades reinforce the BCT with the following capabilities; sustainment, engineer, intelligence, protection, and aviation.

The BSB's role is to support the supported brigade's execution of operations by providing logistic support. The BSB commander must understand the supported commander's plan and then execute support so the supported brigade maintains freedom of action and maneuver. Synchronizing current and future support requirements with the supported brigade are the hallmarks of successful support. Tactical logistics and Army Health System (AHS) support must be integrated into the brigade's concept of operations.

The BSB commander mission commands all organic BSB capabilities in support of BCT priorities. The forward support companies (FSCs) extend the operational reach of the BSB into the maneuver area and are critical to the success of the logistic concept of support. BSBs perform similar roles in support of brigades however; the capabilities of a BSB vary by design. Area support is the method of logistics, medical support, and personnel services in which support relationships are determined by the location of the units requiring support. Sustainment units provide support to units located in or passing through their assigned areas. The BSB provides area support on an exception basis when they have the capability and capacity to do so.

II. Support to Decisive Action

The BSB supports offensive, defensive, stability and Defense Support of Civil Authorities (DSCA) tasks. BSB operations are accomplished by planning and executing missions within the context of the sustainment warfighting function and by applying the principles of sustainment when executing the support of decisive action tasks. The sustainment warfighting function is the related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance (Army doctrine reference publication [ADRP] 3-0). Successfully integrating the sustainment warfighting function into the concept of operations enables freedom of action, extended operational reach and prolonged endurance.

See following pages (pp. 4-2 to 4-3) for further discussion.

Support to Decisive Action

Ref: ATP 4-90 (FM 4-90), *Brigade Support Battalion* (Apr '14), pp. 1-1 to 1-3.

The BSB supports offensive, defensive, stability and Defense Support of Civil Authorities (DSCA) tasks. BSB operations are accomplished by planning and executing missions within the context of the sustainment warfighting function and by applying the principles of sustainment when executing the support of decisive action tasks. The sustainment warfighting function is the related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance (Army doctrine reference publication [ADRP] 3-0). Successfully integrating the sustainment warfighting function into the concept of operations enables freedom of action, extended operational reach and prolonged endurance.

See chap. 5, *Sustainment of Decisive Operations*, for further discussion.

Operational Reach

Operational reach is the distance and duration across which a unit can successfully employ military capabilities. The BSB enables operational reach by task organizing FSCs with required capabilities to prolong the endurance of brigade operations while maintaining sufficient support to ensure freedom of action. Endurance stems from the ability to maintain, protect, and sustain forces, regardless of how far away they are deployed, how austere the environment, or how long decisive tasks are continued. The BSB enables endurance ensuring a continuous flow of sustainment to its supported brigade.

Sustainment of Offensive Tasks

The objective of sustainment in offensive tasks is to provide sufficient support to enable the BCT to conduct the four primary offensive tasks: movement to contact, attack, exploitation and pursuit employing the six forms of maneuver: envelopment, turning movement, frontal attack penetration, infiltration, and flank attack. Sustainment of offensive tasks involves providing support to widely dispersed forces along extended lines of communication. Sustainment support to offensive tasks is focused on rearming, refueling, casualty evacuation and maintenance support. The following tasks are common in support of sustainment planning for offensive operations:

- Plan and conduct recovery operations.
- Position sustainment forward to reduce resupply and maintenance support requirements.
- Plan and conduct airdrop operations.
- Plan and conduct casualty evacuation operations.
- Consider establishing aerial resupply and forward logistics bases.

Sustainment of Defensive Tasks

The objective of sustainment in defensive tasks is to provide sufficient support to enable the BCT to conduct the three primary defensive tasks: area defense, mobile defense and retrograde. Area defense is a defensive task that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy (ADRP 3-90). The mobile defense concentrates on destruction or defeat of the enemy through a decisive attack by a striking force (ADRP 3-90). Retrograde involves organized movement away from the enemy (ADRP 3-90). Sustainment support of defensive tasks is focused on rearming, counter mobility and casualty evacuation. Consider the following points for defensive operations sustainment planning:

- Locate BSB and support points where they can best fulfill support tasks while using minimal resources to maintain security.
- Plan and conduct casualty evacuation operations.

Sustainment of Stability Tasks

The sustainment of stability tasks often involves supporting U.S. and multinational forces in a wide range of missions. It can be conducted in support of a host nation or interim government or as part of an occupation when no governments exist. Stability tasks range from long-term humanitarian and civic assistance missions to major short notice peace enforcement. Some stability tasks may involve combat. Tailoring supplies, personnel and equipment to the specific needs of the operation is essential.

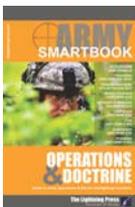
Sustainment for stability tasks is unique and more complex due to physically dispersed unit locations, lack of adequate infrastructure, nontraditional demands by civil military operations, and the burden caused by displaced civilians. Leaders must understand all the mission variables and remain flexible. Stability operations are generally fluid environments for support Soldiers and can result in confusion if leaders are not operationally aware of support agreements.

Host-nation support, operational contract support, and local purchases are force multipliers during the execution of many decisive action tasks. Situations that lack optimal sustaining capabilities may require using nonstandard logistics. They may augment or replace existing logistics capability. Nonstandard logistics can reduce dependence on the logistic system, improve response time and free airlift and sealift for other priority needs. Contingency contracting personnel should precede the main body of Army forces, if feasible. Nonstandard logistics may be employed for:

- Limited supplies such as classes I, II, III, IV, VII, and IX.
- Services such as catering, maintenance and repair, sanitation, and laundry.
- Transportation.

Sustainment of Defense Support of Civil Authorities (DSCA) Tasks

Defense Support of Civil Authorities (DSCA) is generally used in cases of domestic emergencies, for designated law enforcement support, and other activities upon request for assistance from civil authorities. Civil support includes operations that address the consequences of natural or man-made disasters, accidents, terrorist attacks, and incidents in the United States and its territories. Army forces conduct civil support operations when civil authorities request assistance and the Secretary of Defense concurs. In Defense Support of Civil Authorities, military forces always play a supporting role. State and federal laws define how military forces can support civil authorities. Often, a state's National Guard forces, acting in their state capacities under Title 32 of the United States Code, are enough to provide an adequate response to a situation. However, when these forces are not enough, Governors may request additional support from federal authorities. For more information see Department of Defense Directive 3025.18 and Army doctrine publication (ADP) 3-28, Defense Support of Civil Authorities.



Refer to AODS5: *The Army Operations & Doctrine SMARTbook for complete discussion of the fundamentals, principles and tenets of Army operations and organization (ADP/ADRP 3-0 Operations, 2016); chapters on each of the six warfighting functions: mission command (ADP/ADRP 6-0), movement and maneuver (ADPs 3-90, 3-07, 3-28, 3-05), intelligence (ADP/ADRP 2-0), fires (ADP/ADRP 3-09), sustainment (ADP/ADRP 4-0), and protection (ADP/ADRP 3-37); Doctrine 2015 guide and glossary of terms.*

B. Field Maintenance Company (FMC)

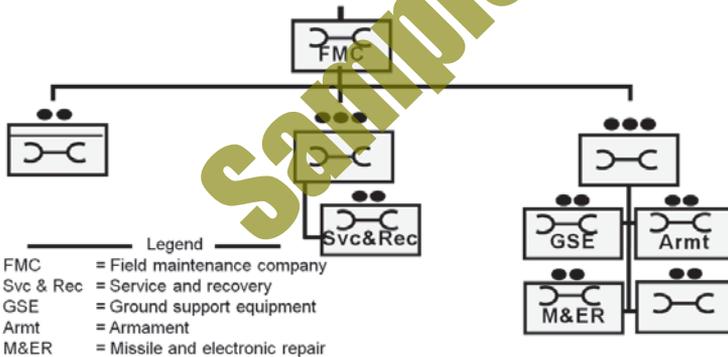
Ref: ATP 4-90 (FM 4-90), Brigade Support Battalion (Apr '14), chap. 4.

The nature of the modern battlefield demands a maintenance system that is flexible, responsive, and focused on returning systems to operational status quickly and as near as possible to the point of failure or damage. This requirement implies a forward presence of maintenance into brigade areas. Maintenance assets move as far forward as the tactical situation permits to return inoperable and damaged equipment to the battle as quickly as possible.

Role

The field maintenance company provides field maintenance support to the BSB, the brigade engineer battalion and supported units in the BSA. It also provides limited field maintenance support to the FSCs for low density commodities such as communications/electronics and armament equipment. The field maintenance company is employed in the BSA.

Field maintenance is generally characterized by on (near) system maintenance, often using line replaceable unit and component replacement, in the owning unit, using tools and test equipment found in the unit. Field maintenance is not limited to remove and replace actions, but also allows for repair of components or end items on (near) system. Field maintenance also includes adjustment, alignment, service, applying approved field-level modification work orders as directed, fault/failure diagnoses, battle damage assessment, repair, and recovery. Field maintenance is always repair and return to the user, and includes maintenance actions performed by operators.



Organization

Field maintenance companies are tailored to maintain the specific equipment and densities of the BCT they support. Therefore, the organizational structure of both personnel and equipment will vary between BSBs. In general the field maintenance company is composed of a company headquarters and two platoons: a maintenance control platoon and a maintenance platoon. Refer to unit authorization documents for exact type and quantities of assigned equipment. Exact configurations of companies vary from command to command depending on METT-TC. For example, some units consolidate the maintenance control section, shop officer, and the service and recovery section in the company headquarters.

FMCs are tailored to the specific equipment and densities of the BCT they support. Thus, the organizational structure of both personnel and equipment will vary in different BSBs.

Field Maintenance Operations

All field maintenance companies perform the same functions within a BSB, however the capabilities of each unit are unique to the brigade to which it is assigned. The majority of the field maintenance company assets are located in the BSA to reduce the burden placed on maneuver elements. The field maintenance company can send limited support forward to support the FSC's FMTs or maintenance collection points (MCP) to ensure support is positioned well forward. The field maintenance company also provides limited recovery and machine shop support to the battalion FSCs and brigade engineer battalion.

The field maintenance company completes diagnostics and determines if the piece of equipment is field level maintenance or if it is sustainment level maintenance. There are general guidelines available for where and how maintenance is completed, there is no absolute checklist. Leaders must decide the best course of action based on operational and mission variables. Equipment determined to be sustainment level maintenance will be evacuated to a national level provider. Upon receipt of replacement class VII items, maintenance personnel, along with the equipment operator, ensure that replacement items are operational and ready for use. When equipment is determined to be sustainment level maintenance, supply sergeants, S-4s and property book personnel must be incorporated into the process in order to maintain accountability.

Sustainment level maintenance is generally characterized by "off system" component repair and/or end item repair and return to the supply system, or by exception, back to the owning unit. It is performed by national-level maintenance providers (including the U.S. Army Materiel Command and installation directorate of logistics maintenance activities). The sustainment maintenance function can be employed at any point in the integrated logistics chain. The intent of this level is to perform commodity-oriented repairs on all supported items to return them to a national standard, providing a consistent and measurable level of reliability, and to execute maintenance actions not able to be performed at the field level of maintenance.

Maintenance execution and planning should include the maintenance priorities approved or established by the guiding mission plans and orders. Other tasks could include:

- Identify maintenance collection points that are collocated at or near mortuary affairs collection points for mutual security purposes that emphasize BDAR.
- Establish criteria for requesting additional recovery assets.
- Consider the feasibility of dividing up recovery assets to provide broader coverage for attacking companies.
- Identify critical combat spares and have them ready to move forward on short notice.
- Ensure rapid repair and return of non mission capable equipment to support the operation.
- Locate maintenance sites to be accessible to customers, including recovery/ BSA and near but off the MSR.
- Ensure maintenance shops, along with parking and equipment holding sites are on firm ground.

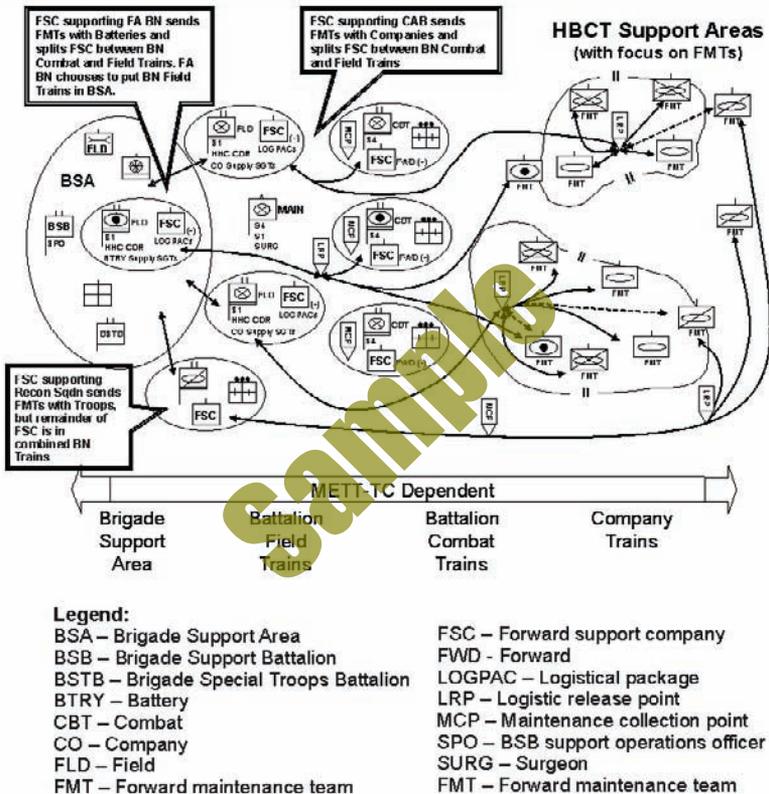
The field maintenance company provides dedicated field maintenance on an area basis to the BSB units as well as limited support to the FSCs and supported maneuver battalions. The field maintenance company also retains maintenance capabilities in the BSA since certain pieces of test equipment are not easily transportable. The field maintenance company provides field maintenance on weapons, power generation and other equipment assigned to the BCT headquarters, the brigade engineer battalion, the BSB and, on an area basis, for units operating in the BSA. The field maintenance company provides field maintenance to the brigade's missile and electronic equipment/weapon systems for those battalions that don't have the capability in FSCs.

II. Sustainment Support Areas

Ref: Adapted from FM 4-90.7, Stryker BCT Logistics (Sept '07) and related sources.

A support area is a designated area in which sustainment elements, some staff elements, and other elements locate to support a unit. The BCT S-4, BCT S-3, and BSB S-3 coordinate the location of the BCT sustainment support areas.

Sustainment Support Areas



Trains

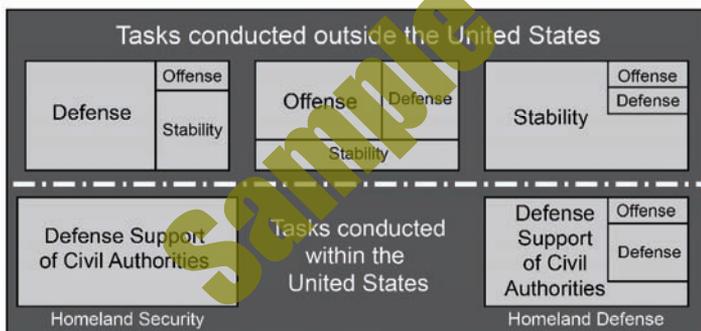
Trains are a grouping of unit personnel, vehicles, and equipment to provide sustainment. It is the basic sustainment tactical organization. Maneuver battalions use trains to array their subordinate sustainment elements including their designated forward support company. Battalion trains usually are under the control of the battalion S-4, assisted by the battalion S-1. The composition and location of battalion trains varies depending on the number of units attached to, or augmenting, the battalion.

Sustainment of Decisive Action

Ref: ADRP 3-0, Operations (Nov '16), ADP 4-0, Sustainment (Jul '12), and some adaptations from FM 4-0, Sustainment (Aug '09).

Army forces demonstrate the Army's core competencies through decisive action—the continuous, simultaneous combinations of offensive, defensive, and stability or defense support of civil authorities tasks. In unified land operations, commanders seek to seize, retain, and exploit the initiative while synchronizing their actions to achieve the best effects possible. Operations conducted outside the United States and its territories simultaneously combine three elements—offense, defense, and stability. Within the United States and its territories, decisive action combines the elements of defense support of civil authorities and, as required, offense and defense to support homeland defense.

Decisive Action



The mission determines the relative weight of effort among the elements.

Ref: ADRP 3-0, Operations (Nov '16), fig. 2-1, p. 2-3.

Editors's note. See related discussion from ADP 4-0 of "sustainment of decisive action" on pp. 1-21 to 1-23. The following discussion of sustainment of decisive operations has been adapted from ADRP 3-0, Operations (Nov '16) and ADP 4-0, Sustainment (Jul '12), pp. 10 to 15. Some elements from the previous edition of FM 4-0, Sustainment (Aug '09) have been retained for the purposes of this discussion.

A. Sustaining Offensive Tasks

An offensive task is a task conducted to defeat and destroy enemy forces and seize terrain, resources, and population centers (ADRP 3-0). Sustainment operations in support of offensive tasks are high in intensity. Commanders and staffs plan for increased requirements and demands, anticipate where the greatest need might occur, and develop a priority of support. Sustainment planners may consider positioning sustainment units in close proximity to operations to reduce response times for critical support.

See following pages (5-2 to 5-3) for further discussion of supporting offensive tasks.

Sustaining Offensive Tasks

Ref: Adapted from ADP 4-0, *Sustainment* (Jul '12) and FM 4-0, *Sustainment* (Aug '09).

An offensive task is a task conducted to defeat and destroy enemy forces and seize terrain, resources, and population centers (ADRP 3-0). Sustainment operations in support of offensive tasks are high in intensity. Commanders and staffs plan for increased requirements and demands, anticipate where the greatest need might occur, and develop a priority of support. Sustainment planners may consider positioning sustainment units in close proximity to operations to reduce response times for critical support.

Sustainment of offensive operations is high in intensity. Commanders and staffs plan for increased requirements and demands on sustainment. Sustainment planners work closely with other WFF staffs to determine the scope of the operations and develop estimates for quantity and types of support required. They anticipate where the greatest need might occur and develop a priority of support. Sustainment planners may consider positioning sustainment units in close proximity to operations to reduce response times for critical support. They also consider alternative methods for delivering sustainment in emergency situations.

To maintain momentum and freedom of action, coordination between staff planners must be continuous. During offensive operations, certain requirements present special challenges. The most important materiel is typically fuel (Class III Bulk) and ammunition (Class V), Class VII, movement control, and medical evacuation. Based on planning assessments, sustainment commanders direct the movement of these and other support to meet anticipated requirements.

Another challenge in planning for and sustaining an offensive operation is the lengthened lines of communication (LOCs). Widely dispersed forces, longer LOCs, and congested road networks increase stress on transportation systems. As a result, a combination of ground and aerial delivery maybe planned to accommodate the distribution. Distribution managers and movement control units synchronize movement plans and priorities according to the commander's priority of support. Distribution must be closely coordinated and tracked to ensure delivery of essential support. The routing function of movement control becomes an essential process for coordinating and directing movements on main supply routes or alternate supply routes, and regulating movement on LOCs to prevent conflict and congestion.

Higher casualty rates associated with offensive operations increase the requirement of medical resources. Plans to position medical support close to operations to facilitate treatment and evacuation are considered. If increased casualty rates overwhelm medical resources, nonmedical transportation assets may be needed for evacuation. Another planning consideration may be moving combat and operational stress control teams to support combat stress casualties following operations.

Higher casualty rates also increase the emphasis on personnel accountability, casualty reports, and replacement operations. G-1s and S-1s plan for accurate tracking of casualties and replacements through coordination with Casualty Liaison Teams (CLTs) and the HRSC.

Plans should also provide for religious support, which may become critical during offensive operations. Religious support through counseling and appropriate worship can help reduce combat stress, increase unit cohesion, and enhance performance.

Using contractors during the sustainment of offensive operations entails great risk and raises significant practical and legal considerations. However when necessary, the force commander may be willing to accept this risk and use contractors in forward areas. Commanders should seek counsel from their judge advocates when considering the use of contractors during offensive operations.

Tactical-Level Considerations

Sustainment in the offense is characterized by high-intensity operations that require anticipatory support as far forward as possible. Commanders and staffs ensure adequate support for continuing the momentum of the operation as they plan and synchronize offensive operations. Plans should include agile and flexible sustainment capabilities to follow exploiting forces and continue support (FM 4-0).

The following sustainment techniques and considerations apply to offensive planning:

- Plan for dealing with threats to sustainment units from bypassed enemy forces in a fluid, non-contiguous area of operations
- Recover damaged vehicles only to the main supply route for further recovery or evacuation
- Pre-stock essential supplies forward to minimize interruption to lines of communications
- Plan for increased consumption of petroleum, oils, and lubricants (POL)
- Anticipate increasingly long lines of communications as the offensive moves forward
- Anticipate poor trafficability for sustainment vehicles across fought-over terrain
- Consider planned/pre-configured sustainment packages of essential items
- Plan for increased vehicular maintenance, especially over rough terrain
- Maximize maintenance support teams well forward
- Request distribution at forward locations
- Increase use of meals-ready-to-eat (MREs)
- Use captured enemy supplies and equipment, and particularly support vehicles and POL. Before use, test for contamination.
- Suspend most field service functions except airdrop and mortuary affairs
- Prepare thoroughly for casualty evacuation and mortuary affairs requirements
- Select potential/projected supply routes, logistic release points, and support areas based on map reconnaissance
- Plan and coordinate enemy prisoner of war operations
- Plan replacement operations based on known/projected losses
- Consider the increasing distances and longer travel times for supply operations
- Ensure that sustainment preparations for the attack do not compromise tactical plans

(Sustainment of Decisive Action) I. Logistics

Editor's note: This section is focused on logistics support at the sustainment brigade level and adapted from the superseded FMI 4-93.2, Sustainment Brigade (Feb '09) and additional, updated references (as noted). See pp. 1-37 to 1-56 for discussion of logistics as an element of the sustainment warfighting function from ADRP 4-0 (Jul '12).

Logistics is the science of planning, preparing, executing, and assessing the movement and maintenance of forces. In its broadest sense, logistics includes the design, development, acquisition, fielding, and maintenance of equipment and systems. Logistics integrates strategic, operational, and tactical support of deployed forces while scheduling the mobilization and deployment of additional forces and materiel.

Logistics



Maintenance (ATP 4-33)



Transportation (FM 4-01)



Supply (ATP 4-42)



Field Services (ATP 4-42)



Distribution (ATP 4-0.1)



Operational Contract Support (ATP 4-92)



General Engineering Support (ATP 3-34.40)

I. Maintenance

Ref: ATP 4-33, Maintenance Operations (Apr '14), chap. 3.

Maintenance is one of the logistics functions that support Soldiers and their systems in the field. It sustains materiel in an operational status, restores it to serviceable condition, or upgrades its functional utility through modification or product improvement. The Army maintenance system designates the scope of tasks performed by maintenance activities. It provides support planning requirements for maintenance of materiel systems when fielded and after fielding. It also establishes requirements for managing activities that physically perform maintenance.

C. Battle Damage Assessment & Repair (BDAR)

Ref: ATP 4-31, *Recovery and Battle Damage Assessment and Repair* (Aug '14), chap 1.

Battlefield recovery and battle damage assessment and repair (BDAR) are separate and distinct subsets of maintenance. Both are the owning units' responsibilities and both have a fundamental purpose of returning combat assets to the battlefield as soon as possible. The purpose of recovery is to rapidly free mired equipment or remove disabled equipment from the battlefield. The purpose of BDAR is to apply expedient repairs allowing the equipment to self-recover and continue the mission.

Recovery

Recovery is defined as the process of freeing or retrieving immobile, inoperative, or abandoned equipment from its current position and returning it to service or to a maintenance site for repairs. These actions typically involve extracting, towing, lifting, or winching. Towing is usually limited to moving equipment to a field maintenance site or the nearest unit maintenance collection point. Depending on the mire level or the severity of battle damage, recovery is usually accomplished by the following methods: self-recovery, like-vehicle recovery, dedicated-recovery and expedients. Each of these recovery methods and mire levels will be discussed in more detail in later chapters.

Damaged and inoperable equipment on the battlefield can strain dedicated recovery resources. To effectively support battlefield recovery operations, dedicated recovery assets should be strategically placed for optimum support of the area of operations. Commanders must emphasize the use of self and like vehicle recovery methods to the greatest extent possible. These practices will minimize the use of dedicated recovery assets for routine recovery missions.

Additional information and guidance can be found in ATP 4-33, Maintenance Operations.

Recovery operations on the battlefield and in general can be extremely hazardous. A risk assessment must be conducted and safety must remain a top priority for each recovery mission. Proper maintenance of recovery vehicles and serviceability of authorized rigging and other equipment is essential to ensure safe recovery missions. Operational variables must be considered prior to and during all recovery operations.

Battle Damage Assessment and Repair (BDAR)

BDAR is the procedure used to rapidly return disabled equipment to the operational commander by field-expedient repair of components. BDAR restores the minimum essential combat capabilities necessary to support a specific combat mission or to enable the equipment to self-recover. BDAR is accomplished by bypassing components or safety devices, cannibalizing parts from like or lower priority equipment, fabricating repair parts, jury-rigging, taking shortcuts to standard maintenance, and using substitute fluids, materials or components. Depending on the repairs required and the amount of time available, repairs may or may not return the vehicle to a fully mission-capable status. Operators/crew, maintenance teams, or recovery teams may perform BDAR.

Based on a unit's standard operating procedures (SOP) and at the commander's discretion, anyone can perform BDAR depending on the extent of repairs required and operational variables. The commander decides whether or not to use BDAR instead of standard maintenance procedures. Expedient repairs may or may not return the vehicle to a fully mission-capable status.

Class V Control Procedures

Ref: Adapted from FM 4-30, Ordnance Operations (Apr '14).

Ammunition Supply Rates

The procedures used to control ammunition consumption are the required supply rate (RSR) and controlled supply rate (CSR). The Standard Army Ammunition System—Modernization (SAAS-MOD) is the management information system used to support these control procedures.

1. Required Supply Rate (RSR)

The RSR is the amount of ammunition a maneuver commander needs to sustain tactical operations, without restrictions, over a specified time period or for a specific mission. The RSR is expressed as rounds per weapon per day or, for selected items such as mines or demolition materials, as a bulk allotment per day or per mission. As the threat or mission changes, RSRs should change to reflect revised ammunition expenditure estimates. Maneuver commanders develop RSRs and submit them to the next higher HQ through operations channels. Each HQ reviews, adjusts, and consolidates RSRs and forwards them through operations channels. At the HQ that has ammunition management responsibilities, normally at TA/ASCC level, the total ammunition requirements are compared against total ammunition resupply capabilities for that period. If there is a shortfall in capability, a CSR will be established.

2. Controlled Supply Rate (CSR)

The CSR is that amount of ammunition that can be allocated based on the availability of ammunition types or quantities, Class V storage facilities, and transportation assets over a specific time period. The CSR is expressed in the same terms as the RSR. Commanders should use CSRs to allocate or prioritize the ammunition flow to units engaged in combat and to units held in reserve. They could also withhold some ammunition, especially high-lethality, low-density ammunition, to meet unforeseen requirements.

Ammunition Basic Loads (ABLs)

ABLs originate with a tactical force's planned deployment. An ABL is that quantity of ammunition either allocated to or issued to a unit [depending on the MACOM's policy] to sustain its operations in combat until it can be resupplied.

Basic load requirements are based on unit weapon density and mission requirements and are designed to meet a unit's anticipated initial combat needs. Units must be able to transport ABLs in one lift on organic weapon systems, equipment, and unit personnel. An ABL is normally expressed in rounds per weapon but may be expressed IAW MACOM policy as a number of required combat loads (example: battalion loads for artillery systems). The following factors influence ABLs:

- Nature of the enemy threat
- Type of mission
- Intensity of engagement
- Resupply transport availability
- Ammunition availability
- Number and types of weapons in unit

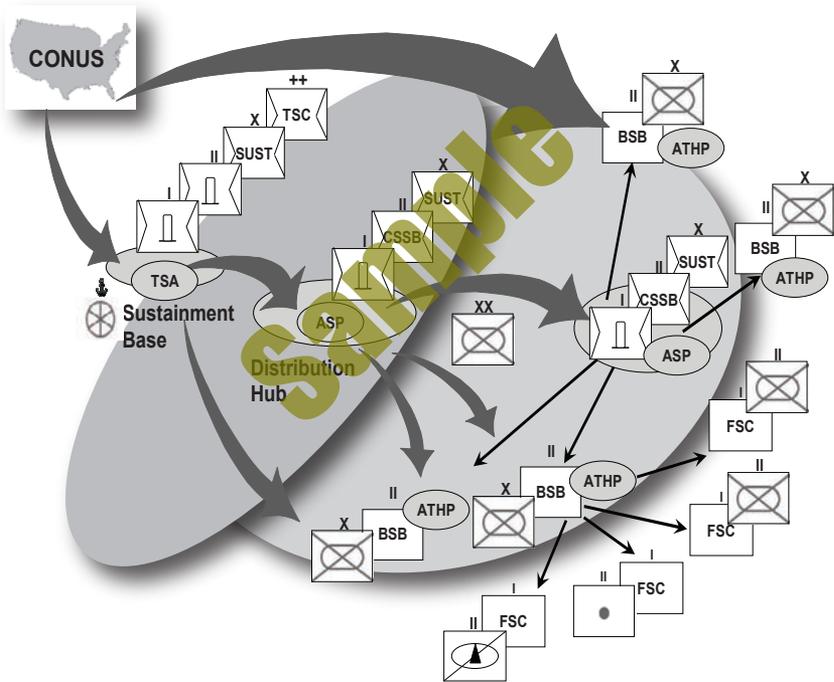
Lift Capability

Ammunition units' capabilities are measured in lift. A lift uses MHE to pick up ammunition and set it down, with each pickup and set down constituting one lift. A lift is measured in short tons (STONs) (2,000 pounds). Ammunition units' expressed lift capabilities are limited by personnel and MHE availability.

Ammunition Support

Ref: Adapted from FMI 4-93.2, *Sustainment Brigade* (Feb '09), pp. 4-17 to 4-18 and FM 4-30, *Ordnance Operations* (Apr '14).

The ammunition logistics system provides to the force the right type and quantity of ammunition in any contingency. The challenge is to move required amounts of ammunition into a theater of operations from CONUS and other pre-positioned sources in a timely manner to support an operation. The system must be flexible enough to meet changing ammunition requirements in simultaneous operations around the world. The objective of the system is to provide configured Class V support forward to the force as economically and responsibly as possible with minimized handling or reconfiguring and quickly adapt to changes in user requirements. The unique characteristics of ammunition complicate the system. These factors include its size, weight, and hazardous nature. It requires special shipping and handling, storage, accountability, surveillance, and security. Munitions are managed using different methods depending on the level of command.



- ASP – Ammunition Supply Point
- ATHP – Ammunition Transfer and Holding Point
- BSB – Brigade Support Battalion
- CSSB – Combat Sustainment Support Battalion
- FSC – Forward Support Company
- SUST – Sustainment Brigade
- TSA – Theater Storage Area
- TSC – Theater Sustainment Command

Decisive
Action

Ammunition Flow

Ammunition issued to users is replaced by ammunition moved up from theater storage areas. In turn, ammunition stockage levels at the theater storage areas are maintained by shipments from CONUS or out of other theater locations. The quantity of ammunition shipped forward is determined by the amount on hand, current and projected expenditures, and the controlled supply rate (CSR).

Each battalion S-4 transmits a request for re-supply of ammunition for units through the brigade S-4 to the BAO. The BAO coordinates and controls the use of Class V supplies for the brigade, consolidates the brigade requests, and submits them to the sustainment brigade, ESC/TSC. The TSC, in coordination with the numbered Army G-4, reviews all requests and balances them against the CSR issued by the theater storage activity. The numbered Army issues the CSR to support the units. Some ammunition requirements are prioritized due to scarcity and some may not be issued due to unavailability. The BAO through TSC coordinate for the shipment of ammunition to the ATHP.

Captured enemy ammunition (CEA) must be kept separate from US munitions; however, it must be accounted for, stored, and guarded using the same criteria that applies to US munitions. When an enemy ammunition cache is found or captured, the commander must assess the combat situation. He/She must decide whether to destroy the CEA because of the situation or to secure it and request explosive ordnance disposal support. During retrograde operations, leaders must ensure safety policies and procedures are carefully observed as these operations can be particularly hazardous and serious injury has occurred in the handling of CEA. Close control of CEA is required. Positively identified and serviceable CEA may be compatible for use in US or allied forces weapon systems. These munitions can potentially ease the burden on the ammunition supply system. CEA can also be used as a substitute for bulk explosives during demolition operations.

1. Theater Storage Area (TSA)

The TSA encompasses the storage facilities located at the operational level. This is where the bulk of the theater reserve ammunition stocks are located. Ammunition companies, with a mixture of heavy- and medium-lift platoons, operate and maintain TSA's. The primary mission of the TSA is to receive munitions from the national level, conduct the bulk of operational level reconfiguration, and distribute munitions to forward ASA locations and BCT ATHP's. The TSA will build those configured loads that cannot be shipped into a theater of operations due to explosive compatibility conflicts for international shipment. Ammunition will be managed by either an ammunition battalion or CSSB based upon METT-TC

The sustainment brigade must keep the TSC DMC informed of storage or handling limitations or shortages in each TSA. When mission analysis indicates more than one TSA or port facility is required, the GCC should plan for early deployment of an ordnance ammunition battalion to provide mission C2 of munitions distribution at the TSC level.

2. Ammunition Supply Points (ASP)

Ammunition supply points (ASPs) provide the capability to receive, store, issue, and perform limited inspections and field level munitions maintenance support. The sustainment brigade gains such capability when it is assigned one or more ammunition ordnance platoons. The CSSB's attached to the sustainment brigade will contain ammunition ordnance companies and ASP. The number of companies and ASPs varies based upon the role of the sustainment brigade to which they are attached and the size and mission of the supported organizations.

ASPs receive, store, issue, and maintain ammunition based on the capabilities of assigned ammunition platoons. ASP stockage levels are based on tactical plans, availability of ammunition, and the threat to the re-supply operation. Additionally ASPs are the primary source of re-supply of ATHP located in BCTs.

B. Medical Brigade (MED BDE)

The MED BDE may be OPCON to a sustainment brigade when the sustainment brigade is in a command relationship with the senior tactical headquarters. The MED BDE provides a scalable expeditionary medical C2 capability for assigned and attached medical functional plugs task-organized for support of deployed forces. The MED BDE brings all requisite medical C2 and planning capabilities to provide responsive and effective AHS throughout the AO. Some MED BDE subordinate elements will collocate with sustainment units in LSA's and FOB's, because MTF's require essential non-medical supplies and services and the LSA's and FOB's will require AHS support since most sustainment units do not contain organic medical assets.

C. Medical Reporting

The MC4 and Theater Medical Information Program support the information management requirements for the brigade surgeon section and BCT medical units. The brigade surgeon section uses BCS3, FBCB2, and MC4-TMIP to support mission planning, coordination of orders and subordinate tasks, and to monitor/ensure execution throughout the mission.

The MC4-TMIP is an automated system, which links health care providers and medical support providers, at all levels of care, with integrated medical information. The MC4-TMIP receives, stores, processes, transmits, and reports medical C2, medical surveillance, casualty movement/ tracking, medical treatment, medical situational awareness, and medical logistics data across all levels of care.

Sample

I. Planning Sustainment Operations

Ref: Adapted from ADP/ADRP 4-0, *Sustainment* (Jul '12).

Planning begins with analysis and assessment of the conditions in the operational environment with emphasis on the enemy. It involves understanding and framing the problem and envisioning the set of conditions that represent the desired end state. Sustainment planning indirectly focuses on the enemy but more specifically on sustaining friendly forces to the degree that the Army as a whole accomplishes the desired end state. There are several tools available for conducting course of action analysis. We will highlight a couple of them below.

Sustainment is a critical and essential enabler that allows the U.S. forces to deploy long distances (operational reach), conduct operations across the depth and breadth of the operational area (freedom of action), and maintain operations for extended durations (prolong endurance). See related discussion from ADP 4-0 of "sustainment of decisive action" on pp. 1-21 to 1-23 and chap. 5. See also chap. 7, Joint Logistics, pp. 7-27 to 7-36 for information on planning joint operations.

I. Sustainment Preparation of the Operational Environment

Sustainment preparation of the operational environment is the analysis to determine infrastructure, environmental, or resources in the operational environment that will optimize or adversely impact friendly forces means for supporting and sustaining the commander's operations plan. The sustainment preparations of the operational environment assist planning staffs to refine the sustainment estimate and concept of support. It identifies friendly resources (HNS, contractable, or accessible assets) or environmental factors (endemic diseases, climate) that impact sustainment.

Some of the factors considered (not all inclusive) are as follows:

- **Geography.** Information on climate, terrain, and endemic diseases in the AO to determine when and what types of equipment are needed. For example, water information determines the need for such things as early deployment of well-digging assets and water production and distribution units.
- **Supplies and Services.** Information on the availability of supplies and services readily available in the AO. Supplies (such as subsistence items, bulk petroleum, and barrier materials) are the most common. Common services consist of bath and laundry, sanitation services, and water purification.
- **Facilities.** Information on the availability of warehousing, cold-storage facilities, production and manufacturing plants, reservoirs, administrative facilities, hospitals, sanitation capabilities, and hotels.
- **Transportation.** Information on road and rail networks, inland waterways, airfields, truck availability, bridges, ports, cargo handlers, petroleum pipelines, materials handling equipment (MHE), traffic flow, choke points, and control problems.
- **Maintenance.** Availability of host nation maintenance capabilities.
- **General Skills.** Information on the general skills such as translators and skilled and unskilled laborers.

See pp. 6-5 to 6-10 for discussion of logistics preparation of the battlefield.

Logistics Prep of the Battlefield (LPB)

Ref: Adapted from FM 4-93.52 *Tactics, Techniques, and Procedures for the DISCOM (Digitized)*, chap. 5.

Logistics preparation of the battlefield is the process of gathering data against pertinent battlefield components, analyzing their impact on sustainment, and integrating them into tactical planning so that support actions are synchronized with maneuver. It is a conscious effort to identify and assess those factors, which facilitate, inhibit, or deny support to combat forces. Just as intelligence preparation of the battlefield is important to the conduct of actual combat operations, logistics preparation of the battlefield is equally important to sustaining the combat power of the force.

The process requires tacticians to understand the data needed by logisticians to plan and provide timely, effective support. It requires TF logisticians to understand the mission, the tactical plan, and the battlefield's time and space implications for support. It is a coordinated effort to prepare the battlefield logistically. The basic steps in systematizing the process are:

- Determine battlefield data pertinent to support actions
- Determine sources from which raw data can be derived
- Gather pertinent data
- Analyze collected data elements and translate them into decision information by assessing their impact on the mission and the competing courses of action
- Integrate decision information into tactical planning by incorporating it in sustainment estimates and TF plans and orders

When determining what battlefield data are relevant to sustainment, it's helpful to break down CSS operations into certain key elements against which data can be collected for study and analysis. These data elements are called the components of tactical sustainment. The following descriptions of the components of tactical sustainment are not intended to be all-inclusive. They are offered here, however, to stimulate thought and to facilitate an understanding of those factors which impact on tactical sustainment:

- Logistics resources are the wherewithal to effect support, including CSS organizational structures, command and control, task organizing for support, communications, information automation systems, medical facilities, and materiel such as transportation assets and supply, maintenance and field services equipment.
- Logistics capabilities include soldier and leader skills and the personnel staffing which, collectively, activate sustainment resources and bring to life the required support.
- Logistics capacities include reception and clearance capacities, carrying capacities of transportation assets, volumes of storage facilities, maintenance production output rates, and supply route characteristics such as surface composition, tunnels, overhead obstructions, bridge weight limits and traffic circulation rates.
- Materiel stocks include the quantity and status of weapon systems, ancillary equipment, ammunition, repair parts and consumable supplies required or available to sustain or reconstitute combat power of deployed units. Also included are sustainment status reports and known or projected shortfalls.
- Consumption and attrition rates include experienced or expected usages of consumable supplies and weapon systems, which must be considered to anticipate support requirements.
- Time and space factors are those requirements and restrictions of the battlefield, which influence whether logistic support is provided to deployed forces at the right place and time. Included here are plans, orders, rehearsals, priority of support,

positioning for support, tempo of support (intensity of demand), security, risk assessment, the effects of terrain, weather, contaminated areas, minefields, night time enemy threat on sustainment operations, and the battlefield signatures of logistic resources. Time and space factors, especially, impact on the synchronization and integration of sustainment on the battlefield.

Sources from which relevant battlefield data are derived include:

- Higher headquarters briefs, plans and orders
- The commander's planning guidance
- The commander's intent (or concept)
- Operations and intelligence briefings and overlays
- Modified table of equipment (MTOE) of task force units
- Sustainment status reports
- Scouts
- Engineer route reconnaissance overlays
- Traffic circulation and highway regulating plans
- Personal reconnaissance

Logisticians should treat the components of tactical sustainment as essential factors that should be assessed for each plan. By doing so, they bring a professional approach to the contributions they make in the planning process. The components are variables. Some are dynamic and change with METT-TC so they should be validated daily, even hourly, if necessary. Commanders should appreciate the unique contributions their logisticians make in the planning process and when they've done a thorough job of collecting and analyzing pertinent battlefield data. Commanders must not accept less.

The commander and staff conduct LPB. Successful LPB contributes immeasurably to the favorable outcome of battle. Logistics preparation of the battlefield is an on-going process by which logisticians analyze:

- Tactical commander's plan/concept of operation
- Tactical commander's intents
- Supported force sustainment requirements
- Available sustainment resources
- Combat service support shortfalls
- The enemy (intentions, capabilities, weaknesses, doctrine)
- Terrain and weather
- Intelligence preparation of the battlefield (IPB) products
- Transportation infrastructure
- Host nation support available
- Time/distance factors

Logistics preparation of the battlefield (LPB) products are:

- A logistics estimate
- A visualization of the pending battle and logistics activity required by phase
- Anticipated logistics challenges and shortfalls
- Solutions to logistics challenges and shortfalls
- How, when, and where to position logistics units to best support the tactical commander's plan
- A synchronized tactical and logistical effort

IV. Running Estimates & Mission Analysis

Ref: Adapted from FM 6-0 (C2), *Commander and Staff Organization and Operations* (Apr '16) and ADP/ADRP 4-0, *Sustainment* (Aug '12).

Running Estimates

A running estimate is a staff section's continuous assessment of current and future operations to determine if the current operation is proceeding according to the commander's intent and if future operations are supportable (FM 3-0). Building and maintaining running estimates is a primary task of each staff section. The running estimate helps the staff provide recommendations to commanders on the best course of action to accomplish their mission. Running estimates represent the analysis and expert opinion of each staff section by functional area.

Mission Analysis

Mission analysis helps commanders to understand the situation to include their mission. This enables commanders to issue the appropriate guidance that drives the rest of the planning process. Commanders—supported by their staffs—gather, analyze, and synthesize information to orient themselves on current conditions in the AO. Such orientation helps commanders to better understand the relationships among the operational and mission variables. Mission analysis helps commanders understand the problem they have been called upon to resolve and how their units fit into the higher headquarters' plan.

During mission analysis, the staff conducts intelligence preparation of the battlefield and updates running estimates in relation to the new mission. The commander and staff analyze the higher headquarters' order to completely understand the higher headquarters commander's intent, mission, and concept of operations. They develop facts and assumptions about the upcoming operations and determine specified, implied, and essential tasks. They identify forces available for the mission, resource shortfalls, and any constraints placed on them from the higher command.

The logistician's input during mission analysis primarily comes from the logistics estimate. The logistics estimate is a continuous process that begins during mission analysis and is continually refined and updated through mission completion. The logistics estimate does not have a doctrinal format at the brigade level.

Mission analysis considerations feed information into the estimate process. The estimates are as thorough as time permits. Personnel/logistics estimates are kept current. As factors that influence operations change, new facts are developed and assumptions become facts or become invalid.

The duration of the mission analysis briefing may vary. It may be with only a few staff briefing the commander, or it may take be several days in the form of a conference that includes commanders, subordinate commanders, staff, and other partners.

See following pages (pp. 6-16 to 6-17) for a listing of suggested sustainment mission analysis considerations by element.



Refer to BSS5: *The Battle Staff SMARTbook (Leading, Planning & Conducting Military Operations)* for discussion of mission analysis and running estimates. Additional related topics include the operations process, the three Army planning methodologies, integrating processes and continuing activities, plans and orders, mission command, rehearsals and after action reviews, and operational terms and military symbols.

V. The Concept of Support (para. 4a)

Ref: Adapted from FM 4-90.7, Stryker Brigade Combat Team Logistics (Sept '07) and related sources (ST 101-6, chap. 3 and app. C-G). See also p. 4-17.

After the commander selects a specific COA, the staff communicates this decision by publishing the operation plan/operation order (OPLAN/OPORD). The G4, with input from the other logistic staff elements (G1, G5, surgeon, finance and personnel officers, and the support command), will prepare paragraph 4 of the plan.

Paragraph 4a is the support concept. This concise, but comprehensive, paragraph tells the maneuver commander and his primary staff those critical or unusual logistic actions that will occur by phase or before, during, and after the battle to support the concept of the operation.

Additional subparagraphs can be used to provide more detailed sustainment information by functional area. Usually, these subparagraphs are omitted, and this detailed information is published as part of the service support annex to the plan. The G4 prepares this order with input from the other logistic staff elements. The G4 can also prepare a Sustainment overlay to show supported units' supply route locations and supporting logistic organizations. Finally, routine, doctrinal, or constant information is incorporated into the unit tactical standing operating procedures (TSOP) to avoid repetition.

I. Developing the Sustainment Concept

The logistician actively participating in the decisionmaking process facilitates the support concept's development. Specifically, during mission analysis, the Sustainment planner determines the units' current materiel and personnel posture before the operation begins. This, with the commander's priorities, determines which units and items of equipment should receive priority before the operation.

The wargaming and quantitative analysis portions of COA analysis highlight critical and/or unusual logistic requirements and determine support priorities during each phase of the operation. By its very nature, wargaming facilitates logistic synchronization with the concept of the operation.

There are numerous other information sources for the support concept:

- Commander's guidance and intent
- Concept of the operation
- Higher HQ support concept, service support order or plan (if applicable), and Sustainment overlay
- Maneuver control system screens and/or other locally generated status charts
- Lessons learned data and historical perspectives to view how others successfully, or unsuccessfully, supported other similar operations
- The unit's battle book

II. The Sustainment Overlay

The sustainment overlay is a graphic representation of the tactical array of support areas and units. Ideally, it accompanies copies of the OPLAN and/or OPORD distributed to subordinate HQ and is used as a graphic backdrop to the support concept briefing.

The sustainment overlay should include (as a minimum):

- Locations of current and proposed support areas
- Boundaries for sustainment responsibilities
- MSRs
- Locations of major HQ
- Locations of sustainment installations and units
- Locations of critical resources [potable water, maintenance collection points, ATPs, mortuary affairs (MA) collection points, ambulance exchange points (AXPs), etc.]

The sustainment overlay will not only depict the tactical array of sustainment units/nodes, but it is also an integral part of the overall OPLAN/OPORD graphics and must be synchronized with the operations overlays.

The **BRIGADE sustainment overlay** would include (as a minimum)—

- The brigade support area (BSA) location and, using type unit symbols, the sustainment units and HQ located therein
- Locations of alternate/proposed BSAs
- Locations of forward logistics elements (FLEs)
- The supply routes from the BSA to the logistic release points and/or maintenance collection points
- The MSR from the division support area (DSA) to the BSA

The **DIVISION sustainment overlay** would include (as a minimum):

- The division support area (DSA) location and using type unit symbols, the sustainment units and HQ contained there-in, whether they are divisional or nondivisional
- Locations of alternate and/or proposed DSAs
- The MSRs from the corps rear area to the DSA and from the DSA to each BSA

The **CORPS sustainment overlay** may have to encompass the entire corps area of operation (AO) as well as a part of the communication zone (COMMZ) and, as a minimum, would depict:

- The logistic support areas (LSAs) and, using type unit symbols, the Sustainment units and HQ located therein, and the locations of any other critical sustainment nodes not located in an LSA
- The MSRs leading into the corps rear area from the COMMZ and the MSRs leading from the corps rear area to each DSA (or, as a minimum, to the division rear boundary) and to other critical logistic nodes
- Locations of alternate and/or proposed LSAs
- Locations of corps sustainment units operating forward of the divisional rear boundaries

III. The Sustainment Matrix

The oral support concept briefing will allow the commander and his subordinates to visualize how the operation will be logistically sustained. The sustainment planners' oral briefing, using the sustainment overlay, is useful in communicating the support concept to the commander. In addition, a support concept matrix can be used to make complex logistic concepts more easily understood.

The sustainment matrix's design is aligned with the support concept format. The logistic functions are in the "by phase" context. The matrix can also be modified to reflect before, during, and after phases. The matrix will highlight those critical aspects of each sustainment function. It can also depict other critical information such as priorities, shifts in priorities, problem areas, critical events, and other critical action. The matrix is not intended to stand alone or to replace the support concept briefing. It should complement and supplement the support concept briefing.

I. Joint Logistics Overview

Ref: JP 4-0, *Joint Logistics* (Oct '13), chap. I.

Sustainment

Sustainment is one of the six joint functions (command and control [C2], intelligence, fires, movement and maneuver, protection, and sustainment) described in Joint Publication (JP) 3-0, Joint Operations. Sustainment provides the joint force commanders (JFCs) freedom of action, endurance, and the ability to extend operational reach. Effective sustainment determines the depth to which the joint force can conduct decisive operations, allowing the JFC to seize, retain, and exploit the initiative. Sustainment is primarily the responsibility of the supported combatant commander (CCDR) and subordinate Service component commanders in close cooperation with the Services, combat support agencies (CSAs), and supporting commands. Sustainment is the provision of logistics and personnel services necessary to maintain and prolong operations until mission accomplishment and redeployment of the force. Joint logistics supports sustained readiness for joint forces.

Logistics

Logistics concerns the integration of strategic, operational, and tactical support efforts within the theater, while scheduling the mobilization and movement of forces and materiel to support the JFC's concept of operations (CONOPS). The relative combat power that military forces can generate against an adversary is constrained by a nation's capability to plan for, gain access to, and deliver forces and materiel to required points of application.

I. Joint Logistics

Joint logistics is the coordinated use, synchronization, and sharing of two or more Military Departments' logistics resources to support the joint force. The joint logistics enterprise (JLEnt) projects and sustains a logistically ready joint force by leveraging Department of Defense (DOD), interagency, nongovernmental agencies, multinational, and industrial resources. The identification of established coordination frameworks, agreements, and other connections creates an efficient and effective logistic network to support the mission.

A. Joint Logistics Enterprise (JLEnt)

The JLEnt is a multi-tiered matrix of key global logistics providers cooperatively structured to achieve a common purpose. It may be bound by an assortment of collaborative agreements, contracts, policy, legislation, or treaties designed to make it function in the best interest of the JFC or other supported organization. The JLEnt includes organizations and partnerships from the Services, combatant commands (CCMDs), joint task forces (JTFs), CSAs, other US Government departments and



Refer to *JFODS5: The Joint Forces Operations & Doctrine SMARTbook (Guide to Joint, Multinational & Interorganizational Operations)* for further discussion. Topics and chapters include joint doctrine fundamentals (JP 1), joint operations (JP 3-0), joint planning (JP 5-0), joint logistics (JP 4-0), joint task forces (JP 3-33), information operations (JP 3-13), multinational operations (JP 3-16), interorganizational cooperation (JP 3-08), plus more!

agencies, and NGOs. Commercial partners also play a vital role in virtually all aspects of the JLEnt and function on a global scale providing comprehensive, end-to-end capabilities. The JLEnt may also include multinational partners. Participants 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 JLEnt partners is essential to planning, executing, controlling, and assessing logistic operations. JLEnt partners must collaborate to ensure the coordinated employment and sharing of capabilities and resources.

B. Building Partnership Capacity (BPC)

Complicated supply lines, finite resources, the challenges of providing robust logistics in austere environments, and shared lines of communications (LOCs) require the ability to establish and foster nontraditional partnerships. BPC is important for sharing the costs and responsibilities, improving information flow, and establishing PN agreements. BPC includes coordination of resources with multinational partners, IGOs, and NGOs. BPC improves unity of effort within the entire JLEnt. BPC is an essential component of joint operations because the Services seldom have sufficient capability to support a joint force independently. BPC is an ongoing, long-term relationship development process that may not yield immediate results. The earlier the BPC efforts begin the better the chance of success for securing partner logistics support when needed. By combining capabilities, commanders can provide maximum effectiveness and flexibility to the joint force focused on common outcomes, that deliver sustained logistics support.

C. Personnel

Joint logisticians are military personnel, civilians, and contractors who specialize in providing joint logistics support extending from the national industrial base to the end user. Joint logisticians plan, supervise, execute, synchronize, and coordinate core joint logistic functions. They understand tactical, operational, and strategic operations and synchronize efforts to effectively meet joint force requirements. Joint logisticians reach a level of proficiency through a combination of training, education, and operational experience created by Service, joint, and multinational duty assignments. Joint logisticians are exposed to logistic operations in a complex, diverse, and globally dispersed environment.

II. Joint Logistics Environment (JLE)

Military leaders conduct operations in a complicated, interconnected, and global environment. Operations are distributed and conducted rapidly and simultaneously across multiple joint operations areas (JOAs), within a single theater, or across boundaries of more than one geographic combatant commander (GCC). These operations can involve a variety of military forces, other governmental organizations, and multinational forces. The joint logistics environment is the sum of conditions and circumstances that affect logistics. The joint logistics environment exists at the strategic, operational, and tactical levels (see Figure I-1, facing page). Globalization, technology advancements, anti-access/area-denial, and flexible adversaries create a complex, ever-changing operational environment. Understanding this environment is essential to planning, executing, synchronizing, and coordinating logistic operations. Joint logistics takes place throughout the operational environment. Service components and CSAs provide the expertise while the JFC's staff focuses on integrating the capabilities with operations. Access to secure networks is necessary to sustain joint force readiness and is achieved through Internet-based applications. Effective networks: find and access relevant information; facilitate collaboration; distribute data to forward deployed areas; increase performance and reliability; utilize the enterprise infrastructure for evolving DOD systems are resilient; and leverage PNs' capabilities.

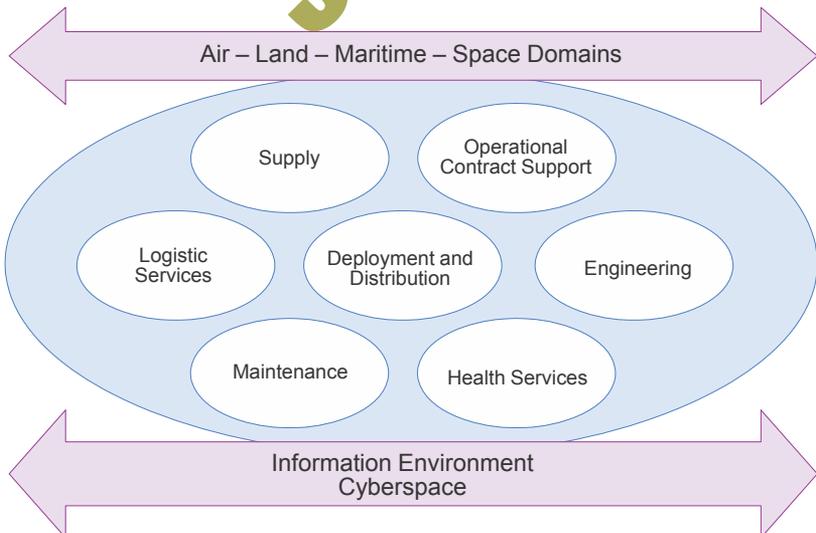
See facing page for further discussion of the JLE operating framework.

Joint Logistics Environment (JLE) Operating Framework

Ref: JP 4-0, Joint Logistics (Oct '13), fig. I-1, p. I-5.

Military leaders conduct operations in a complicated, interconnected, and global environment. Operations are distributed and conducted rapidly and simultaneously across multiple joint operations areas (JOAs), within a single theater, or across boundaries of more than one geographic combatant commander (GCC). These operations can involve a variety of military forces, other governmental organizations, and multinational forces. The joint logistics environment is the sum of conditions and circumstances that affect logistics. The joint logistics environment exists at the strategic, operational, and tactical levels (see Figure I-1, below).

<u>Strategic Level</u>	<u>Operational Level</u>	<u>Tactical Level</u>
Campaign Quality	Coordinate, Integrate, and Synchronize	Effectiveness
<ul style="list-style-type: none">Industrial base capacity enables sustained operationsEnd-to-end processes drive efficiencies across Services, agencies, and industryEffectiveness dependent upon optimizing processes against required outcomes	<ul style="list-style-type: none">Combatant commander integrates joint requirements with national systemsMust optimize component, agency, and other partner nation capabilities to meet requirementsMost significant impact for joint logistics and the joint force	<ul style="list-style-type: none">Outcome is measuredOperational readiness enables "freedom of action"Desired outcomes should drive optimization—from strategic to tactical



Core Logistics Functions

Ref: JP 4-0, *Joint Logistics* (Oct '13), pp. 11-1 to 11-12.

A. Deployment and Distribution

The global dispersion of the threats, coupled with the necessity to rapidly deploy, execute, and sustain operations worldwide, makes the deployment and distribution capability the cornerstone of joint logistics. These operational factors necessitate a shift from a supply-based system to a system that is primarily distribution-based with beginning-to-end synchronization to meet JFC requirements. Through sharing critical information, it is possible to create unity of effort among diverse distribution organizations to satisfy deployment, execution, and sustainment operations.

B. Supply

The joint logistician must understand the complexities of supply operations, the functions and processes that define them, and the organizations and personnel responsible for executing tasks in order to meet the JFC's requirements. DLA is primarily responsible for DOD supply chain operations and manages the supply process to provide common commodities and services to joint forces.

C. Maintenance

Maintenance supports system readiness for the JFC. The Services, as part of their Title 10, USC, responsibilities, execute maintenance as a core logistics function. The Services employ a maintenance strategy of depot and field level maintenance to improve the JFC's freedom of action and sustain the readiness and capabilities of assigned units.

D. Logistics Services

Logistic services comprise the support capabilities that collectively enable the US to rapidly provide global sustainment for our military forces. Logistic services include many highly scalable and disparate capabilities. Included in this area are food service, water and ice service, contingency base services, hygiene services, and mortuary affairs (MA).

E. Operational Contract Support

DOD relies on contractors to perform many tasks. OCS provides the CCDR the tools and processes to manage the variety of services that may be required, such as base operational support, transportation, and security. Within OCS are contract support integration and contractor management.

F. Engineering

Joint force engineers provide comprehensive recommendations to the commander on all engineering capabilities. They provide the ability to execute and integrate combat, general, and geospatial engineering to meet national and JFC requirements to assure mobility, provide infrastructure to position, project, protect, and sustain the joint force. Additionally, they enhance visualization of the operational area. The joint force engineer employs a combination of military engineers, civilians, contractors, and multinational and host nation (HN) capabilities to meet operational requirements, as well as BPC.

G. Health Services

The purpose of HS is to improve the health readiness of individual personnel as well as the overall force and provide HS in order to ensure mission accomplishment. The CCDR requires scalable HS capabilities that are interoperable with other health programs, capable of rapid deployment into the operational area, and integrated across the Military Health System (MHS). HS includes all services performed, provided, or arranged that promote, improve, conserve, or restore the mental and physical wellbeing of personnel. HS employs a mix of MHS and Service capabilities in order to keep the force healthy and ready, maximizing the commander's freedom of action.

III. Coordinating/Synchronizing Joint Logistics

Ref: JP 4-0, *Joint Logistics* (Oct '13), chap. III.

This section describes the authorities, organizations, and control mechanisms that enable the synchronization of logistics in support of the JFC. JP 3-0, *Joint Operations*, identifies C2 as a joint function. Command includes both the authority and responsibility for effectively using available resources and the art of motivating and directing people and organizations to accomplish missions. Control is inherent in command. However, the logistic assets will rarely fall under one command, which makes control, coordination, synchronization, and management of joint logistics more challenging. To control joint logistics, commanders direct forces and functions consistent with a commander's command authority. It involves organizing the joint staff, operational level logistic elements, CSAs, and their capabilities to assist in planning and executing joint logistics. Designating lead Service, assigning agency responsibilities, and developing procedures to execute the CCDR's directive authority for logistics (DAFL) will assist in planning, integrating, synchronizing, and executing joint logistics support operations. While logistics remains a Service responsibility, there are other logistics organizations, processes, and tasks that must be considered when developing a concept of support in order to optimize joint logistics outcome.

Logistics Authorities



Directive Authority for Logistics (DAFL)



Executive Agent (EA)



Lead Service

I. Logistics Authorities

Title 10, USC, and DODD 5100.1, *Functions of the Department of Defense and Its Major Components*, describe the statutory requirements for each Military Department to provide logistical support to assigned forces. Title 10, USC, also describes the basic authority to perform the functions of command that include organizing and employing commands and forces, assigning tasks, designating objectives, and "giving authoritative direction to subordinate commands and forces necessary to carry out missions assigned to the command." This authority includes all aspects of military operations, joint training, and logistics.

Factors to Establish Logistics Control within the Joint Logistics Environment

Ref: JP 4-0, *Joint Logistics* (Oct '13), p. III-15 to III-16 and app. E.

JP 4-0, appendix E provides amplifying information detailing the joint logistics factors and enablers with regard to the staff and organization control options.

GCCs require visibility over the JLEnt to meet the command priorities. The factors below should be considered when the GCC is establishing the logistics control required by the JFC. These factors are not absolute nor all inclusive; but they do reflect the best practices observed in the field. These factors are applicable regardless of the control option selected by the GCC.

Centralized Joint Logistics Planning

This factor implies a capability to match joint logistics planning with the planning done during the execution of a mission.

Maintenance of Situational Awareness

This factor represents more than using radio signals and internet-based application data to track cargo movement (ITV). It involves elements such as the design and use of logistics situation reports and the building of ground truth in logistics input to the JFC's COP.

Adjudication of Conflicting Priorities

This factor is to have processes in place to identify conflicts when following the commander's priorities. For example, a reliable logistics input to the JFC's COP may provide the means to identify conflicts, and a fusion cell may provide the capability to adjudicate.

Timely Identification of Factors and Shortfalls

To meet this factor a process that links the logistics portion of the battle rhythm with the planning windows must exist.

Clear Understanding of Component Capabilities

This factor involves the building of databases that reflect current Service component and support agencies logistics capabilities. Fulfilling this factor may require liaison and physical presence of logisticians representing all appropriate Service components within the selected joint logistics control option.

Ability to Synchronize Components Capabilities

This factor matches the best capability, regardless of Service component, to the joint logistics need.

Integrated Logistics Processes

This factor is founded on the notion that the joint logistic staff comprehends the Service components logistic processes and uses this understanding to build the visibility required by the JFC to control joint logistics.

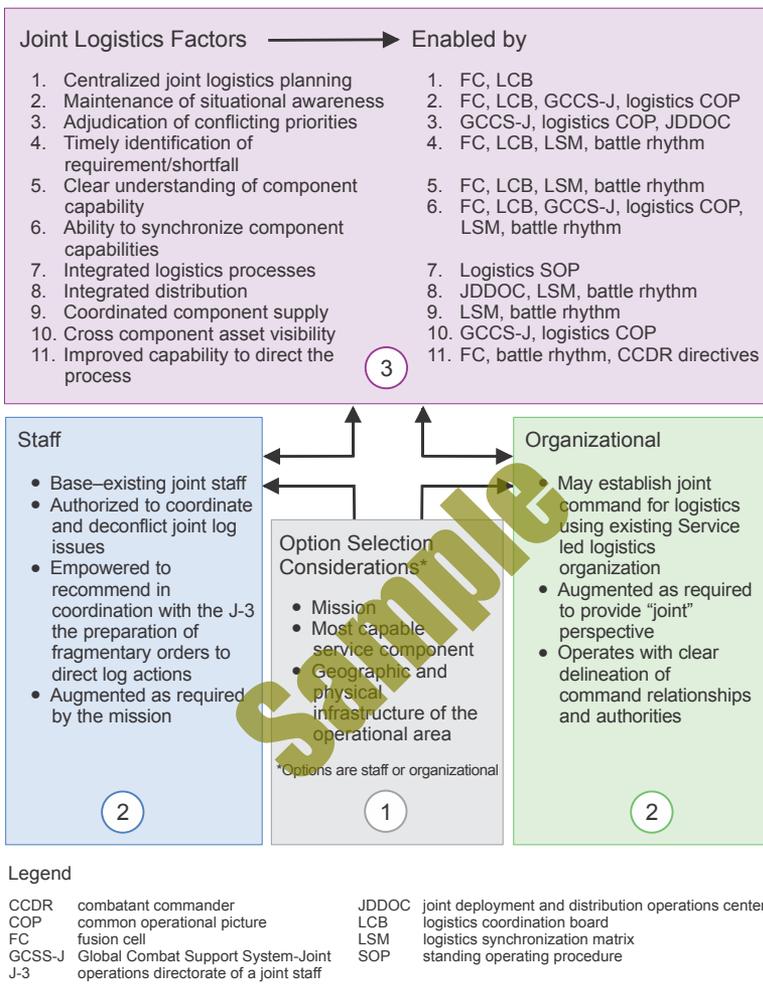
Integrated Distribution

This factor deals with the establishment of the JDDOC and its integration within the joint theater logistics construct. It maximizes the capabilities of the JDDOC to fill the seams between strategic and operational level deployment and distribution tasks. The JDDOC also strives to maximize and synchronize the use of common user land transportation and intratheater lift.

Coordinated Component Supply

This factor involves the establishment of CUL responsibilities and the processes required to achieve their execution.

GCC Option Selection and Design



Ref: JP 4-0, Joint Logistics (Oct '13), fig. III-2, p. III-6.

Cross Component AV

This factor refers to the ability for the Service components to see and understand assets available from other components.

Improved Capability to Direct the Process

This factor proposes the establishment of a decision-making process to direct logistics actions. These actions usually are directed in the form of further guidance to enhance the planning or assessment processes, or the publication of a FRAGORD to direct an action.

IV. Planning Joint Logistics

Ref: JP 4-0, *Joint Logistics* (Oct '13), chap. IV.

Joint logistics planning provides the process and the means to integrate, synchronize, and prioritize joint logistics capabilities toward achieving the supported commander's operational objectives and desired outcome during all phases of plan development. This chapter is applicable for global or theater campaign plans, subordinate campaign plans, campaign support plans, and deliberate plans tasked in the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3110, Joint Strategic Capabilities Plan (JSCP) series, or as directed by the CCDR. This chapter also addresses planning considerations, input and output products used by joint logisticians to create OPLANs/operation orders (OPORDs) that enable transition from peacetime activities to execution of orders. Focus is on JOPP in development of the theater logistics overview (TLO) as a segment of the theater campaign plan (TCP).

Joint logistics planning is conducted under the construct of joint operation planning and the associated JOPP addressed in JP 5-0, Joint Operation Planning. Joint operation planning consists of planning activities associated with joint military operations by CCDRs and their subordinate commanders in response to contingencies and crises. It transforms national strategic objectives into activities by development of operational products that include planning for the mobilization, deployment, employment, sustainment, redeployment, and demobilization of joint forces. Joint operation planning occurs at multiple strategic national and operation levels using process, procedures, tactics, techniques and facilitating information technology tools/applications/systems aligned to the Joint Operation Planning and Execution System (JOPES) and its transition to the Adaptive Planning and Execution (APEX) system.

I. Planning Functions

Joint operation planning encompasses a number of elements, including four planning functions: strategic guidance, concept development, plan development, and plan assessment. Depending upon the type of planning and time available, these functions can be sequential or concurrent. Joint operation planning features detailed planning guidance and frequent dialogue between senior leaders and commanders to promote a common understanding of planning assumptions, considerations, risks, COA, implementing actions, and other key factors. Plans may be rapidly modified throughout their development and execution. This process involves expeditious plan reviews and feedback, which can occur at any time, from SecDef and CJCS. The intent is to give SecDef and the CCDR a mechanism for adapting plans rapidly as the situation dictates.

Key joint operation planning activities across the planning process are the in-progress reviews (IPRs). IPRs are a disciplined dialogue among strategic leaders discussing the shaping of the plan during development. Logistics core functions and their use, availability and readiness will be addressed in the IPR process as appropriate.

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Using the JOPP framework for deliberate and crisis action planning, Figure IV-2 (facing page) reflects the cascading relationship from strategic guidance and tasking to planning and developing OPORDs with a focus on TCP and associated key logistics area products. These key logistics area products, TLO, logistics estimate, and concept of logistic support (COLS), support the TCP and provide the basis for deliberate, functional plans, and OPORD development.

See facing page.

Figures IV-3 and IV-4 (following pages) reflect the joint logistics planning process combined with elements of the joint operation planning activities, functions, and products. A means of anticipating future requirements is through the theater logistics analysis (TLA) process supporting TLO development and codification, logistics estimate, and logistics planning process. Anticipating requirements is essential to ensuring responsiveness and determining adequacy of support. The purpose of the logistics planning process is to ensure the logistics facts, assumptions, information, and considerations are properly analyzed and effectively synthesized within an integrated plan that supports the CONOPS. To ensure this integration occurs, logistics planners must be included in the planning process as early as possible. The remaining sections of the chapter address process segments and outputs.

See following pages (pp. 7-30 to 7-31).

A. Strategic Guidance

At the theater level, planning begins with the receipt of strategic guidance or a planning directive and continues as the CDR develops a mission statement. This planning function relates to the first two JOPP steps: planning initiation and mission analysis. The staffs' planning activities initially focus on mission analysis and developing information to help the commander, staff, and subordinate commanders understand the situation and mission. Planning activities include identifying assumptions, planning forces, mission, and desired end state. Logisticians identify critical logistical assumptions. During mission analysis, joint logisticians must provide critical information to operation planners on the logistics guidance contained in strategic and theater documents. Such documents include the JSCP, JSCP Logistics Supplement, JFC planning guidance, TLA, and TLO. Additionally, detailed information on airfields, seaports, roads, rails, bridging capabilities, and other critical infrastructure captured in the theater posture plan and theater distribution plan are validated and incorporated into the planning efforts.

B. Concept Development

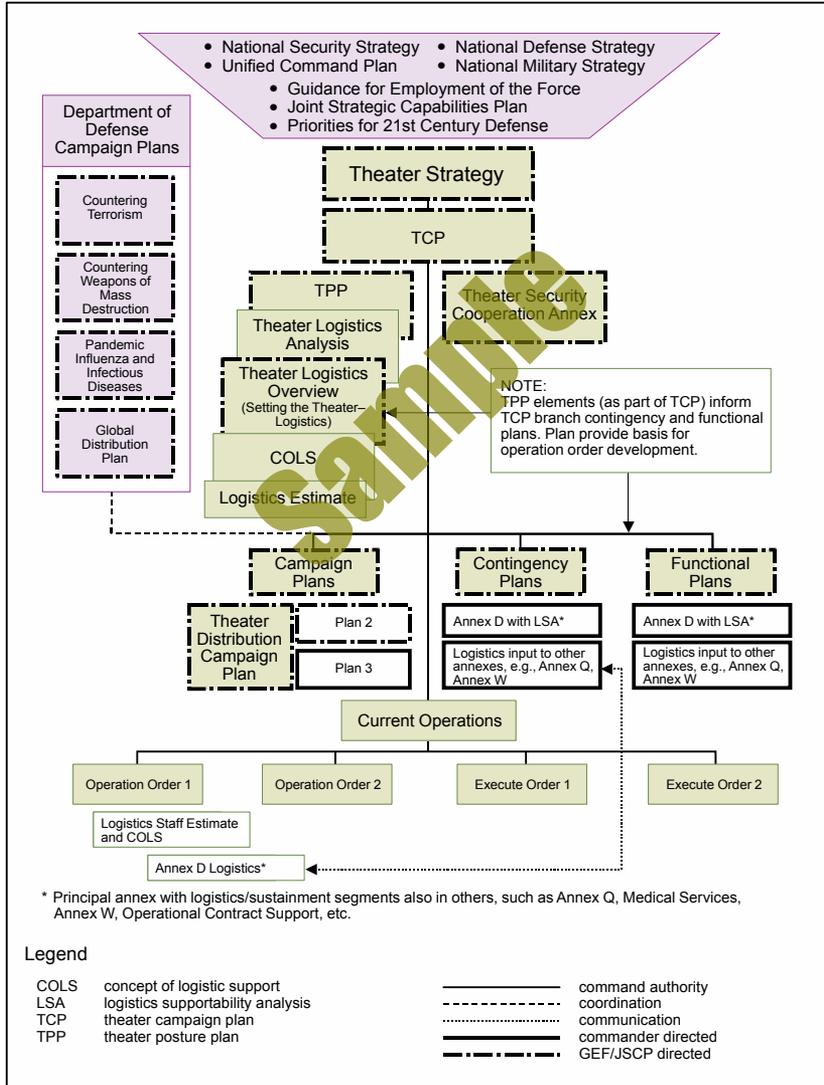
This planning function includes the following JOPP steps: COA development, COA analysis and wargaming, COA comparison, and COA approval. The staff, in coordination with supporting commands, Services, and agencies develops, analyzes, and compares valid COAs and prepares staff estimates. The output is an approved COA. Critical elements include a common understanding of the situation, interagency coordination requirements, multinational involvement (if applicable), and capability requirements. Logistics planners must integrate planning efforts with operation planners as deployment, redeployment, distribution, and sustainment requirements are an integral part of COA development. The logistician identifies requirements, critical items, and services needed. They must be aware of force structure planning, TPFDD development, and JRSOI requirements. The logistician uses this planning data during concept of support development to meet sustainment requirements from theater entry and operations to redeployment and reset. Logistics planners address all the core joint logistics functions.

(2) During COA refinement, phasing of joint operations is done to ensure joint capabilities are available in the proper sequence to meet the operational requirements. Events drive phase changes, not time. Phasing helps the planning community visualize the entire operation to define requirements in terms of forces, resources,

Logistics Planning Integration (Strategic Guidance, Plans, & Operations)

Ref: JP 4-0, Joint Logistics (Oct '13), fig. IV-2, p. IV-4.

Using the JOPP framework for deliberate and crisis action planning, Figure IV-2 reflects the cascading relationship from strategic guidance and tasking to planning and developing OPORDs with a focus on TCP and associated key logistics area products. These key logistics area products, TLO, logistics estimate, and concept of logistic support (COLS), support the TCP and provide the basis for deliberate, functional plans, and OPORD development.

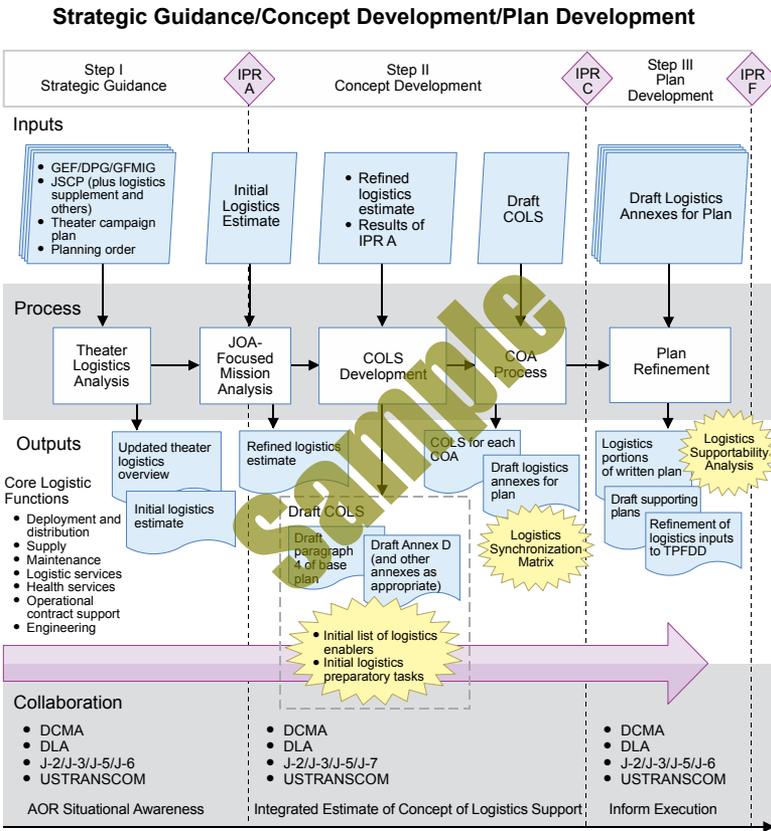


Joint Logistics Planning Considerations

Ref: JP 4-0, Joint Logistics (Oct '13), pp. IV-3 to IV-6.

Figures IV-3 and IV-4 reflect the joint logistics planning process combined with elements of the joint operation planning activities, functions, and products. A means of anticipating future requirements is through the theater logistics analysis (TLA) process supporting TLO development and codification, logistics estimate, and logistics planning process.

Steps I - III (Joint Logistics Planning)



Legend

AOR	area of responsibility	IPR F	plan approval
COA	course of action	J-2	intelligence directorate of a joint staff
COLS	concept of logistic support	J-3	operations directorate of a joint staff
DCMA	Defense Contract Management Agency	J-5	plans directorate of a joint staff
DLA	Defense Logistics Agency	J-6	communications systems directorate of a joint staff
DPG	Defense Planning Guidance	J-7	operational plans and interoperability directorate of a joint staff
GEF	Guidance for Employment of the Force	JOA	joint operations area
GFMIG	Global Force Management Implementation Guidance	JSCP	Joint Strategic Capabilities Plan
IPR	in-progress review	TPFDD	time-phased force and deployment data
IPR A	strategic guidance	USTRANSCOM	United States Transportation Command
IPR C	concept development		

Ref: JP 4-0, Joint Logistics (Oct '13), fig. IV-3, p. IV-5.

I. Deployment & Redeployment Overview

Ref: ATP 3-35 (FM 3-35), *Army Deployment and Redeployment* (Mar '15), chap. 1.

Force projection is the ability to project the military instrument of national power from the United States or another theater, in response to requirements for military operations. (JP 3-0) It is a demonstrated ability to alert, mobilize, rapidly deploy, and operate effectively anywhere in the world. The Army, as a key member of the joint team, must be ready for global force projection with an appropriate mix of combat forces together with support and sustainment units. Moreover, the world situation demands that the Army project its power at an unprecedented pace. The flexible and rapid deployment of Army forces with sufficient depth and strength to sustain multiple, simultaneous operations enables Army units to seize, retain, and exploit the initiative to gain and maintain a position of relative advantage in unified land operations to create conditions for favorable conflict resolution.

See following pages (pp. 8-2 to 8-3) for further discussion.

Deployment Phases

- A** Deployment Planning
- B** Predeployment Activities
- C** Movement
 - Fort-to-Port
 - Port-to-Port
- D** Reception, Staging, Onward Movement, and Integration (RSOI)

Ref: ATP 3-35, *Army Deployment and Redeployment* (Mar '15), chap. 1.

Deployment is composed of activities required to prepare and move forces, supplies, and equipment to a theater. This involves the force as it task organizes, tailors itself for movement based on the mission, concept of operations, available lift, and other resources.

The employment concept is the starting point for deployment planning. Proper planning establishes what, where, and when forces are needed and sets the stage for a successful deployment. Consequently, how the geographic combatant commander (GCC) intends to employ forces is the basis for orchestrating the deployment structure. All deployment possibilities must be examined as they dramatically influence employment planning. Deployment directly impacts the timing and amount of combat power that can be delivered in order to achieve the GCC's desired effects.

I. Force Projection

Ref: ATP 3-35 (FM 3-35), *Army Deployment and Redeployment* (Mar '15), p. 1.

Force projection is the ability to project the military instrument of national power from the United States or another theater, in response to requirements for military operations. (JP 3-0) It is a demonstrated ability to alert, mobilize, rapidly deploy, and operate effectively anywhere in the world. The Army, as a key member of the joint team, must be ready for global force projection with an appropriate mix of combat forces together with support and sustainment units. Moreover, the world situation demands that the Army project its power at an unprecedented pace. The flexible and rapid deployment of Army forces with sufficient depth and strength to sustain multiple, simultaneous operations enables Army units to seize, retain, and exploit the initiative to gain and maintain a position of relative advantage in unified land operations to create conditions for favorable conflict resolution.

Force Projection Processes

Force projection encompasses a range of processes including mobilization, deployment, employment, sustainment, and redeployment. These processes have overlapping timelines, are continuous, and can repeat throughout an operation. Force projection operations are inherently joint and require detailed planning and synchronization. Decisions made early in the process directly impact the success of the campaign.

1. Mobilization

Mobilization is the process of assembling and organizing resources to support national objectives in time of war and other emergencies. Mobilization includes bringing all or part of the industrial base and the Armed Forces of the United States to the necessary state of readiness to meet the requirements of the contingency.

2. Deployment

Deployment is the movement of forces to an operational area in response to an order.

3. Employment

Employment prescribes how to apply force and/or forces to attain specified national strategic objectives. Employment concepts are developed by the combatant commands (COCOM) and their component commands during the planning process. Employment encompasses a wide array of operations—including but not limited to—entry operations, decisive operations, and post-conflict operations.

4. Sustainment

Sustainment is the provision of personnel, logistics, and other support necessary to maintain and prolong operations or combat until successful accomplishment or revision of the mission or national objective.

5. Redeployment

Redeployment is the transfer of forces and materiel to home or demobilization stations for reintegration and/or out-processing. This manual is the proponent for this definition which differs from the joint definition.

Each force projection activity influences the other. Deployment and employment cannot be planned successfully without the others. The operational speed and tempo reflect the ability of the deployment pipeline to deliver combat power where and when the joint force commander requires it. A disruption in the deployment will inevitably affect employment.

Global Force Management (GFM)

Ref: JP 3-35, *Deployment and Redeployment Operations* (Jan '13), p. I-2 to I-3.

At any given time there could be multiple requirements to employ military forces. Each operation could have a different strategic priority and could be of a different size and scope. To effectively support multiple requirements, and apply the right level of priority and resources to each, requires effective GFM. The GFM and the Adaptive Planning and Execution (APEX) processes have separate and distinct purposes but are interdependent by design, with APEX focusing on designing, organizing, and executing operations to create desired effects and GFM focusing on identifying, providing, and managing the forces and capabilities needed to support those operations. GFM aligns force assignment, apportionment, and allocation methodologies in support of the National Defense Strategy, joint force availability requirements, and joint force assessments. It provides comprehensive oversight into the global availability of US military forces/capabilities and provides decision makers a process to quickly and accurately assess the impact and risk of proposed changes in forces/capability assignment, apportionment, and allocation.

The GFM process cycle starts and ends with the Secretary of Defense (SecDef). In accordance with (IAW) Title 10, United States Code, SecDef assigns and allocates forces/capabilities, provides planning guidance to combatant commands (CCMDs), and provides overarching strategic guidance to the Chairman of the Joint Chiefs of Staff (CJCS). The CJCS apportions forces/capabilities to CCMDs for adaptive planning and develops strategic-level guidance. CCMDs, in turn, coordinate forces/capability requirements with the CJCS or delegated CCDR based on SecDef's guidance across the three processes; develop Guidance for Employment of the Force (GEF)-directed plans with forces apportioned by the CJCS, and forward designated plans to SecDef for approval.

The Unified Command Plan (UCP) establishes CCMD missions, responsibilities, and force structure. CCDRs are directed by the UCP, strategic guidance, and various orders to plan for and execute operations and missions. CCDRs are assigned forces to accomplish those missions; however, in the dynamic world environment, a mission may require adjusting the distribution of assigned forces among the CCDRs and Services through a process called allocation. Assignment, apportionment, and allocation of forces to support UCP missions are accomplished through GFM.

During the initial and subsequent deployments, the Department of Defense (DOD) leadership will use requests for forces (RFFs) and deployment orders (DEPODs). Commanders and their staffs must understand the dynamic nature of force flow.

Timely response to crisis situations is critical to US deterrent and warfighting capabilities. The timeliness of US response is a function of US forward deployed forces and pre-positioned assets, forces with organic movement capability, and adequate strategic and intra-theater mobility capability assets. The combination of organic force movement and rapid mobility, bolstered by pre-positioned assets, provides the supported JFC with flexible mobility options that can be tailored to meet any crisis situation. Deployment operations normally involve a combination of organic and common-user lift supported movements using land (road and rail), sea, and air movement resources, as necessary.



Refer to "Joint/Interagency SMARTbook 1: Joint Strategic and Operational Planning (Planning for Planners)" for 400 pages of detailed discussion of joint strategic and operational planning. This new revision of *Planning for Planners* incorporates the latest thinking on Adaptive Planning and Execution (APEX), Global Force Management (GFM), Campaign Planning and Assessment Fundamentals. *Planning for Planners* has been utilized since 2007 as a step-by-step guide to understanding the complex world of global planning and force management.

II. Deployment Phases

Ref: ATP 3-35 (FM 3-35), *Army Deployment and Redeployment* (Mar '15), pp. 1-2 to 1-4.

The Joint deployment process is divided into four phases -- deployment planning; predeployment activities; movement; and JRSOI. The terminology used to describe the Army deployment phases is in synch with the Joint process. The Joint process includes a planning phase at the outset whereas the Army considers planning to be woven through all the phases. Moreover, the movement phase in the Army process is discussed in two segments – fort to port and port to port. The Army relies on U.S. Transportation Command (USTRANSCOM) to provide the strategic lift to and from the port of embarkation (POE).

For the Army, deployments consist of four distinct but interrelated phases which are addressed in the following subparagraphs. A successful deployment requires implementation of each phase with seamless transitions and interactions among all of them. The phases are not always sequential and could overlap or occur simultaneously.

A. Deployment Planning

The initial activity in planning a development plan using the military decision making process. The objective is to synchronize deployment activities to facilitate execution. The steps used in planning and preparation during predeployment activities include: analyze the mission, structure forces, refine deployment data, prepare the force, and schedule movement. Successful deployment planning requires knowledge of the unit's deployment responsibilities, an understanding of the total deployment process, and an intellectual appreciation of the link between deployment and employment.

- 1. Analyze the Mission.** The mission is examined and courses of action (COA) are developed bearing in mind that the employment considerations are paramount. The primary purpose of a deployment is to provide the right force at the right place and at the right time.
- 2. Structure Forces.** The COAs outline the ways (employment) and the means (forces) to accomplish the mission. Initially, capabilities are identified; however, as the COAs are further defined, the requirements are being translated into type units.
- 3. Refine Deployment Data.** As forces are identified, the development of the time-phased force and deployment data (TPFDD) is begun. The supported combatant commander defines the intent for deployment which may be very specific and direct the sequence of units or just identify a general deployment timeline. In any case, the intent should clearly express how the deployment postures the force for employment.
- 4. Prepare the Force.** Force packages are developed, ensuring the right capabilities are in the proper combinations to meet the intentions of the supported combatant commander.
- 5. Schedule the Movement.** The supporting combatant commands must clearly and completely define their mobility requirements and milestones based on the concept of operations. The right sequencing of forces will provide the commander with the capabilities required to achieve the desired objectives. Once the strategic lift schedule is put in motion, it is difficult to change without losing the identified transportation asset and its position in the lift schedule.

B. Predeployment Activities

An expeditionary Army requires that units are prepared for potential deployments consistent with ARFORGEN model. During predeployment units constantly plan for various contingencies and hone their deployment skills. When units train and exercise their predeployment activities, they become second nature and are accomplished efficiently. Not only should units be trained, personnel must be nearly 100 percent compliant with respect to Soldier readiness processing (SRP), encompassing those administrative,

III. Movement

Ref: ATP 3-35 (FM 3-35), Army Deployment and Redeployment (Mar '15), chap. 3.

I. Movement to the Port of Embarkation (POE)

Movement to the POE normally begins with receipt of an execute order from the Army Command; the order, along with any additional guidance is forwarded to the appropriate subordinate commands, deploying units, and installations. SDDC issues a port call message that identifies the date the unit must have their equipment at the seaport of embarkation (SPOE) to meet the ALD. The port call message or the operations order for sealift will also normally include details for vehicle reduction and preparation. AMC enters the aerial port of embarkation (APOE) and airflow scheduling information into Global Transportation Network (GTN). Scheduling information is also available in the JOPES. Based on port call messages and air schedules, the organization backward plans movements to the POEs. Deploying unit equipment normally moves from unit marshalling areas to a central staging area on the installation for further processing. The name, organization and responsibilities for these installation level staging or marshalling areas may differ; however, the functions performed to prepare units for movement are essentially the same.

Each installation has an associated strategic aerial port and/or seaport, but must be prepared to deploy from other ports as necessary. The proximity of the port facilities to the installation determines the type of movement and the numbers and types of assets required to complete the movement to the port. In some cases, the distance to APOE and SPOE is short, allowing units to maximize the use of organic equipment and convoys. In other cases, the distance to the APOE or SPOE is longer; in which case, units may have to rely heavily on commercial road and/or rail transport to complete the move to the port.

Convoy Operations

In some cases, units convoy their vehicles and equipment to the POE. A convoy is a group of vehicles organized for the purpose of control and orderly movement with or without escort protection that moves over the same route at the same time and under one commander. (JP 1-02) Vehicles in a convoy are organized into groups to facilitate command, control, and security and normally move at the same rate.

Refer to ATP 4-01.45, TCO Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations, for specific guidance on planning and conducting convoy operations.

Per the Defense Transportation Regulation (DTR) 4500.9-R, Part III, Appendix F, State Adjutants General establish the State Movement Control Center (SMCC) and appoint a Defense Movement Coordinator (DMC), who is located at the SMCC. The SMCC and the DMC receive and approve convoy movements on public highways. The DMC ensures convoy movements conform to federal, state, and local laws. Units with convoy requirements will submit a Department of Defense form (DD Form) 1265 (Request for Convoy Clearance) through the installation UMC. The unit will also submit a DD Form 1266 (Request for Special Hauling Permit) if required. The UMC will either fax or email the forms to the SMCC in their state (where the convoy is to start). The SMCC enters the request for a convoy into TC-AIMS II, which deconflicts the request on the national server. TC-AIMS II provides an approved convoy movement order which the SMCC will electronically provide to the unit.

Procedures for processing convoy clearances (including the number of vehicles that constitute a convoy) are established by theater policy, standardization agreement, or the host nation support agreement

Rail Operations

Responsibility for planning and executing rail movements of vehicles and equipment is split between the deploying units and the installation transportation office (ITO).

The deploying unit—

- Determines its movement requirements and submits them to the ITO
- Prepares their equipment for rail loading
- Load railcars and chock, block and tie down equipment under the technical supervision of the ITO, who is ultimately responsible for approving all rail loads

The ITO is responsible to--

- Obtain rail cars based on deploying unit requirements
- Validate railcar requirements based on unit rail load plans
- Maximize the use of the available rail assets
- Serve as the official liaison with SDDC and the railway agent and inspect all railcars for serviceability before units begin loading.

The movement control team (MCT) performs the ITO functions in OCONUS locations and obtains the rail cars, validates railcar requirements, serves as the liaison with the railway agent, and inspects the railcars before the units begin loading.

Movement of Passengers

Once the equipment and material are moved to the POE the movement of troops is addressed. Most troops move long distances by air and are configured as advance party, main body, and trail party. In addition, some troops move with the equipment to provide security, property accountability, and assist in reception activities.

The unit prepares personnel rosters for each chalk or plane load. The UMO requests busses and trucks to move the personnel and their baggage from the unit area to the A/DACG. As the personnel arrive at the A/DACG manifests are prepared by the A/DACG and the personnel information verified by checking the CAC (common access card). The baggage is palletized and moved to the ready line. The Soldiers remain in the sterile area until the chalk is called forward to load and the AF moves the chalk to the aircraft for loading.

II. Movement to the Port of Debarkation (POD)

The combination of strategic airlift, sealift, and prepositioned equipment, referred to as the Strategic Mobility Triad, provides the capability to respond to contingencies. Each element of strategic lift has its own unique advantages and disadvantages. In general, airlift transports light, high priority forces and passengers required to rapidly form units with prepositioned equipment and supplies. Airlift is fast and fairly flexible but has limited capacity; it is also expensive and depends on airfield availability. On the other hand, sealift is slower (compared to airlift) and has limited flexibility; however, it is cheaper and has much greater capacity. Sealift is also dependent on port availability or assets for in-stream discharge. Afloat prepositioning of unit equipment reduces the reaction time required to move the force packages to the JOA. Forward stationing of Army watercraft reduces the sail time required to link up with arriving vessels and begin intra-theater water transportation operations. The disadvantages associated with prepositioning are the high costs associated with the periodic offload of vessels and the maintenance of equipment; also there is a risk that the forward deployed assets may not be close to the contingency.



Ref: ATP 3-35, *Army Deployment and Redeployment* (Mar '15), fig. 3-3, p. 3-7.

Strategic Airlift

During the early stages of a deployment strategic airlift is the primary means of moving forces and remains so until the sea line of communication is established. Strategic airlift assets are provided by Air Mobility Command and include both military aircraft and commercial aircraft activated as required under the Civil Reserve Air Fleet program. Refer to JP 3-17 for more information about air mobility.

Strategic Sealift

Strategic sealift normally moves the majority of unit equipment identified for deployment. Strategic sealift assets are provided by Military Sealift Command and include both military and commercial vessels. Additional capacity can be mobilized under the Voluntary Intermodal Sealift Agreement which is a partnership between government and industry to provide commercial sealift and intermodal shipping services.

Refer to JP 4-01.2 for more information on sealift support.

Commercial Liner Service

In many cases unit equipment is moved by commercial liner service operating over scheduled routes on a regular basis. The carrier often picks up the equipment, moves it to the POE, and loads it aboard the ship, reducing the requirement for DOD transportation assets. In that most liner service vessels are container ships the equipment being moved must be containerized or loaded on flat racks. In-transit visibility of unit equipment moved by liner services is an issue that is being addressed by the Joint Deployment and Distribution Enterprise.

Army Prepositioned Stocks (APS)

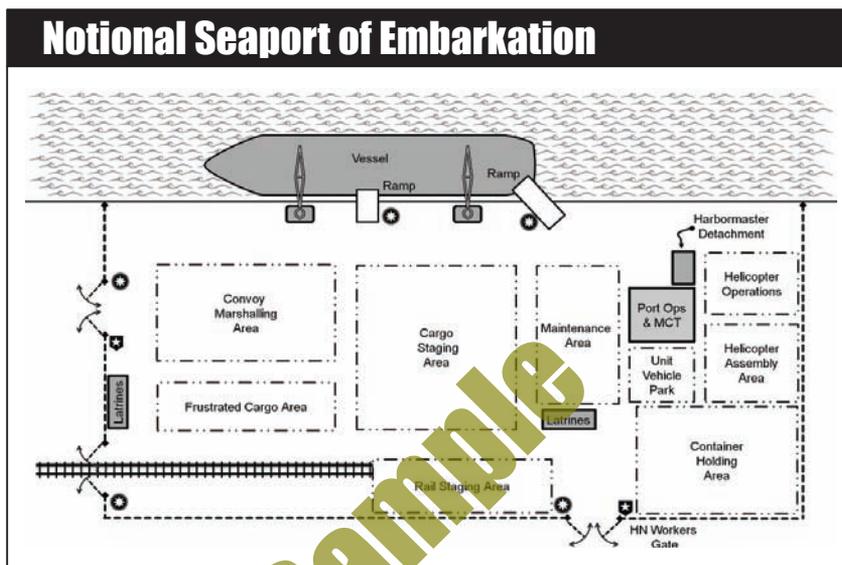
If sited appropriately, Army prepositioned stocks reduce the amount of strategic lift required to support a rapid buildup of forces to demonstrate US resolve. Forward stationing of Army watercraft in a combatant command AOR reduces the sailing times required to link up with afloat Army prepositioned stocks (APS). Army watercraft are also co-located with land-based APS to reduce movement times if these stocks need to be shifted in a theater.

See p. 1-27 for related discussion. Refer to FM 3-35.1 for more information on Army prepositioned operations.

III. Seaport of Embarkation (SPOE)

Ref: ATP 3-35 (FM 3-35), Army Deployment and Redeployment (Mar '15), pp. 3-2 to 3-4. See p. 7-28 for discussion of SPOE responsibilities.

There are essential activities that occur at the SPOE during deployment operations as units prepare for shipment by strategic sealift. The tasks are performed by a number of DOD and Army units and ad hoc organizations.



Ref: ATP3-35, Army Deployment and Redeployment (Mar '15), fig. 3-1, p. 3-3.

1. Marshalling Area

For movement to SPOEs deploying units and equipment may use an en route marshalling area. These areas are ideally located near the port staging area and in the immediate vicinity of rail and truck discharge sites. The SPOE marshalling area is the final en route location for preparation of unit equipment for overseas movement prior to the equipment entering the port staging area. Establishment of a marshalling area reduces congestion within the terminal area and provides space for sorting vehicles for vessel loading. The layout of a marshalling area is not fixed but is contingent on available space and needs of the unit. Equipment arriving in the marshalling area is normally segregated in accordance with the vessel stow plan.

2. Staging Area

The equipment is moved from the marshalling area to the staging area based on the vessel work plans and as directed by the port commander. The SDDC port commander assumes custody of the cargo at this point. Activities within the area include equipment inspection for serviceability, packing lists and load card, accuracy of dimensions and weights, properly secured secondary loads, and documentation of any cargo requiring special handling. Military shipment labels affixed to equipment will be scanned using bar code readers. The data will then be loaded into the Global Air Transportation Execution System (GATES). GATES has a module to produce ship manifests and serve as the basis for status reports. Additionally, GATES feeds data to IGC.



(SMFLS4) Index

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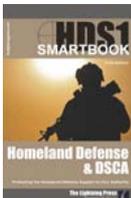
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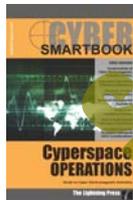
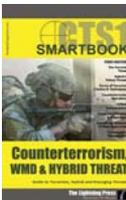
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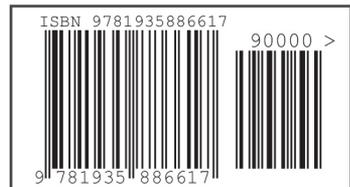


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