

ATP 4-0.1

Army Theater Distribution

October 2014

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Headquarters Department of the Army

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Army Theater Distribution

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Preface

Army techniques publication 4-0.1, *Army Theater Distribution*, provides a doctrinal guidance for Army theater distribution in support of decisive action tasks. This manual describes the Army distribution system, organization, structure, and operational processes within a theater. It provides doctrinal guidance for units with distribution responsibilities, operations, and the in-transit visibility (ITV) tracking and monitoring processes for moving personnel and materiel in theater. These topics are addressed as they pertain to combatant commanders, logisticians at all levels, staff, and students who may require knowledge on Army, joint and multinational theater-level distribution. This manual also provides the basis for theater distribution system training, organizational, and materiel development.

The principal audience for ATP 4-0.1 is all members of the profession of arms. Commanders and staffs of Army headquarters serving as joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning the range of military operations and joint or multinational forces. Trainers and educators throughout the Army will also use this publication.

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

ATP 4-0.1 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which ATP 4-0.1 is the proponent publication (the authority) are italicized in the text and are marked with an asterisk (*) in the glossary. Terms and definitions for which ATP 4-0.1 is the proponent publication are boldfaced in the text. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

ATP 4-0.1 applies to the Active Army, Army National Guard/Army National Guard of the United States and United States Army Reserve unless otherwise noted.

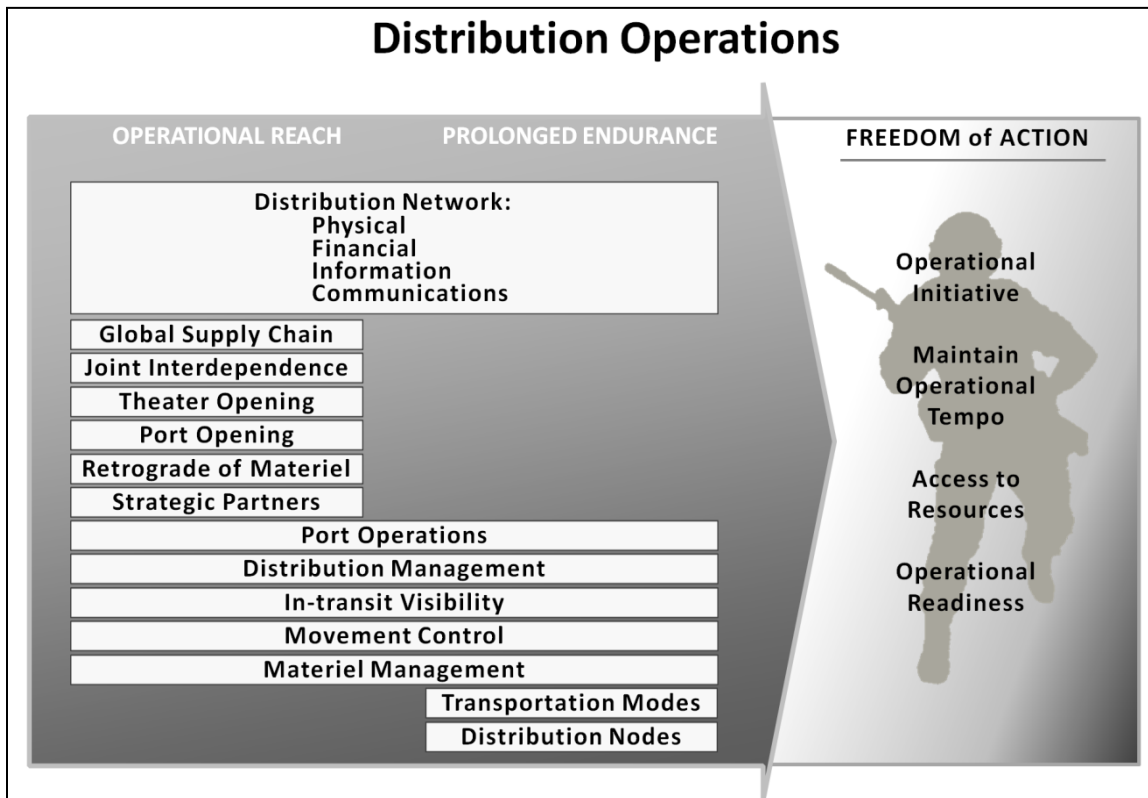
The proponent of ATP 4-0.1 is the United States Army Combined Arms Support Command. The preparing agency is the G-3 Doctrine Division, USACASCOM. Send comments and recommendations on a DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, United States Army Combined Arms Support Command, ATTN: ATCL-TS (ATP 4-0.1), 2221 Adams Ave, Bldg 5020, Fort Lee, VA, 23801-1809; or submit an electronic DA Form 2028 by e-mail to: usarmy.lee.tradoc.mbx.lee-cascom-doctrine@mail.mil.

Introduction

ATP 4-0.1 describes the Army theater distribution system, organizations, and operational processes. It provides techniques for units with theater distribution planning and execution responsibilities. ATP 4-0.1 also defines how strategic distribution and theater distribution are integrated by the Army Service component command's theater sustainment command (TSC) or Expeditionary Sustainment Command (ESC). Both headquarters provide mission command to organizations that execute distribution and distribution management and control capabilities, often in the same theater. ATP 4-0.1 is a revision of ATTP 4-0.1, *Army Theater Distribution*, last published in 2011.

This ATP was written for commanders, staffs and Soldiers at all levels, leaders and instructors at military institutions, student and doctrine and training developers. It provides relevant information for Army theater distribution in support of operations across offensive, defensive, stability and defense support of civil authorities tasks.

Theater distribution operations are accomplished by planning and executing missions within the context of the sustainment warfighting function. Soldiers apply the principles of sustainment when executing distribution support to the commander's execution of decisive action tasks. (See ADRP 4-0.) Successfully integrating the sustainment warfighting function into the concept of operations enables freedom of action, extends operational reach and prolongs endurance. Theater distribution enables operational reach by integrating and synchronizing Army and joint capabilities to prolong the operational endurance while maintaining sufficient support to ensure freedom of action. (See introductory figure-1.) Theater distribution enables endurance ensuring a continuous flow of sustainment to its supported theater.



Introductory figure-1. Distribution operations

ATP 4-0.1 expands on existing distribution doctrine. The intent is to frame Army theater distribution operations as a synchronization effort requiring an understanding of joint and operational level operations and logistics. Distribution is a system integrating transportation and supply. The integrator for transportation and supply is the distribution management center (DMC). Theater logisticians performing distribution functions must understand the coordination lines to successfully synchronize theater distribution. Examples provided throughout the ATP are for the sustainment command (TSC and ESC) staffs since they are the logisticians most likely to coordinate Army theater distribution. The content of ATP 4-0.1 is consistent with Army doctrine and nested with joint logistics and distribution doctrine.

The text of ATP 4-0.1 is reorganized to present consolidated distribution definitions, distribution fundamentals, and the expanded joint and strategic partners content in the first chapter. All content related to planning is consolidated into one chapter and includes references to joint planning and actions the sustainment command's could have in the joint planning process. There is a mission command chapter which includes Army theater distribution commands, control and synchronization organizations, and boards and centers. Newly created and updated graphics reflect ATP content and current organization construct. ATP 4-0.1 contains 5 chapters:

Chapter 1 provides an overview of sustainment and theater distribution fundamentals. The chapter identifies theater distribution strategic partners and describes their role in theater distribution.

Chapter 2 discusses theater distribution planning and preparation including planning process and products. The chapter also includes sustainment preparation of the operational environment and synchronization of other sustainment activities such as medical and maintenance operations. Chapter content also identifies joint planning products the sustainment command staff might contribute to or use to develop Army planning products.

Chapter 3 includes a mission command discussion for organizations conducting theater distribution. Staff elements with a controlling function are identified and described. Theater level boards and centers and their relationship with the Army theater distribution providers are discussed.

Chapter 4 begins with theater opening and moves to sustaining theater distribution. Distribution methods and providers are identified. Task organized elements conducting distribution functions are identified along with considerations for how and when to establish them. This chapter also includes a discussion on assessments.

Chapter 5 addresses materiel management and the integration of supply and transportation at the operational level.

Introductory table-1. New term

<i>Term</i>	<i>Remarks</i>
retrograde of materiel	New term and definition

Introductory table-2. Modified term

<i>Term</i>	<i>Remarks</i>
distribution management	Modified the definition.

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Chapter 1

Theater Distribution Overview

Army theater distribution consists of organizations and processes for providing materiel to Army forces, other Services, and multinational partners across a theater of operation. This chapter covers the definitions and principles of theater distribution and identifies the strategic partners. It also discusses the distribution networks required to conduct theater distribution.

FUNDAMENTALS OF DISTRIBUTION

1-1. Distribution is a critical aspect of sustainment which builds and maintains combat power and provides the Army its operational reach. It is the integration of the logistics functions of transportation and supply and is dependent on movement control and materiel management. A well planned distribution system enables support to multiple areas of operations (AO) within a theater. It encompasses the movement of personnel, cargo, and equipment in support of decisive action tasks. The movement of personnel and equipment does not include the movement of forces (deployment, employment and redeployment). The movement of forces is included in the movement and maneuver warfighting function explained in FM 3-35, *Army Deployment and Redeployment*.

1-2. Logistics planners, materiel managers, and movement control personnel play a crucial role in synchronizing, coordinating and executing distribution operations. Through their coordinated efforts, all elements of sustainment are distributed to support operations across the theater. Additionally, these professionals plan and coordinate distribution operations with their joint and multinational partners. By meeting these requirements, the combatant commander is assured of force readiness, operational reach, and mission accomplishment.

1-3. Theater distribution involves multiple Services, joint commands, and defense agencies. Although ATP 4-0.1 offers techniques for distribution from the port of debarkation to the using unit, the TSC, ESC or sustainment brigade logistician must understand what happens before the port of debarkation. They should understand the capabilities of the strategic providers so they can integrate strategic provider capabilities into the operational and tactical environments.

1-4. One of the ways strategic capabilities are integrated throughout the Department of Defense (DOD) is through the DOD supply chain. The DOD supply chain consists of a global network of the Services, defense agencies and commercial supply, maintenance, and distribution activities that acquires and delivers materiel and logistics services to the joint force. Its fundamental goal is to maximize force readiness while optimizing the allocation of limited resources. By-products of achieving this goal are increased efficiencies and reduced demand for operational energy resources.

1-5. Army leaders and soldiers coordinate and synchronize their tasks within the end-to-end supply chain business processes to meet combatant commander's requirements for the full range of military operations. Commanders and their staffs optimize supply chain operations and must strive to rapidly identify and communicate requirements. To begin understanding distribution, you must understand distribution related definitions highlighted in this chapter. JP 4-0, *Joint Logistics*, has more information about the DOD supply chain.

DISTRIBUTION TERMINOLOGY

1-6. *Distribution* is the operational process of synchronizing all elements of the logistics system to deliver the "right things" to the "right place" at the "right time" to support the geographic combatant commander (JP 4-0). It also delivers the right quantity as determined by logisticians in synchronization with operational

commanders and mission. Distribution is more than physical distribution of materiel, but also includes synchronizing the functions of warehousing, inventory control, outbound transportation, materials handling, packaging, communications, and services such as maintenance.

1-7. *Global distribution* is the process that coordinates and synchronizes fulfillment of joint force requirements from point of origin to point of employment (JP 4-09). The point of employment is a physical location designated by the tactical level commander where force employment, emplacement, or commodity consumption occurs.

1-8. A *distribution system* is that complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military materiel between the point of receipt into the military system and the point of issue to using activities and units (JP 4-09). It is a combination of four networks (physical, financial, information, and communication) that are managed, synchronized and tailored to meet the theater requirements across an area of operations.

1-9. Distribution starts with a requirement. A soldier establishes a requirement which must be fulfilled and transported to the soldier's requested location when the soldier needs it. The requirement data is compiled with transportation data which populates all the data in the defense transportation system.

1-10. The theater segment begins at the port of debarkation or theater source of supply and ends at the point of need. In distribution operations, the *point of need* is a physical location within a desired operational area designated by the geographic combatant commander or subordinate commander as a receiving point for forces or materiel, for subsequent use or consumption (JP 4-09). The Army component command of the geographic combatant commander (GCC) is typically assigned executive agency for surface distribution in the theater segment, as well as tactical distribution to the point of employment. Materiel may enter the theater by land via truck and rail, by air, or by sea using fixed port or logistics over-the-shore (LOTS) operations. Combinations of United States (U.S.) military, multinational, and contractor organizations operate the transportation nodes/hubs/modes and supply nodes that enable distribution of sustainment materiel.

1-11. ***Distribution management is the function of synchronizing and coordinating a complex of networks (physical, communications, information, and finance) and the sustainment functions (logistics, personnel services, and health service support) to achieve responsive support to operational requirements.*** Synchronization of the distribution processes are coordinated and directed by logisticians performing distribution functions at each level of warfare. Army logisticians performing theater distribution functions are located in the distribution management centers in the theater sustainment command and the expeditionary sustainment command.

ARMY THEATER DISTRIBUTION NETWORKS

1-12. Distribution is dependent upon various independent and mutually supporting networks. The networks consist of both manual and automated systems designed to assist with cargo management. The distribution system is dependent on the effectiveness of these networks. The theater distribution network consists of four main networks: physical, financial, information, and communications. These networks are discussed below.

1-13. Army theater logisticians use available mission command and logistics information systems to link the distribution networks to ensure materiel moves according to priority from source to the requesting unit. These networks use global, commercial, or military distribution capability as well as host nation infrastructure.

1-14. Threat activity against space-based communications is a concern for theater distribution operations. Communications interruption will require forces to adapt and adjust until full capability is restored. Short term disruptions of satellite communications are mitigated through alternative communications methods.

Physical Network

1-15. The physical network consists of the quantity, capacity, and capability of military organizations, fixed structures and established facilities, commercial partners, multinational participants, and host-nation support (HNS), supporting the distribution operations. It includes airfields, roads, bridges, railroads,

structures (such as warehouses, depots, or storage facilities), ports and staging areas, inland waterways), and pipelines (fuel and water).

Financial Network

1-16. The financial network consists of the policies, agreements, processes, and decision systems that obtain, allocate, and apportion the fiscal resources. These resources enable and maintain distribution capabilities and execution of the distribution missions. Fiscal assets provide the critical linkage to commercial distribution capabilities. The financial network includes funding mechanisms and accounting responsibilities for access to local inventories for local purchase and contracting.

Information Network

1-17. The information network is the combination of all information and data collection devices, decision support tools, and asset visibility and enabler capabilities supporting theater distribution. The information network provides logisticians performing theater distribution functions with the situational understanding and control to operate the distribution system.

Communications Network

1-18. The communications network links all of the facets of the distribution system and provides continuous information throughout the strategic, operational, and tactical levels of the Army's Battle Command network capability areas. It carries all of the data produced by the information network. The security, capacity, and reliability of the communications network significantly affect the overall effectiveness of distribution operations. Application of modern military and commercial communications systems, combined with information systems, comprise the central nervous system of the distribution system.

PRINCIPLES OF THEATER DISTRIBUTION

1-19. The principles of distribution include centralized management, optimized infrastructure; maximized throughput; rapid and precise response; continuous, seamless, two-way flow of resources; and time definite delivery. All of these principles rely upon solid asset visibility which enables distribution operations. Commanders, logistics planners, and logisticians performing theater distribution functions must understand each of these principles and consider how they are applied when developing strategic, operational, and tactical plans.

Centralized Management

1-20. Centralized management of the supply and transportation systems is essential for efficient and effective distribution operations. At the strategic level, the United States Transportation Command's (USTRANSCOM) deployment and distribution operations center provides centralized management of distribution. The deployment and distribution operations center is the single coordination and synchronization element that manages distribution operations within the joint deployment and distribution enterprise. The deployment and distribution operations center is the strategic link to the GCC's joint deployment and distribution operations center (JDDOC).

1-21. A geographic combatant commander may create a full time JDDOC or activate one at the time of need. The JDDOC is part of the geographic combatant commander's staff and has a supporting relationship to the GCC. They can be located anywhere but most often are co-located with the GCC's logistics directorate of a joint staff (J-4) or with the sustainment command's distribution management center, in the command post current operations integration cell. The joint deployment and distribution operations center maintains centralized management of critical information concerning sustainment movement from the strategic to operational (theater) pipeline. There is more information about the JDDOC in JP 4-0, *Joint Logistics*, JP 4-09, *Distribution Operations* and throughout ATP 4-0.1.

1-22. The TSC or ESC's distribution management center provides centralized management of the distribution system across the theater (operational to tactical). The DMC interacts with the JDDOC to

receive the information needed to coordinate and synchronize the theater distribution pipeline from source to point of need. Control, visibility, and capacity are fundamental to the execution of centralized management.

Control

1-23. Control of the distribution system is the focal point of centralized management. Sustainment mission command headquarters and staffs, control distribution by providing direction and oversight of distribution processes and flow of materiel. Logisticians performing theater distribution functions exercise control through the identification of shipments and the monitoring of their location as shipments move through the distribution system. When the situation necessitates, logisticians may reprioritize or reroute materiel where most needed. The DMC controls the movement of resources in accordance with the commander's intent. Also, movement control teams regulate the movement of cargo along main supply routes to reduce or eliminate bottleneck that could impede distribution operations.

Visibility

1-24. Visibility allows commanders and logisticians the ability to see forces and commodities moving within the distribution system. Visibility includes asset visibility and in-transit visibility (ITV). Asset visibility provides commanders with situational understanding of the flow of materiel, including arrival and departure of unit personnel, equipment, and all cargo at all nodes, from origin to destination on all modes. In-transit visibility provides visibility and near real-time status on the movement of all classes of supply. It identifies, locates, and tracks the movement of all classes of supply from source of supply to user to include the flow of assets from the consignor to the consignee, port, servicing airhead, supply support activity (SSA), or other destination. In austere environments or during the early stages of a deployment, visibility may be more difficult due to limited infrastructure and sophistication of communications and information network. More information on visibility is in JP 3-35, *Deployment and Redeployment Operations*, and chapter 4, ATP 4-0.1.

Capacity

1-25. Capacity includes the measure of personnel and materiel that can move through the distribution system and the capability of the infrastructure to support a two-way flow of forces and materiel. The theater's infrastructure (roadways, sea and aerial ports, warehouses, etc.) will determine the capacity of its distribution system and logistics support framework. Availability of transportation assets, materials handling equipment, air, ground transportation and watercraft determines the capacity of the distribution system to deliver and accept materiel. Logisticians performing theater distribution functions define requirements less capabilities and identify shortfalls. They integrate the full range of information capabilities into their planning and control and allocate resources to optimize theater's distribution capacity.

Optimized Infrastructure

1-26. Optimizing the theater infrastructure (roads, railways, waterways, structures, seaports, airports and open staging areas, other structures, distribution nodes, and warehouses) means synchronizing the movement of forces and materiel moving over or through the existing infrastructure. Planners must maintain a balance between distribution capability and the infrastructure capacity to support operations. The available vehicles (air, ground, and watercraft), sustainment units and personnel (Army and contractor), and assets (physical and organizational) affect distribution system optimization. This allows logisticians performing theater distribution functions to divert, reallocate, or acquire physical capabilities to meet changing operational, environmental, and location requirements.

Maximized Throughput

1-27. Throughput refers to the quantity of cargo and passengers that can pass through a port or a transportation terminal on a daily basis. An efficient distribution system maximizes tonnage, minimizes handling, and improves velocity using containerization, pallets and flatracks. By maximizing throughput the logistician reduces the surface traffic on the physical network and therefore reduces Soldier's exposure

to risk. Further, cargo consolidation also makes more efficient use of transportation assets, allowing the logistician flexibility to respond to changing operational requirements. This is not to be confused with throughput distribution, which is a method of distribution explained in ATP 4-11.

Rapid and Precise Response

1-28. Rapid and precise response is the ability to receive, prioritize, and fill customer requests in the minimum time possible, and in the exact quantity, quality and point of need requested. This must be accomplished without disrupting mission-essential operations. The effectiveness of rapid and responsive distribution can be measured by assessing the following attributes, or key performance indicators:

- Speed is at the core of responsiveness. Speed does not mean everything moves at the same rate or fastest rate, but that everything moves according to priority at the rate that meets “the right time” condition of distribution. This includes synchronizing speed or velocity within the network to maximize the overall distribution network effectiveness.
- Accuracy can be considered as the ability to deliver the requirements at the scheduled time and place as the distribution network responds to changing conditions and requirements. These are the “right thing” and “right place” conditions of distribution.

Continuous, Seamless, Two-Way Flow Of Resources

1-29. The principle of continuous and seamless pipeline two-way flow of resources describes the flow of sustainment materiel and retrograde cargo between the strategic, operational, and tactical levels. It ensures transportation assets are maximized in the delivery of sustainment and in support of retrograde and redeployment activities. Maximized transportation assets not only increase efficiency but also reduce operational energy consumption. It provides that all nodes and modes operate effectively. To accomplish this, logistics operators and planners continuously monitor the distribution system and make adjustments as required. Logistics operators provide feedback on distribution system operations and provide insight to planners as to what is happening on the ground. A robust communications network between the strategic, operational and tactical levels is necessary to provide the connectivity required to ensure the two-way flow of resources.

Time-Definite Delivery

1-30. Time-definite delivery is the consistent delivery of requested logistics support at a time and specified destination. Time definite delivery is ensuring commanders receive the right materiel at the required location, in the right quantity, and within the required timeframe. It is based on the logisticians performing theater distribution functions and logistics planners anticipating needs to support operational requirements. To achieve time definite delivery, logistics planners must link materiel to those available resources that will deliver them within the required time. Time definite delivery reinforces commander’s confidence in the ability of the logistics system to support operational requirements and eliminate the need for stockpiled materiel.

STRATEGIC DISTRIBUTION

1-31. All distribution operations beyond the Army’s ability are coordinated through the supporting strategic providers. This means that Soldiers conducting theater distribution management and planning must be familiar with strategic distribution and be conversant with joint operations terminology. The Army logistics planner must maintain distribution situational understanding and know how to link in to available strategic provider capabilities. These capabilities include transportation support, fuel storage, water production, field service support and operational contract support. The following paragraphs are intended to provide a basic understanding of the roles of the strategic distribution providers.

INDUSTRIAL BASE

1-32. The industrial base, also known as the defense industrial base, includes government and private sector companies and their subcontractors who perform under contract to the Department of Defense, providing incidental materials and services to the Department of Defense, and government-

owned/contractor-operated and government-owned/government-operated facilities. Defense industrial base companies include domestic and foreign entities, with production assets located in many countries. They provide products and services that are essential to mobilize, deploy, and sustain military operations. The strategic partners interface with the industrial base and theater Army logisticians performing theater distribution functions. The theater sustainment command DMC or sustainment brigade support operations office (SPO) will not normally interface with the industrial base; however, there will be occasions when materiel is shipped directly from the manufacturer or vendor. In those instances the DMC must obtain information from the strategic partner that arranged the shipment in order to maintain visibility of inbound materiel.

STRATEGIC PARTNERS

1-33. Global distribution system connects national resources (forces and materiel) to support and execute joint operations. The ultimate objective of this process is the effective and efficient accomplishment of the joint force mission. In this context, global distribution is the operational process that produces a seamless distribution pipeline that includes the entire joint distribution community. Theater demands drive global distribution. Figure 1-1 illustrates who has responsibility for the different legs of global distribution.

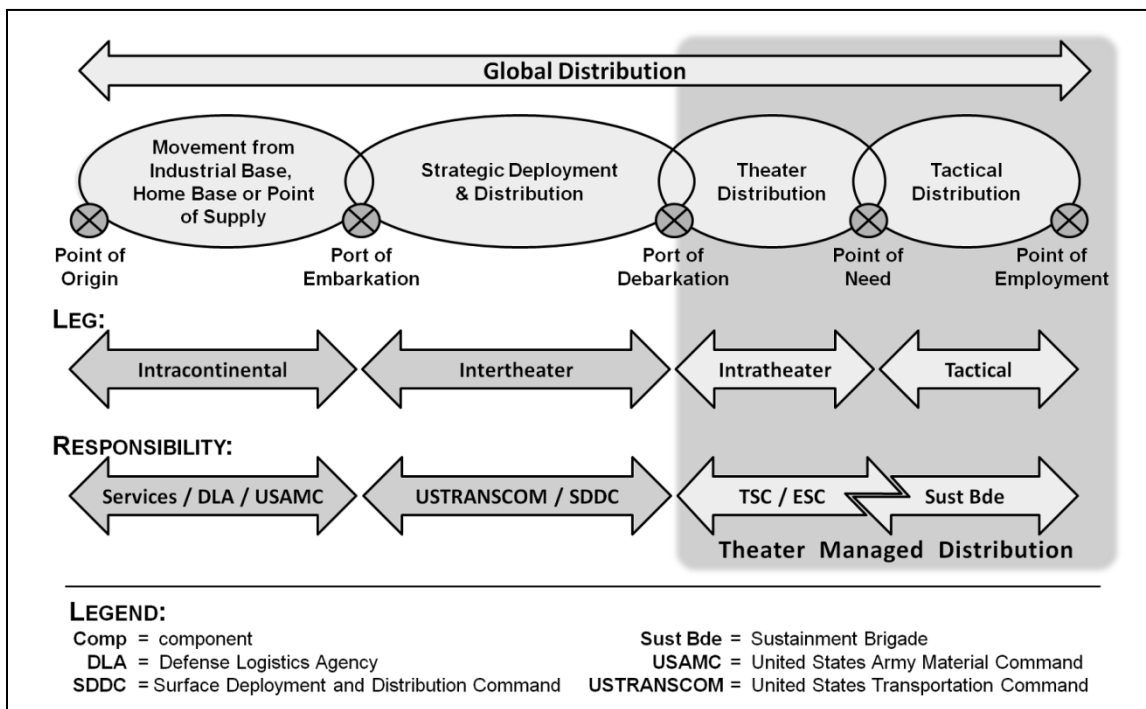


Figure 1-1. Global distribution

1-34. The global distribution pipeline consists of an intracontinental leg, an intertheater leg and often, intratheater movement. The intracontinental leg includes the movement of forces, unit equipment, and supplies from their point of origin to the port of embarkation as well as movement of supplies from a vendor to a defense distribution depot and then to the port of embarkation. This leg represents the distribution functions normally performed by the Defense Logistics Agency (DLA), United States Army Materiel Command (USAMC) and the Services.

1-35. The intertheater leg includes force and sustainment movements between theaters in support of the combatant commander. The intertheater leg extends from the port of embarkation to the port of debarkation in the combatant commanders area of responsibility. It may also include forces and materiel delivered directly to the point of need, bypassing normal strategic ports or strategic airfields in the desired operational area.

1-36. Intratheater movements are force and sustainment movements within a theater. The intratheater leg extends from the port of debarkation or the source of supply (internal to a theater) to the point of need (a physical location) in the desired AO. Operation of the intratheater leg of the joint distribution pipeline is the responsibility of the supported GCC. Intratheater movements are optimized and synchronized by a JDDOC. Movement that extends beyond the point of need to the point of employment is a Service-specific responsibility as designated by the GCC. The GCC may assign the responsibility for the planning, execution and/or management of intratheater distribution to the Army. In this case, the DMC would be involved in actions required to accomplish the mission.

1-37. Army theater logistics planners and leaders are most likely to have contact with USTRANSCOM, DLA and United States Army Materiel Command headquarters staff and subordinate units. The following paragraphs provide details about what each organization does, their command and support relationship and where to find more information. See figure 1-2 for a graphic depiction of strategic providers to Army theater distribution.

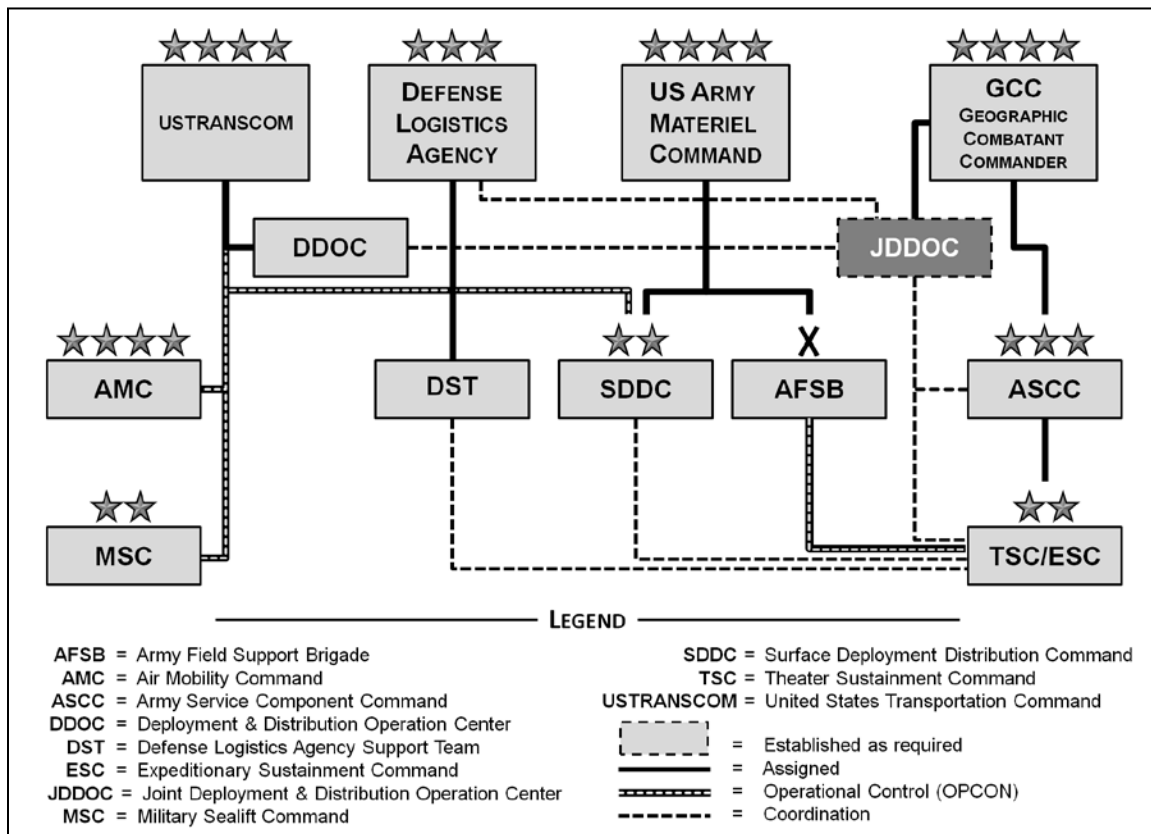


Figure 1-2. Strategic providers to Army theater distribution

U.S. TRANSPORTATION COMMAND

1-38. Theater distribution operations depend on the strategic functions of USTRANSCOM. United States Transportation Command is a functional combatant command and provides transportation capabilities through its three Service component commands: Air Mobility Command (AMC), Military Sealift Command (MSC), and Military Surface Deployment and Distribution Command (SDDC).

1-39. USTRANSCOM is the single manager for defense transportation and exercises control of strategic movement through its Service transportation component commands. United States Transportation Command is the DOD distribution process owner. The distribution process owner's role is to oversee the overall effectiveness, efficiency, and alignment of DOD-wide distribution activities, including force projection, sustainment, and redeployment/retrograde operations. USTRANSCOM is also responsible for

synchronizing planning for global distribution operations and will do so in coordination with other combatant commands, the Services, and, as directed, appropriate government agencies. For more information about defense transportation resources, see JP 4-01, *The Defense Transportation System*.

1-40. As the single worldwide manager of common-user ports of embarkation and ports of debarkation, United States Transportation Command performs those functions necessary to support the strategic flow of forces and sustainment materiel through the aerial and sea ports of embarkation and debarkation with hand-off to the combatant commander. Cargo can also be delivered to the combatant commander through land border gateways. In executing the worldwide port manager responsibility, USTRANSCOM employs two of its three transportation component commands, SDDC and Air Mobility Command.

1-41. Another USTRANSCOM capability is the joint task force – port opening (JTF-PO). The JTF-PO is not a standing task force, but is a jointly trained and ready set of forces that provides a joint expeditionary capability. The JTF-PO rapidly establishes and initially operates an aerial port of debarkation and/or seaport of debarkation, conducts cargo handling and movement operations to a forward distribution node, and facilitates port throughput in support of combatant commander executed contingencies. More information about JTF-PO is in ATP 4-0.1, chapter 4.

Air Mobility Command

1-42. Air Mobility Command (AMC), the Air Service component, provides airlift, air refueling, and aeromedical evacuation services for deploying, employing, sustaining, and redeploying U.S. forces worldwide. Additionally, AMC is the worldwide aerial port manager and, where designated, operator of common-user aerial ports of embarkation or aerial port of debarkation. AMC operationally directs the use of domestic and international airlift services, including the civil reserve air fleet. AMC has the capability to rapidly employ aerial ports around the world.

1-43. AMC's fleet of air mobility aircraft is joined by commercial air carriers to deliver cargo and personnel anywhere in the world in a matter of hours. During contingencies and operations, Air Mobility Command assets support both intertheater and intratheater common-user airlift operations. Although primarily used for intertheater operations, AMC assets can be assigned to support theater operations and temporarily assigned GCC control. AMC use Service cargo transfer units to expedite cargo through the aerial port of debarkation and into the theater distribution network.

Military Sealift Command

1-44. The Naval Service component for USTRANSCOM is the Military Sealift Command. Military Sealift Command provides worldwide transportation of fuel, equipment, supplies and ammunition during peace and war using government owned and chartered United States flagged ships. During contingencies, MSC uses its government-owned surge sealift fleet, including large medium speed roll-on/roll-off vessels, to rapidly load equipment and supplies to deploy where needed. These ships are responsible for conducting the intertheater sea operations. Intratheater water operations are conducted by MSC, commercial watercraft and Army watercraft organizations. These organizations perform the operational maneuver and sealift of sustainment and units and supports marine terminal operations and distribution operations.

1-45. MSC also employs ships from the Ready Reserve Fleet, to include fast sealift ships. These ships, which are owned and maintained in reduced operating status by the Maritime Administration, come under MSC control when activated. Assured access to additional sealift and intermodal capacity is gained through a partnership with the United States flag maritime industry, by way of the Voluntary Intermodal Sealift Agreement and Maritime Security Program. A balanced reliance on organic and commercial assets—product tankers, dry-cargo ships, vessels with unique capabilities, and access to their associated ports and intermodal networks—optimizes sealift response in support of the Warfighter. Some Ready Reserve Fleet vessels have unique features to support joint LOTS, where fixed-ports may be inadequate, damaged, or nonexistent.

Military Surface Deployment and Distribution Command

1-46. Military Surface Deployment and Distribution Command (SDDC) is the Army Service component command of United States Transportation Command and a major subordinate command of U.S. Army

Materiel Command. As a component of USTRANSCOM, SDDC provides worldwide common-use ocean terminal services and traffic management services to deploy, employ, sustain, and redeploy U.S. forces on a global basis. SDDC is the Defense Transportation System's interface between DOD shippers and the commercial transportation carrier industry. SDDC's assets provide coordination of force movement, status of worldwide infrastructure, and seaport operations. The unique suite of traffic management capabilities includes freight and traffic management, integrated transportation systems and intermodal contracts and agreements, and worldwide port management.

1-47. Military Surface Deployment and Distribution Command is the single port manager for all common-user seaports of embarkation and debarkation. SDDC supports the flow of deploying units, equipment and sustainment into the seaport of debarkation. SDDC supports all aspects of theater port operations and provides asset visibility information in accordance with geographic combatant commander's priorities.

1-48. An Army Reserve unit that supports the SDDC is the Deployment Support Command. The Deployment Support Command provides standardized training and readiness oversight to all Army Reserve units providing support to SDDC operations. These units are engaged in water terminal, deployment and distribution support, container management, and movement control operations. The Deployment Support Command exercises mission command for these units during peacetime and is responsible for coordinating and synchronizing their deployment.

DEFENSE LOGISTICS AGENCY

1-49. The Defense Logistics Agency provides the Army, Navy, Air Force, Marine Corps, other federal agencies, and combined and allied forces with the full spectrum of logistics, acquisition and technical services. The Agency sources and provides nearly 100 percent of the consumable items America's military forces need to operate, from food, fuel and energy, to uniforms, medical supplies, and construction and barrier equipment. DLA also supplies more than 85 percent of the military's spare parts. In addition, the Agency manages the reutilization of military equipment, provides catalogs and other logistics information products, and offers document automation and production services. In addition to the DLA organizations listed below, DLA Distribution provides wholesale and retail level storage and distribution to the GCC in theater when requested by the combatant commander. DLA Distribution currently has facilities located in many overseas.

Defense Logistics Agency Regional Commands

1-50. The Defense Logistic Agency supports each geographic combatant commander with a DLA regional commander. This commander is the focal point for coordinating all DLA activities throughout the theater and can provide flexible support on demand. Once the Services identify capability required, the requirement goes through the joint task force commander, the combatant command and to the joint staff for approval. Following approval, DLA organizes its capabilities to meet requirements. The DLA regional commander will stand up a Defense Logistics Agency Support Team (DST) to provide direct support to the area of operations.

Defense Logistics Agency Support Team

1-51. DLA regional commanders provide liaison officers and functional experts under the command of a DST commander. These teams are rapidly deployed to provide support to a combatant commander, joint task force, Service components, or subordinate unified commands during regional conflicts, contingency operations, mobilization, emergencies, flexible deterrent options, exercises, or other situations. DSTs are comprised of active, reserve, and civilian personnel. While deployed, the DST is under the operational control of the theater commander, who may further delegate this duty as required.

1-52. The DST provides logistical support to conflicts, natural disasters, emergencies, mobilizations and other contingency operations around the world. DSTs are responsible to the combatant commander. The DST works directly with the sustainment command and integrates materiel management support of DLA common commodities such as subsistence, protective clothing, general supplies, and bulk petroleum. They also provide disposal support as appropriate including the disposal of hazardous wastes. However, DSTs

require force protection, life support, use of common user land transport (CULT) assets and may need terrain prepared for their operations.

1-53. For more details of support available to a specific operation, contact the DLA Customer Interactions Center. The DST provides logistical support to conflicts, natural disasters, emergencies, mobilizations and other contingency operations around the world.

Defense Distribution Expeditionary Depot

1-54. The defense distribution expeditionary depot provides sustainment support to continental United States (CONUS) and outside the United States for overseas contingency operations, humanitarian assistance and disaster relief. The defense distribution expeditionary depot is capable of rapid worldwide deployment and its capability can be tailored to the requirements of the customer. The defense distribution expeditionary depot is a subordinate organization of DLA Distribution. DLA Distribution or in some instances the DLA regional commander, will provide mission command for the defense distribution expeditionary depot during forward deployed operations. The defense distribution expeditionary depot can deploy personnel and equipment to the port of embarkation within 24 hours of notification. It is capable of operating in austere environments; force protection and life support must be provided by the customer. When requested and established, the defense distribution expeditionary may be located at a point of debarkation or inland distribution node and has the capability to receive, store, issue, and transship DLA items, Service items, or GSA items.

1-55. One of the capabilities the defense distribution expeditionary depot can provide is a theater consolidated shipping point, also known as a container cross dock operation. The defense distribution expeditionary depot is designed to support sustainment operations. This capability can be deployed early in a contingency to reduce backlogs in the sustainment flow. This capability is task organized with defense distribution expeditionary personnel who are fully trained and functional experts from multiple DLA Distribution sites and range from supervisors to materiel handlers and distribution process workers.

Defense Logistics Agency Disposition Services

1-56. DLA Disposition Services disposes of excess property received from the military services. The inventory changes daily and includes thousands of items: from air conditioners to vehicles, clothing to computers, and more. That property is first offered for reutilization within the DOD, transferred to other federal agencies, or donated to state and local governments and other qualified organizations. DLA Disposition Services also supports disaster relief at home, and humanitarian assistance and foreign military sales programs.

1-57. DLA Disposition Services provides the maximum amount of property disposition services as is practical within the area of responsibility (AOR). DLA Disposition Services may provide technical assistance to commanders. This can include management services for hazardous waste management and disposal, technical assistance regarding demilitarization and trade security control requirements, and advice on disposal requirements. It does not include the provision of disposition instructions for property or the proper supply condition code for property as those functions are a Service responsibility.

1-58. Reutilization is the redistribution of excess items within the DOD and can be a significant part of intratheater excess redistribution. Transfers to other federal agencies and donations to authorized recipients are subject to the rules of the Department of State and will vary from country to country and operation to operation. DLA Disposition Services also oversees the disposal of all hazardous material or hazardous waste. To the extent possible, the centralized disposal activity shall physically accept and process all property for which it has responsibility. For further specific information, see DOD 4160.21-M, *Defense Materiel Disposition Manual*.

DEFENSE CONTRACT MANAGEMENT AGENCY

1-59. Defense contract management agency may be directed to provide administrative contract services for contracts awarded by all DOD components and other designated federal and state agencies, and foreign governments. Defense contract management agency is responsible for assuring that procured materiel and services are satisfactory and delivered when and where needed. Defense contract management agency is a

separate agency under DOD and deploys its own command structure when supporting contingency operations. Defense contract management agency provides significant reach back support for a sustainment command during operations requiring contracting services.

U.S. ARMY MATERIEL COMMAND

1-60. The U.S. Army Materiel Command provides technology, acquisition support, materiel development, logistics power projection, and sustainment to the total force. USAMC maintains the Army's prepositioned stocks, both on land and afloat. USAMC also handles the majority of the Army's contracting including contracting services for deployed units and installation-level services, supplies, and common-use information technology hardware and software. USAMC supports deployed Army forces through its subordinate contracting support brigade and Army field support brigade. The Military Surface Deployment and Distribution Command is one of the major subordinate commands of USAMC.

Contracting Support Brigade

1-61. The contracting support brigade is regionally aligned and provides theater support contracting services and operational contract support planning assistance in support of the theater Army, Army force headquarters, and their major subordinate commands. The contracting support brigade serves under the command and procurement authority of the expeditionary contracting command, providing direct support to the theater army or TSC as directed. For more information about the contracting support brigade see FM 4-92, *Contracting Support Brigade*.

Army Field Support Brigade

1-62. The Army field support brigade is a small, mission focused, highly modular organization built around a tailored modified table of organization and equipment and an augmentation table of distribution and allowances structure. The Army field support brigade is assigned to the U.S. Army Materiel Command's Army Sustainment Command. Army field support brigade's leverage USAMC national-level provider capabilities and assist in the coordination of national level sustainment support to the operational Army. Each Army field support brigade can request assistance and support from USAMC and the Assistant Secretary of the Army for Acquisition, Logistics and Technology to meet specific mission requirements. When deployed in support of contingency operations, and when directed by their higher echelon, the Army field support brigade will normally be placed under the operational control of the supported theater Army commander. This operational control authority is normally delegated to the TSC or ESC as appropriate. For more information about the Army field support brigade see ATP 4-91, *Army Field Support Brigade*.

SUMMARY

1-63. Army theater distribution consists of organizations and processes for providing materiel to Army forces, other Services, and multinational partners across a theater of operation. Many of the distribution fundamentals are common across the DOD. Knowledge of the distribution terms and principles and the distribution networks enables an effective operational planning and execution process while integrating strategic provider capabilities into the operational and tactical environments in theater. The strategic partners contribute critical capabilities to the operational environment.

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Chapter 2

Theater Distribution Planning

Distribution planning requires understanding of the operational environment, the supported commander's priorities and requirements, and the strategic to operational to tactical interface. A Theater Sustainment Command may be planning and managing distribution operations in multiple areas of operation within its theater of operations. Because of these complexities, the planning phase is extremely important as a means to identify the joint organizations and points of contact with whom the theater logistician will coordinate and to establish the distribution framework before start of operations.

THE PLANNING PROCESS

2-1. Army headquarters use the military decisionmaking process and publish plans and orders in accordance with the Army plans and orders format. ADRP 5-0, *The Operations Process*, describes the military decisionmaking process and the Army design methodology.

2-2. An Army headquarters that provides the base of a joint force headquarters, will participate in joint planning and receive a joint formatted plan or order. This headquarters, such as a TSC or ESC serving as a command or center for joint logistics, has the option to use the military decisionmaking process or the joint operation planning process to develop its own supporting plan or order written in the proper Army or joint format to distribute to subordinate commands. The joint operation planning process is described in JP 5-0, *Joint Operation Planning*.

2-3. As the organization coordinating sustainment support for tactical requirements from strategic capabilities, TSC and ESC commanders and staffs must be familiar with joint planning processes, procedures, and orders formats. These staffs should be prepared to interpret and apply the output of the joint operation planning process to Army plans, orders and estimates.

2-4. Since time is a factor in all operations, commanders and staffs conduct a time analysis early in the planning process. This analysis helps them determine what actions they need and when to begin those actions to ensure forces are ready and in position before execution. This may require the commander to direct subordinates to start necessary movements, conduct task organization changes, and execute other preparation activities before completing the plan.

LOGISTICS PLANNING PROCESS

2-5. Logistics planning process is the means to integrate, synchronize, and prioritize logistics capabilities with the supported commander's operational objectives to achieve the desired outcome during all phases of plan development. The logistics planning process ensures that logistics facts, assumptions, limitations and constraints are properly analyzed and effectively synthesized; creating an integrated logistics plan that supports the operational plans. Theater logistics planners must be included in the planning process as early as possible to ensure this integration occurs.

2-6. The goal of all sustainment efforts is to support the commander's plan. The theater logistician integrates all of Army sustainment with the operations process (plan-prepare-execute-assess). Effective support requires a thorough understanding of the commander's intent and synchronizing sustainment plans with the concept of operations. Theater logisticians must anticipate changes in the types and quantity of sustainment required. Anticipating changing requirements will ensure that sustainment continues to extend the combatant commander's operational reach.

2-7. Army theater logistics planners develop theater logistics concept plans and operations plans that are nested within higher level command plans. Thus, each commander's operational environment is part of a higher commander's operational environment. Resulting plans are reviewed, analyzed and used as the basis for publication of operations orders. Commanders establish mission priorities, assess the risk to and plan for the protection of materiel and forces, establish visibility of materiel requirements, distribution operations, resource availability and shortfalls, and shared processes.

2-8. While gathering the necessary tools for planning, each staff section begins updating its running estimate—especially the status of friendly units, resources and key civil considerations that affect each functional area. Running estimates not only compile critical facts and assumptions from the perspective of each staff section, but also include information from other staff sections as well as other military and civilian organizations. The task of developing and updating running estimates continues throughout the deliberate planning and the operations process.

2-9. The theater distribution plan is part of the overall sustainment plan. The logistics plans are articulated in the annexes and supporting plans of the Army service component command's (ASCC) operation plan (OPLAN) and operation order (OPORD). Theater sustainment plans will guide the planning of other supporting commands and organizations, as well as governmental departments and agencies that will be supporting the combatant commander.

MISSION ANALYSIS

2-10. Commanders gather, analyze, and synthesize information to orient themselves on the current conditions of the operational environment. Distribution planning addresses the following tasks:

- Analyze force requirements and sourcing to support combined arms maneuver and wide area security operations.
- Verify sustainment.
- Analyze transportation.
- Assess the four distribution networks (physical, information, communication and financial).
- Review logistics analysis.
- Develop commodity distribution concepts.
- Ensure protection.
- Plan for retrograde.

2-11. This methodology is based on the supported theater's sustainment needs. There are five areas to address: requirements, capabilities, shortfalls, analysis, and determining solutions. Each planner's position and organization reflects the level of detail required for the mission analysis.

2-12. During the planning process, logistics requirements are evaluated to assess force sustainability, transportation feasibility and to develop an end-to-end distribution concept. This involves coordination and cooperation with supporting commands and agencies. Supporting commanders and agencies confirm resource availability and support materiel requirements during execution planning. Theater logisticians will consider operational energy in the planning and executing of the distribution mission. Operational energy is the sum of energy and associated systems, information and processes required to train, move, and sustain forces and systems for military operations.

2-13. Joint planning includes distribution planning tasks as part of plan development. One of the key distribution planning tasks is to analyze force requirements and sourcing. *Force sourcing* is the identification of the actual units, their origins, ports of embarkation, and movement characteristics to satisfy the time-phased force requirements of a supported commander (JP 5-0). Subordinate component commanders are tasked to determine specific forces (unit) and materiel (nonunit) requirements (including personnel replacements) and recommended time-phasing of these requirements. Component command force and support requirements are submitted to the supported combatant commander (CCDR), who coordinates these and other requirements to develop the time-phased force and deployment data.

2-14. Knowledge of force sourcing decisions is critical to the acceptability, adequacy, and feasibility of the concept of support and sustainment planning. Planners must understand the relationship between the employment of forces and current distribution concepts for various sustainment and commodity supply

chains. This allows logistics planners to incorporate new distribution capabilities. Planners ensure they have the proper mix and types of units to execute the distribution mission. In many instances, planners may incorporate the use of coalition partners, HNS, contractors and other Services in distribution operations.

2-15. Logistics refinement is part of the joint planning process. Logistics refinement is the process of resolving shortfalls in logistics support during the planning process. During contingency planning, USTRANSCOM hosts logistics refinement conferences for the joint staff and supported combatant commands to review OPLAN logistics support. The purpose of the logistics refinement conference is to confirm sourcing of logistics requirements in accordance with Joint staff and Service guidance and to assess the adequacy of resources provided by support planning.

Sustainment Preparation Of The Operational Environment

2-16. Army leaders plan, prepare, execute, and assess operations by analyzing the operational environment in terms of the operational and mission variables. Operational variables consist of political, military, economic, social, information, infrastructure, physical environment, and time. Mission variables consist of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations. How these variables interact in a specific situation, domain (land, maritime, air, space, or cyberspace), area of operations, or area of interest describes a commander's operational environment but does not limit it.

2-17. The *sustainment preparation of the operational environment* is the analysis to determine infrastructure, environmental factors, and resources in the operational environment that will optimize or adversely impact friendly forces means for supporting and sustaining the commander's operations plan (ADP 4-0). This analysis is a reiterative process and is continually updated throughout the operations process.

2-18. The joint theater logistics analysis is the joint theater logistics overview which identifies the theater logistics capabilities and shortfalls as they affect the AOR. See JP 4-0, *Joint Logistics*, for a complete description of a joint theater logistics analysis.

2-19. Logistics planners use the sustainment preparation of the operational environment analysis to optimize the distribution system. The analysis products may include identifying forward operating bases, selecting lines of communications, determining operational stock assets, and designing a distribution and automatic information technology infrastructure for the theater.

2-20. The focus of the analysis is identifying and ensuring access to resources currently in theater. The sustainment preparation of the operational environment provides the data required to prepare the logistics estimate. The logistics planner also completes a distribution network assessment discussed later in this chapter. Some areas to consider when completing the sustainment preparation of the operational environment analysis are below:

- Are there agreements with host nation (HN), allies or coalitions in place?
- Does HN have supply resources available to support U.S. forces?
- Are there warehousing and other storage facilities available?
- What are the contracting options?
- What resources have other U.S. government departments and agencies, international or nongovernmental organizations, multinational forces or private sector identified?
- Does the local population workforce possess the desired skilled labor?
- What HN communication capabilities are available?
- What is the entry environment, permissive or non-permissive?

2-21. One of the first variables the sustainment planner considers is the entry into theater. Entry into an operational area in which host country military and law enforcement agencies have control, as well as the intent and capability to assist operations that a unit intends to conduct, is known as permissive environment. A forcible entry is when operations seize and hold lodgments against armed opposition. In forcible entry operations, effective combined arms maneuver defeats antiaccess and area denial efforts, disrupting the enemy and allowing the ground force to transition rapidly to stability tasks. Forcible entry operations are usually a joint operation and the Army theater sustainment planner must remain linked with lead theater planning headquarters. ADRP 3-0, *Unified Land Operations*, provides overarching guidance on

unified land operations including the Army's core competencies of combined arms maneuver and wide area security. See JP 3-18, *Joint Force Entry Operations*, for more information about joint force entry operations.

Assessing Distribution Networks

2-22. In today's operational environment, the threat may range from nation states to extremist networks, groups or organizations. In any scenario, planners should anticipate that the threat will seek to disrupt the distribution network. Logistics planners must find ways to limit the impact of actions against the distribution network and ensure forces are sustained. The Army theater sustainment planner must remain linked with lead theater planning headquarters. Planners may use a variety of techniques such as altering routes and using aerial delivery to mitigate actions against the distribution network.

2-23. One of the joint distribution planning tasks is to assess distribution network limitations. These are the factors that place limits on global distribution networks and functions through mobilization, deployment, joint reception, staging, onward movement and integration employment, sustainment, and redeployment during joint operations. Logistics planners must determine and understand these factors so they are capable of offsetting potential network constraints or can make informed tradeoff decisions to adapt to potential constraints.

Physical Network

2-24. Physical network constraints are restrictions in the flow of materiel and movements. These restrictions can be described as bottlenecks or conditions that limit or degrade the ability of the distribution system to support an operation. Planners must identify and offset or adapt to these constraints. An infrastructure assessment is essential to understanding the capabilities and limitations of the theater to support distribution operations. It serves as the basis to determine the amount and type of support personnel and materiel that must be deployed early to facilitate the deployment of combat forces, as well as for determining facility upgrades required to enhance operations.

2-25. The infrastructure assessment is an integrated effort by the intelligence and sustainment warfighting functions. They review the complete logistics picture that shows the port and supply locations, nodes, and maintenance and transportation activities. This assessment allows planners to know where and how support normally flows, and where it may be diverted as operational needs dictate. The distribution system constantly evolves as the theater develops.

2-26. The logistics planner identifies locations for possible inland terminals, future ports, and upgraded surface infrastructure. In distribution planning, both improved and unimproved road networks must be considered in supporting distribution execution. Planners consider rivers that must be crossed or could be used for surface distribution.

2-27. Movement planners use the infrastructure assessment to develop the transportation network. Planners evaluate the complete system of routes pertaining to all modes of transportation available in the theater. Planners assess intelligence and engineer information on the theater to determine the capabilities of available transportation networks. They analyze the situation to determine existing or potential threats to movement. Concurrently, they assess the suitability and feasibility of moving supplies and personnel over those transportation networks. Based on these assessments, planners recommend locations for transportation units and modes to make full use of the transportation networks.

Financial Network

2-28. Financial network constraints are factors that may restrict fiscal resource availability for distribution operations. The immediate concern to planners is the adequacy of funding, the authority and ability to access that funding, and the ability to disburse financial resources to obtain needed distribution capabilities and materiel. Financial Management personnel should be included in the planning process to coordinate for special funding and disbursing operations in support of contract requirements.

Information network

2-29. Information network constraints are limitations that may affect the flow of information, or the utility of that information. Compatibility constraints, particularly when dealing with multinational, HN, or commercial partners, may affect information network operation. Capacity constraints may arise when network operations surge from peacetime to unified land operations. This could result in lost information which would impact on quality of distribution operations. Restrictions imposed for operations security purposes may shut down or limit access to some peacetime information networks used in the global distribution process.

Communications network

2-30. Communications network constraints are physical or administrative restrictions that may limit the amount of logistics information flow over communications systems below that which is needed to effectively conduct logistics operations. The logistics planner must also consider the sufficiency of the information and communications networks. Identifying the type and availability of communication and information tools will influence where the planner places terminals and distribution controlling units.

COURSES OF ACTION

2-31. Commanders and planners develop courses of action for a proposed operation. One course of action is selected based on a course of action analysis and comparison. Sustainment command planners participate in all course of action development and analysis conducted by the ASCC. An effective analysis results in identifying: critical events, requirements for support of each warfighting function, effects of friendly and enemy actions on civilians and infrastructure, and the coordination required for integrating and synchronizing interagency, host-nation and nongovernment organization involvement. It will also assist in developing decision points and sustainment plans and overlays.

2-32. The logistics estimate draws conclusions and makes recommendations concerning the feasibility of various courses of action and the effects of each course of action on distribution operations. Once the commander selects a course of action, the planner uses the logistics estimate to develop the sustainment and distribution plans of the OPLAN or OPORD.

ASSESSMENTS

2-33. Both the military decisionmaking process and joint planning consider assessment a critical step of the planning process. Assessment focuses on developing an understanding of the current situation and determining what to assess and how to assess progress using measures of effectiveness and measures of performance. Developing the unit's assessment plan occurs during the military decisionmaking process—not after developing the plan or order.

2-34. Depending on the situation, assessment may be a detailed process, a formal assessment plan with a dedicated assessment cell, or an informal process that relies more on the intuition of the commander.

2-35. The level at which a specific operation, task, or action occurs should be the level at which such activity is assessed. This focuses assessment at each level and enhances the efficiency of the overall assessment process. Commanders and staffs should have an assessment plan in place before they deploy. Assessments and metrics are discussed further in chapter 4.

OPERATIONS PLANS AND ORDERS

2-36. A product of planning is a plan or order—a directive for future action. Commanders issue plans and orders to subordinates to communicate their understanding of the situation and their visualization of an operation. Plans and orders direct, coordinate, and synchronize subordinate actions and inform those outside the unit how to cooperate and provide support.

2-37. Paragraph 4, Sustainment, of the commander's order or plan includes the concept of logistics support. The sustainment plan of the published OPLAN or OPORD is annex F, sustainment. The distribution plan is developed as appendix I (Tab F- Distribution) to annex F (sustainment) to the ASCC,

corps, or division commander's operation order. The distribution plan format is per the instructions in FM 6-0, *Commander and Staff Organization and Operations*.

Sustainment Plan

2-38. Operational success depends in part on the staff's ability to prepare a comprehensive and technically supportable sustainment plan. The sustainment plan is an integral part of the OPLAN and OPORD. It is an overarching plan, which specifies the theater concept of support, support relationships, priorities of support, and task organization for support of the force. It translates theater-level support policies into a unified concept of support across the logistics and distribution spectrum.

2-39. A well thought out sustainment plan will set the theater up for success for the duration of the operation. It will also set the stage for retrograde and redeployment operations. The sustainment plan is the commander's plan for sustainment operations based on the information gathered and analyzed during the military decisionmaking process. It provides information to the supported elements, and it serves as the basis for the plans of supporting commanders to their units. The characteristics of the sustainment plan are consistent and align with the seven principles of theater distribution.

2-40. The Annex F (sustainment) includes a logistics appendix which has multiple subordinate tabs. Logistics planners must read and may reference this information in the distribution plan. For example, the distribution plan must be synchronized with the route synchronization plan, which is subordinate to the transportation plan. The maintenance plan includes information critical to the execution of surface distribution. All this information is contained in the OPLAN or OPORD and its subordinate annexes and appendices.

The Distribution Plan

2-41. The TSC uses the distribution plan to execute Army theater distribution. The distribution plan supports the combatant commander's priorities by establishing how requirements can be met given available logistics assets, units, transportation modes, and in-theater infrastructure. It identifies competing requirements and shortages, ensuring assets are used to effectively meet the commander's priorities. It is a living document that requires updating to accommodate known and anticipated requirements. It constantly evolves as the theater matures and as the execution of the combatant commander's campaign plan progresses.

2-42. The theater distribution plan describes how sustainment flows from the theater base to the tactical level. The plan outlines who, what, when, where, and how distribution will be accomplished. Theater distribution is the final leg of the global distribution network and the plan must coordinate and synchronize with the strategic plan. The plan must be flexible enough to support changing operations. The DMC is responsible for developing the theater distribution plan and synchronizing distribution operations for the TSC. Developing the distribution plan is the single most important aspect of theater distribution.

2-43. The distribution plan is a series of overlays, descriptive narratives, and arrays that delineate the architecture of the distribution system and describe how units, materiel, equipment, and sustainment resources are to be distributed within the theater. It portrays the interface of automation and communications networks for maintaining visibility of the distribution system and describes the controls for optimizing capacity of the system. Integration of risk management is crucial to distribution planning for identifying hazards and controlling risks arising from operational factors.

2-44. The scope of the distribution plan is limited to explaining exactly how the DMC will maintain asset visibility; adjust relative capacity; and control the distribution of supplies, services, and support capabilities in-theater. The distribution plan describes the distribution system and directs the specific protocols by which the DMC will receive and transmit information in order to perform its mission in regard to visibility, capacity, and control of theater distribution.

2-45. Logistics planners develop a distribution concept for each commodity supply chain. Planners determine the impact of each element of global distribution on the commodity's supply chain, adjusting or adapting as necessary to meet the requirements of the supported CCDR's concepts of operations and support. Logistics planners determine transportation requirements by adding together all the commodity

supply chain requirements, then comparing the sum total to resources needed to execute the distribution plan.

2-46. The distribution plan becomes the guide by which planners and managers know where support should normally flow and where it may be diverted as commanders and operational needs may dictate. It is complemented by the movement plan that is used to plan known, anticipated, and contingency transportation requirements. As the operational environment evolves, the distribution plan will change; it may be incorporated into orders or included in standard operating procedures.

2-47. The distribution plan must include the specifics of how ITV data will be captured. The DMC identifies the key nodes in the network and the modes that will be tracked. The DMC works closely with the ASCC staff which develops ITV plans and policy for the joint operation area.

2-48. The distribution plan may include key distribution leaders, liaison requirements, and specific reports or reporting procedures not covered in a standard operating procedure or Annex R (Reports). Identify reference documents essential to understanding the plan such as supporting OPLANs or OPORDs, maps, overlays, applicable appendixes, annexes, tabs, or doctrinal references. If not already covered in the overarching sustainment concept or logistics appendix, the distribution plan may address integrating actions with JDDOC and other strategic partners.

2-49. Resources available to guide the development of a distribution plan include JP 4-09, *Distribution Operations*, specifically Appendix C, *Commander's Checklist for Distribution of Materiel and Movement of Forces*. This appendix contains a generic list of issues or questions that logistics planners could consider when integrating distribution activities into OPLANs or OPORDs. The questions in this checklist are for joint operations but can be used as a starting point for developing an Army theater distribution plan.

Theater Movement Program

2-50. The theater movement program is a command directive prepared by planners in the sustainment command, with assistance from the movement control battalion and disseminated through the orders process. A division, brigade combat team, or separate brigade may also create a movement program to better synchronize their distribution operations. Planners coordinate the movement program with operations, supply, military police, engineer, and air staffs to delineate responsibilities during execution. Coordination is ongoing to ensure integrated planning and coordinated execution.

2-51. The theater movement program authorizes the movement control teams (MCT) to issue transportation movement releases, directs mode operators to furnish assets, arrange commercial movements, and alerts receiving units to accept programmed shipments so that they can unload transportation assets promptly. There are nine basic steps used to develop a movement program. These steps are discussed in detail in ATP 4-16, *Movement Control*. Movement planners develop a movement program prior to deploying.

2-52. While developing the theater movement program, planners use available information to determine the number of transportation units and their equipment available to support common-user movement requirements. Other factors include: total number of HN transportation assets (commercial, rail, inland waterways, and coastal shipping), U.S.-contracted assets, reception, materials handling equipment, and in-transit storage capabilities.

2-53. An effective theater movement program is vital for operational support. Units are required to provide accurate data when identifying transportation requirements and inform movement planners of current and future operations. Movement planners must be flexible due to changing priorities, requirements, asset availability, and lines of communication status. Movement plans should have developed courses of action based on changing situations and priorities. An integrated movement program that matches transportation movement requirements against transportation capabilities supporting distribution, deployment, and redeployment operations requires logistics planners from the following organizations to coordinate the movement program: ASCC sustainment cell, sustainment command's DMC, sustainment brigade SPO, corps and division transportation officer, joint movement center, and movement control battalions (MCB) and MCTs.

2-54. The theater movement program is a critical task for the sustainment command DMC. The tactical level planners require the sustainment command's output in order to integrate and complete their movement plan. Once the operational level plan is drafted, the TSC is better able to guide the strategic level providers with timing shipments, mode of shipment and other information crucial to expedite distribution through the ports and on to the using unit.

DISTRIBUTION PLANNING CONSIDERATIONS

2-55. Distribution operations directly affect the civilian populace, environment, infrastructure and nongovernmental organization's ongoing operations. Commanders and planners must be aware of this when planning and executing distribution operations. Distribution operations often support humanitarian operations, disaster relief operations, feeding, and employment of local populations. By understanding human variables, commanders and planners improve the chance of successfully conducting their mission. Additional distribution planning tasks that aid logistics planners in assessing the adequacy and feasibility of concepts of support for campaign plans and OPLANs are listed below.

2-56. Throughout the planning process, the TSC considers operational security. This includes all aspects of the mission from physical protection while completing convoy mission to protecting the logistics information systems. Comprehensive protection requires the employment of the full array of active and passive measures and the integration, coordination of intelligence and security programs, information operations, risk management techniques, and safety programs to increase individual awareness of potential threats.

2-57. No two operational environments are identical, even within the same theater of operations, and every operational environment changes over time. Because of this, Army leaders consider how evolving relevant operational or mission variables affect force employment concepts and tactical actions that contribute to the distribution mission. Awareness of potential ground threats is especially critical in the area of distribution operations in countering improvised explosive devices, military grade land mines and explosively formed penetrators. Kinetic threats likewise are of concern to the convoy planner. Successful distribution operations result from the fusion of current intelligence, Soldiers familiar with current tactics, techniques and procedures, standard operating procedures, and deliberate and careful use of counter improvised explosive devices enablers. See ATP 3-90.37, *Countering Improvised Explosive Devices*, For more information about countering improvised explosive devices.

2-58. In the TSC, the assistant chief of staff, operations (G-3) Protect Cell participates in the detailed planning and coordination for theater distribution operations. Logistics planners consider how multiple entry points into an area of operations, and the lines of communications that connect those points, will be secured. Identify the force protection planners early in the planning process and ensure the distribution plan and the force protection plans are coordinated and nested within the command and with higher headquarters plans. For more information on operation security, see ADRP 3-37, *Protection*.

2-59. Sustainment organizations will consider operational energy in the planning and executing of their missions. Operational energy is the sum of energy and associated systems, information and processes required to train, move, and sustain forces and systems for military operations. Operational and tactical level logisticians must consider ways to conserve or reduce the amount of operational energy resources used in operations. Through conservation of energy resources, commanders can reduce resupply operations, increase vehicle and equipment efficiency, and reduce environmental damage. Energy resources include fossil fuel, electricity, battery, solar, and every other source of energy. Commanders must plan and oversee operations to reduce consumption, use alternative energy means, and incorporate the latest energy saving technologies. Employing a combination of best practices, technologies, and discipline in managing and executing supply and field services operations will extend operational reach and reduce mission risk.

PLAN FOR THEATER OPENING

2-60. The distribution portion of theater opening is the ability to establish and initially operate ports of debarkation; to establish the distribution system and sustainment bases; and to facilitate the reception, staging, and onward movement of forces and materiel. Theater opening includes communications, personnel protection, intelligence, civil affairs operations, human resources, financial management, Army

Health System Support, engineering, movement (air, land, and water transport and terminal operations), materiel management, maintenance, and operational contract support. Theater opening operations are also discussed in ATP 4-94, *Theater Sustainment Command*.

2-61. It's important to understand the capacity of all available ports in the projected area of operations. Certain ports may be useful for re-supply while they may not be useful for initial entry forces. As forces are deployed throughout theater, alternate sea and air ports may be used. A major port could be prioritized for initial materiel flow potentially impeding sustainment distribution flow. In that instance, an alternate sea port or inland port could be used. Be sure to analyze the distribution network associated with the alternate ports before determining their value.

2-62. The Army theater opening plan is nested with whatever plans the lead headquarters develops. If the TSC or ESC is the lead sustainment headquarters, they will focus on establishing the logistics systems that flow sufficient logistics through the lodgment(s) created to support follow-on operations. Logistics planning must account for early resupply of initial assault forces as these forces will generally be employed with limited on-hand capacities.

2-63. Consider whether or not an intermediate staging base is necessary. The phasing of theater opening, limited port capacity or physical infrastructure, or operational requirements may demand that materiel is kept away from the AO but close enough for immediate support.

2-64. Early deployment of the transportation theater opening element (TTOE) is essential to successful theater opening operations and the continuous, seamless flow of materiel into the initial theater distribution system. Without adequate theater-opening capabilities, the combatant commander may not have the resources required to maintain and manage the Army theater distribution system. A tailored sustainment brigade assigned theater opening responsibility and augmented by a TTOE will ensure that the combatant commander has the capacity and capability to establish and manage theater distribution and execute reception, staging and onward movement.

2-65. The TTOE provides staff augmentation to the sustainment brigade headquarters assigned theater opening responsibility. It augments the sustainment brigade SPO section by adding the required capabilities for staff oversight for select theater opening operations. For example, it provides a sustainment brigade the additional planning and oversight required to open and initially operate air, sea and inland terminals. Once theater opening transitions to sustainment, the TTOE could augment the sustainment command's DMC.

CONTAINER OPERATIONS

2-66. Container operations expedite and optimize cargo-carrying capabilities via standard shipping containers and multiple modes of transport (sea, highway, rail, and air). Planners weigh the advantages and disadvantages when considering the use of commercial-owned or government-owned containers. Identify and consider the mode of transport as well as required materials handling equipment at the earliest point in the planning phase. As part of the planning process, sustainment planners should also develop a recommendation for a theater wide container policy. The expected duration of a contingency influences how sustainment planners incorporate the use of commercial and government owned containers in support of the combatant commander. For more information on container operations see ATP 4-12, *Army Container Operations*.

OPERATIONAL CONTRACT SUPPORT

2-67. Theater sustainment planners should be familiar with the different contracting options available to them. Some contracts will be fully coordinated and executed by joint staff or defense agencies. Other contracts will be the responsibility of the initiating headquarters. The following paragraphs summarize possible contracting options available to sustainment planners. Operational contract support consists of two complementary functions: contract support planning and integration, and contractor management.

2-68. Commanders can expect that contractors will be involved in operations. The management and control of contractors differs from the mission command of Soldiers and Department of the Army civilians. During military operations, Soldiers and Army civilians are under the control of the military chain of command. Commanders can direct Soldier and Army civilian task assignment, special recognition, and disciplinary

action. However, they do not have the same control over contractors. The terms and conditions of the contract establish relationships between the military and the contractor. Commanders and staff planners must assess the need for providing operational area security to a contractor and designate forces to provide security when appropriate. The mission of, threat to, and location of the contractor determines the degree of protection needed.

2-69. There are three types of contracted support available to support an operational commander: theater support, systems support, and external support. Theater support contracts are contracts awarded by contingency contracting officers deployed to the operational area that provide the ability to rapidly contract for logistics support within a theater of operations. Systems support contracts are prearranged contracts awarded and funded by acquisition program executive officers and project/product management officers. These contracts provide technical support, maintenance support and, in some cases, class IX support for a variety of non-type classified and selected Army weapon and support systems.

2-70. External support contracts are contracts awarded by contracting organizations whose contracting authority does not derive directly from the theater support contracting head(s) of contracting activity or from systems support contracting authorities. External support service contracts provide a variety of logistics and other noncombat related services and supply support. The largest and most commonly known external support contract is the Army's logistics civil augmentation program. The logistics civil augmentation program may provide supply services (e.g. storage, warehousing, or distribution) for the nine classes of supplies, but the services source the actual commodities. See ATTP 4-10, *Operational Contract Support Tactics, Techniques, and Procedures*, and AR 700-137, *Logistics Civil Augmentation Program*, for additional information.

2-71. Another example of an external support contract is the DLA prime vendor contract. When coordinated, the Defense Logistics Agency throughputs bulk fuel, water, and food to units. This may be done either through pre-positioned stocks or defense logistics agency theater support contracts (e.g., into-plane contracts, into-bag contracts, into-truck contracts) after sources are inspected and approved by veterinary and preventive medicine personnel. Customers typically receive materiel delivery through the vendor's commercial distribution system.

HOST-NATION SUPPORT

2-72. Host-nation support is civil and military assistance rendered by a nation to foreign forces within its territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations. Host nation support may include the use of sea and aerial ports of debarkation, warehousing for storage, transportation assets, personnel such as stevedores and other distribution related or supported capabilities. Many HNS agreements have already been negotiated between existing allies. There are certain sustainment efficiencies that can be achieved to facilitate a unity of effort through the use of HN, allied and intergovernmental organization agreements. These can be pre-existing agreements or agreements that are generated after deployment to a theater. A comprehensive analysis of HN capabilities and plans for incorporating these resources provides sustainment commanders with an array of options. Note that HNS is different than contracted support.

2-73. Host-nation support is especially important during the follow on phases of distribution operations. If there is no HNS agreement, theater Army can still assess host nation sustainment capacity, identify process improvements and then train and mentor the HN sustainment force in building its own capacity. Using HNS can reduce the number of soldiers in theater. Even if the Army theater distribution plan does not use host nation support, DLA may use host nation or contractor support to assist in the storage, transportation or delivery of parts and material to the customer.

MULTINATIONAL SUPPORT

2-74. The sustainment commands look to their higher headquarters for guidance relating to common sustainment. Common sustainment consists of materiel, services, and/or support that is shared with or provided by two or more military Services, DOD agencies, or multinational partners to another Service, DOD agency, non-DOD agency, and/or multinational partner in an operation. Although logistics is a national responsibility, The North Atlantic Treaty Organization also considers logistics a collective

responsibility. As such multinational and bi-lateral agreements will necessitate a more cooperative environment for the movement and distribution of multinational logistics. Multinational and bi-lateral agreements will require common user land transportation to move multinational logistics to shared based camps or operational areas. Deliberate efforts will be required to coordinate and control movement across multinational boundaries. See JP 3-16, *Multinational Operations*, and JP 4-08, *Logistic in Support of Multinational Operations*, for more information about multinational logistics.

PLAN FOR RETROGRADE, REDEPLOYMENT AND THEATER CLOSING

2-75. Planning for materiel retrograde must be accomplished during the initial stages of an operation. Early retrograde planning is essential and necessary to preclude the loss of materiel assets and maximize the use of retrograde transportation capabilities. Planners address the following retrograde requirements during the initial planning phases; how to recover and retrograde during ongoing operations, identify packaging requirements and how to use transportation assets effectively. The retrograde plan should also include the concept for control and movement of retrograde materiel both intertheater and intratheater.

2-76. Commanders at all levels must enforce supply accountability and discipline to ensure effective and timely retrograde operations. This includes identifying, acquiring and maintaining packing materials to be used in retrograde operations. Significant resources are needed to restore and repackage certain categories of supplies, ammunition and equipment. In addition to assigned military organizations, contractor and HNS may be required. If planners expect to use contractor or HNS for retrograde operations, those contracts must be in place early in the operation. Contractors must know and fully understand the scope of work necessary to complete the mission. HNS should be thoroughly screened by security personnel. Retrograde operations are more fully explained in chapter 5.

2-77. Planning for redeployment can be as or more complex than planning for deployment. Each redeploying unit must plan and coordinate the movement of its equipment and personnel in the distribution system. It must plan what equipment it will be leaving with, what it will leave behind, and how it will distribute or make visible its serviceable and unserviceable excess.

2-78. *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 joint operations. In the final stages of theater closing, military operations are transitioned to the State Department.

2-79. Planning for theater closing should begin during the initial operational planning process and continue during all phases of a campaign or major operation. Distribution operations are part of both theater closing and redeployment activities. The sustainment command planners should consider capabilities provided by strategic partners when recommending stay behind units and functions. Redeploying forces can use contractors, strategic partners and HNS. This is a synchronizing and integrating function for the sustainment commands.

TRANSITION FROM PLANNING TO EXECUTION

2-80. Planning outputs serve as blueprints to executable actions. Planning and execution may be running concurrently and updated logistics plans are critical planning outputs, which serve as the expectation against which distribution execution is measured. The theater logistician requires the ability to monitor, assess, and direct distribution operations in order to assure that the concept of support is effectively executed. The sustainment principle of responsiveness is critical to this effort. Theater distribution operations must be responsive to evolving mission requirements and operate effectively across the tasks of decisive action. Theater logisticians must improvise, adapt procedures and task organize in response to changing situations, missions, and operational requirements.

SUMMARY

2-81. Distribution planning requires understanding of the operational environment, the supported commander's priorities and requirements, and the strategic to operational to tactical interface. The planning

phase is extremely important as a means to identify the joint organizations and points of contact with whom the theater logistician will coordinate and to establish the distribution framework before start of operations. Planners also consider the entire operation including actions associate with theater closing. Sustainment concepts of support, sustainment and distribution plans are outcomes of the planning process. Planning for operations includes consideration of contractor, multinational and host-nation support and how these sources of support will integrate with Army mission command.

Chapter 3

Theater Distribution Mission Command

The knowledge of materiel management and transportation processes and the willingness to influence those processes is what achieves theater distribution effectiveness and efficiencies. Theater logisticians should know who controls or is exercising mission command over all materiel or distribution agencies supporting the theater to enable their ability to influence. This chapter introduces the organizations involved with theater distribution operations and highlights the different mission command relationships of Army organizations cited. It also describes the special boards and centers the TSC may participate in or chair.

MISSION COMMAND

3-1. *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 intent of the following paragraphs is to highlight Army organizations involved in theater distribution and the associated mission command warfighting functions. The following commands all provide mission command of Army theater distribution. These commands use the mission command warfighting function to integrate and synchronize distribution operations. The philosophy of mission command, the art of command and the science of control are described in ADRP 6-0, *Mission Command*.

COMBATANT COMMAND

3-2. Combatant commanders exercise combatant command authority over forces assigned to accomplish the command's missions. The combatant command J-4 is responsible for developing logistics plans, formulating policies, and coordinating execution of the combatant commander's policies and guidance. The J-4 communicates the CCDR's logistics priorities to the Services responsible for executing joint logistics. The priorities are then passed from the ASCC to the theater sustainment command.

3-3. If the sustainment command is directed to control AOR joint logistics planning and execution, the CCDR must delineate the command relationships between the combatant command and all other components of the force. This will drive the relationships between the staffs, particularly the J-4, the TSC, and the joint force land component commander staff. Command relationships are stated in mission orders. JP 3-0, *Joint Operations*, offers more details about the combatant commander's strategic role. Once the command relationships between the forces are clarified, the proper authorities are delegated to the TSC or ESC to execute the joint functions. This delegation of authority should include applicable directive authority for logistics provisions and the method in which these provisions will be executed if required. For additional information on joint staff responsibilities, see JP 4-0, *Joint Logistics*. ADRP 4-0, *Sustainment*, provides more details about the directive authority for logistics.

ARMY SERVICE COMPONENT COMMAND

3-4. There is a component commander from each Service-level organization (Army, Air Force, Marine Corps, Navy, and Coast Guard) in each geographic combatant command. These Service component headquarters are apportioned one to each combatant command. The Army service component command assigned to each GCC supports all areas required under Title 10 United States Code. ADRP 4-0, *Sustainment*, provides detail about Army Title 10 sustainment requirements.

3-5. The ASCC is the senior Army command in a theater. It includes the Service component commander and all Army personnel, organizations, units, and installations that have been assigned to the combatant command to which the Army service component command is assigned. Each Army service component command has a theater sustainment command through which it executes the sustainment mission based upon priorities established by the GCC. The TSCs are either assigned or aligned. Although aligned is not a command relationship, it allows the Reserve component TSC's to establish and maintain a geographic focus.

3-6. Sustainment commands must understand the command and support relationships across theater. The GCC must clearly specify the authorities being delegated to the TSC so that joint functions are clearly explained to the supported AOR. Establishing clear command relationships and authorities are also applicable when the GCC creates subordinate joint force headquarters. The joint command, support and logistics relationships have different implications than the Army's. Planners on TSC and ESC staffs must thoroughly understand the CCDR's command authorities. See JP 1, *Doctrine for the Armed forces of the United States*, for information on joint command and control.

THEATER SUSTAINMENT COMMAND AND EXPEDITIONARY SUSTAINMENT COMMAND

3-7. Both the TSC and ESC have distribution management responsibilities executed through a distribution management center. The sustainment commands provide mission command to organizations that execute distribution and distribution management and control capabilities. The TSC and ESC can operate as a command or center for joint logistics when augmented with appropriate personnel and equipment. For more information about the theater and expeditionary sustainment commands, see ATP 4-94, *Theater Sustainment Command*.

3-8. The TSC is a fixed headquarters organization comprised of a command group, staff and special troop's battalion. The TSC provides mission command and staff supervision to subordinate units and synchronizes current and future sustainment operations for an ASCC headquarters. The TSC can deploy an expeditionary sustainment command when the TSC determines that a forward command is required, or when task organized directly under a Corps or Army forces.

3-9. The ESC is also a fixed headquarters which deploys to an AO or joint operational area and provides mission command capabilities when multiple sustainment brigades are employed or when the TSC determines that a forward command is required. In most cases, the ESC will have a support relationship with the ARFOR (direct support to the ARFOR). In certain circumstances, the ESC may be under OPCON of a corps, ARFOR, or joint task force as required by an appropriate order.

3-10. The significant difference between TSC and ESC capabilities is scale and scope. The TSC looks across the geographic theater and shapes distribution. They set the conditions for successful distribution operations. The TSC provides guidance to the strategic partners when priority conflicts exist between JOAs. The ESC is focused on the JOA and executing the joint task force or ARFOR commander's priorities. The ESC is managing the distribution mission in the JOA. The TSC maintains oversight of sustainment operations within the AO or joint operational area with direct coordination with the ESC and its sustainment information systems. This capability provides the TSC commander with the regional focus necessary to provide effective operational-level support to Army or joint task force missions. The TSC may employ multiple ESCs within the theater.

TRANSPORTATION BRIGADE EXPEDITIONARY

3-11. The transportation brigade expeditionary is an early-entry brigade that supports an ASCC in managing and conducting seaport operations. The transportation brigade expeditionary provides mission command for Army transportation terminal battalions, seaport operations companies and Army watercraft units deployed to support the CCDR. Establishing the seaport operations early on ensures a smooth flow of sustainment while processing deploying units and equipment into the port. The TSC or ESC provides mission command of the transportation brigade expeditionary.

Expeditionary Terminal Operations Element

3-12. The expeditionary terminal operations element is assigned to a transportation terminal battalion and may be under operational control of the SDDC. This unit manages terminal operations in seaports and provides organic, multimodal, multi-ship, 24-hour oversight of contract labor. The contract labor is hired to receive, clear, and move forward cargo and personnel from multi-modal conveyances and terminals located at ports or inland cargo transfer points. The expeditionary terminal operations element also provides cargo documentation service and ITV in seaports.

SUSTAINMENT BRIGADE

3-13. The sustainment brigade has both a distribution management function through the brigade SPO and a physical distribution function accomplished through its subordinate organizations. The sustainment brigade is a fixed headquarters organization comprised of a command group, staff and special troops battalion. The sustainment brigade may include combat sustainment support battalions, functional logistics battalions, and functional logistics companies, platoons and detachments. Under normal circumstances, the sustainment brigade will not have medical organizations attached. The sustainment command provides mission command to the sustainment brigade. ATP 4-93, *Sustainment Brigade*, provides more information about sustainment brigades and combat sustainment support battalions.

Movement Control Battalion

3-14. Movement control is the dual process of committing allocated transportation assets and regulating movements according to command priorities to synchronize the distribution flow over lines of communications to sustain land forces. Movement control is used to help distribute resources based on the GCC's priorities, and to balance sustainment requirements against transportation capabilities. The movement control team commits allocated transportation assets, regulates movement on theater controlled main and alternate supply routes, and provides transportation services in a theater of operation. ATP 4-16, *Movement Control*, describes roles, responsibilities, and command relationships for organizations planning, executing, and supporting Army movement control.

3-15. The TSC or ESC provides mission command to the MCB. The movement control battalion commands between four and ten movement control teams and is responsible to the sustainment command for the execution of the theater movement program. The MCB synchronizes the movement of all forces, equipment, materiel, and sustainment over lines of communication within their area of operations. It provides transportation asset visibility and coordinates the use of common-user land transportation assets. The MCB also provides in-transit visibility of unit moves and convoy movements.

3-16. The MCB coordinates with host nation authorities for cargo transfer locations, road clearances, border (land gateway) clearances, escort support, and additional transportation support. The TSC may divide the theater into transportation movement regions. This approach permits centralized control by the TSC and allows the MCB mission command of movement control functions. Theater movement control organizations subordinate to the sustainment commands are responsible for all materiel and cargo movements in theater distribution. These movements are controlled by the MCB and its movement control teams.

Movement Control Teams

3-17. Movement control teams are subordinate elements of the movement control battalion and are positioned throughout the theater to assist in the decentralized execution of movement control responsibilities. Movement control requires a commitment of allocated transportation assets according to command planning directives.

3-18. Elements of a MCT may locate at other nodes such as centralized receiving and shipping point (CRSP), convoy support center (CSC), and container yards. MCTs enforce the route synchronization plan established by the sustainment command and may deploy its sections along main supply routes to assist with convoy tracking. MCTs are placed at various nodes that best support the TSC concept of support. An MCT may collocate with a sustainment brigade to provide movement control support on an area basis.

3-19. Movement control teams are the entry point for joint and Army forces to request Army common user transportation assets when movement requirements exceed an organization's organic transportation capability. The movement control teams attached to the MCB may be under operational control of the sustainment brigade and assist with ITV and transportation asset allocation. The sustainment brigade monitors the movement of all items until they reach the customer or destination. The sustainment brigade also manages the convoy marshalling areas, convoy halt sites, and distribution hubs between the theater base and the supported units. This is accomplished through close coordination with the MCT.

CONTROL AND SYNCHRONIZATION

3-20. Commanders and staffs use the science of control to regulate forces and direct the execution of operations to conform to their commander's intent. Logistics staffs coordinate, synchronize, and integrate actions, inform the commander, and exercise control for the commander. Establishing control measures and identifying control organizations for all logistics elements is essential for synchronizing theater distribution. Control relies on continuous flow of information between the commander, staff, subordinates, and unified action partners. The following staff elements and organizations provide the controlling function which permits sustainment commanders to adjust theater distribution operations to account for changing circumstances and direct the changes necessary to address the new situation. An efficient distribution system optimizes available infrastructure, reduces support response time, maximizes throughput, provides time definite delivery, maintains ITV, and processes retrograde movements. There must be integrated Connectivity between the strategic, operational, and tactical logistics elements must be integrated and transparent to supported units. A comprehensive discussion of the science of control is in ADRP 6-0, *Mission Command*.

JOINT DEPLOYMENT AND DISTRIBUTION OPERATIONS CENTER

3-21. The joint deployment and distribution operations center is established by the GCC at the time of need. It is an integral component of the geographic combatant commander's staff, normally under the staff supervision of the GCC J-4. A JDDOC may be co-located with the DMC, normally in the sustainment commands command post current operations integration cell.

3-22. The JDDOC manages the transition between strategic and intra-theater segments of the distribution system by linking the activities and requirements of multiple organizations. This may include the distribution process owner, other U.S. government departments and agencies, international and nongovernmental organization liaison elements, multinational forces, and elements of the private sector. It then synchronizes all those entities with theater logisticians performing theater distribution functions in the DMC or sustainment brigade SPO.

3-23. The JDDOC, in coordination with the TSC, provides visibility of strategic distribution and deployment. The theater sustainment command also establishes links with USTRANSCOM's Service components to coordinate seaport and aerial port operations and to maintain in-transit visibility of movements in and throughout a GCC's specified area of responsibility.

3-24. The JDDOC supports theater movement control by resolving movement conflicts and assisting the TSC in meeting transportation requirements that exceed TSC capability. It can also coordinate and synchronize joint and coalition movement request within theater. JDDOC is also discussed in chapter 1, ATP 4-0.1. For additional information concerning a JDDOC, refer to JP 3-35, *Deployment and Redeployment Operations*, and JP 4-09, *Distribution Operations*.

DISTRIBUTION MANAGEMENT CENTER

3-25. The sustainment commands (TSC and ESC) have distribution management centers which manage and maintain effective uninterrupted distribution operations. DMCs and movement control battalions are responsible for controlling distribution. The sustainment commands manage and coordinate the theater distribution system from the operational through tactical levels. The sustainment commands perform the coordination and management function through their distribution management center. The distribution management center receives strategic distribution information from the JDDOC and sustainment priorities from the next higher command staff. This could be the Army forces assistant chief of staff, logistics or the

joint force commander's J-4. The distribution management center is part of the sustainment command's staff. The functions of the DMC are the same regardless of which level of command.

3-26. The DMC develops the theater distribution management plan in coordination with the JFC. It coordinates and synchronizes Army materiel managers and movement controllers in a theater. The DMC has primary responsibility for Army distribution management. The DMC manages all facets of transportation, including the effective use of surface and air transportation assets. It considers the impact of unit movement requirements on the distribution system.

3-27. The DMC monitors the distribution of all classes of supply and services, maintenance, and personnel movements supporting the deployed force. It involves ensuring systems and processes are in place to monitor the flow of materiel, equipment, and personnel. It is important that TSC units arrive early in the force flow to coordinate and synchronize the various port activities with reception, staging, onward movement and integration (RSOI) and theater distribution plans. The DMC provides location of mode assets and movement of critical supplies along main supply routes. It provides staff recommendations to direct, redirect, retrograde, and cross level resources to meet mission requirements.

3-28. When deployed, a forward team from the medical logistics management center collocates with the DMC and the JDDOC (if established). The medical logistics management center forward team is subordinate to the medical command (deployment support) and serves as a link between national-level medical logistics support and theater-level distribution.

3-29. The DMC enables logistics commanders and staffs to synchronize distribution functions within an AO. The DMC staff establishes and maintains the common operational picture throughout the theater. They maintain continuous contact and connectivity with the GCC logistics staff, JDDOC, corps, and division sustainment cells and brigade combat team battalion logistics staff officer for resource prioritization. They also coordinate with system and item managers and the Army field support brigade for system support and materiel requirements. If the TSC serves as a joint logistics command, the DMC has the responsibility to coordinate logistics requirements for coalition forces if directed by the GCC. Figure 3-1 shows the organization of a DMC.

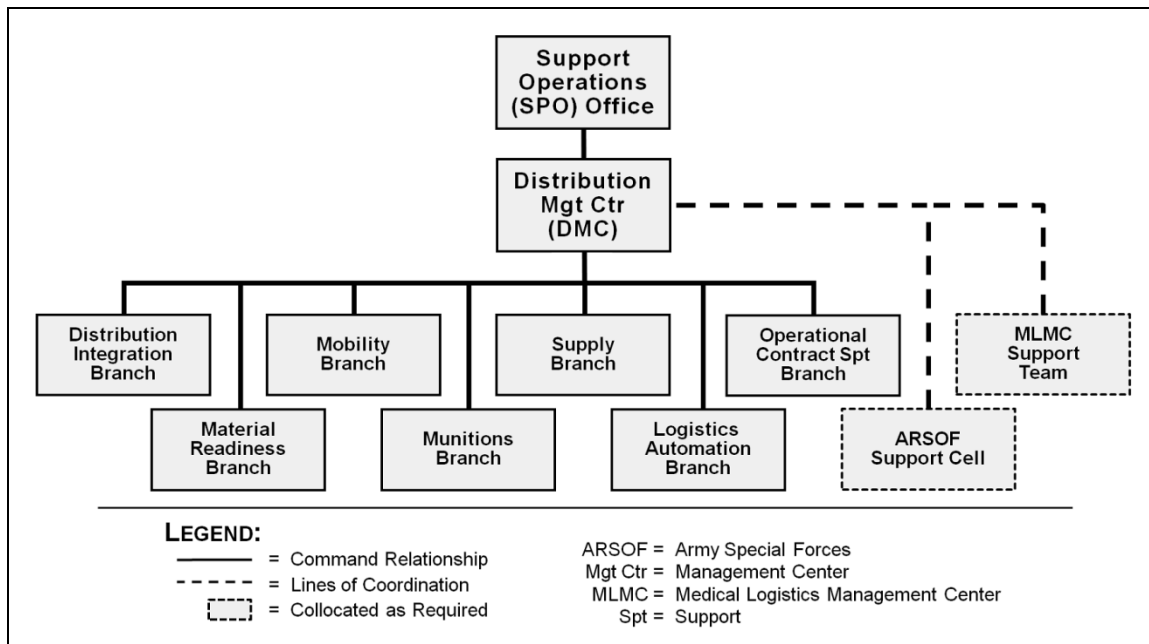


Figure 3-1. Theater and expeditionary sustainment command distribution management center

Distribution Management Center, Distribution Integration Branch

3-30. The function of the distribution integration branch is to plan and synchronize distribution operations in the theater distribution network to include visibility, capacity management, and control of system

operations. The distribution integration branch synchronizes theater distribution operations at the operational level with the JDDOC. The distribution integration branch develops the ASCC's distribution plan and synchronizes materiel and movement management, and is also responsible for coordinating the protection of theater distribution nodes.

Distribution Management Center, Mobility Branch

3-31. The mobility branch executes the controlling function for the physical movement of distribution. They are charged with maintaining liaison with JDDOC, joint task force-port opening (JTF-PO), HN transportation agencies, mode operators, and supported units. This branch also manages CULT assets, both U.S. and host nation and provides theater level liaison to host nations and for contracted assets.

3-32. They maintain visibility of materiel that is being transshipped at distribution nodes and have visibility of resources required to operate the nodes. The mobility branch coordinates internally with supply and distribution integration branches for distribution management of all commodities (less class VIII and communications security equipment), and unit movements (RSOI, redeployment, and retrograde).

3-33. The mobility branch has staff oversight of the development and implementation of the movement program executed by the MCB. They provide guidance, plans, policies, and staff supervision for movements which includes theater route synchronization (both road and rail), distribution network design, and maneuver and mobility support OPLANs. The mobility branch analyzes the physical distribution requirements and develops recommendations for establishing a convoy support center.

3-34. Common-user land transportation assets are DOD-controlled land transportation equipment and facilities designated as common-use in theater. CULT is a function of each geographic combatant commander's authority for logistics. Normally, theater level surface transportation assets are under the operational control of the theater army. However, the GCC may assign common-user land transportation responsibility to another Service. These details are outlined in the combatant commander's operation plan and supporting plans. The theater army fulfills its CULT responsibilities through the use of its transportation assets, rail assets, and petroleum distribution assets. Assets not designated as common use remain under the control of their Service component commanders to accomplish their mission.

Distribution Management Center, Battle Rhythm

3-35. The TSC may establish various boards or cells to focus the management of certain logistics functions. The most common of these are the movements board and distribution board. The TSC movement boards are conducted periodically, depending on operations. This board supports the distribution boards. The TSC distribution board is a task organized group that meets periodically to provide theater movement controllers with updates on distribution priorities, major unit moves, and a means to provide input concerning changes to main and alternate supply routes and area status. It provides an operational to tactical view of the theater movement program. The sustainment commands may establish a board to review daily distribution priorities and resolve transportation asset conflicts.

3-36. Board participants may include, ASCC sustainment cell, DMC, sustainment brigade SPO, corps transportation officer, division transportation officer, and representatives from the MCB and MCTs. Actions that are an output of the distribution boards should be captured in an order and distributed through the orders process. The TSC may use the theater-joint transportation board framework as a model for a TSC distribution board.

3-37. The distribution board receives input from the TSC movement boards. Movement boards, which support the distribution boards, should be conducted at all levels from brigade to theater, wherever there is a requirement to validate transportation movement requirements against transportation capabilities. The movement boards manage transportation policies, priorities, lines of communications status, convoy protection and synchronization, and transportation asset allocation to support theater distribution operations. Movement boards establish movement requirements and at this level could be daily or weekly depending on the situation. More information about movement boards are in ATP 4-16, *Movement Control*.

CORPS TRANSPORTATION OFFICE

3-38. The corps transportation office is a staff organization normally assigned in the sustainment cell of the corps headquarters. In coordination with the corps G-3, the corps transportation office plans and coordinates unit movements, maneuver and force tracking. The corps transportation officer is a staff planner who advises the commander, develops theater transportation policy, coordinates with the G-3 on operational movements, the assistant chief of staff, logistics on sustainment and the assistant chief of staff, plans on transportation aspects of plans and orders. Route synchronization is planned by the corps transportation office for the corps area, and supervised through movement control channels. The corps transportation office coordinates transportation actions with the senior sustainment command in the AO, normally in a TSC or ESC. The corps transportation office also coordinates policy and procedures with the joint movement center when the corps is the Army component of a joint force or the JDDOC as appropriate. ATP 4-16, *Movement Control*, has a complete description of the corps transportation office.

DIVISION TRANSPORTATION OFFICE

3-39. The division transportation office is a staff organization normally assigned in the sustainment cell of the division headquarters and coordinates the movement of units and maneuver elements in coordination with the division G-3. The division transportation office is responsible for strategic and operational planning, coordination, and execution of division deployments, redeployments, and retrograde. The division transportation officer is a staff planner that advises the commander, coordinates with the G-3 on operational movements, the assistant chief of staff, logistics on sustainment and the assistant chief of staff, plans on transportation aspects of plans and orders. The division transportation officer coordinates the division's route synchronization plan. This route synchronization plan, along with the theater distribution network design, specifies the control measures applied to main and alternate supply routes, so that effective and efficient use of road networks can be maintained according to the commander's priorities.

SUSTAINMENT BRIGADE SUPPORT OPERATIONS OFFICE

3-40. The sustainment brigade SPO executes material priorities established by the DMC. They manage internal supplies and stocks and supervise distribution, maintenance, and materiel management functions within the brigade AO. They employ integrated and automated control, and logistics information systems to develop a logistics common operational picture and maintain situational awareness throughout the brigade operational area. The transportation theater opening element (TTOE) and theater distribution augmentation elements may supplement the sustainment brigade SPO. Figure 3-2 on page 3-8 depicts the sustainment brigade SPO.

3-41. The TTOE is assigned to a TSC and can be attached to an expeditionary sustainment command or sustainment brigade. When attached to a sustainment brigade the transportation theater opening element augments the support operations office and provides additional capability for the brigade to provide mission command and staff oversight of transportation terminal, intermodal, and movement control units. During early entry operation the TTOE can provide battalion level staff oversight of movement control operations until an MCB arrives in theater to include providing route synchronization, oversight of the movement control teams and coordination with the rapid port opening element of the JTF-PO operating at an air or water terminal. The transportation theater opening element can also augment the sustainment command support operations office to manage the theater-wide movements and transportation mission.

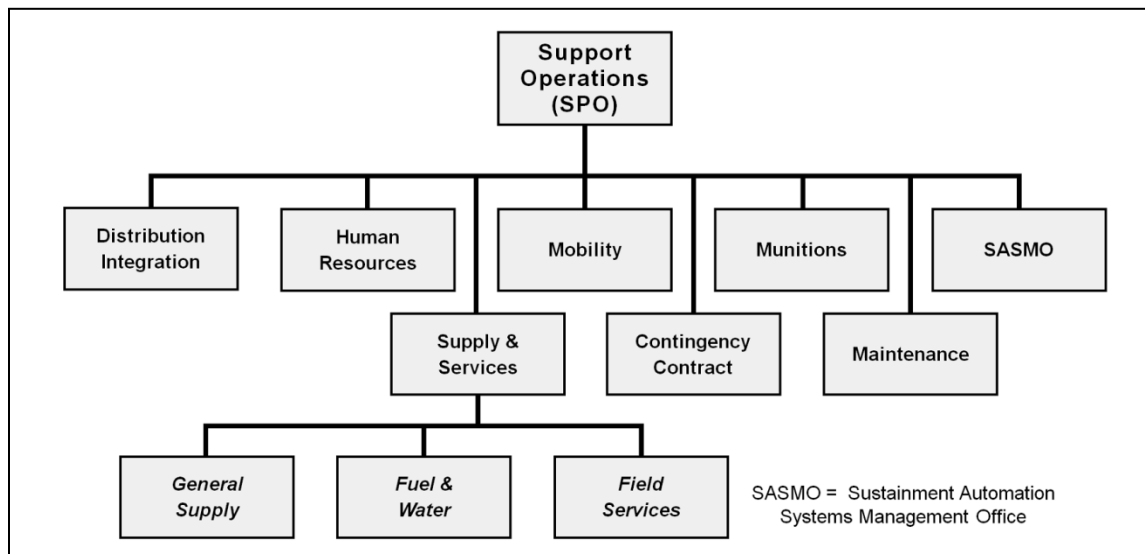


Figure 3-2. Sustainment brigade support operations

SPECIAL BOARDS AND CENTERS

3-42. The strategic and operational movement information, coordination, and synchronization are managed through the establishment of boards and centers. Operational level logisticians provide advice and recommendations to the supported Army commander and the combatant commander concerning prioritizations, allocations, or procedural changes based upon the constantly changing operational environment. These boards, centers, cells, and other organizations are defined in terms of roles, responsibilities, locations, and relationships in planning or execution documents. The following text introduces the distribution related boards and centers with whom the lead Army distribution organization, TSC, ESC or sustainment brigade, would interface. If the sustainment command is appointed joint responsibilities, they may also sponsor some of these boards and centers. See JP 4-0, *Joint Logistics*, Appendix C for more information about joint strategic and operational level boards and centers.

THEATER-JOINT TRANSPORTATION BOARD

3-43. The theater-joint transportation board is a task organized board established by the GCC as close to the beginning of a deployment as possible. Early theater-joint transportation board operation precludes confusion and backlogs, and deconflicts commercial, U.S. military and other demands on in-theater transportation assets. The GCC determines the chairperson for the theater-joint transportation board; normally it is co-chaired by the director of the JDDOC and the geographic combatant commander's J-4. The theater-joint transportation board's role is to resolve transportation issues within the command, such as allocating transportation capability among components for unit movement, nonunit movement, resupply, and disposal. The theater-joint transportation board consists of representatives from the Service components, movement control agencies, and the joint operations, plans and logistics staff office. The TSC provides Army support if a theater-joint transportation board is established.

3-44. The sustainment command should establish the framework for a theater-joint transportation board while in the pre-deployment phase. Establishing allocation procedures and the board procedures prior to deployment will facilitate a smooth transition during crisis operations. Conflicts over in-theater transportation assets occur very early in the deployment phase as units try to clear unit equipment from the port, logisticians performing theater distribution functions pre-position supplies and prepare supply routes or pipelines. The TSC may use the framework for a theater-joint transportation board as a model for a TSC distribution board. See JP 4-09, *Distribution Operations*, Appendix E, for more information about the theater-joint transportation board.

JOINT MOVEMENT CENTER

3-45. The joint movement center may be established at a subordinate unified or joint task force level. The joint movement center coordinates the employment of theater transportation (including that provided by allied or HN's) to support theater operations. It oversees the execution of theater transportation priorities. It is also responsible for planning movement operations and for monitoring the overall performance of the theater transportation system. In the absence of a theater-joint distribution board, the joint movement center is the primary advisor to the combatant commander or the joint force commander in the transportation allocation process. The joint movement center identifies the difference between forecasted requirements and current capabilities of all modes to assist in the planning process. The joint movement center works closely with the JDDOC.

3-46. The joint movement center is organized along functional lines and is designed with a peacetime nucleus that can expand in proportion to the size of the joint forces. A fully developed joint movement center will have an administrative section and two divisions such as plans and programs and operations. The combatant commander will first use assigned staff and Service component staff personnel resources for the nucleus of the joint movement center. When expanding a joint movement center, the commander will consider the structure of the assigned dominant force and component-unique movement control requirements. The commander may also draw on reserve personnel to augment the joint movement center. The joint movement center's major responsibilities include the following:

- Planning theater transportation by land, sea, and air (excluding bulk liquid fuel that moves by pipeline). Allocating transportation capability available within the theater among the projected transportation tasks and components.
- Monitoring sea and air deployment and recommending changes to movement requirements in Joint Operation Planning Execution System. Reviewing and validating sea channels.
- Monitoring container control activities of all joint force components. Managing transportation requirements that cannot be met at lower levels in the movement control system.

SUMMARY

3-47. Army command relationships are expressed in mission orders. If the TSC or ESC is selected to control AOR joint logistics planning and execution, the command relationships between the various staffs and other components of the force must be clearly expressed to avoid confusion. Commanders and staffs use the science of control to regulate forces and direct the execution of operations to conform to their commander's intent. Logistics staffs coordinate, synchronize, and integrate actions, inform the commander, and exercise control for the commander. There are a variety of Army and joint boards and centers that assist with strategic and operational movement information, coordination, and synchronization.

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Chapter 4

Executing Theater Distribution

The execution of distribution operations require continuous monitoring of resources and movements. The distribution process is a proactive, systematic synchronization of transportation, tracking, and delivery of materiel. This process requires the integration of distribution management from the strategic to the tactical levels. This chapter will address considerations for establishing a distribution system, distribution nodes and distribution assessment.

ESTABLISHING A THEATER DISTRIBUTION SYSTEM

4-1. Establishing a theater distribution system is part of theater opening. Theater opening is a complex joint process involving the GCC, its Service component commands, and strategic partners. It includes establishing and operating ports of debarkation, facilitating reception, staging, and onward movement and integration of forces within a theater of operations, and establishing a distribution system. Theater opening requires a seamless strategic-to-operational interface and unity of effort among various commands.

4-2. The TSC, ESC, Transportation Brigade Expeditionary and sustainment brigade all have the responsibility to execute theater opening and are the vital link for successful theater opening. When tasked with a theater opening mission, these sustainment commands may be augmented with a TTOE to provide additional manpower and expertise to coordinate theater opening functions.

4-3. Ports of debarkation and land/borders are where sustainment arrives in theater. Operating and managing the aerial and sea ports of debarkation are critical in establishing the theater distribution system. The TSC establishes the command and control system to coordinate and synchronize efforts between strategic, joint and host nation partners. Effective control of initial operations at the port of debarkation ensures a successful strategic-to-operational hand-over of forces and sustainment.

4-4. The logistician executing operational level distribution should understand the port opening and RSOI tasks, the units involved and how theater distribution integrates with reception, staging, onward movement and integration and port opening. FM 3-35, *Army Deployment and Redeployment*, provides more information about reception, staging, onward movement and integration. The following paragraphs provide information about port opening.

PORT OPENING

4-5. 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 to support unified land operations. (ADRP 4-0) The port opening process is complete when the port of debarkation and supporting infrastructure is established to meet the desired operating capacity for that node. Supporting infrastructure includes the transportation and maintenance structure needed to support port clearance of equipment, 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. Once the ports are open, the conditions are set to establish theater distribution.

4-6. Water port opening is the process of establishing seaports of debarkation to receive deploying forces, their equipment and/or cargo to accomplish unified land operations. The SDDC is the single port manager for all common user seaports of debarkation and as the single port manager it develops policy and advises the GCC on port management, recommends ports to meet operational demands, and is primarily responsible for planning and managing strategic seaport operations.

4-7. Several organizations and units are required to establish, operate and sustain Army water terminals. Theater requirements determine size, type and duration of each organization and unit's involvement in this effort. The TSC and its subordinate Transportation Brigade Expeditionary, sustainment brigades, terminal battalions and seaport operating companies perform the port operator functions at seaport of de. 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.

4-8. When a Transportation Brigade Expeditionary is not available, a sustainment brigade is task organized with multiple functional units to accomplish three major missions: theater opening, theater distribution and sustainment. The sustainment brigade should be augmented with a TTOE to assist with staff oversight and management of water terminal operations to support port opening, RSOI, or the ongoing distribution operations if the missions dictates.

4-9. Aerial port opening is the process of establishing an air terminal at an aerial port of debarkation to receive deploying forces, their equipment and/or cargo for sustainment, disaster relief, or humanitarian assistance operations. There are two options available to the GCC that could be used to accomplish the mission associated with opening an air terminal. United States Transportation Command's JTF-PO (aerial port of debarkation) or a combination of the Air Force's contingency response group and an Army arrival/departure airfield control group.

4-10. JTF-PO will establish communication with the appropriate combatant command and/or joint task force staff to tie in with the theater distribution plan, but may be asked to coordinate with the TSC for specific theater distribution requirements.

JOINT TASK FORCE - PORT OPENING

4-11. The joint task force-port opening (JTF-PO) is a joint capability provided by United States Transportation Command that is designed to rapidly establish and initially operate an aerial port of debarkation and seaport of debarkation, establish a distribution node, and facilitate port throughput within a theater of operations. The JTF-PO is a jointly trained, ready set of forces constituted as a joint task force at the time of need. The Army contribution to the joint task force-port opening is the transportation detachment, rapid port opening element which has the capability to conduct cargo handling, movement operations to a forward distribution node, provide ITV and facilitate port throughput in support of the combatant commander. The JTF-PO capability is designed to deploy and operate for 45-60 days. As follow-on theater logistics capabilities arrive, the joint task force-port opening will begin the process of transferring mission responsibilities to arriving forces or contracted capabilities to ensure the seamless continuation of airfield and seaport distribution operations. For more information see JP 4-09, *Distribution Operations*.

VISIBILITY

4-12. Asset visibility provides logisticians with timely and accurate information on the location, movement, status and identity of units, personnel, equipment, and supplies flowing into, throughout, and out of the theater. The TSC and subordinate sustainment units must be prepared to execute the ITV portion of the distribution plan from the start of any operation.

4-13. Asset visibility obtains data on all classes of supplies from various information systems providing in-container/on-pallet visibility, en route visibility, and transition node visibility. Asset visibility enables logisticians and operators to provide near-real time information to commanders, allowing them to make informed decisions using the most current logistics information. Materiel managers use asset visibility to identify, cross level, ship, or redirect assets throughout the theater. This includes identifying and tracking commercial equipment for which the U.S. government is responsible such as, commercial ocean carrier containers that must be returned to ocean carriers to avoid costly detention or purchase fees.

4-14. Within the theater, asset visibility is achieved by linking automated identification technology, such as radio frequency identification tags, memory buttons, smart cards, and barcode readers with automated information system and ground and satellite transmission stations; providing the means to influence the

flow of materiel throughout the intra-theater distribution system. ITV is a capability that uses radio frequency and automated identification technology designed to provide visibility and near real-time status on the movement of all classes of supplies. It is important to ensure theater generated ITV solutions feed into existing DOD or Army ITV systems so users have a true end-to-end picture.

STRATEGIC TO OPERATIONAL HAND-OVER

4-15. Sustainment and cargo enter the theater distribution system at the port of debarkation. Cargo designated for the Army or other Services as directed by the GCC, becomes part of the theater distribution system. Once in port, Army and/or Service sustainment and cargo are consolidated and sent to locations throughout the theater.

4-16. A close working relationship between the strategic and operational organizations at the ports of debarkation is required to execute all aspects of theater opening, including distribution. Once opened, theater logisticians adapt the distribution plan to the operational environment. The DMC begins adapting the distribution plan as soon as manifest data is available. The DMC works with port manager to ensure the port throughput capacity supports RSOI and the distribution plan.

4-17. The TSC establishes a network of distribution hubs and supply support activities in order to support theater requirements and maximize the efficiency of the intratheater distribution system. DMC logisticians maximize the use of throughput distribution from theater ports of entry to supply support activities and end users to increase level of support to the Soldier. This practice also enables theater sustainment command DMC logisticians to more effectively schedule movements and maximize asset utilization.

4-18. The DMC and MCB work together to program and expedite moving non-unit equipment and supplies, especially those shipped using distribution platforms such as containers, 463L pallets or flatracks. The movement of distribution platforms is a coordinated effort between the port manager and TSC subordinate units. The MCB captures visibility of the distribution platform and tracks it throughout the theater. Distribution platform status is shared and tracked by the DMC as part of asset management.

4-19. The TSC closely monitors the throughput at each port of debarkation. When transportation assets are not available to clear the marshalling area, the MCT and port manager notify the TSC and work together to develop alternative solutions to clearing the marshalling area.

4-20. There are normally marshalling areas with equipment and cargo destined for locations throughout the area of operations. A theater logistician's biggest challenges are segregating and sorting supplies and equipment, then preparing it for transportation to end user. One method to segregate and sort supplies and equipment is to establish a centralized receiving and shipping point (CRSP). A CRSP is a cross docking operation in which supplies and materiel are separated and then consolidated with cargo bound for the same location. More details on CRSP are discussed later in this chapter.

4-21. Not all cargo offloaded at a port is unit equipment or supplies. DLA commodities are also received at a port of debarkation. Defense Logistics Agency cargo may go to a DLA supported theater consolidated shipping point at the port of debarkation or land border. In this case, TSC assets would transport offloaded cargo to Defense Logistics Agency's theater consolidated shipping point.

4-22. If materiel arriving at the port of debarkation is configured for a specific unit, it can be throughput from the port directly to the tactical level sustainment unit. Materiel not throughput directly to the tactical level sustainment is directed to distribution terminals for reconfiguration or to an appropriate general support storage activity in the theater. Materiel managers use the function of redistribution to reallocate excess materiel to other locations in theater. Materiel managers eliminate excess materiel in theater through redistribution to fill shortages and requirements.

4-23. Operational level logisticians must consider ways to conserve or reduce the amount of operational energy resources used in military operations. Through conservation of energy resources, commanders can reduce resupply operations, increase vehicle and equipment efficiency, and reduce environmental damage. Commanders must plan and oversee operations to reduce consumption, use alternative energy means, and incorporate the latest energy saving technologies.

4-24. Containers discharged from the vessel are moved to staging areas on the port. Radio frequency identification tags and shipping labels are scanned and the container is scheduled for movement. Containers without those documents may become frustrated cargo and are staged separately. Frustrated cargo requires additional effort to find consignees and delays delivery of containers to the end user. Commercially owned containers as frustrated cargo may accrue detention charges. Cargo is forwarded via a variety of distribution modes.

DISTRIBUTION MODES

4-25. Mode operations describe the methods by which sustainment and cargo are delivered. There are two available modes of operation available to logisticians performing theater distribution functions: surface and air. The surface mode includes motor, water and rail. The air mode consists of fixed-wing and rotary-wing aircraft. Air delivery of sustainment and forces within a theater is provided by Army and Air Force aviation units. Army watercraft units provide the assets to execute waterborne movement of sustainment and forces within theater. They support water operations in the employment and sustainment of forces. Army pipeline, truck, rail, and terminal units provide the assets to execute surface movement of sustainment and forces within the distribution system. Surface operations are the most common method by which sustainment and cargo are delivered to forces. FM 4-01, *Army Transportation Operations*, offers detailed information about transportation modes including transportation costs and funding.

Motor Transport Operations

4-26. Motor transportation provides essential distribution capabilities for organizations and is the predominant mode of transportation for the reception, onward movement, and sustainment of forces. Motor transport units provide the ability to perform line haul movements operated for extended distances over main supply routes that can serve the entire theater. There are many factors to consider when planning motor transport operations including convoy organization, control measures, security and integration of host nation, contract or allied vehicles. See ATP 4-01.45, *Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operation*, for more details about convoy operations.

Logistics Over-The-Shore

4-27. Logistics over-the-shore is the loading and unloading of ships in an austere environment or without deep draft capable fixed port facilities. Logistics over-the-shore operations include all processes from in-stream discharge through the off-loading, and arrival of equipment/cargo and supplies at the inland staging and marshalling areas. LOTS operations provide a critical capability for bringing equipment, cargo and supplies into theater with degraded or austere port facilities, or it can be used to bypass enemy anti-access or area denial efforts. LOTS can also supplement existing port facilities. Logistics over-the-shore operations provide the combatant commander the option to choose which off-load locations to use, such as bare beach, austere port, or a damaged fixed port. Using LOTS allows for cargo to be delivered and off-loaded closer to the point of need. LOTS enablers will allow them to create pier facilities, conduct salvage, or provide floating crane support capabilities alongside ships and fixed facilities. Using a variety of Army watercraft systems, the Army can conduct its own logistics over-the-shore operation or, it can operate in conjunction with the Navy in a joint logistics over-the-shore. See ATTP 4-15, *Army Water Transport Operations* for more information about Army LOTS operations.

Railway Operations

4-28. Incorporation of rail into theater distribution planning requires assessment of existing rail infrastructure, planning, advising and assisting host nation rail personnel when required to support assigned missions. See ATP 4-14, *Expeditionary Railway Center Operations* for more information about railway operations.

Aerial Delivery Distribution

4-29. Theater airlift and airdrop may be planned for if the combatant commander allocates air assets for logistics air movement operations within the theater. The sustainment command will determine allocations for airlift based on command priorities.

4-30. Aerial delivery distribution provides an efficient and effective means of conducting distribution operations. Aerial delivery includes airland, airdrop, and sling-load operations. Aerial delivery is increasingly employed as a routine distribution method, primarily for areas that are unreachable due to terrain, enemy situation, or for urgent resupply operations. When applied together with surface distribution operations, aerial delivery enables maneuver forces to engage in a battle rhythm that is not as restricted by geography, supply routes, tactical situations or operational pauses for logistics support. The type used for a specific mission depends on what is to be dropped, how much accuracy is required, the threat situation, and airdrop equipment available. For more information on aerial delivery operations see, ATP 4-48, *Aerial Delivery*.

DISTRIBUTION NODES

4-31. A *node* is a location in a mobility system where a movement requirement is originated, processed for onward movement, or terminated (JP 3-17). Node operations ensure that sustainment and cargo are consolidated as they move through the distribution system toward their destination. Traditionally, it is within the distribution nodes that congestion and bottlenecks occur. Therefore, nodes present the greatest challenge to the operators of the distribution process. Ports, centralized receiving and shipping points, and supply support activities can be considered nodes. Node operations also include hub and spoke distribution. The distribution plan designates which nodes will be used for in-transit visibility equipment.

4-32. Hub and spoke distribution is a physical distribution system developed and modeled on industry standards to provide cargo management for a theater. A *hub* is an organization that sorts and distributes inbound cargo from multiple supply sources (ATP 4-11). Examples of a hub are a distribution center, trailer transfer point, centralized receiving and shipping point, logistics support area or brigade support area. A *spoke* is the portion of the distribution system that refers to the transportation mode operator's responsibility for scheduled delivery to a receiving unit. The hub and spoke model makes transportation much more efficient by simplifying the network of routes and nodes. The sustainment command and MCB (in conjunction with SDDC elements) establish initial theater hubs to facilitate the time definite delivery of materiel moving through the theater distribution system. Figure 4-1 on page 4-6 depicts notional Army theater distribution.

TERMINAL OPERATIONS

4-33. Terminals are essential nodes to the total distribution network that support the commander's concept of operation. When linked by modes of transport (air, highway, rail and water), terminals define the transportation structure. Army terminal operations are key enablers of the theater distribution system and are conducted at common-user seaports, inland waterway ports, bare beaches (LOTS operations), rail terminals, aerial ports, truck terminals and trailer transfer points, centralized receiving and shipping points, supply support activities, ammunition storage areas, and other distribution nodes throughout the operating area.

4-34. Terminal operations present unique aspects for distribution execution; for example, some commercial seaport operations can be conducted with no military presence at all, while other water terminal operations, such as LOTS, may require multiple units to be effective.

4-35. Land terminals include, centralized receiving and shipping points, trailer transfer points, rail, petroleum, and inland water terminals. Land terminals are established at points along air, rail, river, canal, pipeline, and motor transport lines of communication to provide for the transshipment of cargo and personnel carried by these modes. Inland terminals are key enablers or links between modes when terrain and operational requirements cause a change in type of conveyance.

Centralized Receiving and Shipping Points

4-36. Centralized receiving and shipping points conduct a cross docking function that breaks down and consolidates cargo bound for the same location. Centralized receiving and shipping point provide centralized distribution node operations within an AO where cargo is delivered and backhaul is picked up. The CRSP is an effective and efficient type of port and inland terminal operation. The overall advantage of the centralized receiving and shipping point is that theater trucks move in and out of the AO quickly, providing faster throughput. CRSPs also assist in container management for the theater. As a result of cross-docking, empty commercial ocean carrier containers at the centralized receiving and shipping point are identified and made available to the ocean carrier for pickup or returned to a container holding yard. Empty government-owned containers are identified and returned to the theater base for reuse or held at the CSRSP for future use. ATP 4-13, *Army Expeditionary Intermodal Operations*, has more information about the centralized receiving and shipping point mission and organization.

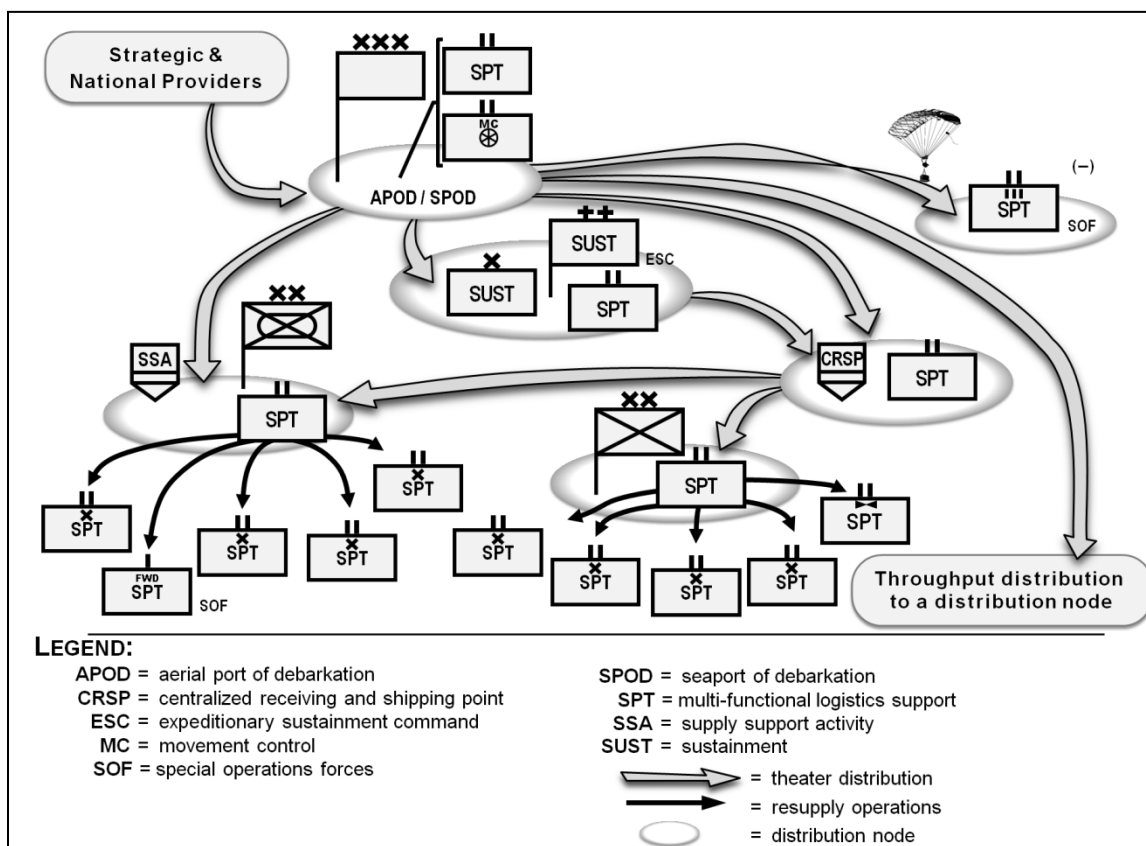


Figure 4-1. Notional Army theater distribution

4-37. This mission is accomplished using regular sustainment deliveries between other distribution nodes and the CRSP employing a hub and spoke concept. The intent is to maximize vehicle loads, minimize trans-loading time, minimize time spent at the CRSP, and reduce the number of convoys moving in the AO. As a result, movement of cargo should flow as quickly and efficiently as possible, the exception being frustrated cargo, cargo destined to low volume consignees, or battle damaged equipment which might require inspection and processing.

4-38. Materiel arriving at a theater node is sent to the CRSP at the distribution hub or to one of the centralized receiving and shipping points located in the sustainment brigade areas. Information stored on the radio frequency identification tag is read and communicated to the national radio frequency ITV server and personnel consolidate loads bound for a supported unit. New radio frequency identification tags are processed and attached to the loads. Equipment and loads ready for shipment are placed in holding areas on the centralized receiving and shipping point for outbound shipment to the supported units.

4-39. When task organized, a combat sustainment support battalion can provide theater distribution capabilities to operate a CRSP. These capabilities can be found in combat sustainment support battalion subordinate units including inland cargo transfer companies and quartermaster supply companies.

Convoy Support Center

4-40. The convoy support center is a task organized operation which forms the connecting link between local haul and line haul operations. The TSC recommends to the ASCC whether a CSC is required, what support the CSC should offer and the location. CSCs are normally established to allow for fuel resupply and safety considerations including driver rest, life support, and vehicle repair. They are usually located in or near centers of concentrated trucking activities at both ends of a line haul or at intermediate locations. The locations and number of these centers depend upon the organization of the line haul operation and the location of supported units.

4-41. The MCB may have an element at the CSC to oversee the movement plan. They will also either support or coordinate support to the terminal. Convoy support center are assembly points and dispatch centers for motor transport equipment. Convoy support centers are not used for in-transit storage or freight sorting. They are usually located forward of cargo pickup points and to the rear of delivery points. Convoy support centers may be established at intermediate points along the line haul route, or co-located at major hubs. ATP 4-11, *Army Motor Transport Operations*, has more information about the CSC.

Supply Support Activities

4-42. The final node in the theater distribution system is the SSA. They receive supplies from higher supply sources, other SSAs, or directly from civilian sources. They are the distributors of sustainment for requesting units. Materiel that arrives at the SSA is segregated and consolidated into loads distributed to the brigade support battalion's subordinate units. Information on the shipping label is verified, radio frequency identification tags are read and communicated to the national radio frequency ITV server, and the shipment record closed. The SSA is responsible for coordinating the final delivery of supplies to the supported units. Frequency of replenishment will be mission variables dependent.

CONTAINER OPERATIONS

4-43. Container operations are a partnership between Army and joint organizations. Theater logisticians performing theater distribution functions adapt the established container usage plan to the current operational environment and synchronize strategic, operational and tactical container operations.

4-44. A well executed distribution plan requires well managed containers. The DMC managers can only manage distribution when they know the location of inbound supplies (containers). To ensure management of containers in support of the theater requirements, commanders designate authorities at the strategic, operational and tactical level to synchronize movement management and control, with container accountability. The theater commander determines the level of container management in theater based on the complexity of the theater distribution environment and volume of containers. A short duration operation or one that involves a smaller contingency force may not require robust container management cells.

4-45. Acknowledging the potential challenges with containers ahead of time can head off unwanted consequences. Commercially owned/leased containers are owned by commercial ocean carriers that are contracted to support DOD operations and leased for a specific time. Generally the Service which uses the container is charged a fee for the use. Additional detention charges are incurred if the container is not returned within the contractual time. DOD leased containers are an option and offer flexibility, but may not fit all situations especially for long deployments or locations where they cannot be returned to the contractor. DOD-owned/leased containers can be used indefinitely without detention charges. Government owned/leased containers are nonexpendable.

4-46. A critical node for containerized cargo is the initial entry container control site; this may be a seaport, aerial port, truck terminal, CRSP, or railhead. The ability of control site personnel to rapidly identify the sender and receiver address is the primary enabler for proper accounting and delivery. Every control site is responsible for the expedient receipt, staging, and onward movement/shipment of containers.

4-47. Container control is performed by distribution management center personnel and movement control personnel at transportation, storage, and distribution nodes and centers. They report daily essential information to a central container control activity, movement control battalion, or distribution operations center concerning each container's location, use, flow, and condition.

4-48. Container tracking is conducted using electronic data interchange and radio frequency identification tags (written with required information and verified as operational) attached to all containers. Information on the tag should include shipment information and conveyance characteristics (to include container number). It should also contain commodity, transportation control and movement document information of the equipment and supplies being transported. It includes item level visibility of the container contents. See ATP 4-12, *Army Container Operations* for more information about container management.

ASSESSMENT

4-49. Logisticians conducting theater distribution must develop a means to assess the performance and effectiveness of the distribution system. Criterion used to assess the effectiveness and efficiency of the distribution system should be able to measure how well the distribution system is fulfilling the commander's requirements and target areas for improvement. Army regulations establish supply chain metrics and require Army commanders with responsibility for distribution segments to compare their units' performance to the supply chain standards.

4-50. When changes to the overall distribution system are made, there should also be a measurement to determine if the changes improved the system. Use assessment and supporting data to provide feedback to improve distribution system effectiveness and efficiency and to optimize distribution operations. ADRP 5-0, *The Operations Process*, has more information about assessing and evaluating operations.

4-51. The four performance measures that describe the critical characteristics required of distribution performance are precision, responsiveness, efficiency and robustness. Collectively, these measures serve as a basis for the development of distribution system metrics that are defined in collaboration with the TSC staff and ASCC. Visibility and velocity are indicators of efficiency, but are not stand alone measurements of distribution system efficiency. For example, if a system is more efficient, that metric alone provides a measure of a distribution system's effectiveness. That a logistician has visibility of a distribution system only means they can see the progress of the requirement, it does not measure how effective the distribution system is. That a distribution system is fast is not important to the effectiveness particularly if the requirement is delivered to the wrong place or in the incorrect quantity.

4-52. Here are some questions to ask when developing distribution assessments:

- Who is this measurement helping?
- Who does this measurement affect?
- What does this assessment tell us?
- How can we drill down to identify the root cause of trends?

4-53. Logisticians conducting theater distribution measure what they control or influence. The theater logistician is more than a metrics reporter; the theater logistician must apply critical thought to selected metrics and recommend action. In some cases, the action might be to add additional capacity or adjust the speed of the flow of sustainment.

SUMMARY

4-54. Establishing a theater distribution system is part of theater opening. Theater opening is a complex joint process involving the GCC, its Service component commands, and strategic partners. A critical step in establishing an efficient distribution system is clearing the port marshalling yard and establishing distribution nodes when and where they are required. Node operations ensure that sustainment and cargo are consolidated as they move through the distribution system toward their destination. Nodes include terminal transfer points and SSA's. Logisticians conducting theater distribution develop means to assess the performance and effectiveness of the distribution system. Criterion used to assess the effectiveness and efficiency of the distribution system should be able to measure how well the distribution system is fulfilling the commander's requirements and target areas for improvement. Accurate assessments inform logistician

conducting distribution management and enable them to make management decisions that increase distribution network efficiency.

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Chapter 5

Distribution Management

Materiel management functions are the warehousing, managing, cataloging, requirements determination, requirements validation and prioritization for procurement, distribution, redistribution of excess, and retrograding of materiel. Materiel managers in the DMC are responsible for managing materiel within theater and executing the priorities established by the GCC. This chapter discusses supply, materiel management and the integration of supply and transportation.

MATERIEL MANAGEMENT

5-1. Theater materiel management functions are executed by the distribution management center in the sustainment commands (TSC and ESC). The sustainment commands provide the ASCC with a materiel management capability for Army forces operating in an area of responsibility. The DMC performs materiel management for all classes of supplies (less medical – class VIII, and classified communications security equipment) for the ASCC. DMC materiel management functions include managing, cataloging, requirements determination, requirements validation and prioritization for procurement, distribution, redistribution of excess, and retrograde of materiel. These functions are performed within the parameters of policies, plans, priorities, and allocations developed in coordination with the ASCC.

5-2. The primary objective for materiel management is to provide effective and efficient supply support to meet operational requirements from the tactical level to the industrial base. DLA manages and distributes a significant amount of defense materiel stocks including physical distribution of Service-owned and -managed stocks and nearly all fuel and petroleum products for military use. DLA coordinates and performs the procurement, management, and supply of clothing and textiles DOD wide. DLA is also the designated DOD executive agent for class I, class III (bulk), class IV, and class VIII (medical materiel) supply chains. See JP 1, *Doctrine for the Armed Forces of the United States*, and Department of Defense Directive 5101.1, *Department of Defense Executive Agent*, for more information about executive agents. Materiel management addresses all internal and external processes, information and functions necessary to satisfy an operational supply requirement. There are multiple logistics information systems which assist logistics planners and materiel managers.

5-3. Supply operations use logistics information systems and total asset visibility enablers to merge the tactical, operational, and strategic levels into a seamless supply system. Logistics information systems serve as a means to capture unit requests and assist sustainment units to provide responsive support. Supply activities are governed by Army regulation and supply policies generated by nearly every level of command. For more information about supply policy, see AR 710-2, *Supply Policy Below the National Level*.

MANAGEMENT FUNCTIONS

5-4. Requirements determination is the process which results in a clear understanding of the actual supply requirements to meet operational needs and aids materiel managers in defining capabilities to support anticipated workloads. Theater logistician must have visibility of all requirements to ensure the distribution system operates effectively. When determining requirements, logistics planners identify a quantity of supply that must be retained in theater. That number may change as the operational environment changes. Quantity, type of supply and supply location are calculated by the various logistics information systems and DMC materiel managers review the logistics information systems recommendation and accept or modify those recommendations.

5-5. Materiel managers validate all requirements against commander's priorities. Validation and prioritization is the function of certifying movement and resource requirements against commander's priorities. Managers satisfy the commander's requirements and priorities through appropriate sourcing, maintenance, and/or distribution of materiel and equipment.

5-6. Materiel managers maintain accountability and visibility of materiel and cross-level materiel to fill shortages and ensure materiel is available to meet operational needs. The DMC logisticians also identify the decision points at which priority, quantity or delivery dates could change in order to fulfill shortages or accommodate operational requirements. Materiel managers execute release strategy which is a set of guidelines for reviewing, releasing or rejecting questionable requirements based on specific business rules.

5-7. Requisitions flow from the requesting unit through Army information systems. Policy set by the ASCC dictates the process executed by the DMC. This process supports unit materiel readiness and ensures units have materiel requirements for operations.

5-8. In accordance with ASCC support priorities, the DMC provides direction for receiving, storing, and issuing theater stocks. When the required stocks are not available or stock replenishment is required, requirements continue to the appropriate strategic provider. For requirements being considered for local procurement, the DMC validates the requirement prior to forwarding it to the local procuring activity.

5-9. Global Combat Support System-Army is an enterprise resource planning tool that provides supply managers across the Army a single database for visibility, anticipation, requisition, and demand satisfaction. This system enables the DMC logisticians to allocate and synchronize the flow of supplies in support of combatant commanders. It integrates enterprise information and provides all echelons access to critical logistics information used to support distribution and materiel management that may affect the outcome of combat operations, combat power generation and planning for future operations.

5-10. At the operational level, the Global Combat Support System-Army materiel management tasks include the release strategy, release agents, resource management (passing funds from finance business systems to Global Combat Support System-Army), and account assignment for purchasing. The DMC staff also monitor processes, conduct quality control and adjust processes based on outcomes of performance assessments.

SUPPLY

5-11. General supply operations include the requisition, receipt, storage, protection, maintenance, issue, distribution, redistribution, and retrograde of supplies. Levels of supply are broadly classified under the levels of warfare as strategic, operational and tactical. Strategic supplies are items under the control of DLA or the USAMC life cycle management commands. Operational supplies are theater supplies that are positioned to replenish tactical stocks when strategic replenishment is not feasible. The following paragraphs provide information about who manages and how each class of supply arrives in theater and how they could be distributed. The classes and subclasses of supply are graphically depicted in FM 4-95, *Logistics Operations* and explained in AR 710-2, *Supply Policy Below the National Level*.

Class I

5-12. Defense Logistics Agency is the executive agent for class I (subsistence). DLA plans, procures, manages, ensures quality, and maintains war reserve stocks to support Services and combatant commands' requirements for food service, produce, and operational rations, quantities and delivery. DLA also procures, inspects, stores, and distributes subsistence.

5-13. Normally the using unit requests sustainment through a class I logistics information systems. Perishable and semi-perishable rations depending on the CCDRs feeding policy, the arrival dates of units capable of handling class I items, and the availability of refrigerated storage. Class I supplies arriving in the theater are consolidated at a DLA facility and then issued to the consuming units. They stock class I supplies based on unit strength reports submitted by the units they support.

Classes II, III (Packaged), And IV

5-14. The using unit arrives in theater with a predetermined amount of class II, III (packaged) and IV supplies. Class II items are common consumable items such as military clothing, tents, blankets, textiles, and personal protective equipment. Class III (packaged) includes packaged petroleum oils and lubricants products, bulk chemical products, and additives of petroleum and chemical products.

5-15. Class IV consists of fortification, barrier, and construction materials. Essential products as diverse as light bulbs, items for force protection, safety and rescue, as well as targets for training, and automatic data processing equipment and supplies are also class IV. Units and supply support activities request resupply through their supporting logistics information system. Supplies are issued to consuming units when requested. Because these supplies are bulky and normally not an emergency resupply they move via surface transportation. Class II and III (packaged) supplies are stocked in the supply support activities.

5-16. Class IV construction items are primarily used by engineer units and are usually throughput to the emplacement site. This reduces handling and limits the number of intermediate stockage locations. Establishing mission configured load packages ahead of time expedites the requisition and distribution process.

Class III (Bulk) Supplies

5-17. DLA-Energy is responsible for achieving a more vertical integration of product management down to the point of sale to the customer. The established regional offices coordinate delivery orders with industry, resolve logistics problems, supply emergency products, perform quality surveillance and management, and assist the joint petroleum office in petroleum logistics planning. The DLA-Energy regional offices can also assist the petroleum planner with identifying and maximizing in-country civilian or host-nation support fuel facilities, establish contracts early in the operation and maintain the theater joint petroleum office or subarea petroleum office as the single fuel manager.

5-18. The sustainment command DMC centrally manages, controls, and allocates class III (bulk petroleum) according to the GCC priorities. The sustainment brigade, in coordination with the TSC, is responsible for providing class III (Bulk), which also includes coal and natural gas, to supported forces. Distribution planning is the basis for the design, construction, and operation of the theater petroleum distribution system. The sustainment brigade is also responsible for quality surveillance and liaison with the supported forces.

Class V

5-19. Materiel managers must be aware of distribution requirements to support pending operations and changes to the resupply rate. Munitions distribution is a high priority, controlled event that places additional strain on the distribution system. The sustainment brigade that operates the theater storage area must keep the DMC informed of changes and limitations to class V distribution. The theater storage area maintains the theater class V stocks. Its mission is to receive class V from the national level and conduct operational level reconfiguration. Sustainment brigades distribute class V forward to ammunition support activities at distribution hubs.

Class VI

5-20. Sundry and personal demand (class VI) items are often provided by Army and Air Force Exchange Service sales teams operating fixed-area facilities and tactical field exchanges. In the early stages of an operation, essential exchange stocks may be turned over to the theater supply system. Class VI items forwarded to the theater are based on personnel strength figures. Health and comfort packs provide everyday necessities when a field exchange is not available. As the theater matures and conditions permit, exchange activities can be established or expanded and a wider variety of items can be sold.

Class VII

5-21. Class VII (major end items) items represent a low percentage of total line items but a high percentage of the total dollar value of the Army inventory. Due to the high dollar cost and their overall importance to

combat readiness, major end items are controlled through the TSC command channels. The requisitioning, distribution, maintenance, retrograde and disposal of these items are intensely managed at each support level to ensure visibility and operational readiness.

Class VIII

5-22. Army medical logistics support (including blood management) is an integral part of the Army Health System. Medical logistics is distinguished from line logistics in that its products and services are used almost exclusively by the medical system. The medical logistics system provides specialized materiel required by the Army Health System to reduce morbidity and mortality among Soldiers, while line logistics focuses on the sustainment of major end items and general troop support to maximize combat power.

5-23. The medical products and services provided are critical to the success of the Army Health System support mission and are subject to the same strict standards and guidelines that govern the health care industry in the United States. Another key to this success is the delivery of a medical logistics capability that anticipates the needs of the customer and is tailored to continuously provide end-to-end sustainment of the Army Health System mission. Providing timely and effective Army Health System support is a team effort which integrates the clinical and operational aspects of the mission. The provision of medical logistics support requires collaboration between the medical logisticians, clinicians, and other health care providers on the battlefield. Medical logistics support includes, but is not limited to, the following functions: materiel acquisition, materiel supply and resupply, medical equipment maintenance and repair support, optical fabrication and repair, health facilities planning and management, medical gases, blood storage and distribution and medical contracting support.

5-24. In a mature theater, class VIII resupply support is provided by the medical logistics companies operating throughout the AO, while the medical logistics management center forward support team provides theater-level commodity management of class VIII materiel. The medical logistics management center forward support team is subordinate to the medical command (deployment support) and collocates with the DMC. The medical command (deployment support) is the senior medical command within the theater in support of the ASCC. The medical logistics company is the principle medical command (deployment support) unit that serves as the SSA for medical units within the AO and is assigned to a multifunctional medical battalion.

5-25. Critical to ensuring that sustainment distribution meets the Soldiers' needs is establishing a functional theater distribution plan that enables a responsive Army supply chain from the tactical level, to the strategic sustaining base. Theater class VIII supply management is accomplished through a unit distribution system that pushes supplies and services to supported units throughout the AO. Blood and resuscitative fluids are dispersed throughout the Army Health System using predetermined distribution guidelines. See FM 4-02.1, *Army Medical Logistics*, for additional information on theater medical logistics support.

Class IX

5-26. The TSC manages class IX (repair parts) supplies for the theater. The degree of management is proportional to the contribution repair parts make to the operational readiness of the end items they are supporting. Items such as major assemblies, that directly affect the ability of end items to operate in combat, receive particular attention. Another factor affecting management is dollar value of supplies. Operations essential and high-dollar value items are intensely managed at all levels. Low-cost, noncombat essential items may be managed within the established parameters of the automated systems at the various echelons of supply, thereby allowing the manager to concentrate on fewer items.

5-27. The operational level of class IX support focuses on maintaining a theater sustainment level of supply that provides a safety level for all repair parts and a level of stockage for the items that will not be sent to the theater via air line of communication. Easing these supply requirements are the serviceable assets that sustainment maintenance repair of line replaceable units generates. These theater-generated assets can offset the requirement to support from the strategic level of supply.

RETROGRADE OF MATERIEL

5-28. **Retrograde of materiel is an Army logistics function of returning materiel from the owning or using unit back through the distribution system to the source of supply, directed ship-to location, or point of disposal.** The movement of retrograde through the distribution system, to include maintenance evacuation of materiel, is accomplished in reverse order—from the tactical through strategic level. The theater distribution system provides the framework for the DMC to manage retrograde flow of all materiel. Retrograde functions include turn-in classification, preparation, packing, transporting, and shipping. Materiel managers may use the retrograde process to redirect sustainment to different locations to fill shortages and meet requirements. Retrograde of materiel occurs as a normal part of theater supply operations, redeployment and theater closing operations. Retrograde of materiel includes: classes of supply and consumable items, and cargo and equipment.

5-29. The decision to use contractor or HNS should have been made and contracts negotiated either in the pre-deployment planning phases or early in the operation. If contractor or HNS is used, they must know and fully understand the scope of work necessary to complete the mission. HNS must be identified early enough to ensure they are properly screened and present no security risk.

5-30. Retrograde equipment and materiel is consolidated at the lowest level SSA and reported through the support operations channels to the designated commodity manager. Disposition instructions are issued and the SSA packages, documents, labels, and produces radio frequency tags for retrograde items for shipment. Transportation requirements for retrograde of materiel are synchronized with inbound transportation flow to maximize use of transportation platforms.

5-31. The USAMC coordinates, monitors, controls, receives, accounts for, and arranges the retrograde shipment of Army equipment and weapon systems when released by the combatant commander. This includes inspection, condition coding, repackaging, preservation, marking, coding, documentation, loading, and accountability to ensure the orderly and timely retrograde movement of all materiel and munitions no longer required in the AO. When materiel identified for retrograde exceeds the capability of the SSA's, the supported Army service component commands may request the USAMC to form and deploy a Responsible Reset Task Force. This task force functions as USAMC's forward command presence responsible for coordinating strategic retrograde, reset and redistribution in accordance with USAMC's mission. See ATP 4-91, *Army Field Support Brigade*, for more information on Responsible Reset Task Force and Redistribution Property Assistance Teams.

5-32. Under certain circumstances such as, major unit rotations and redeployments in conjunction with exercises and contingency operations, cargo and personnel returning to the U.S. can be "pre-cleared" (i.e., inspected/certified at the origin instead of at the U.S. border). These pre-clearance programs will be initiated only when the combatant commander, USTRANSCOM, and the respective U.S. agency or agencies explicitly agree to their establishment. The program must be in place prior to the shipment of battle damaged equipment back to CONUS for repair. The unit commander identified for movement (deployment or redeployment) must ensure that unit personnel, equipment, and materiel are in compliance with customs and agricultural requirements for that area and according to DOD Regulation 4500.9-R, *Defense Transportation Regulation Part V, Department of Defense Customs and Border Clearance Policies and Procedures*.

DISPOSITION OF SUPPLY AND CONSUMABLE ITEMS

5-33. Retrograde and return of class I materiel is not normally done due to health concerns. Class I items certified, no longer fit for human consumption, by medical or veterinary personnel are surveyed according to applicable Service procedures. DLA Disposition Services will assist in the disposal of packaged operational rations as hazardous waste.

5-34. Because class II items are generally low cost or bulky, a key retrograde consideration is the economic trade off of in-theater disposition vice movement back to CONUS. The general guidance is to consume or transfer class II items instead of returning them to CONUS. Class II consumables are used by most military units and are typically a prime candidate for cross leveling. Some class II materiel, including uniforms with the introduction of friend or foe technology, may require demilitarization prior to acceptance by DLA Disposition Services for disposal. Special care must be taken by Service component generators of excess

and DLA disposal personnel to ensure that demilitarization requirements are met for prescribed items prior to disposal. The cost and difficulty of performing demilitarization of these items in theater may lead to retrograde as a disposal solution.

5-35. Theater inventories of bulk class III stocks are controlled by the joint petroleum office and are redistributed or disposed of at the conclusion of operations. Return of class III products to stock must include provisions to ensure that returned materiel still meets quality standards. Excess and waste class III products require disposal by trained personnel. This task is normally performed in coordination with DLA disposal personnel and DLA Disposition Services licensed contractors by arrangement with DLA Disposition Services and the appropriate host nation authorities.

5-36. Excess construction materiel is usually readily usable in theater and should be transferred to other military activities. Usable class IV generated as excess by Service components may be transferred to other U.S., HN, or multinational forces after being turned in with turn-in or transfer documentation to DLA Disposition Services for disposal action. Class IV property will not generally be considered for retrograde or redeployment. Donation by appropriate authorities to local entities is also possible.

5-37. Class V items require Soldier maintenance and stock management to assure the item is ready for use. These actions are conducted at munitions storage sites, but also may be conducted by trained personnel in theater. Class V items are usually moved back to authorized storage facilities following contingency operations. Materiel managers may use this return process as an opportunity to cross level inventories between theater army, dispose of excess/obsolete munitions through the foreign military sales process, or dispose of unserviceable/non-repairable munitions stocks.

5-38. Class VI materiel is not turned into DLA Disposition Services for disposal unless required by status-of-forces agreements or other HN agreements.

5-39. Repairable class VII items are returned to maintenance for overhaul or repair. Because of the limited number of operational spares, timely retrograde of damaged items and repair is critical to maintain Service force readiness levels. Class VII repairable assets should not be surveyed and transferred to disposal activities without specific approval from the program or materiel manager. In some instances, such as vehicle or aircraft accidents, engineering and safety investigations may require resolution prior to disposal. Demilitarization actions must be coordinated with DLA Disposition Services prior to transfer to disposal.

5-40. The rapid return of repairable class VIII medical equipment to repair facilities is critical to returning the item to the supply system or back to its original owner. Disposal of class VIII items must be carefully monitored and coordinated with Service component medical logistical personnel. The sensitivity of some medical items and their potential use by terrorist organizations may require the retrograde of some medical equipment for disposal. Refer to FM 4-02.1, *Army Medical Logistics*, for additional information.

5-41. Repair parts that are usable excess consumable items and all repairable items are reported to the materiel manager for return, intratheater redistribution, or disposition decisions. Repairable items are returned to the established source of supply for repair and subsequent return to the global distribution system. ITV of retrograde repairable items is mandatory to minimize repairable item loss or delay.

5-42. Class X items are not DOD-owned property and are expended at the point of transfer to the designated nongovernmental organization or civil populace. Class X materiel is normally not returned once transferred to the designated recipient.

CARGO AND EQUIPMENT

5-43. Cargo and equipment identified as retrograde are prepared for shipment to demobilization/home station or another theater of operation like all other equipment entering CONUS. A U.S. Customs Seal will be placed on the outside of all containers and vehicle compartments during the inspection acknowledging that no contraband or illegal items are stored on the vehicle. Certified and inspected retrograde equipment will be moved to a sterilization yard until movement to the port of embarkation for shipment to demobilization/home station or its ultimate destination. Empty container roll in/roll out platforms, distribution platforms such as containers and 463L pallets, may be used to retrograde excess supplies and repairables.

INTEGRATING SUPPLY AND TRANSPORTATION

5-44. It is not as easy to execute distribution as it is to doctrinally define it. Logisticians responsible for distribution management must be capable of managing, planning and executing effective support to materiel readiness and support requirements during unified action in complex operational and strategic environments.

5-45. There is not a single system, a single office, a single organization that controls the entire global distribution network. Army theater distribution is a combination of networks the theater logistician must manage. The networks are assembled and managed by theater logisticians. The theater logistician must know what information to look for, where to find the information, and understand how to apply the information. The theater logistician must manage the networks.

5-46. The DMC integrates the distribution networks and material management activities and processes. Understanding the flow of sustainment from origin to the theater is important to make the links between strategic to operational and operational to tactical seamless. Supplies are transported to theater differently depending on what organization manages the supply, the origin of the supply and how the supply was requested.

5-47. Individual DMC staff elements know and understand the capabilities and capacities of the distribution networks. Movement managers know the transportation mode and transshipment node capabilities of the network. Materiel managers know the supply node capacity and inventory requirements of the network. The DLA support team has visibility over supplies and capability that can be provided to support the network. Tools such as command support and sustainment system node manager help the operational and strategic level provide the common operating picture for all sustainers to monitor.

5-48. Integration with strategic partners occurs in a JDDOC. This integration connects the operational level of the distribution networks with the strategic level of the distribution networks. TSC distribution managers interface with the JDDOC to ensure the efficient and coordinated flow of units, supplies, equipment, and materiel from theater points of entry to point of employment in the AO.

5-49. Theater logisticians coordinate with strategic partners to integrate them into the TSC distribution plan. Enablers such as the DLA theater consolidation shipping point, class I prime vendors, class 3 bulk prime vendors, and prepositioned stocks influence and support the AOR. Success is managing the communications and information systems interfaces and leveraging that knowledge through the physical distribution network.

SUMMARY

5-50. Theater materiel management functions (less class VIII) are executed by the DMC. They provide the ASCC with a materiel management capability for Army forces operating in an area of responsibility. General supply operations include the requisition, receipt, storage, protection, maintenance, issue, distribution, redistribution, and retrograde of supplies. Levels of supply are broadly classified under the levels of warfare as strategic, operational and tactical. Retrograde of materiel occurs as a normal part of theater supply operations, redeployment and theater closing operations. Retrograde of materiel includes: classes of supply and consumable items, and cargo and equipment. There should be a basic framework for retrograde of materiel in place as a result of the planning process. Army theater distribution is a combination of networks the theater logistician must manage. Individual DMC staff elements know and understand the capabilities and capacities of the distribution networks. The networks are assembled and managed by TSC and ESC logisticians.

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Appendix A

Distribution Automated Information Systems

Automated information systems support distribution operations for supply requisitions, transportation and in-transit visibility. These systems are essential to maintaining data management and inputs into and interfaces between automated systems. This appendix describes the systems that interface between the Army operational level and the strategic providers. This is simply a reference for the theater logistician. A logistician on the DMC staff will feed information to or get information from one or more of these systems. The systems highlighted in this appendix only relate to distribution function in a deployed environment.

SUPPLY AND TRANSPORTATION INFORMATION SYSTEMS

A-1. The information network may be the most critical and least understood of the four distribution networks; physical, financial, information and communication. A supply request passes through many supply and transportation automated information systems before the tactical unit requester receives the request. Each class of supply has a specific materiel ordering system and transportation system. Theater logisticians managing supply and transportation requests ensure staffs are educated on information systems, trained on techniques to manage information, and integrated so that supply and transportation efforts are synchronized.

A-2. There is no single system of record. Across the global distribution system, there are multiple methods to track the requisition or the transportation status of supplies and equipment. A system of record is commonly understood as an information storage system (usually on a computer system) that is the authoritative data source for a given data element or piece of information. Multiple systems of record often results in status conflicts and confusion.

A-3. The number and complexity of information systems increases as the number of requirements grow. As systems complexity increases, the interface between systems becomes more complex. The theater logistician's challenge is to understand where the gaps and overlaps are and to develop means of mitigating the outcome of those gaps and overlaps.

A-4. The theater logistician must be familiar with the relevant information systems and be able to identify the key person or office with access to each system. This is one of the advantages of co-locating supporting strategic partners with the deployed sustainment command. The following systems are grouped into logistics, finance, mission command, and transportation categories.

LOGISTICS INFORMATION SYSTEMS

A-5. Sustainment information systems include medical information systems, human resource information systems, the legacy logistics information systems, Global Combat Support System-Army, Transportation Coordinator-Automated Information for Movements System and others. The following paragraphs highlight the legacy logistics information systems that are part of the overall theater distribution system as well as systems that are currently being fielded.

Army Food Service Management Information System

A-6. Army Food Service Management Information System provides automated support to control the management and operation of the Army's worldwide food service program. Army Food Service Management Information System provides the users with the capability to order, receipt, inventory, and invoice class I supplies to include field rations. Army Food Service Management Information System

supports the operation of dining facilities for menu planning, production and recipe management, automated head count, labor scheduling, cash collection, and equipment replacement.

Global Combat Support System

A-7. Global Combat Support System-Army is a web based sustainment information system using DOD approved web services. Global Combat Support System-Army includes all tactical echelons. It will subsume the multiple standalone and overlapping sustainment information systems—for supply, property accountability, and maintenance—operating at the tactical level of Army logistics. It is intended to integrate and modernize the current tactical sustainment information systems into one overall multi-echelon, web based logistics enterprise resource planning system with improved interfaces to mission command systems and to the wholesale level of Army and national supply.

A-8. The Army enterprise system integration program will link Global Combat Support System-Army with the Logistics Modernization Program—the Army’s national level logistics system. Global Combat Support System-Army will provide a single access point to the single Army logistics enterprise for external customers, such as the U.S. Transportation Command, the Defense Logistics Agency, and original equipment manufacturers.

A-9. Global Combat Support System-Army will interface with joint logistics information technology systems to allow for mobilization, deployment, sustainment and redeployment of joint forces. Logisticians from tactical to national level will have complete situational awareness of materiel requirements and in-transit visibility of supplies and services.

Joint Automatic Identification Technology

A-10. Joint Automatic Identification Technology is a suite of technologies enabling the automated capture of source data for electronic transmission to and from automated information systems, thereby enhancing the ability to identify, track, document and control deploying forces, equipment, personnel, and cargo. The media includes, but is not limited to, bar codes, radio frequency identification, magnetic stripes, common access or smart cards, optical memory cards, touch buttons and satellite tracking devices as well as the hardware to capture data and read and write. Within DOD logistics, these technologies facilitate the capture of supply, maintenance, and transportation information for inventory and movement management, shipment diversion and reconstitution, and personnel or patient identification. The big benefit of Joint Automatic Identification Technology is that with minimal human intervention, it is possible to rapidly capture detailed information and interface with current and emerging information systems.

Logistics Information Warehouse

A-11. The Logistics Information Warehouse is a single authoritative source of asset data supporting managers and decision makers. Reports on asset information for specific force and item levels can be created and viewed in Logistics Information Warehouse. It draws data from multiple sources and resident data bases to provide users with accurate and complete responses. Asset data sources include:

- Property Book Unit Supply Enhanced.
- Standard Army Retail Supply System.
- Logistics Modernization Program.

A-12. The aim of Logistics Information Warehouse is to provide a single authoritative data/info source for logistics decision support. Work continues toward merging and selecting the best of Logistic Integrated Data Bases to create a single system that eliminates duplication and conflicting info while providing maximum support to Soldiers and other DOD logistics and resource managers.

Property Book Unit Supply Enhanced

A-13. Property Book Unit Supply Enhanced is a web-based, combat support property accountability system. The system uses commercial off-the-shelf hardware and is operated by both tactical and garrison level supply management personnel. Property Book Unit Supply Enhanced integrates property book

accountability and unit level logistics functionality for the Army. System processes include: real-time asset visibility, lateral transfers, asset adjustments, administrative adjustment reports, hand receipts, and more.

Standard Army Ammunition System-Modernized

A-14. Standard Army Ammunition System-Modernized provides centralized information management to support ammunition management functions within a theater of operations. Standard Army Ammunition System-Modernized systems are located within and function from sustainment units such as ammunition transfer and holding points, ammunition supply points, and distribution management systems at various levels. It provides class V managers with the capability to optimize allocation and use of scarce logistical ammunition resources and meet the needs of commanders for planning during deployment, redeployment, reconstitution, and retrograde operations. It also provides decentralized processing, mission command data support, and source data automation through automatic information technology. The system will operate on a variety of platforms from laptops to computer workstations.

Standard Army Maintenance System-Enhanced

A-15. Standard Army Maintenance System-Enhanced increases the productivity of maintenance shops by providing commanders with accurate and timely maintenance management information. It provides visibility of inoperative equipment and required repair parts, selected maintenance, equipment readiness, and equipment performance reports. Standard Army Maintenance System-Enhanced also provides completed work order data to the Logistic Support Activity for equipment performance and other analyses. Standard Army Maintenance System-Enhanced can process field/sustainment level maintenance shop production functions, maintenance control work orders, and key supply functions previously performed manually. Requisitions are prepared automatically and automatic status is received from the Standard Army Retail Supply System. Standard Army Maintenance System-Enhanced is comprised of three interrelated subsystems. It automates shop production functions and maintenance control records, maintains shop supplies, and requests repair parts. It also provides readiness data and life-cycle management data to the USAMC.

Standard Army Retail Supply System

A-16. Standard Army Retail Supply System supports receipt, storage, issue and management of class II, IIIP, IV and IX items of supply. Standard Army Retail Supply System is comprised of two interrelated subsystems and is the standard supply system for receipt, storage, issues, replenishments and storage operations. It is a real-time, transaction-oriented system where users can interactively enter, retrieve, and update supply information. The Standard Army Retail Supply System processes customer unit requests for supplies, cancellation, modification, and follow-up. It also provides an interactive query capability.

Unit Level Logistics System-Aviation (Enhanced)

A-17. The Unit Level Logistics System-Aviation (Enhanced) is a menu driven tactical logistics software program designed to provide complete, accurate and up-to-date information for managing all aspects of aircraft maintenance, including: mission readiness, electronic records retention and supply management logistics. The system is also capable of handling all aviation related reporting requirements mandated by Army Regulations and Department of the Army Pamphlets.

FINANCE

A-18. Financial management operations depend heavily on Financial Management Information Systems as well as the interfacing information systems. The following systems are examples of financial systems that interface with logistics or transportation systems which enable theater distribution.

Financial Management Tactical Platform

A-19. The Financial Management Tactical Platform is a deployable, modular local area network configured hardware platform, supporting deployed finance and resource management operations. The Financial Management Tactical Platform systems provide the same support and functionality equivalent to home

station/garrison support. Financial Management Tactical Platform is the enabler for objective financial management support. Its functionality includes vendor services, military pay, disbursing, accounting, travel, and resource management software management packages. It is a modular design that enables users to have all of the most current financial applications provided by the Defense Finance and Accounting Service in the field to perform their mission tasks.

General Fund Enterprise Business Systems

A-20. General Fund Enterprise Business Systems is the Army's integrated financial management system for funds distribution, execution and reporting. The system provides real-time visibility of transactions as well as historical data to enable better analyses and to make better informed decisions. General Fund Enterprise Business Systems complies with statutory and regulatory requirements, enforces internal controls and is the Army's centerpiece for achieving unqualified financial audit opinions.

A-21. General Fund Enterprise Business System is an enterprise-level solution that enables the Army to link financial accounting, funds control, logistics, asset accounting, and cost management information across the enterprise. It provides accurate, reliable, cost information and makes the information available to all users on a real-time basis. Operational and tactical financial management elements use General Fund Enterprise Business Systems to provide accounting support.

A-22. Perhaps the most significant interface in a theater of operations is with the Global Combat Support System-Army. Global Combat Support System-Army is primarily a logistics--but also a financial--system that is tightly integrated with General Fund Enterprise Business System. Global Combat Support System-Army receives funds only from General Fund Enterprise Business System, shares the financial management module of General Fund Enterprise Business System, and provides execution data to General Fund Enterprise Business System for consolidation.

MISSION COMMAND

A-23. Mission command systems provide mission command and situational understanding capabilities for the command post that enable more effective, agile, and decisive mission execution by commanders and leaders at all levels. The following paragraphs highlight some of the mission command systems used in theater distribution.

Battle Command Sustainment Support System

A-24. Battle Command Sustainment Support System provides Mission Command Enterprise Services with node, commodity and convoy in-transit visibility and asset visibility both in spreadsheet format and on an automated common operating picture. Designed as the logistics sustainment support system-of-record this system operates on classified and unclassified enterprise networks. Battle Command Sustainment Support System provides map-centric displays and data on workstations receiving logistics sustainment information feeds from other authorized system servers used to collect data from numerous other non-mission command systems. Such data sources include but are not limited to the Logistics Information Warehouse and the Joint Automatic Identification Technology national servers.

A-25. Battle Command Sustainment Support System is not a logistic information system; it is a system that pulls information from current logistic information systems and from in-transit visibility servers. The logistics information systems provide current updates on supply, maintenance, and ammunition. The in-transit visibility servers provide data from radio frequency interrogation devices and satellite transceivers on vehicles using systems like the Movement Tracking System. Battle Command Sustainment Support System takes those data and allows them to be shown graphically on digital maps.

A-26. A subset of Battle Command Sustainment Support System is Battle Command Sustainment Support System-Node Management which allows users to track and manage Transportation Control Numbers, containers, and pallets from the source of supply to the tactical supply activity. This capability provides commanders situational understanding of the sustainment pipeline and a complete assessment of the logistics situation. Battle Command Sustainment Support System-Node Management seamlessly integrates logistical information elements from the Services, other DOD agencies, and multinational elements. It fuses numerous data points from various systems such as, Integrated Development Environment/Global

Transportation Network Convergence, Joint-Automatic Identification Technology, ITV server, and Business Systems Modernization-Energy all of which manage various segments of the distribution pipeline.

Global Command And Control System

A-27. Global Command and Control System provides DOD combat commanders with a single source of secure information. It assists joint force commanders with coordinating air, land, sea, and space operations of widely dispersed units in fast moving operations. It is flexible enough for combat operations or humanitarian assistance missions. Global Command and Control System allows greater software flexibility, reliability, and interoperability with other automated systems. Commanders can establish their own secure homepage and communicate worldwide using E-mail. Additionally, this automated information system provides situational understanding and deliberate and crisis planning with the use of an integrated set of analytical tools and flexible data transfer capabilities.

A-28. Global Command and Control System is the Army's strategic and operational command and control system. Global Command and Control System provides a seamless link of operational information and critical data from the strategic to Army theater elements and below. The system also provides operational information and data from Army tactical units to the strategic level.

A-29. Global Command and Control System assists in mission planning and operations in theater, providing a common picture of Army tactical operations to the Joint and Coalition community. In addition, it delivers Joint asset visibility to the Army to facilitate operations and situational awareness and is the system of record for theater Army headquarters worldwide.

Joint Capabilities Release-Logistics

A-30. The Joint Capabilities Release-Logistics merges the Movement Tracking System and Blue Force Tracking. Movement Tracking System software integrates Force XXI Battle Command Brigade-and-Below and Blue Force Tracking capability to provide a common picture of maneuver and logistics units on the battlefield. Blue Force Tracking provides visibility of tactical level equipment and communications while the Movement Tracking System provides strategic data.

A-31. Movement Tracking System provides automated tracking of vehicles and radio frequency identification tagged cargo. It provides fleet monitoring using vehicle map displays, sensors, communications log storage and retrieval capability, and remote monitoring worldwide. Blue Force Tracking is a global positioning system-enabled system that provides commanders and forces with location info about friendly and hostile military forces.

Joint Operation Planning And Execution System

A-32. Joint Operation Planning and Execution System is an integrated joint command and control system used to support military operation planning, monitoring and execution activities. Joint Operation Planning and Execution System has three operational activities; situation awareness, planning, and execution. It provides the process, structure, reports, plans, and orders that orchestrate the joint planning and execution community's delivery of the military instrument of national power. Joint Operation Planning and Execution System provides joint commanders and war planners, at all levels, standardized policy procedures and formats to execute a variety of required tasks. It assists planners in development of operation plans, concept plans, functional plans, campaign plans, and operation orders. The Joint Operation Planning and Execution System is used for time-phased force and deployment data management and development. It defines requirements and gains visibility of the movement of combat forces into the combat commanders' area of responsibility. Joint Operation Planning and Execution System combines individual Service terminology into one standard system. It standardizes the joint planning system used to execute complex multi-Service exercises, campaigns, and operations. The Joint Operation Planning and Execution System automated data processing resides in the computer network of the Global Command and Control System.

Single Mobility System

A-33. Single Mobility System is a web based computer system that integrates numerous independent mission command systems supporting the Defense Transportation System to provide visibility of air, sea,

and surface transportation assets in a collaborative planning environment. It provides functional users and mission planners a single integrated view of cargo and passenger movements reported to U.S. Transportation Command and the transportation component commands mobility systems.

TRANSPORTATION

A-34. Transportation systems are a fundamental part of distribution operations and planning. They are critical to the successful execution of any operation that requires the movement of people or things from one location to another. The following systems are used to support theater transportation operations.

Army Container Asset Management System

A-35. Army Container Asset Management System is a secure, web-based system DOD designated as the DOD-wide system of record to provide life cycle management and control of all Army owned and leased container assets. The Army Container Asset Management System application is customized to meet the functional requirements of container managers worldwide to account for control and provide visibility of container assets and is used to accomplish statutory and regulatory report requirements such as container reports, equipment inspection and maintenance worksheet, and physical inventory reports. The Army Container Asset Management System provides the Army with capabilities to centrally manage procurement, registration, inspection, maintenance, status, location, ownership, and special characteristics of intermodal assets. It maintains a complete history of events associated to each intermodal asset and provides robust report capability, summary, and detailed data for all levels of Army container management. It is the primary reference of ownership of U.S. Government owned containers.

Cargo Movement Operations System

A-36. Cargo Movement Operations System is a top down directed program that automates base-level transportation at various sites. Originally an Air Force program, the Army adopted it as another transportation system. It is a web based combat support system that automates and streamlines installation level cargo movement processes for peacetime, deployment, and contingency cargo. Workstations in installation transportation officer functional areas support one-time data capture for the preparation of documentation for all modes of shipment. The specific functional areas supported are the receipt, preparation, and movement of cargo; the reporting of movement for ITV, and military airlift passenger travel.

Computerized Movement Planning And Status System

A-37. The Computerized Movement Planning and Status System is the Army's unit movement data used in the Joint Operation Planning and Execution System. This system provides deployment planning systems with accurate Army unit movement requirements. The system describes unit property and equipment in transportation terms and converts unit movement data into a Computerized Movement Planning and Status System organizational equipment list. The Computerized Movement Planning and Status System maintains unit movement data for use in mobilization and deployment planning.

Global Air Transportation Execution System

A-38. The Global Air Transportation Execution System automates support for receipt, movement and billing of cargo and passengers. It provides the DOD, Air Mobility Command, SDDC and commercial partners with an automated management system to process and track cargo and passenger information, support management of resources, provide logistical support information, generate standard and ad hoc reports, and provide message routing and delivery service for virtually all aircraft movement data. In the force projection scenario, the Global Air Transportation Execution System is the automated information system that sends aircraft arrival and departure ITV data to the global transportation network. The Global Air Transportation Execution System-Surface integrates the ship load planning capabilities and concurrent planning for multi-ship operations formerly provided by the worldwide port system. The Global Air Transportation Execution System is now the DODs single port/terminal processing and management system for both air and sea movements.

Integrated Booking System

A-39. Integrated Booking System is the execution system for the Defense Transportation System to move international cargo. It provides a worldwide, automated booking system to move military cargo outside of CONUS. The Integrated Booking System allows DOD shippers to automatically process movement requests directly using SDDC booking offices. It automatically determines the best value ocean carrier supporting the move. It interfaces with the ocean carrier industry, Global Air Transportation Execution System, and Integrated Data Environment Global Transportation Network Convergence.

Integrated Computerized Deployment System (ICODES)

A-40. The Integrated Computerized Deployment System is designed to support multi-modal load planning requirements in support of the DOD requirement for a single load planning capability. Responsibility for this function is shared among the SDDC, the Services. The Integrated Computerized Deployment System is a joint decision-support system developed to assist users with the staging and load-planning requirements for multiple military and commercial modes of transportation. The combined functionality of ship, air, rail, and the other Services, gives commanders, planners, and operators at all levels a single platform capable of producing and evaluating load plans and alternative actions for units of any size, using varied modes of transportation, in support of deployed operations.

A-41. The system enables users to plan and track cargo stowage for air, ocean, rail, and truck in a single system that affords the capability of one time entry of the data. It enables the joint community to easily create exchange and interpret cargo movement plans through a single software application. The Integrated Computerized Deployment System integrates multiple knowledge-based expert systems, data storage, and a graphical user interface within a distributed and collaborative operational environment providing global services to the operational Army.

Integrated Data Environment / Global Transportation Network Convergence

A-42. Integrated Data Environment / Global Transportation Network Convergence is a system that provides supply chain, distribution, and logistics information fusion, through common integrated data application services, enables the development of cohesive business solutions both by and for the supported and supporting combatant commands, components, Services, joint staff, agencies, and other federal organizations. It creates an environment where logistics and distribution data and information from both USTRANSCOM and DLA are accessible from a single access point.

Transportation Coordinators Automated Information For Movements System II

A-43. Transportation Coordinators Automated Information for Movements System II provides automated day-to-day operations for unit movement officers and organizations providing movement control at various levels in a theater of operations. It improves and expedites unit movements and distribution while providing a source of timely and accurate deployment information for use at all joint deployment community command levels. Under Transportation Coordinators Automated Information for Movements System II, unit movement, installation transportation, and loading functionality are accessible from a single client platform at the unit or installation level. The processing, tracking, and reporting of data is available to decision makers at all command levels. Additionally, Transportation Coordinators Automated Information for Movements System II has the capability of running on an Enterprise system. It provides in-transit and total asset visibility to users and is the basic building block of source data that the Integrated Data Environment / Global Transportation Network Convergence and Battle Command Sustainment Support System force tracking software translates into ITV and force tracking information.

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Glossary

The glossary lists acronyms and abbreviations and terms with Army or joint definitions, and other selected terms. Where Army and joint definitions are different, (Army) follows the term. Terms for which ATP 4-0.1 is the proponent (authority) manual are marked with an asterisk (*). The proponent manual for other terms is listed in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

ADP	Army doctrine publication
ADRP	Army doctrine reference publication
AMC	Air Mobility Command
AO	area of operations
AOR	area of responsibility
AR	Army regulation
ASCC	Army Service component command
ATP	Army techniques publication
ATTP	Army tactics, techniques, and procedures
CCDR	combatant commander
CONUS	continental United States
CRSP	centralized receiving and shipping point
CSC	convoy support center
CULT	common-user land transportation
DA	Department of the Army
DLA	Defense Logistics Agency
DMC	distribution management center
DOD	Department of Defense
ESC	expeditionary sustainment command
FM	field manual
G-3	assistant chief of staff, operations
GCC	geographic combatant commander
HN	host nation
HNS	host-nation support
ITV	in-transit visibility
J-4	logistics directorate of a joint staff
JDDOC	joint deployment and distribution operations center
JP	joint publication
JTF-PO	joint task force-port opening
LOTS	logistics over-the-shore
MCB	movement control battalion
MCT	movement control team
MSC	Military Sealift Command

OPLAN	operation plan
OPORD	operation order
RSOI	reception, staging, onward movement and integration
SDDC	Surface Deployment and Distribution Command
SPO	support operations
SSA	supply support activity
TSC	theater sustainment command (Army)
TTOE	transportation theater opening element
U.S.	United States
USAMC	United States Army Materiel Command
USTRANSCOM	United States Transportation Command

SECTION II – TERMS

asset visibility

(U) (DOD) Provides users with information on the location, movement, status, and identity of units, personnel, equipment, and supplies, which facilitates the capability to act upon that information to improve overall performance of the Department of Defense's logistics practices. Also called AV. (JP 3-35)

common user land transport

(U) (DOD) Point-to-point land transportation service operated by a single Service for common use by two or more Services. Also called CULT. (JP 4-01.5)

defense industrial base

(U) (DOD) The Department of Defense, government, and private sector worldwide industrial complex with capabilities to perform research and development, design, produce, and maintain military weapon systems, subsystems, components, or parts to meet military requirements. Also called DIB. (JP 3-27)

***distribution management**

The function of synchronizing and coordinating a complex of networks (physical, communications, information, and financial) and the sustainment warfighting function (logistics, personnel services, and health service support) to achieve responsive support to operational requirements.

distribution manager

(U) (DOD) The executive agent for managing distribution with the combatant commander's area of responsibility. (JP 4-09)

in-transit visibility

(U) (DOD) The ability to track the identity, status, and location of Department of Defense units, and non-unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers; patients; and personal property from origin to consignee or destination across the range of military operations. Also called ITV. (JP 4-01.2)

***retrograde of materiel**

An Army logistics function of returning materiel from the owning or using unit back through the distribution system to the source of supply, directed ship-to location, or point of disposal.

supply chain

(U) (DOD) The linked activities associated with providing materiel from a raw materiel stage to an end user as a finished product. (JP 4-09)

theater distribution

(U) (DOD) The flow of personnel, equipment, and materiel within theater to meet the geographic combatant commander's missions. (JP 4-09)

theater opening

The ability to establish and operate ports of debarkation (air, sea, and rail), to establish a distribution system, and to facilitate throughput for the reception, staging, and onward movement of forces within a theater of operations. (ADRP 4-0)

throughput

(U) (DOD) 1. In transportation, the average quantity of cargo and passengers that can pass through a port on a daily basis from arrival at the port to loading onto a ship or plane, or from the discharge from a ship or plane to the exit (clearance) from the port complex. (JP 4-01.5)

throughput distribution

A method of distribution which bypasses one or more intermediate supply echelons in the supply system to avoid multiple handling. (ATP 4-11)

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ATP 4-0.1
29 October 2014

By Order of the Secretary of the Army

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:

A handwritten signature in black ink, appearing to read "Gerald B. O'Keefe". The signature is written in a cursive style with a large initial 'G' and 'O'.

GERALD B. O'KEEFE
Administrative Assistant to the
Secretary of the Army
1429401

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