

Joint Publication 4-09



Joint Doctrine for Global Distribution



14 December 2001



PREFACE

1. Scope

This publication provides guidance and principles for the planning and execution of global distribution operations of the Armed Forces of the United States. It explains the global distribution system, the networks and functions of the system, and planning and execution considerations that may impact US joint force operations. It discusses the responsibilities and command relationships for supported and supporting combatant commands and Services, as well as their interaction with defense and federal agencies. This publication also discusses global distribution execution and enabling facilities; infrastructure; command, control, communications, computers, and intelligence components; logistic systems; and transportation programs. Finally, this publication discusses global distribution operations in support of joint force missions involving multinational and interagency partners.

2. Purpose

This publication has been prepared under the direction of the Chairman of the Joint Chiefs of Staff. It sets forth doctrine to govern the joint activities and performance of the Armed Forces of the United States in joint operations and provides the doctrinal basis for US military involvement in multinational and interagency operations. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders (JFCs) and prescribes doctrine for joint operations and training. It

provides military guidance for use by the Armed Forces in preparing their appropriate plans. It is not the intent of this publication to restrict the authority of the JFC from organizing the force and executing the mission in a manner the JFC deems most appropriate to ensure unity of effort in the accomplishment of the overall mission.

3. Application

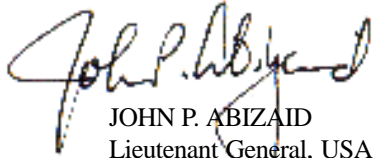
a. Doctrine and guidance established in this publication apply to the commanders of combatant commands, subunified commands, joint task forces, and subordinate components of these commands. These principles and guidance also may apply when significant forces of one Service are attached to forces of another Service or when significant forces of one Service support forces of another Service.

b. The guidance in this publication is authoritative; as such, this doctrine will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. If conflicts arise between the contents of this publication and the contents of Service publications, this publication will take precedence for the activities of joint forces unless the Chairman of the Joint Chiefs of Staff, normally in coordination with the other members of the Joint Chiefs of Staff, has provided more current and specific guidance. Commanders of forces operating as part of a multinational (alliance or coalition) military command should follow multinational doctrine and procedures ratified by the United States. For

doctrine and procedures not ratified by the United States, commanders should evaluate and follow the multinational command's

doctrine and procedures, where applicable and consistent with US law, regulations, and doctrine.

For the Chairman of the Joint Chiefs of Staff:



JOHN P. ABIZAID
Lieutenant General, USA
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EXECUTIVE SUMMARY

COMMANDER'S OVERVIEW

- Discusses Global Distribution Concepts
 - Covers the Responsibilities for Global Distribution
 - Provides Guidance for Global Distribution Planning and Execution
 - Discusses Those Systems that Enable Global Distribution
-

General

Global distribution is fundamental to joint operations because it links national means to joint operating forces through fulfillment of force requirements for support during the preparation for and conduct of joint operations.

Global distribution encompasses the collective activities of the Services, defense agencies, and the commercial sector, guided by policy, doctrine, and modern logistic art and science **to mobilize, deploy, employ, sustain, and redeploy the national resources required to execute the National Military Strategy (NMS)**. In essence, it provides the wherewithal to execute the NMS. In this context, global distribution melds the Service responsibilities for requirements determination and acquisition of resources with centralized materiel management and movement control provided by the Services and other Department of Defense (DOD) functional agencies to tailor logistic support for joint operations.

A major element of joint logistic support is distribution.

In its broadest sense, distribution is the operational process of synchronizing all elements of the logistic system to **deliver the “right things” to the “right place” at the “right time”** in order to generate and sustain the military capability required by joint forces. Distribution is the key logistic process that provides the means for joint force operations and is integrated and synchronized with the ways of joint operations to effectively and economically accomplish the assigned mission. Global distribution links national resources with joint force support requirements, enabling joint force commanders to generate and sustain combat power and maintain combat readiness.

Global distribution is the process that synchronizes and integrates fulfillment of joint force requirements with employment of the joint force.

The global distribution system is the Department of Defense controlled and operated or contracted end-to-end distribution system from point of origin or source of supply to final destination or point of need.

Global distribution provides national resources (personnel and materiel) to support execution of joint operations. The ultimate objective of this process is the **effective and efficient accomplishment of the joint force mission**.

The global distribution system has **two distinct line of communications (LOC) segments** that comprise the end-to-end distribution system. The first segment is the strategic-national LOC that consists of points of origin or sources of supply external to a supported theater. This LOC provides a supported combatant commander with access to national assets available outside the theater to support joint operations. The second segment is the theater LOC, that extends from ports of debarkation, points of origin, or sources of supply to final destinations or points of need internal to a theater. Operation of the in-theater portion of the global distribution system is the responsibility of the supported combatant commander.

Global Distribution of Materiel

A requirement common to all joint operational processes is the provision of materiel to the operating force.

Global distribution of materiel is **the process of providing materiel from the source of supply to the point of consumption or use**. To be effective, efficient, and make the best use of fiscal resources, materiel distribution must be conducted within the framework of supply chains. This modern approach to materiel distribution uses the organizational process of supply chain management to integrate and synchronize the networks, functions, and elements of the global distribution system.

Global Distribution Networks and Functions

The global distribution system is composed of networks and functions operating through the lines of communications supporting a joint force.

The four **networks** of the integrated global distribution system **are the physical, the financial, the information, and the communications networks**. Understanding the interdependencies and interrelationships of these networks is essential in planning for global distribution in support of operations. Assurance of the critical infrastructures that support each of the networks ensures continuity of global distribution. The effectiveness and efficiency of global distribution is improved or diminished by the level of performance of any of these networks.

The **functions** of the global distribution system are the organic supply, transportation, and maintenance capabilities of the Services and defense agencies, combined with those contracted

from the commercial sector or obtained through multinational partners, and the logistic management organizations and processes that provide direction and control to these functional elements.

Fundamentals and Tenets

Fundamentals compose the essential structure of a system and are of central importance to a system's identity.

The fundamentals of global distribution are as follows:

Integration. The management of all elements of the supply chain, government and commercial, to achieve a common purpose through standardization, simplification, discipline, information technology, connectivity, and information sharing.

Confidence. The global distribution system must stand up to warfighter scrutiny with credible redundancies and safeguards that instill trust in the system's reliability.

Balance. The effective mix of military and commercial sector capabilities and the right combination of people (individuals and organizations), technology (information and equipment), and processes in performing global distribution functions.

Control. The ability to influence the distribution process at any point in the operation in order to rationalize and harmonize emergent requirements and priorities.

Security. The physical, operations, and information measures necessary to protect personnel and materiel assets from threats.

Tenets are the principles or beliefs held in common by an organization or profession.

The tenets of global distribution are as follows:

Agility. Agility is the ability to adjust rapidly and responsively to changes.

Efficiency. Efficiency is the application of the best practices to satisfy the warfighter's requirements and incorporates the logistic principles of attainability and availability.

Precision. Precision is the ability to respond rapidly to point of need demands and requirements, and requires the elements of the global distribution system to forecast, anticipate, and pre-plan distribution execution.

Visibility. Visibility is the capability to determine the status, position, and direction of flow of a requirement or materiel in the global distribution system or in use or possession of units.

Velocity. Velocity is the speed at which requirements are fulfilled by the distribution system. Synchronizing the velocities of the various global distribution aspects maximizes total system effectiveness.

Value. Value is achieving the best possible synergy of effectiveness and efficiency to provide the most responsive support for the least cost.

Elements of Global Distribution

At the core of global distribution of materiel is a set of activities common to every materiel distribution operation — the elements of global distribution of materiel.

The elements of global distribution are interrelated and interdependent activities that affect all aspects of planning and executing acquisition and physical distribution of materiel. **The elements of global distribution of materiel often span planning cycles of many years, but are executed through transaction cycles sometimes measured in seconds.** These elements cut across the domains of the strategic, operational, and tactical levels of war. These elements are requirements determination and stocking policy; acquisition and procurement; requisition process; physical distribution and transportation; redistribution; retrograde and returns; disposal; environmental considerations; customs; and redistribution and redeployment.

Global Distribution Planning

Distribution planning is both art and science.

Global distribution planning involves the operations, logistic, and acquisition communities. It is an iterative process that includes detailed analysis and evaluation of the distribution networks and functions supporting the end-to-end distribution process. **Planning should include redundancy and flexibility** to avoid complete reliance on a single process, node, or mode. Global distribution planning is a collaborative effort spanning the strategic, operational, and tactical levels of war.

Planning for Distribution of Materiel

Global distribution of materiel involves essential planning considerations that must be used by planners at all levels to successfully accomplish distribution operations.

Logistic planners must apply a **supply chain management perspective** and the **fundamentals and tenets of global distribution** to create logistic plans and support concepts. These considerations include the following: requirements determination and stocking policy; organizations and sources; requisition planning; physical distribution and transportation planning; retrograde and return planning; surge considerations; strategic to theater interface; nongovernmental organizations and multinational considerations; and distribution network constraints.

Operational Planning

The director of the logistics directorate of a supported combatant command is the proponent for global distribution planning for a given operation, campaign, or theater.

The task of distribution planning is fundamental to accomplishing joint theater logistics management. **The essence of planning global distribution of materiel is in determining the materiel requirements and distribution capabilities needed to support joint forces and verifying sourcing and resourcing for both.** These distribution requirements and capabilities must be integrated into the framework supported by formal joint operation planning processes and systems. All distribution planning is supported by the framework of the Joint Operation Planning and Execution System and its associated processes.

Distribution Execution

While some elements of these materiel distribution processes may be relatively common across the range of commodities, other distribution elements vary widely between the classes of supply.

The complexity and variety of materiel managed by defense agencies and the Services has necessitated the **creation of multiple materiel distribution processes**. The elements of global distribution discussed earlier have evolved into commodity-based supply chains aligned to the military classes of supply. Distribution is now being accomplished through a variety of methods. Some distribution continues to be made from producers and/or vendors through the military depot system, particularly for munitions and repair parts, while commercial contracts for some materiel support now require delivery by the vendor directly to the military customers on a global basis. Other contracts require delivery by the vendor to the Defense Transportation System for movement into the overseas areas, where either the contractor takes possession to make the delivery or the shipment is moved by US military capability to the final destination. **The shift in DOD support philosophy away from the traditional stock-based logistic system to a leaner, just-in-time distribution-based system has taken away the traditional safety net of redundant materiel stocks to support almost every eventuality.** This shift reinforces the importance of accurate planning and execution of each element of the global distribution of materiel.

Enablers

Distribution support to joint force operations requires robust enablers and continuous improvement and innovation.

Enablers can be both physical (technology and equipment) and procedural (streamlined, efficient policies, processes, and business practices). Defense reform initiatives have emphasized the integration of modern technology and business practices into DOD operations reducing policy and procedural barriers to change. The immediate and tangible impact of these distribution enablers is to provide combatant command

and Service distribution planners and operators with a toolbox of solutions for global distribution operations. Distribution enablers for joint force operations are categorized as distribution facilities and infrastructure, distribution-related joint command, control, communications, computers, and intelligence (C4I) and information (including total asset visibility) systems, DOD and commercial transportation programs, modern procurement methods, and military standard logistic systems and procedures.

CONCLUSION

This publication provides guidance and principles for the planning and execution of global distribution operations of the Armed Forces of the United States. It explains the global distribution system, the networks and functions of the system, and planning and execution considerations that may impact US joint force operations. It discusses the responsibilities and command relationships for supported and supporting combatant commands and Services, as well as their interaction with defense and federal agencies. This publication also discusses global distribution execution and enabling facilities; infrastructure; C4I components; logistic systems; and transportation programs. Finally, this publication discusses global distribution operations in support of joint force missions involving multinational and interagency partners.

CHAPTER I

GLOBAL DISTRIBUTION CONCEPTS

“The commander who fails to provide his army with necessary food and other supplies is making arrangements for his own defeat, even with no enemy present.”

Emperor Maurice, *The Strategikon*, AD 600

1. General

a. **Purpose.** The purpose of this publication is to provide joint doctrine on global distribution as a critical element of joint operations. Global distribution encompasses the collective activities of the Services, defense agencies, and the commercial sector, guided by policy, doctrine, and modern logistic art and science to mobilize, deploy, employ, sustain, and redeploy the national resources required to execute the National Military Strategy (NMS). **Global distribution is fundamental to joint operations because it links national means to joint operating forces by fulfilling joint force support requirements during preparation for and conduct of joint operations.** In essence, it provides the wherewithal to execute the NMS. In this context, global distribution melds the

Service responsibilities for requirements determination and acquisition of resources with centralized materiel management and movement control provided by the Services and other Department of Defense (DOD) functional agencies to tailor logistic support for joint operations. This chapter provides all joint force commanders (JFCs), the Military Services, agencies, and other organizations involved in global distribution with a doctrinal framework for planning, synchronizing, and executing logistic support during joint force operations. This chapter will define global distribution and:

- Provide a doctrinal framework necessary to understand, plan, and execute global distribution operations — attaining the Joint Vision (JV) 2020 focused logistics joint deployment and rapid distribution goals of improved visibility and



Global distribution provides the means to execute the NMS.

accessibility of assets from point of origin or source of supply to final destination or point of need;

- Describe the networks, functions, and elements that comprise global distribution;
- Define the fundamentals and tenets of global distribution; and
- Provide a broad model for understanding global distribution operations.

b. **Distribution.** A major element of joint logistic support, as described in Joint Publication (JP) 4-0, *Doctrine for Logistic Support of Joint Operations*, is distribution. **In its broadest sense, distribution is the operational process of synchronizing all elements of the logistic system to deliver the “right things” to the “right place” at the “right time” to generate and sustain the military capability required by joint forces.** Joint operations normally require the application of national resources to accomplish assigned tasks. Joint operations are described by concepts of operations and support that detail the ways (scheme of employment) and means (force requirements) of joint operations. Distribution is the key logistic process that provides the means for joint force operations and is integrated and synchronized with the ways of joint operations to effectively and economically accomplish the assigned mission. Global distribution links national resources with joint force support requirements, enabling JFCs to generate and sustain combat power and maintain combat readiness. Moreover, **distribution effectiveness and efficiency significantly impacts operational art and the employment of forces.** The distribution system serves as the conduit to integrate and synchronize logistics and operations. The effectiveness of this effort ultimately determines the success or failure of the joint force mission.

- Distribution operations supporting a joint force **include all of the “things” moving in the lines of communications (LOCs) extending from a point of origin or source of supply to a final destination or point of need.** The points of origin or sources of supply for resources may be in the continental United States (CONUS) or outside the continental United States (OCONUS). They include military bases, camps, posts, forts, ports, depots, supply ships, vendor warehouses, or commercial production facilities. During peacetime and joint operations, distribution links these points of origin or sources of supply through LOCs to a joint force.
- Conceptually, there is a single “pipeline” into and out of a theater influenced and controlled by the supported combatant commander and managed by supporting commands and agencies to ensure that the distribution flow meets the JFC’s guidance and intent. However, the global distribution “pipeline” is more accurately described as a directional distribution network consisting of the various LOCs supporting a joint force, through which that force acquires resources to conduct required operations. This directional distribution network must accommodate the global distribution of people and materiel to position resources when and where required by a JFC. In addition, organization of this global distribution network must account for numerous other constituent elements, such as commodity-based and specialized distribution networks occurring simultaneously during peace and war. Distribution techniques and practices conceived in peacetime to promote effectiveness and efficiency must be able to seamlessly incorporate and accommodate demands to support wartime conditions. The breadth and variety of distribution actions taking



Distribution must be synchronized with the other elements of joint logistic support to generate and sustain the military capability required to conduct joint operations.

place within this “pipeline” require a distinct doctrine to understand and ultimately plan, manage, and execute the operations required to support an operating force (see Figure I-1).

c. Definition of Global Distribution.

Global distribution is **the process that synchronizes and integrates fulfillment of joint force requirements with employment of the joint force.** It provides national resources (personnel and materiel) to support execution of joint operations. The ultimate objective of this process is the effective and efficient accomplishment of the joint force mission.

- Global distribution doctrine provides both a theoretical and practical approach to providing support to the warfighter. Fundamentally, this approach recognizes that effective and efficient fulfillment of warfighter requirements is dependent on the deliberate synchronization and integration of multiple logistic and joint operational processes.
- Global distribution doctrine expands the traditional “warehouse to warfighter”

concept of distribution to recognize the myriad of logistic agencies and functions from strategic to tactical levels necessary to provide logistic support. This integrated and collaborative approach requires the coordinated management of a complex of networks (physical, financial, information, and communications) and functions (supply, transportation, maintenance, and logistic management) to achieve responsive, customized solutions to the dynamic mission requirements of modern warfighting.

d. Global Distribution and Joint Operations.

Joint operations involve a range of operational processes (mobilization, deployment, employment, sustainment, and redeployment) dependent upon mission requirements and circumstances. Global distribution is inextricably linked to these joint operational processes (see Figure I-2). Planning for and execution of these processes normally occurs in a continuous, overlapping, and iterative sequence for the duration of the mission. However, each joint operation or campaign usually differs in both scale and sequence. The following paragraphs briefly

GLOBAL DISTRIBUTION OPERATIONS

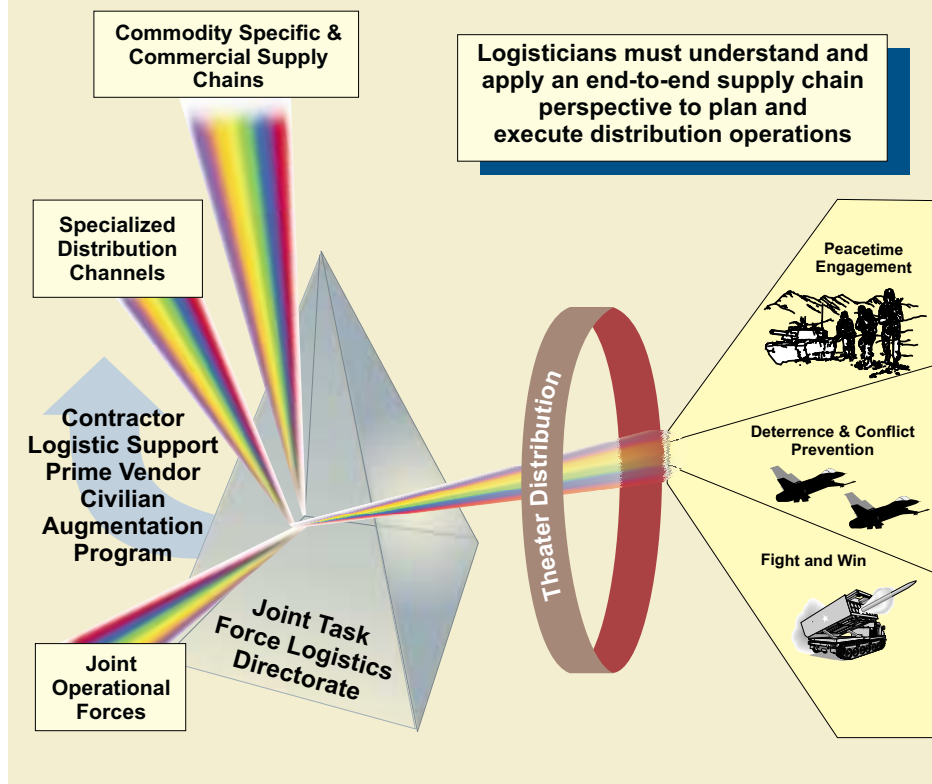


Figure I-1. Global Distribution Operations

describe the end-to-end distribution system and the relationship of each joint process to global distribution.

- **The Global Distribution System.** The global distribution system is the DOD controlled and operated or contracted end-to-end distribution system from point of origin or source of supply to final destination or point of need. **This system has two distinct LOC segments that comprise the end-to-end distribution system.**
 - The first segment is the strategic-national LOC that consists of points of origin or sources of supply external

to a supported theater. This LOC segment provides a supported combatant commander with access to national assets available outside the theater to support joint operations. To promote the effectiveness and efficiency of this LOC segment in support of joint operations, **the US Joint Forces Command (USJFCOM) serves as the joint deployment process owner (JDPO) to coordinate improvements in the joint deployment process.** The Defense Logistics Agency (DLA) and the Military Services provide centralized materiel management and asset visibility, and the US Transportation Command (USTRANSCOM) provides transportation

GLOBAL DISTRIBUTION AND JOINT OPERATIONS

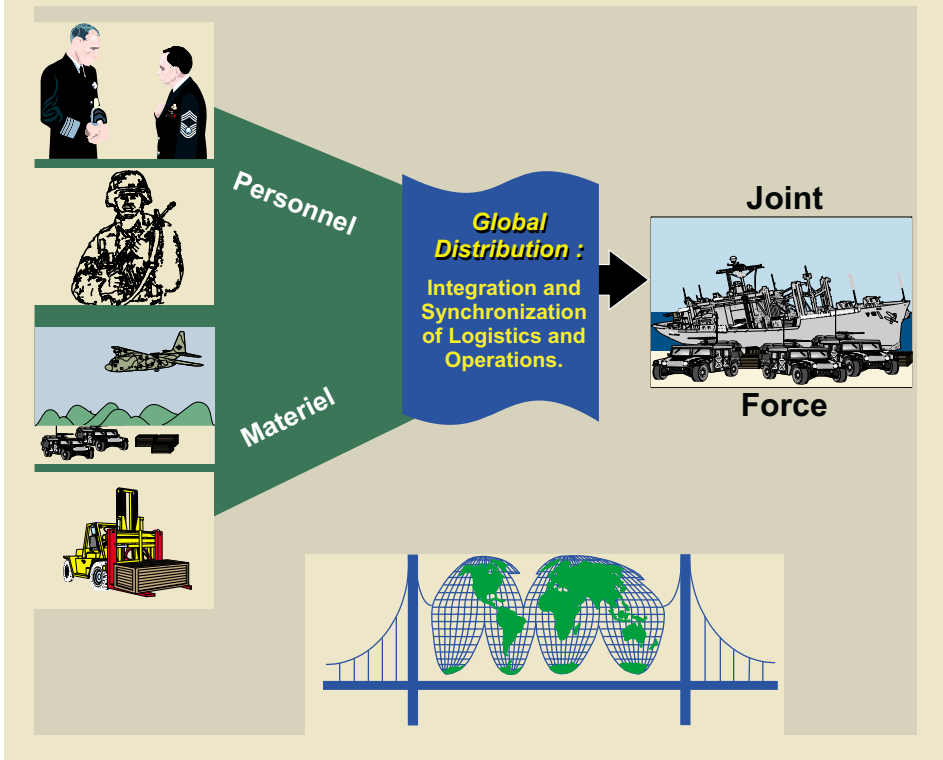


Figure I-2. Global Distribution and Joint Operations

support and in-transit visibility (ITV) through centralized control of common-user and contracted transportation assets.

• The second LOC segment is the theater segment that extends from ports of debarkation (PODs), points of origin, or sources of supply to final destinations or points of need internal to a theater. Operation of the in-theater portion of the global distribution system is the responsibility of the supported combatant commander. However, global distribution decisions made in the strategic-national LOC segment before or during joint operations may adversely impact or inappropriately influence

theater distribution operations. For this reason, supported combatant commanders and staffs must understand the end-to-end global distribution process and the critical requirement to coordinate the strategic-theater distribution interface.

For information about theater distribution, see JP 4-01.4, Joint Tactics, Techniques, and Procedures for Joint Theater Distribution.

• The objective of the global distribution system is to integrate and synchronize the strategic-national and theater LOC segments to facilitate supported combatant commander control

of the global distribution process and provide effective and efficient support to the operating force.

- **Joint Operations.** The global distribution system encompasses operational mission support and spans the continuum of peacetime support, mobilization, deployment, employment, sustainment, and redeployment. **This system provides national resources to the logistic activities in direct support of warfighting customers and, in some cases, directly to the warfighter.** Defense agencies, the Services, combatant commands, and the US industrial base (as well as multinational partners) may, at one time or another, all participate in this system. The following paragraphs describe the relationship of global distribution to the joint operational processes.

•• **Mobilization.** Mobilization is the process of assembling and organizing national resources to support national objectives in time of war or other emergencies. Mobilization includes bringing all or part of the industrial base and the Armed Forces of the United States to the necessary state of readiness to meet the requirements of the specific contingency. **Global distribution supports the mobilization process by fulfilling joint force requirements relative to a potential contingency.**

For more information, see JP 4-05, Joint Doctrine for Mobilization Planning, and JP 4-05.1, Joint Tactics, Techniques, and Procedures for Manpower Mobilization and Demobilization Operations: Reserve Component (RC) Callup.

•• **Deployment.** Deployment is movement of forces and materiel from their point of origin to a specific

operational area to conduct joint operations outlined in a given plan or order. **Global distribution supports the deployment process through coordination and integration of the movement of personnel and materiel to meet a supported commander's mission requirements.** Deployment must be coordinated with sustainment because both activities occur simultaneously and utilize the same LOCs supporting an operating force.

For more information on joint deployment, see JP 3-35, Joint Deployment and Redeployment Operations, JP 4-01.8, Joint Tactics, Techniques and Procedures for Joint Reception, Staging, Onward Movement, and Integration, and Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3122.02, Crisis Action Time-Phased Force and Deployment Data Development and Deployment Execution.

•• **Employment.** Employment prescribes how to apply force and/or forces to attain specified national strategic objectives. Employment concepts are developed by JFCs and their component commands during the planning process. These concepts provide the foundation and determine the scope of mobilization, deployment, sustainment, and redeployment processes. Joint operation planning prescribes how logistics is integrated and synchronized with operations. **Global distribution supports employment of the joint force through effective integration and synchronization of the strategic-national and theater LOC segments to meet the needs of the operating force.** This allows the joint force to maintain a higher operational tempo and agility resulting in an operational advantage.

For more information on arrangement of operations and logistics, see JP 3-0, Doctrine for Joint Operations, and JP 4-0, Doctrine for Logistic Support of Joint Operations.

•• **Sustainment.** Sustainment is directed toward providing and maintaining levels of personnel and materiel required to sustain the levels of combat or mission activity for the appropriate duration and at the desired level of intensity. **Sustainment is conducted for the duration of the joint mission.** Logistic concepts of support must meld with and complement concepts of operations. Logistic planners accomplish this by **tailoring the existing global distribution system or devising new distribution capabilities to be responsive, timely, and accurate in providing logistic support to the JFC and integrating and synchronizing logistic and operation planning to maintain readiness and competitive advantage.**

For more information on sustainment of joint operations, see JP 4-0, Doctrine for Logistic Support of Joint Operations.

•• **Redeployment.** Redeployment involves the transfer of forces and materiel to support another JFC's operational requirements, or to return personnel, equipment, and materiel to the home and/or demobilization stations for reintegration and/or out-processing. Commanders plan and execute redeployment in a manner that optimizes readiness of redeploying forces and materiel to meet new contingencies or crises. **Global distribution supports the redeployment objectives including reconstitution and reorganization of the force prior to redeployment; redistribution of personnel, equipment, and materiel; and disposal of unwanted materiel and hazardous wastes.** During redeployment, the use of automated identification technology (AIT) devices to support ITV and asset visibility of materiel becomes vitally important. In some cases, these devices may be the only method of documentation available at the receiving site.

For additional information on redeployment of the joint force, see JP 3-35, Joint Deployment and Redeployment Operations.



Deployment, sustainment, and redeployment must be fully coordinated and synchronized because they normally utilize the same LOCs supporting the operating force.

- Current joint doctrine addresses many of the other operational aspects of global distribution during the execution of these joint operational processes, such as the provision of personnel, transportation, civil engineering, and health services.

For more information on personnel support, see JP 1-0, Doctrine for Personnel Support to Joint Operations; for additional information on transportation, see JP 4-01, Joint Doctrine for the Defense Transportation System; for additional information on civil engineering, see JP 4-04, Joint Doctrine for Civil Engineering Support; and for more information on health services, see the 4-02 series of JPs.

2. Global Distribution of Materiel

a. **Materiel Distribution.** A requirement common to all joint operational processes is the provision of materiel to the operating force. Materiel distribution is particularly complex because it requires the interaction of the Services, combatant commanders, and the defense agencies to accomplish the task within the fiscal constraints of the DOD budget while supporting the operational requirements of the geographic combatant commands. **Materiel decisions affecting global distribution are often made years prior to the decision to employ joint forces.** Combatant commanders and staffs, subordinate JFCs and staffs, supporting commands and agencies, and other organizations involved in global distribution must fully understand how these decisions affect joint operations. More importantly, they must understand how the application of modern logistic art and science may provide them with operational flexibility, freedom of action, and a competitive logistic advantage over an adversary during execution of joint operations. Driven by the JV 2020 pillar of focused logistics, materiel distribution has undergone revolutionary changes in

support of joint operations. These changes require supporting doctrine because of the profound impact on and implications for global distribution in support of joint operations.

- **Definition of Global Distribution of Materiel.** Global distribution of materiel is **the process of providing materiel from the source of supply to the point of consumption or use.** To be effective and efficient, and to make the best use of fiscal resources, materiel distribution must be conducted within the framework of supply chains. This modern approach to materiel distribution uses the organizational process of supply chain management to integrate and synchronize the networks, functions, and elements of the global distribution system.

- **Supply Chains.** Supply chains are **the linked logistic activities associated with providing materiel from a raw material stage to an end user as a finished product.** These linked activities include requirements determination and stocking policy, acquisition and procurement, physical distribution and transportation, and returns, reutilization, transfer, donation, and disposal of used or residual materiel. In a supply chain, these logistic activities are integrated across internal functional boundaries (acquisition, supply, maintenance, and transportation) to provide a higher level of effective and efficient support than possible if the activities had not been linked. Within the Department of Defense, multiple supply chains, roughly corresponding to military commodities or classes of supply, make up a portion of the global distribution pipeline mentioned above.

- Military supply chains integrate the capabilities of joint, cross-Service, and commercial entities. Understanding the

operations and management of military supply chains, their impact on traditional physical distribution functions, and additional requirements generated by the loss of any link in the chain is an essential ingredient to mastery of global distribution doctrine.

- As the Department of Defense migrates from a stock-based to a distribution-based logistic system, **the concept of integrating and managing military supply chains becomes the operating model for solving the basic materiel distribution challenge** described above — the balance between inventory and transportation for joint warfighting success.
- **Supply Chain Management.** Supply chain management, as defined in Figure I-3, provides an intellectual and organizational approach to managing, integrating, and assuring all the elements that affect the flow of materiel to the joint force. Military supply chain management is **the discipline that integrates acquisition, supply,**

maintenance, and transportation functions with the physical, financial, information, and communications networks in a results-oriented approach to satisfy joint force materiel requirements. This publication will highlight key supply chains and their associated distribution techniques and enablers that exist across a broad range of military logistic organizations and processes. Using this awareness and understanding, logisticians can apply a supply chain management approach to materiel distribution activities that support the joint force.

b. Inventory Versus Transportation.

Basically, the challenge of materiel distribution is in meeting joint force requirements with the proper balance of inventory and transportation (see Figure I-4). Global distribution planning addresses this balance through integrated acts of calculating, planning, and managing the trade off of inventory variables of source, quantity, and position and transportation variables of capacity, reliability to minimize uninterrupted distribution, and velocity to successfully meet the materiel requirements of the supported force.

SUPPLY CHAIN MANAGEMENT

Supply chain management is a cross-functional approach to procuring, producing, and delivering products and services to customers. The broad scope includes sub-suppliers, suppliers, internal information, and funds flow.

3. Global Distribution Networks and Functions

The global distribution system is composed of networks and functions operating through the LOCs supporting a joint operating force. Supply chain management is used to link logistic activities across these networks and functions during operation of the global distribution system (see Figure I-5).

a. **Global Distribution Networks.** The four networks of the integrated global distribution system are the **physical, financial, information, and communications networks.** Understanding the interdependencies and interrelationships of these networks is

Figure I-3. Supply Chain Management

BALANCE INVENTORY AND TRANSPORTATION

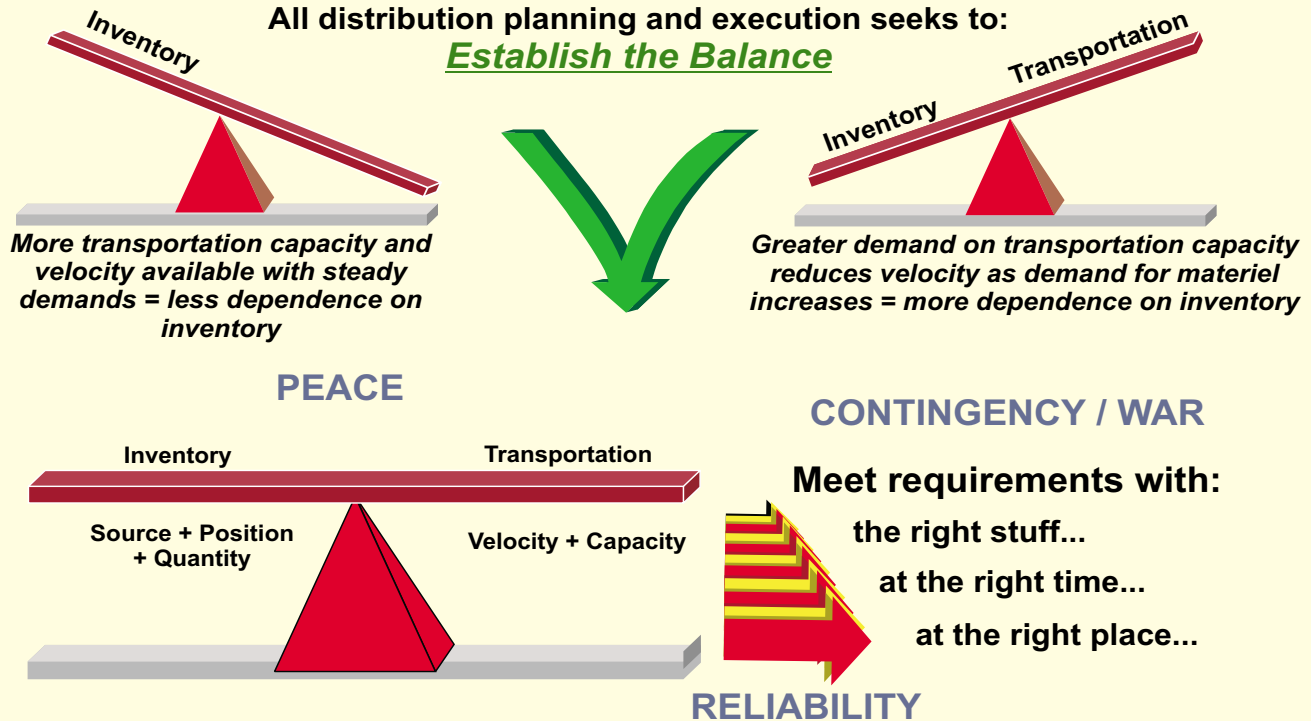


Figure I-4. Balance Inventory and Transportation

GLOBAL DISTRIBUTION NETWORKS AND FUNCTIONS

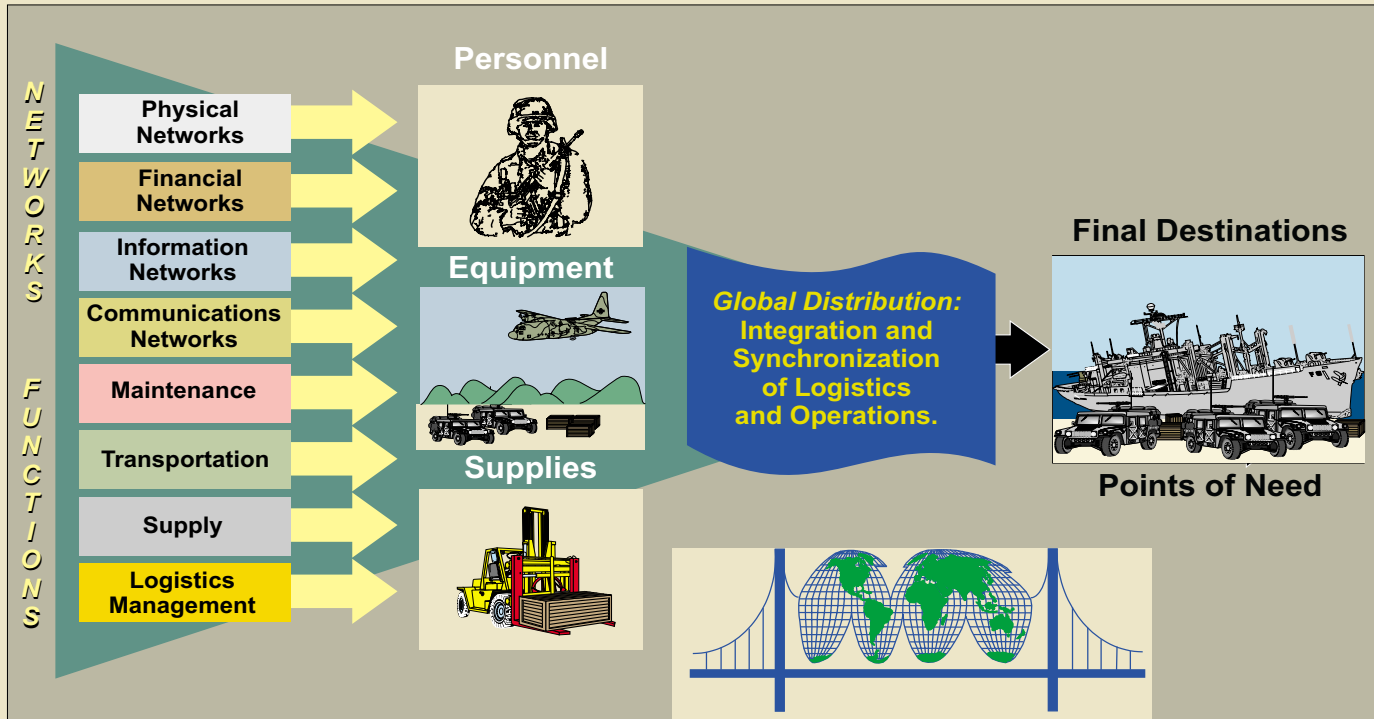


Figure I-5. Global Distribution Networks and Functions

essential in planning for global distribution in support of operations. Assurance of the critical infrastructures that support each of the networks ensures continuity of global distribution. The effectiveness and efficiency of global distribution is improved or diminished by the level of performance of any of these networks.

- **Physical Network.** The physical network of the distribution system **consists of the quantity, capacity, and capability of fixed structures and established facilities supporting distribution operations.** It includes roads, railroads, structures (such as warehouses, depots, or storage facilities), ports, waterways, and pipelines. **The physical network encompasses physical resources such as personnel, equipment, and materiel as well as the capabilities to physically move these assets.** It includes organic capabilities of military organizations and those of commercial partners, as well as those of multinational and interagency participants. The physical network can be thought of as the skeletal and muscular structure of global distribution. General engineer capability allows global distribution to expand the capacity of the physical network (e.g., terminals, airfields, roads, waterways). Engineer reconnaissance provides information on the capacities of the physical system as well as identified potential barriers or bottlenecks.
- **Financial Network.** The financial network is composed of **policies, processes, and decision systems that obtain, allocate, and apportion fiscal resources to acquire and maintain distribution capabilities and to execute the global distribution missions.** These fiscal assets enable investment in materiel inventory, ensure necessary physical distribution capabilities, and provide the critical linkage to commercial distribution

capabilities. The financial network provides the energy to fuel the physical, information, and communications networks. **Global distribution capacity is the sum of the combined physical and financial networks.**

- **Information Network.** The information network combines **all data collection devices, automatic identification technologies, automated data and business information systems, decision support tools and applications, and asset visibility capabilities supporting or facilitating global distribution.** The optimum integration of these information systems and their data provide tools critical to the effectiveness and efficiency of global distribution operations.

Examples of these component systems are discussed in Chapter V, “Enablers.”

- **Communications Network.** The communications network links every facet of military operations affecting the ability of the Armed Forces to control and influence the outcome of war and military operations other than war (MOOTW). **It carries the data of the information network.** The capacity, reliability, and security of communications networks, principally those that support the rapid transmission of global distribution data, significantly affect the overall operational velocity and effectiveness of global distribution operations. These communications requirements increase proportionally with the distribution task and/or priority. **Real-time communications are an absolute requirement for successful execution of distribution operations.** Application of modern military and commercial communication technology and capabilities, combined with information systems, comprise the central nervous system of global distribution.

For more information on communications, see JP 6-0, Doctrine for Command, Control, Communications, and Computer (C4) Systems Support to Joint Operations.

b. **Functions.** The functions of the global distribution system are **the organic supply, transportation, and maintenance capabilities** of the Services and defense agencies, combined with those contracted from the commercial sector or obtained through multinational partners, and **the logistic management organizations and processes that provide direction and control to these functional elements.** The critical interrelationships of the supply, maintenance, transportation, and logistic management functions are described below.

- **Supply** includes the requisition, management, acquisition, receipt, storage, issue and release, retrograde, reutilization, transfer, donation, and disposal of materiel required to equip and sustain military operating forces and other agencies supported by the Department of Defense. Its span is from the point a materiel requirement is determined through its fulfillment, consumption or, if necessary, removal from service or disposal. **A critical element of the supply function is the decision process that determines the proper quantities and positioning of inventories to provide rapid and efficient materiel support to meet warfighter requirements.**
- **Maintenance** includes all actions taken to keep or return materiel to operational condition. **Maintenance is both a source of supply and a requirements generator for global distribution operations.** As a source of supply, maintenance repairs and returns materiel to its original owner or returns the repaired materiel to inventory for re-

issue. Maintenance also is supported by supply and transportation through the provision of inventory and movement of materiel needed to carry out maintenance operations. Maintenance generates requirements for a variety of items during the repair process, from small expendable repair parts to major end item components.

- **Transportation** provides the means of physical movement of materiel in support of the supply and maintenance functions. The transportation function **establishes management and control over the operation of the physical distribution network known as channels or LOCs.** These channels or LOCs are composed of modes (the means of movement) and nodes (points of origin, stock, or modal transfer).
- **Logistic management** includes the business rules, policies, practices, techniques, and approaches that range from “stove-piped” commodity specific functional applications to development of integrated support strategies. **Defense agencies, USTRANSCOM, and other Military Service organizations direct the various elements of the global distribution system and provide the methods and mechanics that integrate the other functional elements and networks. Of the four distribution functions, this is the most dynamic.** The evolution of logistic management policy, organizations, and processes is the essential enabler in the DOD migration from a stock-based to a distribution-based logistic system.

4. Fundamentals and Tenets of Global Distribution of Materiel

JP 4-0, *Doctrine for Logistic Support of Joint Operations*, defines seven principles of logistics. These principles apply to global

distribution. In addition, global distribution of materiel doctrine is governed by a set of fundamentals and tenets that serve as the foundation for all participants in the execution of their roles. Fundamentals and tenets are the basis upon which implementing doctrine, organizations, materiel, and innovative leaders are developed. The principles of logistics and the fundamentals and tenets of global distribution of materiel are shown in Figure I-6.

a. **Fundamentals** compose the essential structure of a system and are of central importance to a system's identity. The fundamentals of global distribution are as follows.

- **Integration.** Integration involves the management of all elements of the supply chain, government and commercial, to achieve a common purpose through standardization, simplification, discipline, information technology, connectivity, and information sharing. Integration creates a seamless system operating with a common vision and common goals in which all government organizations, from the strategic to the tactical level and in conjunction with commercial partners, function in a complementary and compatible manner.
- **Confidence.** The global distribution system must stand up to warfighter

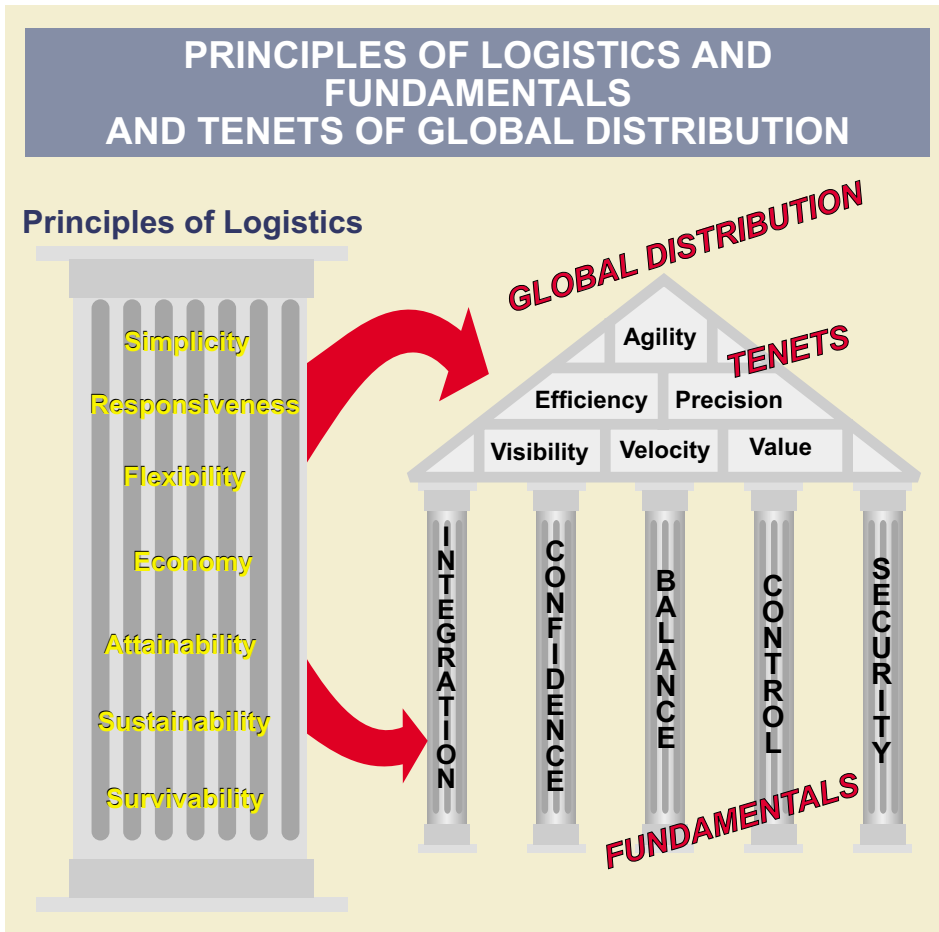


Figure I-6. Principles of Logistics and Fundamentals and Tenets of Global Distribution



Global distribution of materiel is driven by a series of interrelated and interdependent activities with the objective of providing materiel support when and where required by the supported combatant commander.

scrutiny with credible redundancies and safeguards that instill trust in the system's reliability. Lack of confidence can manifest itself in a breakdown of logistic discipline and a demand for ad hoc methods to replace disciplined standard procedures.

- **Balance.** The effective mix of military and commercial sector capabilities and the right combination of people (individuals and organizations), technology (information and equipment), and processes are required in performing global distribution functions.
- **Control.** There are two aspects of control: control exercised by the supporting commands and agencies executing distribution operations and control exercised by supported commands generating mission requirements and priorities based on their concept of operations. Supporting and supported commands must be able to coordinate, harmonize, and rationalize these two aspects.
- **Security.** Security includes the physical, operations, and information measures

necessary to protect personnel and materiel assets from threats. Additionally, security embodies the traditional responsibilities of accountability for, and stewardship of, public resources.

b. **Tenets** are the principles or beliefs held in common by an organization or profession. The tenets of global distribution are as follows:

- **Agility.** Agility is the ability to adjust rapidly and responsively to changes. Robust distribution capabilities are necessary to overcome interruptions and disruptions and adapt to unexpected circumstances. Agility is dependent on the capacity of physical, financial, information, and communication networks to respond to changing requirements of warfighters. The ultimate measure of agility is effectiveness, providing the right support in the right quantity in the right place at the right time.
- **Efficiency.** Efficiency involves the application of the best practices and most economical methods to satisfy the warfighter's requirements and incorporates the logistic principles of

economy and attainability. Distribution processes must continuously balance the competing demands of operational requirements and finite national resources.

- **Precision.** Precision involves timely, accurate filling of demand without excess “insurance stocks” that clog the distribution pipeline, reducing responsiveness. Precision is the ability to rapidly respond to point of need demands or requirements and requires the elements of the global distribution system to forecast, anticipate, and pre-plan distribution execution. Precise distribution meets performance expectations and satisfies mission requirements when and where required by the supported commander’s concept of operations.
- **Visibility.** Visibility is the capability to determine the status, position, and direction of flow of a requirement or materiel in the global distribution system. Visibility provides timely, accurate, and useable information at each step in the global distribution process and provides the supported commander with the capability to make informed operational decisions.
- **Velocity.** Velocity is the speed at which requirements are fulfilled and transported by the distribution system. Rapidity is only one aspect of velocity. Requirements must be fulfilled at the right speed; faster is not always better. For example, speed in mobilizing materiel assets is defeated if adequate strategic lift is unavailable, which can further hinder the lift process by clogging ports of embarkation (POEs). Similarly, speed in strategic lift can be negated by inadequate joint reception, staging, onward movement, and integration (JRSOI) or theater distribution capability, causing materiel

backups in-theater, duplicate requisitions, and inflated requisition priorities by operational forces. The requirements, circumstances, capabilities, and infrastructure require synchronization of the speeds of the various aspects of the global distribution process in order to maximize effectiveness.

- **Value.** The best possible synergy of effectiveness and efficiency must be achieved in order to provide the most responsive support for the least cost. Providing the best value to a customer requires integration of cost, time, and convenience factors to reach the best support solution. Stock positioning and speed of delivery are complementary functions that can be balanced to best suit customer requirements. Predictability and reliability may be of more value for a given requirement than cost or time. The major challenge for the various elements of the global distribution process is to tailor best value solutions for warfighter requirements.

5. Elements of Global Distribution of Materiel

At the core of global distribution of materiel is a set of activities common to every materiel distribution operation. **They are the elements of global distribution of materiel.** These interrelated and interdependent activities affect all aspects of planning and executing acquisition and physical distribution of materiel. The elements of global distribution of materiel often span planning cycles of many years, but are executed through transaction cycles sometimes measured in seconds. These elements cut across the domains of the strategic, operational, and tactical levels of war. Global distribution of materiel is planned and executed by the Military Services, combatant commanders, and Defense agencies at the strategic level through funding provided by DOD and Service appropriations

and revolving capital funds. The supported combatant commander integrates the elements of global distribution of materiel at the operational and tactical levels through the theater distribution concept. The elements of global distribution of materiel are illustrated in Figure I-7 and are discussed in detail below.

a. Requirements Determination and Stocking Policy

- **Requirements determination** is the process by which the Services and Service components **estimate what will be consumed by a force, how much is needed, when it will be needed, and where supporting inventories will be positioned.** At the strategic level, requirements determination and stock policy processes are primarily the purview of the Services and DLA. These decisions strongly influence the global distribution system and their impact must be considered during distribution planning and execution. Service components, combatant commanders, and subordinate JFCs generate requirements for materiel and services based on defense planning guidance and mission taskings. Planning guidance and taskings are derived from the Joint Strategic Planning System (JSPS), which outlines specific planning requirements and mission taskings for commanders. Specifically, the defense planning guidance provides guidance for the development of the Military Departments' program objective memoranda. The Joint Strategic Capabilities Plan (JSCP) provides guidance to the combatant commanders and Service chiefs for accomplishing military tasks and missions based on current military capabilities. These planning products are the source documents for requirements determination and promulgate fundamental resource decisions that are implemented in the basic distribution of

military resources. Requirements are further defined and refined based on planning decisions made by the combatant commanders and Service chiefs when reviewing mission taskings and projected requirements for force capability. These resource decisions in turn drive stocking policy decisions at every echelon of command. These policies determine inventory sizes and locations.

- **Stocking policy** contributes to the selection of a proper inventory source based on availability, production lead-time, and physical distribution characteristics. Inventory can be owned by the government or a government contractor, exist in the commercial sector as part of the larger economy, or exist in the inherent capability of a manufacturer to meet a demand. **Inventory is currently categorized into retail, wholesale, and war reserve types,** as shown in Figure I-8. The distinction between wholesale and retail inventory is diminishing with reduction of DOD-owned inventory and the increased reliance on vendor support arrangements. Inventory planning, and the subsequent positioning of inventory, is one of two key components in developing the distribution concept for support of joint force operations.

See Chapter III, "Planning," and Chapter IV, "Distribution Environment," for more information.

b. Acquisition and Procurement.

Acquisition is the conduit through which the national industrial base or a regional capacity to meet military materiel requirements is linked into the global distribution system. Once requirements are determined and inventory stocking policies and plans are formulated, the foundation for acquisition and procurement processes is established. **At the**

ELEMENTS OF GLOBAL DISTRIBUTION OF MATERIEL

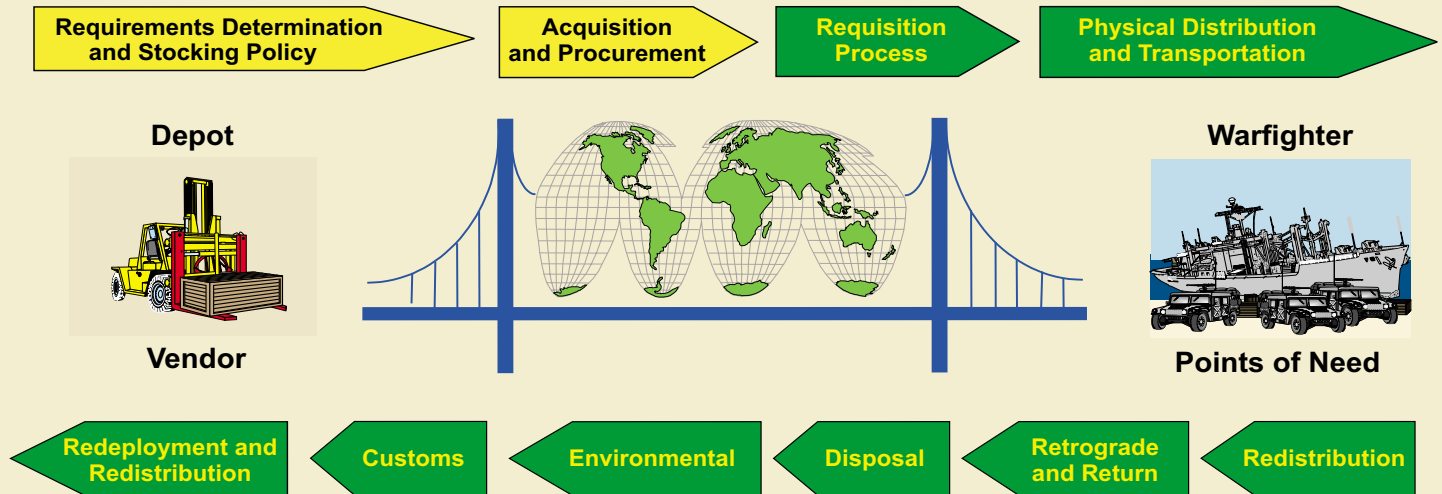


Figure I-7. Elements of Global Distribution of Materiel

INVENTORY TYPES

Retail: materiel stocked closest to point of consumption to meet immediate or short-term specific anticipated demand.

Wholesale: materiel stocked to replenish retail inventories and respond to immediate demands not addressed by retail inventory and inventory designed to create global strategic flexibility and agility.

War Reserve: mission-essential secondary items, principal and end items, and munitions required to attain operational objectives in the scenarios authorized for sustainability planning in the Secretary of Defense planning guidance.

Figure I-8. Inventory Types

strategic level the Services, in conjunction with defense agencies, acquire and procure products. Acquisition and procurement strategies are tailored to meet the performance standards articulated either in law, by DOD and Service policies, or as imposed by supported combatant commanders. Defense agencies and Services are often assigned DOD-wide responsibility for the acquisition and procurement of specific commodity groups or weapon systems in order to better control acquisition processes and achieve value. **At the operational and tactical levels, the decentralized local purchase of materiel to support immediate consumption is governed by combatant command and Service policies and overarching federal and DOD acquisition regulations.** Acquisition actions in support of global distribution generally can be divided into four categories:

- Procurement of materiel in response to a materiel manager's wholesale stock requirements to satisfy anticipated need.
- Procurement of materiel in response to direct or indirect customer requirements placed on the distribution system to satisfy actual need.
- On-scene procurement of goods and services for joint forces, ranging from individual one-time buys at the unit level to area-wide arrangements for common-user materiel or services.
- Utilizing acquisition actions, the practice of acquiring access to materiel or capabilities that may be needed during contingencies while not acquiring ownership and physical custody of materiel or distribution capabilities. An example of distribution capability access is the civil reserve air fleet (CRAF), which will be discussed in Chapter V, "Enablers." An example of materiel access is the Class VIII vendor managed inventory programs discussed in Chapter IV, "Distribution Execution." The decision between acquiring materiel or distribution capabilities now or acquiring access to these same items when needed is a primary stocking policy decision supported by the acquisition process. **The practice of acquiring future access vice immediate ownership assesses the trade off of low risk "just-in-case" inventory with the efficiencies and economies of the "just-in-time" acquisition and subsequent movement of materiel.** To be both effective and maintain confidence of supported combatant commanders, this procurement strategy must be more than a "paper plan." It requires some degree of financial investment, detailed requirements planning, and verification and exercising

of supplier capabilities to deliver goods and services under operational conditions.

c. Requisition Process. Requisitions originate from a consumer requirement. **The requisition process is controlled by Service and joint policies, regulations, and business rules that govern access to and initiate the provision of materiel from inventory.** These policies, regulations, and business rules provide the systemic logic and direction for the global distribution system to satisfy a materiel requirement. They also govern the performance of the global distribution system through a body of standards and metrics that drive the performance of physical distribution actions.

- The requisition process provides a common language and methods for joint forces to “pull” materiel through the distribution pipeline. The requisition process remains essentially linear. If materiel requirements cannot be filled from a retail inventory, purchased locally, or cross-leveled from other inventory, the requisition process directs the requirement to a wholesale inventory source at the strategic or operational level. Improvements in access, speed, and accuracy in the requisition process can increase distribution velocity and consumer satisfaction resulting in better mission support.
- The traditional linear requisition process is changing, however, with the increased use of various direct vendor support arrangements that link customers and vendors, often with real-time electronic ordering capability. These methods bypass the traditional flow of materiel requests through sequential levels of storage nodes and inventory managers. While beneficial from an improved responsiveness and cost reduction perspective, these non-linear methods

bring different visibility and control challenges to distribution information systems currently designed to support the traditional requisition process.

d. Physical Distribution and Transportation. Physical distribution and transportation is the grouping of two interrelated functions: **1) distribute — receipt, store, and issue individual materiel items or inventory; and 2) transport — move this materiel from source to storage or from storage to a forward inventory location or to a consumer.** Defense agency and Service-owned inventories are received, stored, and issued from Defense distribution depots and Service storage sites. Commercial firms with direct vendor or contractor logistic support (CLS) responsibilities execute similar physical distribution activities. Inventory is received, stored, issued, and transported by military organizations, host nation (HN) forces, and commercial entities at the operational and tactical levels. In traditional supply-based logistic systems, this distribution and transportation cycle may be repeated numerous times as materiel migrates through a hierarchy of storage and custody activities before it reaches the end-user. Global distribution of materiel, using the supply chain management approach, seeks to reduce the number and time of these cycles to provide rapid, efficient, and agile distribution support. In this context, **transportation moves materiel from either the source or storage point to a forward inventory location where access is more timely.** Alternatively, transportation may move the materiel directly to a joint force consumer. Transportation is often the longest segment of the cycle mentioned above. Modern transportation methods, traffic management practices, and deliberate decisions to resource or augment transportation operations are means to increase velocity and capacity. Appropriately applied, these methods may shorten transportation times, ultimately reducing (in some proportion) reliance on inventory. The

following are alternative methods of executing physical distribution and transportation.

- **Distribution depots** are inventory storage facilities strategically located to take advantage of existing transportation, including rail lines, airports, and highways. **Distribution depots are used to fulfill customer requirements on a regional basis, or to provide global support for materiel to support special equipment, facilities, programs, and training.** There are two strategic distribution platforms (SDPs) — one on each coast. Each SDP contains a broad level of inventory and operates as a consolidation and containerization point (CCP). Second tier depots support local or regional customers, with inventory tailored to support its customers' requirements. Stock positioning decisions assign particular items to storage at specific distribution depot(s) to obtain the best combination of appropriate delivery time to fulfill customer requirements and geographic concentration or dispersion to minimize shipping, storage, handling, and facilities costs.

- **Vendor support** includes **various contractual arrangements where specific commodities or families of commodities are replenished through commercial inventory and distribution systems.** General examples of vendor support include direct vendor delivery (DVD), prime vendor (PV), and virtual prime vendor (VPV) contracts. Federal agency and Service managers establish performance standards for these sources consistent with the parameters of the requisition process.

Specific examples of these will be presented in Chapter IV, "Distribution Execution."

- **Product support** is an arrangement in which **a commercial firm has contractual responsibility for maintaining the functional readiness of specific weapons systems or their components, including the provision and distribution of most materiel required to support the performance of these contracts.** Some major weapons systems are, or will be shortly, logistically supported through CLS. This concept



Requirement-specific packaging and the use of intermodal containers can reduce the distribution and transport cycles associated with physical distribution and transportation, improving support to the joint force.

of logistic support presents a significant challenge in integrating and synchronizing CLS support into the global distribution system.

- **Local purchase** is a procedure used by **DOD customers to acquire materiel from local commercial sources**. They may also procure physical distribution capabilities like commercial storage and local transportation capabilities to meet military needs. Use of these inventory resources and local military or vendor storage or transportation reduces the overall demands on other components of the physical distribution system.
- The **Defense Transportation System (DTS)** employs a complementary combination of military and commercial transportation platforms (governed by traffic management practices) to move materiel by air, land, and sea from a point of origin or source of supply to a designated POD or point of need in a theater. **The DTS includes contracts with various domestic and international commercial carriers for air, ground, inland and coastal waterway, and sea transportation support**. When opportunities arise and the law allows, the military transportation resources of other nations may be employed to support global distribution. The performance measures of the transportation system are driven by the standards dictated by the requisition process priorities. The DTS is integrated with Service-unique or theater-assigned transportation capabilities and movement control agencies through theater distribution JRSOI plans crafted to accomplish physical distribution tasks in support of a combatant commander's mission requirements.

e. **Redistribution.** Redistribution, sometimes referred to as cross-leveling, is the

authority and ability to shift materiel or inventory from one owner to meet the requirement of another to resolve critical readiness shortfalls or to meet an operational need. Cross-leveling is an operational application of cross-servicing where materiel assets or inventory of one Service are transferred to support another Service for which reimbursement is required from the Service receiving support. (Common servicing is when reimbursement is not required from the Service receiving support.) **Cross-leveling generally takes place between Services at the strategic level.** At the operational or theater level, it is the process of diverting en route materiel from one military element to meet the higher priority of another. It also provides for the repositioning of materiel assets or inventory from one strategic or operational element to support a greater need within the same theater or in a different theater. Expeditious execution of cross-leveling actions is dependent on accurate and complete asset visibility information. Types of cross-leveling include the following:

- **Lateral redistribution** is when wholesale assets are not available to satisfy a materiel requirement; the materiel manager may direct the lateral redistribution of materiel held at the retail level, if available, to meet the demand. Lateral redistribution actions are used to resolve critical materiel shortfalls affecting the readiness of deployed units. Services may direct within-Service lateral redistribution at their discretion. Lateral redistribution across Services is managed and controlled by the associated materiel manager and does not typically occur until wholesale inventory sources have been exhausted, unless such distribution is essential to mission accomplishment.

- **Operational cross-leveling** is when the geographic combatant commander, using

combatant command (command authority) (COCOM) directive authority for logistics, may direct cross-leveling of materiel assets or inventory in theater as required to meet an operational need.

f. Retrograde and Returns. Materiel requiring repair, programmatic upgrade, or evacuation from using activities for any other reason is referred to as retrograde. Retrograde of materiel through an LOC is as important to the joint force as the original forward movement of an item to its using activity. Various reparable components or major end items themselves are distributed to operational or strategic level maintenance activities for repair, refit, or rebuild. Once the materiel is restored, it is returned to the user or placed in inventory for future use.

- **Retrograde** is the return of reparable components or major end items of materiel to government or commercial repair depots at the operational or strategic level for repair and return to serviceable condition or evaluation as unserviceable (condemned). Based on the nature of the item and Service policy, repaired materiel is sent back to the original user or to inventory for future use by other customers. **Service weapon systems are heavily dependent on the use of reparable components to maintain required operational readiness standards.** Weapons system maintenance depends on a two-way flow of unserviceable components being returned for repair and serviceable components flowing from repair facilities to storage activities or end users. The Services manage their reparable items through detailed processes and procedures for transporting and reporting the flow of retrograde cargo.

- **Materiel return** is another component of the two-way flow within the global distribution system. The logistic

principle of economy mandates that **excess materiel is rapidly made available for reuse**, especially in view of reduced inventory sizes. Units and retail storage points holding such materiel report it to the materiel manager for a disposition decision. Materiel managers determine the current or potential demand for the materiel and direct the reporting organization to return the item to wholesale stocks, redistribute the item to another user, retain the item temporarily or, if unserviceable, locally dispose of the item. The materiel return process is dependent on timely and accurate reporting of excess materiel, prompt disposition decisions by the materiel manager, and rapid and assured communications of disposition guidance to organizations holding excess materiel as well as prompt, visible transportation of the materiel to inventory.

g. Disposal. Defense agencies and the Services divest materiel that is no longer required by DOD operations. **Materiel is removed from inventory through a specialized turn-in process from military Service components to the Defense Reutilization Marketing Service (DRMS) and redistributed via reutilization, transfer, donation, or disposal in a controlled, efficient manner.** While a legal responsibility of command, this task may detract from the main effort of combat forces when faced with custodial responsibility for materiel that does not contribute to warfighting or mission support. Disposal is governed by complex legal, environmental, and security constraints. Normally this materiel is identified, accounted for, and disposed of in accordance with DRMS procedures. However, disposal of hazardous materiel and waste requires unique means and methods that are protective of human health and the environment. Hazardous materiel and waste will normally be collected, packaged, and transferred to the DLA or an approved contractor based on theater policies,

regulations, and procedures. Disposal management and disposition of hazardous materiel and waste overseas may be affected by international treaties or laws.

For additional information on the disposal process, see DOD Directive 4160.21-M, Defense Materiel Disposition Manual.

h. Environmental Considerations. Distribution of DOD materiel to joint forces includes overarching responsibility for protection of personnel, equipment, and the natural environment at origin, en route, and at the destination from hazards inherent in supply commodities. Materiel managers seek to avoid the use of hazardous material wherever possible in the supply chain or to minimize potential hazards when not feasible. Almost every materiel distribution transaction has environmental considerations. **Environmental concerns are specifically addressed during the acquisition, physical distribution and transportation, and disposal elements of global materiel distribution.** These concerns may be obvious — such as the hazards of explosive ordnance or flammable fuels — or subtle, such as the potential health hazards of improperly stored or over-aged subsistence items or medical supplies. Though some commodities have little impact on the environment, global distribution planners must consider sensitivities to perceived or actual environmental threats. These sensitivities may restrict or constrain distribution options or flow. Supply chains and commodity distribution techniques must be structured to minimize, where possible, the quantity of hazardous material and mitigate the impact on the waste stream resulting from actual or perceived environmental risk.

For more detailed information on environmental considerations during joint operations, see JP 4-04, Joint Doctrine for Civil Engineering Support. Additional

information on environmental regulation is contained in DOD Instruction 4715.6, Environmental Compliance; Title 49, Code of Federal Regulations, “Hazardous Material Regulations;” International Air Transport Association, “Dangerous Goods Regulations;” and the International Maritime Organization, “Dangerous Goods Code.” DOD Publication 4715.5-G, Overseas Environmental Baseline Guidance Document, provides detailed environmental standards for health protection of US personnel and HN citizens in the absence of other applicable standards.

i. Customs. Sovereign nations regulate the flow of foreign source materiel to protect domestic industries and markets, generate tariff revenue, and restrict the entry of materiel deemed illegal or culturally unacceptable. The typical mechanisms to enforce these restrictions are customs regulations and operations. Distribution operations must consider these potential restrictions and take appropriate actions to assure the unimpeded flow of materiel support to joint forces. **Successful handling of foreign customs regulations is usually based on agreements negotiated by Department of State (DOS) representatives with the HN and incorporated into status-of-forces agreements (SOFAs) or other measures and arrangements that grant duty-free importation of military materiel.**

- **Distribution Elements and Foreign Customs Regulations.** Several global distribution elements affect solutions to foreign customs issues. Although the physical distribution and transportation element must perform face-to-face customs compliance activities, the requirements determination, acquisition, and disposal elements all influence successful execution of distribution operations under customs regulations constraints. Disposal of imported materiel within the HN will typically be



Redistribution of materiel is critical to joint force readiness. Materiel being redeployed must comply with customs, agriculture, and hazardous material and environmental requirements for the intended destination.

subject to coordination with local customs authorities for collection of customs duties from local purchasers.

• **US Customs Requirements.**

Retrograde and return and redeployment of materiel to the United States is subject to US Customs regulations. Joint forces must be familiar with US and military customs documentation requirements and restrictions to ensure the unimpeded flow of materiel back to home bases, repair facilities, or storage sites.

j. **Redistribution and Redeployment.**

The global distribution system must include provisions to redistribute and redeploy unused inventory for future use at the conclusion of operations. **Redistribution is an essential factor in redeploying and reconstituting materiel for future operations.** Significant resources are invested in materiel to support joint operations. Therefore, redistributing materiel during recovery and reconstitution is a critical effort. Non-unit equipment and supplies are redistributed according to plans developed by the Joint Staff and the Services with input from the combatant commanders. Priority of effort is generally for forces committed to the Chairman of the Joint Chiefs

of Staff (CJCS)-approved operation plans (OPLANs). However, political agreements or commitments made in a multinational operation may alter redistribution efforts. Other recipients may include HN countries, Service materiel commands, DLA, and General Services Administration (GSA). In the redistribution process, equipment may be available for foreign military sales or grant programs, such as excess defense articles, to support national interests and policies. Forces preparing materiel for redeployment must carefully execute shipping documents and apply container markings to ensure that materiel arrives at the proper destination with ITV. Materiel shipments must comply with customs, agriculture, and hazardous material and environmental requirements for the destination nation, whether it is the United States or another country.

6. Conclusion

Distribution is the key functional logistic process supporting a joint operating force because it links national resources with joint force requirements for support, enabling JFCs to generate and sustain combat power and maintain combat readiness. Logisticians must incorporate civilian sector capabilities when



The ultimate test of the global distribution system is its ability to provide timely and precise support to the operating force.

and where required, leveraging best business practices, commercial economies of scale, and global networks. Global distribution operators and planners must apply the tenets and fundamentals of global distribution to effectively and efficiently operate the distribution system. Successful application of global distribution doctrine requires an understanding of the organizations, responsibilities, and relationships discussed in Chapter II, “Responsibilities.” The global distribution doctrine framework developed in this chapter is applied during planning joint

operations as discussed in Chapter III, “Planning.” Furthermore, this doctrinal framework is key to understanding the nuances of the military commodity supply chains — these will be discussed in Chapter IV, “Distribution Execution.” Similarly, an understanding of the enabling tools described in Chapter V, “Enablers,” is necessary for the application of this doctrine. Finally, global distribution practices are applicable to the entire range of military operations, as described in Chapter VI, “Other Missions.”

THE “HUMP”

The strategic and operational logistic distribution capabilities of the United States provide US combat forces with a decisive competitive advantage on the battlefield. On occasion in US history, the combined distribution capabilities of America's industrial base and its military transportation, supply, and maintenance forces have achieved decisive strategic results. The best known examples include logistic support of Russia during the Second World War (WWII) and the Berlin Airlift during the Cold War. A less well known, but equally dramatic story, is the brilliant and strategically vital operation to support the Chinese Army and US forces operating in the China-Burma-India (CBI) Theater during WWII. This strategic logistics operation was set against the complex regional political background of Chinese, British, and Indian interests and influenced by global considerations in allocating materiel and distribution capabilities to the competing demands of the buildup in England, maintaining Russia's war effort, and support of allied operations in North Africa. For nearly 5 years US industry and military logistic forces combined to support Chinese

and allied operations to engage over a million and a half enemy troops that could have been used against allied forces elsewhere in the Pacific. The bulk of materiel to support these operations flowed over the Burma, and later, the Ledo Roads, both remarkable military logistics operations in their own right. However, for a period of over 24 months Japanese forces succeeded in dislodging the Allies from the port of Rangoon, the critical port of debarkation supporting the theater, which denied the Allies access to the rugged ground lines of communications through Burma. The link that kept materiel flowing to engaged allied and Chinese forces was a joint strategic distribution operation called “the Hump.”

The airlift operation to negotiate the Himalayan mountains became known as flying “the Hump.” In the words of the commander of the operation; “We flew that airlift over the highest mountains in the world, in weather good or bad, over large areas of territory inhabited by the enemy and by savage tribes, even headhunters, and with a confusing variety of planes. Each successive range towered fourteen to sixteen thousand feet. After the Salween River rose the highest peaks of all, those of the Santsung mountains, known to the American pilots as “the Rockpile.”

Allied distribution operations enabled the Chinese Army, US, and allied forces operating in the CBI theater to keep up their resistance and cause the Japanese to keep nearly two million men engaged in China. The strategy to make distribution of materiel the main effort succeeded. Every enemy soldier engaged in China was one less enemy soldier shooting at American soldiers, Marines, sailors, and airmen in the islands of the Pacific. It was a sterling example of how the strategic distribution capabilities of America's industrial base can be combined with the talents and capabilities of the Services' logistics forces to achieve decisive, competitive advantage over even the most formidable opponent.

SOURCES: *Stilwell and the American Experience in China*, Barbara W. Tuchman 1970; *Over the Hump*, Lieutenant General William H. Tunner, USAF Warrior Studies, Office of Air Force History, 1985; and US Army Historical Series, *Global Logistics and Strategy 1943-1945* and *Transportation Corps- Overseas Operations*

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CHAPTER II RESPONSIBILITIES

“Organization is the vehicle of force.”

MGEN J.F.C. Fuller
The Foundation of the Science of War, 1926

1. General

The global distribution system has numerous stakeholders. **Stakeholders are either customers of global distribution or commands and agencies that influence or control one or more of the networks, functions or elements of global distribution.** Participants in joint operations must clearly understand the roles of these stakeholders in global distribution as the first step in planning and conducting integrated and coordinated distribution support. This chapter identifies the distribution-related missions and relationships of the primary commands and agencies.

2. Secretary of Defense

The Secretary of Defense is responsible for the assignment of forces and lift resources to the combatant commands to perform missions

assigned to those commands and also assists in the strategic interagency coordination at the national level. The Secretary’s responsibilities include **supervision of defense agencies operating the global distribution system, advocacy for resources to support global distribution,** and the following primary global distribution functions.

a. Identify those industrial products and facilities that are essential to mobilization readiness, national defense, or post-attack survival.

b. Analyze potential effects of national security emergencies on actual production capability, taking into account the entire production complex, including shortages of resources. Develop preparedness measures to strengthen capabilities for production increases in emergencies.



The Secretary of Defense and the Chairman of the Joint Chiefs of Staff promulgate fundamental global distribution decisions through formulation and issuance of Defense Planning Guidance.

c. Provide management direction for the stockpiling of strategic and critical materiel; conduct storage, maintenance, and quality assurance operations for the stockpile of strategic and critical materiel; and formulate plans, programs, and reports relating to the stockpiling of strategic and critical materiel.

d. Establish policies and provide guidance to DOD components and the Military Services concerning the effective and efficient use of supply and transportation systems and coordinate transportation policy, planning, and operations within the Department of Defense.

3. Chairman of the Joint Chiefs of Staff

As the principal military advisor to the President and Secretary of Defense, the Chairman of the Joint Chiefs of Staff is assigned specific supervisory and joint operation planning responsibilities in the areas of strategic direction, strategic planning, and joint operation planning.

a. **CJCS responsibilities most directly related to global distribution** include the following:

- Prepare joint logistic and mobility supplements to support joint operation plans and recommend the assignment of logistic and mobility responsibilities to the Military Services in accordance with those logistic and mobility plans. Ascertain the logistic support available to execute the joint operation plans of the combatant commanders. Review and recommend to the Secretary of Defense appropriate logistic guidance for the Military Services that, if implemented, will result in logistic readiness consistent with approved plans.
- Prepare and submit to the Secretary of Defense general strategic guidance for

use in the development of industrial and manpower mobilization programs.

- Prepare and submit to the Secretary of Defense, for consideration in connection with the preparation of budgets, statements of military requirements based on US strategic considerations, current national security policy, and strategic plans. These statements of requirements include tasks, priority of tasks, force requirements, and general strategic guidance for developing military installations and bases and for equipping and maintaining military forces.

b. **For global distribution operations and as part of joint operation planning and execution**, the Chairman of the Joint Chiefs of Staff is responsible for the following movement requirements, resources, and allocated capability.

- Establish procedures in coordination with the Assistant Deputy Under Secretary of Defense (Transportation Policy), the Secretaries of the Military Departments, and DLA for the submission of movement requirements by DOD user components to USTRANSCOM. In addition, establish procedures for the submission of validated requirements and capabilities by USTRANSCOM and the transportation component commands (TCCs) to the Chairman.
- Prescribe a materiel issue and movement priority system in agreement with the uniform materiel movement and issue priority system (UMMIPS) that is designed to ensure responsiveness to meet the needs of the using forces. UMMIPS is a product of the logistic management function and is one of the governing factors for requisition process performance of the global distribution system. The Joint Materiel Priorities and

Allocation Board (JMPAB) is charged with performing duties for the Chairman of the Joint Chiefs of Staff in matters that establish materiel priorities or allocate resources.

Complete JMPAB responsibilities are found in Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 4110.01A, Uniform Materiel Movement and Issue Priority System — Force Activity Designators.

- Monitor the capabilities of USTRANSCOM common-user transportation resources to provide airlift, sealift, CONUS land transportation, common-user ocean terminal service, and aerial port service based upon the requirements of DOD components.
- Assign movement priorities in support of DOD components based upon capabilities reported by USTRANSCOM.
- Adjudicates competing lift requirements as requested by USTRANSCOM or the Joint Transportation Board.

- Apportion strategic lift assets through CJCSI 3110.01A, *Joint Strategic Capabilities Plan (JSCP)*, and CJCSI 3110.11B, *Mobility Supplement to the Joint Strategic Capabilities Plan*.

- Allocate strategic lift assets through the CJCS execute order to the supported combatant commander.

4. Military Departments and Services

a. **Military Departments.** The Secretaries of the Military Departments are responsible for the following global distribution-related functions enumerated in DOD Directive 5100.1, *Functions of the Department of Defense and Its Major Components*.

- Exercise authority to conduct all affairs of their Departments, to include organizing, supplying, equipping, training, servicing, mobilizing, demobilizing, administering, and maintaining forces.



The primary responsibilities of the Military Departments include organizing, training, and equipping interoperable forces for employment by combatant commanders and the provision of personnel, equipment, and materiel to effectively prosecute joint operations.

- Prepare forces and establish reserves of manpower, equipment, and supplies for the effective prosecution of joint operations.
- Recruit, organize, train, and equip interoperable forces for assignment to combatant commands.
- Conduct research; develop tactics, techniques, and organization; and develop and procure weapons, equipment, and supplies essential to the fulfillment of functions assigned by the Secretary of Defense.
- Create, expand, or maintain an infrastructure that supports US forces using installations and bases, and provide administrative support unless otherwise directed by the Secretary of Defense.
- Plan and execute cross-servicing agreements for supply, maintenance, and transportation operations to support other Services and joint operations.

b. **Military Services.** The Army, Marine Corps, Navy, and Air Force (under their respective departmental Secretaries) and the US Coast Guard (USCG) (under the Department of Transportation in peacetime, the Department of the Navy in wartime, or when the President otherwise directs) are responsible for organizing, equipping, and training their Service forces. US Special Operations Command (USSOCOM) is responsible for special operations-specific equipment. In terms of global distribution, their paramount responsibility centers on equipping their forces. This includes the following:

- Developing weapon system integrated logistic support.
- Determining the viability, capability, and cost-effectiveness of weapons systems

and equipment supply support requirements.

- For Service-managed materiel, determining inventory management factors such as item essentiality and reliability, inventory levels, allowances, packaging and preservation requirements, hazardous material and hazardous waste, inventory locations, repair cycles, attrition rates, replenishment lead times, the length and level of interim supply support, the degree of contractor support, and materiel to be pre-positioned as well as war reserves. For items managed and/or distributed by DLA, provide coordination on materiel management and planning factors for Service-interest items.
- Performing supply support functions, including the following:
 - Determining materiel requirements of their forces and weapons systems and providing timely planning factors to supporting Service organizations or defense agencies. This is critical to the design and size of supporting global distribution systems.
 - Providing inputs to the life cycle logistic functions.
 - Developing, implementing, monitoring, and evaluating the supply policy, programs, and procedures for weapons systems and equipment throughout the life cycle phases.
 - Providing materiel in support of weapon systems and equipment throughout the life cycle process.
 - Coordinating materiel disposal and reutilization programs with the DRMS.

For additional information on points of contact, see www.drms.dla.mil/DRMSI/contingencypocs.htm.

- Under title 10 of the United States Code, the Services operate distribution capabilities to support their unique requirements. Examples of this are the US Navy's combat logistics force (CLF) and Navy unique fleet essential airlift/aircraft (NUFEA) assets to support forward-deployed mobile afloat units.
- In accordance with title 10, United States Code, the Services are responsible for generating war reserve requirements for end items, secondary items, and consumables.
- In the role of common-user military transportation services, the Army, Marine Corps, Navy, Air Force, and USCG are all generically called shipper services. Each Service is responsible for the administrative support and performance of transportation operations assigned by combatant commanders at either their local shipping installations or throughout the theater.
- Resource and provide traffic management and physical distribution capabilities through respective Service TCCs: Military Traffic Management Command (MTMC) (Army); Air Mobility Command (AMC) (Air Force); and Military Sealift Command (MSC) (Navy).
- Performing executive agent and/or lead agent for common-user logistics (CUL) support functions.
 - An example of a Service DOD executive agent is the assignment of the Department of the Army as single military mail manager.

•• Lead organizations for CUL support functions are joint forces, Service components, or DOD agencies responsible for specific common-user item and/or Service support in a joint or multinational operation, as defined in OPLANs and operation orders (OPORDs). If a Service component is assigned as the lead organization, it is referred to as a lead Service. Examples of lead Service responsibilities are common-user land transportation (CULT), operational ration distribution, potable water, and bulk fuel. In a large operational area, lead Service responsibilities for a given CUL support function may be divided along geographic lines among more than one Service component.

For additional information on CUL, see JP 4-07, Joint Tactics, Techniques, and Procedures for Common-User Logistics During Joint Operations.

5. Combatant Commands

Combatant commanders are responsible for the development and production of joint plans and orders in response to mission taskings. They exercise directive authority for logistics within their area of responsibility (AOR), to include developing and maintaining an effective theater distribution system that is consistent with established policies and procedures as well as prescribing specific policies and procedures unique to that theater.

For more information, see JP 0-2, Unified Action Armed Forces (UNAAF), JP 3-0, Doctrine for Joint Operations, JP 4-0, Doctrine for Logistic Support of Joint Operations, JP 4-01.4, Joint Tactics, Techniques, and Procedures for Joint Theater Distribution, and JP 5-0, Doctrine for Planning Joint Operations.

a. **Responsibilities of Supported Combatant Commanders.** Supported combatant commanders have four major responsibilities relative to global distribution operations: develop distribution plans to support theater operations; coordinate and harmonize the strategic-theater distribution interface; control the distribution flow; and manage their theater distribution system.

- **Develop Distribution Plans to Support Theater Operations.** Supported combatant commanders must establish distribution plans in advance of any theater operations in order to ensure that they have the requisite tools, equipment, and information to effectively integrate the global distribution network into theater operations and manage the theater distribution network. Although distribution planning will be addressed in greater detail in the next chapter, the supported combatant commander must consider the following general factors in the development of supporting distribution plans.

- Access and use of total asset visibility (TAV) in coordination with Service components in theater, DLA and Service inventory control points (ICPs), defense distribution and Service depots, retail inventory sites, the TAV system, and the Global Transportation Network (GTN).
- Integration of materiel distribution requirements into JRSOI plans and operations.
- Development of force requirements to operate the theater distribution system.
- Identification of theater inventory for critical materiel as well as coordination with the Services and DLA for pre-positioned materiel and war reserve to support operations.

- Organization and management of theater distribution capabilities.
- Determination of CUL responsibilities.
- Negotiation of HN and transited nation diplomatic clearances, POD access, overflight and landing clearances, and customs and border clearance requirements for distribution operations.
- Identification of HN sources for materiel and physical distribution capabilities.
- Integration of existing DOD commercial support partners contracted to perform distribution operations in support of joint or multinational forces.
- **Coordinate the Strategic-Theater Distribution Interface.** The strategic-theater distribution interface represents a critical process seam where support from the global distribution system must meld with and accommodate the theater capacity and capability to distribute resources to theater forces.
- **Control the Distribution Flow.** Supported combatant commanders exercise control by tailoring global distribution support to theater mission requirements and priorities based on their concept of operations. Control of the distribution flow allows the supported combatant commander to “right size” the initial support provided by the global distribution system and respond to changes in mission circumstances with timely and agile distribution solutions.
- While developing requirements and priorities, supported geographic combatant commanders coordinate with USTRANSCOM, the defense agencies, and other supporting organizations to



A critical task for the supported combatant commander is coordinating the strategic-theater distribution interface.

ensure that the planned theater capacity and capability to distribute resources within theater will be ready to execute global distribution throughput. The theater reception, staging, and onward movement capability must have the capacity to accommodate joint force mission requirements and provide the supported combatant commander with operational flexibility for mission execution.

- Global distribution operations must also be accomplished at the “right” velocity for theater circumstances. Theater needs must be fulfilled at the velocity consistent with the requirements, circumstances, capabilities, and infrastructure designated by the supported command.

- **Manage the Theater Distribution System.** Supported combatant commanders must plan for, coordinate, and integrate all elements of the theater distribution system to effectively control logistic and transportation support at the theater level. The supported combatant commander is responsible for the following:

- Integrating joint theater distribution operations with strategic level organizations.
- Allocating critical theater distribution transportation assets and assigning common distribution tasks to Service components.
- Coordinating the retrograde of commercial leased containers.
- Providing security for theater distribution operations.
- Maintaining visibility on the status, quantity, and location of relevant stocks and war reserve assets and effectively integrating this materiel into operations.
- Operating communications and information networks to support theater distribution.
- Updating requirements for intratheater lift capability.
- Coordinating the retrograde through Service supply channels or turn in to DRMS for reutilization, transfer,

donation, and disposal of materiel including hazardous waste.

- Managing the redeployment of distribution forces, equipment, and materiel.

- Organizing functional boards or centers to centrally manage critical assets and more effectively react to unforeseen circumstances. The Theater-Joint Transportation Board, theater joint movement center, and logistics readiness center are examples of the boards and centers that can be used to effectively support distribution operations.

For further information on the functions of joint logistics centers and boards, see Appendix B, “Organizations and Functions of the Supported CINC’s J-4 and Functions of Joint Logistic Centers, Offices, and Boards,” of JP 4-0, Doctrine for Logistic Support of Joint Operations and Appendix B, “Charter of the Transportation Board,” of JP 4-01, Joint Doctrine for the Defense Transportation System.

b. Responsibilities of Supporting Combatant Commanders. Certain

situations may require that one combatant commander support another combatant commander. Support is a command relationship obligating the supporting organization to aid, protect, complement, or sustain the supported organization. The primary task for supporting combatant commands is to ensure that the supported combatant commander tasked to achieve national objectives receives the timely and complete support needed to accomplish the mission. Because of the numerous global distribution stakeholders, successful operations require high levels of integration. Normally, several functional combatant commands are involved in every phase of a joint operation.

- **United States Joint Forces Command.**

USJFCOM is the facilitator for building joint capabilities on the existing Service structures. USJFCOM is involved in global distribution operations under its charter to provide trained and ready CONUS-based joint force assets to other geographic combatant commanders, as they require them. These may include military units that support or perform distribution operations. USJFCOM fulfills this responsibility by performing three distinct functions with its assigned



USJFCOM, in its role as the joint force provider, provides CONUS-based forces and materiel to meet the needs of the forward-deployed combatant commanders.

CONUS-based forces. **USJFCOM is the joint force trainer, integrator, and force provider for joint forces organized from these assets.** See <http://www.jfcom.mil/>.

•• **Joint Force Trainer.** As the joint force trainer for CONUS-based forces, USJFCOM provides joint force staff training through joint operations staff training programs and simulation-driven joint force command post exercises.

•• **Joint Force Integrator.** USJFCOM serves as an integrator of capabilities from the five Services, Reserve Components, and interagency sources. Additionally, USJFCOM's integration effort is focused on developing and maintaining technological interoperability among Service distribution systems.

•• **Joint Force Provider.** USJFCOM also serves as the CONUS-based joint force provider. Joint force assets needed to support forward-deployed geographic combatant commands are provided by USJFCOM's four component commands, United States Army Forces Command, Marine Forces, Atlantic, US Atlantic Fleet, and Air Combat Command. As the joint force provider, USJFCOM is chartered by the Secretary of Defense as the JDPO responsible for coordinating and implementing continuous process improvement in the joint deployment process.

- **United States Special Operations Command.** USSOCOM is responsible for providing trained and ready special operations forces (SOF) in response to mission taskings. USSOCOM has title 10, US Code responsibilities to organize, train, and equip SOF to accomplish nine principal missions: direct action, special reconnaissance, foreign internal defense (FID), unconventional warfare, combatting

terrorism, psychological operations, civil affairs, counterproliferation of weapons of mass destruction, and information operations. In addition, SOF frequently conduct the following collateral activities: coalition support, combat search and rescue, counterdrug activities, counterintelligence activities, foreign humanitarian assistance (FHA), security assistance, and special activities. **SOF are unique in that they may be supported by two parallel distribution systems.** In addition to the conventional distribution processes which provide common support to all Services, **USSOCOM operates a separate distribution system for providing SOF-peculiar support to SOF worldwide.** The USSOCOM distribution system extends from acquisition and depot functions to dedicated theater delivery capabilities. Effective and efficient SOF support in a joint environment requires skillful integration of the two complementary distribution and logistic systems by each of the subunified special operations command logistics directorates (J-4s) operating in their respective geographical operational areas as well as USSOCOM's Special Operations Acquisitions and Logistics Center personnel. See <http://www.socom.mil/>.

For more information on special operations, see JP 3-05, Doctrine for Joint Special Operations.

- **United States Space Command (USSPACECOM).** USSPACECOM is responsible for providing space operations forces trained and ready to support joint force operations. Space forces provide a means to exploit and, if required, control space to assist in the successful execution of joint force operations. USSPACECOM serves as the single point of contact for military

space operational matters and is a **primary enabler to the communications network supporting global distribution**. During distribution operations, USSPACECOM employs its assets to provide a variety of critical capabilities to supported combatant commands and strategic level organizations. These enhancements include theater ballistic missile warning, weather support, satellite communications support, positive navigation support, computer network defense, and space-based intelligence support. Space operations are vital to the combatant commander's battlespace awareness and distribution visibility, agility, precision, and integration. As a supporting combatant command, USSPACECOM will conduct a review of space assets necessary to support global distribution operations. See <http://www.spacecom.af.mil/usspace>.

- **United States Strategic Command** is responsible for posturing strategic forces in a manner to deter a military attack on the United States, US forces, or its allies. **They are a customer of global distribution**. Should deterrence fail, strategic forces will be employed when authorized by the President of the United States. The posturing or employment of strategic forces may require the deployment of forces or redeployment of forces from a theater to CONUS locations to prepare for future operations. See <http://www.stratcom.af.mil/>.

For more information on nuclear operations, see JP 3-12, Doctrine for Joint Nuclear Operations.

- **United States Transportation Command**. USTRANSCOM is responsible for strategic common-user air, land (CONUS), and sea transportation and traffic management, as well as port management at aerial ports of

embarkation (APOEs), aerial ports of debarkation (APODs), seaports of embarkation (SPOEs), and seaports of debarkation (SPODs) for the Department of Defense across the range of military operations. **USTRANSCOM operates the DTS. USTRANSCOM exercises responsibility for planning, resourcing, and operating a worldwide transportation system in support of distribution operations and geographic combatant commanders**. This includes reviewing the JSCP tasking, analyzing supported combatant commanders' requirements for transportation feasibility, and advising on changes required to produce a sustainable force deployment concept. USTRANSCOM, in coordination with strategic level agencies, plans strategic transportation support to global distribution during all phases of operations. USTRANSCOM plays essential policy roles through its executive agent responsibility for transportation regulations and customs clearance as well as a critical operational role as single port manager (SPM). During the deployment, sustainment, and redeployment phases of a joint operation, combatant commanders coordinate their movement requirements and required delivery dates with USTRANSCOM, which provides a complete movement system from origin to initial theater destination through its TCCs — AMC, MSC, and MTMC. See <http://www.transcom.mil/>.

•• **Single Port Management**. USTRANSCOM is designated by the Secretary of Defense as the single worldwide manager for common-user ports. As the SPM, USTRANSCOM is responsible for integrated planning and execution of port operations to ensure the seamless transfer of cargo and equipment through ports in any theater. USTRANSCOM, through AMC and

MTMC, operates strategic aerial and sea ports in theaters where forces and infrastructure are both permanent and temporary. AMC and MTMC units and port operators remain under the command and control of USTRANSCOM in support of the supported combatant commander. Working relationships between the supported and supporting combatant commanders are outlined in memoranda of agreement and understanding between the two combatant commanders for their respective AORs.

•• **Transportation Component Commands.** TCCs provide strategic air, land, and sea transportation, traffic management, and terminal services to deploy, employ, sustain, and redeploy military forces to meet national security objectives across the range of military operations. The TCCs orchestrate that portion of the global distribution system and the Nation's transportation infrastructure supporting DOD common-user transportation needs. The transportation system combines and integrates the capabilities of the common-user military and commercial transportation assets to optimize the use of available transportation capabilities, provide visibility over operations, and facilitate the transition from peace to war. Chapter V, "Enablers," will discuss unique TCC capabilities and programs supporting global distribution operations. The general roles and responsibilities of the USTRANSCOM TCCs are as follows:

•• **AMC** is a major command of the US Air Force and the primary air component of the DTS. AMC provides air mobility to deploy, employ, sustain, and redeploy US forces on a global basis. Military airlift and aeromedical evacuation may be augmented by contracted commercial



USTRANSCOM provides critical support to global distribution operations through operation of the DTS.

air carriers. Additionally, AMC is the aerial port manager under the SPM concept and, where designated, operator of common-user APOEs and APODs. See <http://www.amc.af.mil/>.

For further information, see JP 3-17, Joint Doctrine and Joint Tactics, Techniques, and Procedures for Air Mobility Operations.

•• **MSC** is a major command of the US Navy and the primary sea component of the DTS. MSC provides military and contracted commercial common-user and exclusive use sealift transportation services to deploy, employ, sustain, and redeploy US forces on a global basis. See <http://www.msc.navy.mil/>.

For further information, see JP 4-01.2, Joint Tactics, Techniques, and Procedures for Sealift Support to Joint Operations.

•• **MTMC** is a major command of the US Army, is the CONUS surface transportation manager, and provides common-use ocean terminal services and traffic management services to deploy, employ, sustain, and redeploy US forces on a global basis. MTMC manages and employs the DOD common-user intermodal container fleet during joint exercises and across the range of military operations. MTMC is the port manager under the SPM concept for all common-user SPOE and/or SPOD operations. Key aspects of the seaport SPM concept are that MTMC will provide planners to supported combatant commands to develop seaport management and operations requirements. At the request of the supported combatant commander, MTMC will conduct seaport assessments, establish contact with local seaport authorities, and determine availability of host-nation support (HNS) and/or commercial port facilities and port services. When necessary, MTMC will deploy a seaport management team into

the theater and act as seaport operator throughout the operation. MTMC units and port operators remain under the operational control of USTRANSCOM when deployed in support of the supported CINC. See <http://baileys-mtmcwww.army.mil/>.

For further information, see JP 4-01.5, Joint Tactics, Techniques, and Procedures for Transportation Terminal Operations.

6. Joint Task Forces

A joint task force (JTF) is one of the command options used for joint force operations. It is the principal structure when the mission has a specific limited objective and does not require overall centralized control of logistics. Logistic functions normally remain the responsibility of the Service components. **The JTF normally is subordinate to a supported geographic combatant commander who will manage the overall theater distribution system.** The JTF J-4 coordinates logistic support through the supported combatant commander. **The principal distribution responsibilities of the JTF are to determine the logistic support requirements for the Service component**



JTF distribution requirements are coordinated through the JTF establishing authority, usually a geographic combatant commander.

forces assigned, determine distribution requirements and capabilities for the operation, and coordinate and integrate JTF distribution operations with the supported combatant commander to exercise control over the JTF's joint operations area (JOA) distribution network. A combatant commander exercises directive authority for logistics and may delegate **authority for a common support capability to the commander, joint task force (CJTF)** within the JOA. **It is critical that the JTF J-4 determine what, if any, logistics directive authority for a common support capability the combatant commander has delegated to the CJTF** and if the scope of the authority meets the JTF requirements.

7. Defense Agencies and Organizations

There are a number of defense agencies that support, or are supported by, the global distribution network.

a. **Defense Logistics Agency.** DLA is a major combat support agency of the Department of Defense and is controlled and directed by the Deputy Under Secretary of Defense for Logistics and Materiel Readiness. DLA functions as an integral element of the Department of Defense by providing worldwide logistic support to the Military Departments and the combatant commands across the full range of military operations, as well as to other DOD components, federal agencies, foreign governments, and international organizations (IOs). See <http://www.dla.mil/>. **DLA manages or distributes over 80% of existing stockage of defense materiel, including physical distribution of Service-owned and managed stocks and nearly all of the fuel and petroleum products for military usage.** DLA's principal global distribution responsibilities include the following:

- Integrated materiel and supply chain management and distribution support for all subsistence, organizational clothing and individual equipment, maps and charts, bulk fuel and packaged petroleum products, construction materiel, medical supplies and equipment, repair parts, and other consumable items. Distribution depots are used to fulfill customer requirements on a regional basis, or to provide global support for materiel to support special equipment, facilities, programs, and training.
- Property disposal services, including hazardous material and waste.
- Executive agent for DOD Donation Program.
- During joint operations, DLA may assist the supported combatant commander by establishing a DLA contingency support team (DCST) to consolidate in-theater management of DLA operations and provide a single point of contact for DLA distribution activities. The level of support provided by the DCST is based on the mission and tasks assigned to DLA by the supported combatant commander. The decision to employ a DCST is normally accomplished during the planning or early execution phases of a crisis, with a DLA planning and liaison cell responding to immediate supported combatant commander requirements. Both the DLA liaison cell and DCST should be incorporated into the supported combatant commander's distribution plans.

For further information about DLA's contingency capabilities, see JP 4-07, Joint Tactics, Techniques, and Procedures for Common-User Logistics During Joint Operations.

b. **Defense Information Systems Agency (DISA).** DISA is responsible for planning, developing, and supporting command, control, communications, computers, and intelligence (C4I) systems that serve the needs of the National Command Authorities (NCA) under all conditions of peace and war. It provides guidance and support on technical and operational C4I systems issues affecting the Secretary of Defense, the Military Departments, the Chairman and the Joint Staff, the combatant commands, and the defense agencies. **DISA ensures the interoperability of the Global Command and Control System (GCCS), the Global Combat Support System (GCSS), and the other logistic command and control (C2), asset visibility, and transportation information systems** discussed in Chapter V, “Enablers,” that are critical to the global distribution communications and information networks. See <http://www.disa.mil/>.

c. **National Imagery and Mapping Agency (NIMA).** NIMA is a DOD combat support agency and is the primary source for imagery and geospatial information used during the planning and execution of military operations. NIMA provides imagery, imagery intelligence, geospatial information and services (GI&S) support, technical guidance, and staff assistance to the Services, combatant commands, and other DOD components. Information about NIMA and its products is available at <http://www.nima.mil/>. Hardcopy NIMA geospatial products are managed by DLA’s Defense Supply Center Richmond (DSCR), <http://osis.nima.mil/> or at <http://www.nima.smil.mil>, (classified net) and distributed to DOD and other authorized Federal users through the Defense Distribution Mapping Activity (DDMA).

d. **Defense Security Cooperation Agency (DSCA).** DSCA serves as **the DOD focal point and clearinghouse for the development and implementation of**

security assistance plans and programs. DSCA manages major weapon sales and technology transfer issues, budgetary and financial arrangements, legislative initiatives and activities, and policy and other security assistance matters. DSCA has oversight responsibilities for DOD elements in foreign countries responsible for managing security assistance programs, and oversees the DOD Humanitarian Assistance Program that provides nonlethal property to authorized recipients. DSCA arranges DOD funded and space available transportation for nongovernmental organizations (NGOs) for delivery of humanitarian goods to countries in need; coordinates foreign disaster relief missions; and, in concert with DLA, procures, manages, and arranges for delivery of humanitarian daily rations and other humanitarian materiel in support of US policy objectives. For more information on DSCA, see <http://www.dsc.osd.mil/>.

e. **Defense Contract Management Agency (DCMA).** DCMA is the DOD contract manager responsible for ensuring that federal acquisition programs, supplies, and services are delivered on time, within cost and in compliance with performance requirements. See <http://www.dcmc.hq.dla.mil/>.

f. **Military Exchange Systems.** Each of the three Service exchange systems has contingency deployable resale capabilities to provide personal demand items to deployed military customers in all but the most remote OCONUS locations. The Army and Air Force Exchange Service (AAFES) mobile field exchanges, Navy Exchange Command (NEXCOM)-sponsored Naval Reserve personnel support companies, consisting of barber, laundry, and ships store units, and Marine Corps Exchange (MCX) tactical field exchanges can provide a variety of deployable personnel support upon request of the supported combatant commander. Distribution support for both initial and

sustainment merchandise stocks will typically use a combination of commercial and DOD assets, dependent on the theater.

8. Other Federal Agencies and Organizations

There are a number of other federal agencies and organizations that support, or are supported by, the global distribution network. These fall into the categories of defense and federal departments, agencies, and other organizations.

a. **Department of State.** DOS coordinates OCONUS overflight and landing rights, diplomatic clearances, customs, and visa and/or passport requirements for global distribution operations. Additionally, DOS is the lead agency for the coordination and distribution of Class X items, which support nonmilitary programs such as economic and agricultural development, civic action, and various relief and education programs. See <http://www.state.gov/>.

b. **Department of Transportation (DOT).** During national defense emergencies, the Secretary of Transportation has a wide range of delegated responsibilities, including executive management of the Nation's transportation resources. **The Office of Emergency Transportation is the Secretary's peacetime staff element responsible for emergency transportation planning.** Additionally, DOT manages the Maritime Administration and, through the Federal Aviation Administration, the War Air Service Program (WASP). WASP is the program designed to provide for the maintenance of essential civil air routes and services and to provide for the distribution or redistribution of aircraft among civil air transport carriers after aircraft allocated to the CRAF have been called into service. Under national defense emergency conditions and in coordination with DOD agencies and

commands, DOT supports the global distribution system by: developing systems for control of priorities and allocations for moving passengers and materiel by civil transportation through the global distribution network; providing clearance authority for moving out-sized and hazardous military cargo; apportioning planned and/or required civil transportation resources; and ensuring through the USCG the safety, security, and control of US seaports and transferring the operational control of the USCG to the Department of the Navy upon declaration of war or when the President otherwise so directs. See <http://www.dot.gov/>. DOT organizations include the following:

- **Maritime Administration (MARAD).** MARAD has primary federal responsibility for ensuring the availability of efficient water transportation service, adequate shipbuilding and repair service, efficient ports, effective international water and land transportation systems, and reserve shipping capacity in time of national emergency. In addition, MARAD administers federal laws and programs designed to support and maintain a US merchant marine capable of meeting the Nation's global distribution sealift needs. (See <http://www.marad.dot.gov/>.) MARAD supports global distribution through advancing the maritime industry's capabilities to provide total transportation support (port, intermodal, and ocean shipping) through the following:
 - Administering the Maritime Security Fleet of militarily useful vessels and the priorities and allocations of the Voluntary Intermodal Sealift Agreement (VISA).
 - Maintaining an active Ready Reserve Force (RRF) fleet of strategic sealift, which is a component of the inactive National Defense Reserve Fleet, to



Flexible and responsive sealift is the backbone of global distribution operations.

support contingency and national security sealift needs.

- Acquiring US flagged, US owned, and other militarily useful merchant ships in accordance with appropriate authorities from the Merchant Marine Act and the Emergency Foreign Vessels Acquisition Act.

- Operating as the National Shipping Authority to coordinate with North Atlantic Treaty Organization (NATO) Defense Shipping Authority to obtain an allocation of NATO flag ships for service in support of the United States.

- Ensuring readiness preparation and coordination of commercial strategic ports for mobilization through the National Port Readiness Steering

Committee and local port readiness committees.

- **United States Coast Guard.** Located within DOT, the USCG is a Military Service and a branch of the Armed Forces of the United States. The USCG core competencies include national defense, maritime safety, maritime law enforcement, and maritime environmental protection. During global distribution operations, the USCG protects military shipping at US SPOEs and OCONUS SPODs by conducting port security and harbor defense operations. Major USCG vessels may be deployed to participate in maritime interception operations, to enforce sanctions against other nations, and to conduct peacetime engagement activities. Deploying port security units and their sustainment stocks must be time-phased to support Navy component operations and be scheduled for movement on common-user assets of the global distribution transportation network. Port safety responsibilities in CONUS include the establishment, certification, and supervision of ammunition loading operations. In addition, the USCG's role in licensing additional merchant mariners to serve expanded defense shipping needs is integral to mobilization of transportation assets. See <http://www.uscg.mil/>.
- **Office of Intermodalism.** The Office of Intermodalism is a subordinate office within the DOT responsible for DOT projects, programs, and policies involving more than one mode of transportation. For additional information, see <http://www.dot.gov/intermodal/>.

c. **United States Department of Agriculture (USDA).** USDA is responsible for establishing the standards, inspecting the sources, and maintaining quality assurance of

subsistence materiel provided by the Department of Defense. USDA also maintains surveillance of agricultural products and guards against potential plant or animal infestations entering the United States through global distribution PODs. All forces and materiel returning to CONUS through the global distribution network require USDA inspection. USDA also provides ongoing agricultural technical assistance in many OCONUS areas and can develop coordinated DOD Civil Affairs and USDA projects for given countries or regions. See <http://www.usda.gov/>.

d. Department of Health and Human Services (DHHS). During natural disasters or civil emergencies, DHHS assists the Federal Emergency Management Agency (FEMA) and other national agencies in caring for the affected personnel. DHHS global distribution movement and support requirements will be coordinated by FEMA. See <http://www.dhhs.gov/>.

e. Federal Emergency Management Agency. FEMA coordinates the execution of emergency preparedness actions of all federal agencies, including distribution of military support to civil authorities (MSCA) missions. It is the key agency for emergency assistance to civil authorities and coordinates all military support directly with the director of military support (DOMS). The DOD executive agent for MSCA is the US Army. See <http://www.fema.gov/>.

f. National Oceanographic and Atmospheric Administration (NOAA). NOAA provides aeronautical data and backup weather services. NOAA information can be accessed through the USTRANSCOM Joint Intelligence Center for Transportation. See <http://www.noaa.gov/>.

g. US Customs Service. The US Customs Service is a bureau of the Department of the Treasury responsible for enforcing US laws

concerning carriers, cargo, and persons entering and departing the United States. These responsibilities include assessing and collecting duties, detecting and intercepting contraband (including drugs) and ensuring that imported materiel meets the requirements for legal entry. All personnel and materiel redeploying to CONUS require US Customs clearance. See <http://www.customs.ustreas.gov/>.

h. US Postal Service (USPS). USPS is part of the global distribution system and supports joint force operations through movement of mail, including materiel shipped via parcel post. The Military Postal System is an official extension of USPS outside of the United States. The Military Postal Service Agency (MPSA), a joint service staff headquarters under the executive direction of the Department of the Army, is the DOD single military mail manager and point of contact with USPS. MPSA conducts DOD contingency planning and provides postal support to combatant commanders. **Transportation of official and personal mail to and from joint forces outside of the United States is a DOD responsibility** and is moved using a combination of military and commercial carriers through overseas military mail hubs and deployed Service postal units. Distribution of US mail to deployed forces is a vital operational and morale consideration that requires significant strategic airlift and theater distribution support. Mail and parcel post share many of the same distribution modes and nodes as other DOD cargo. Distribution capabilities must be able to handle the heavy influx of inbound and outbound mail to and from deployed forces, particularly when “free” mail and “any member” programs are in use.

For more information on MPSA, see JP 1-0, Doctrine for Personnel Support to Joint Operations.

i. General Services Administration. GSA provides access to inventories of

common-use items to DOD customers. GSA is a major source for general commodities such as office supplies and paper products, tools, furniture, paints, and chemicals. GSA also provides vehicle acquisition and leasing service and is the federal contracting agency for the government purchase card (GPC) program and domestic express small package delivery service.

j. **Other Organizations.** Distribution support is required for materiel used for nonmilitary programs such as economic and agricultural development, civic action, and various relief and education programs as part of FHA programs. Various NGOs typically provide this materiel. The United States

Agency for International Development normally approves NGOs to distribute supplies for use in humanitarian relief operations. Many other foreign-based organizations also provide FHA support. Transportation and distribution organizations may be assigned duties related to movement of FHA materiel on either a dedicated or a space-available basis, depending on the particular program and operational tempo. An additional requirement for distribution support of non-DOD materiel may result from voluntary donations in support of US forces. Distribution of donated materiel is coordinated by DLA subject to the supported combatant commander's policy and procedures.

CHAPTER III PLANNING

"In all our affairs we see instances of the harmful effects of the human tendency to go to extremes. In logistics this further snowball effect is frequently illustrated by cases in which under-planning is followed by over-planning. If the logistic aspects of an operation are initially planned and provided on a seriously inadequate scale, experience has shown that the eventual commitment of logistic resources to that operation, in an effort to correct the initial deficiencies, will be lavish and wasteful. In other words, under-planning leads to over-planning . . . If, in the early stages of an operation, the logistics support is deficient it will not be possible fully to exploit an early or unexpected tactical success. The inability to exploit a tactical success then prolongs the operation or the campaign. The result of this delay inevitably is a great increase in the logistic resources ultimately expended to achieve that specific objective."

RA DM Henry E. Eccles, *Logistics in the National Defense*, 1959

1. General

The purpose of this chapter is to discuss planning global distribution of materiel. The objective is to provide balanced and precise materiel distribution support to the warfighter through highly visible and controlled operations. **Supported combatant commanders plan and execute global distribution operations to gain a dominant logistic advantage over an adversary.** This

chapter includes an overview of global distribution planning and key considerations incorporated into deliberate and crisis action planning processes to ease the transition to war and MOOTW operations.

2. Global Distribution Planning

Distribution planning is both art and science. Global distribution planning involves the operations, logistic, and



Global distribution planners must understand the tradeoffs involved in global distribution planning to provide effective and efficient support to the operating force.

acquisition communities. It is an iterative process that includes detailed analysis and evaluation of the distribution networks and functions supporting the end-to-end distribution process. Planning should include redundancy and flexibility to avoid complete reliance on a single process, node, or mode. Global distribution planning is a collaborative effort spanning the strategic, operational, and tactical levels of war.

a. **Levels of Distribution Planning.** In traditional military logistic models, strategic, operational, and tactical logistic planning was sequential and had discrete, well-defined overlap points and process seams requiring synchronization and coordination. As global distribution operations increasingly incorporate supply chain management

approaches, using information technology and new procurement and acquisition enablers, **there is a growing imperative for integration, synchronization, and overlap of the levels of distribution planning that require a more expansive, less linear approach to organizing integrated and interoperable distribution functions.** Figure III-1 illustrates this evolution in military logistic planning.

- **Strategic.** At the strategic level, the Services and defense agencies, in coordination with the combatant commands, conduct distribution planning. **This planning focuses on preparing and providing the forces, equipment, and materiel necessary to support those forces during joint force**

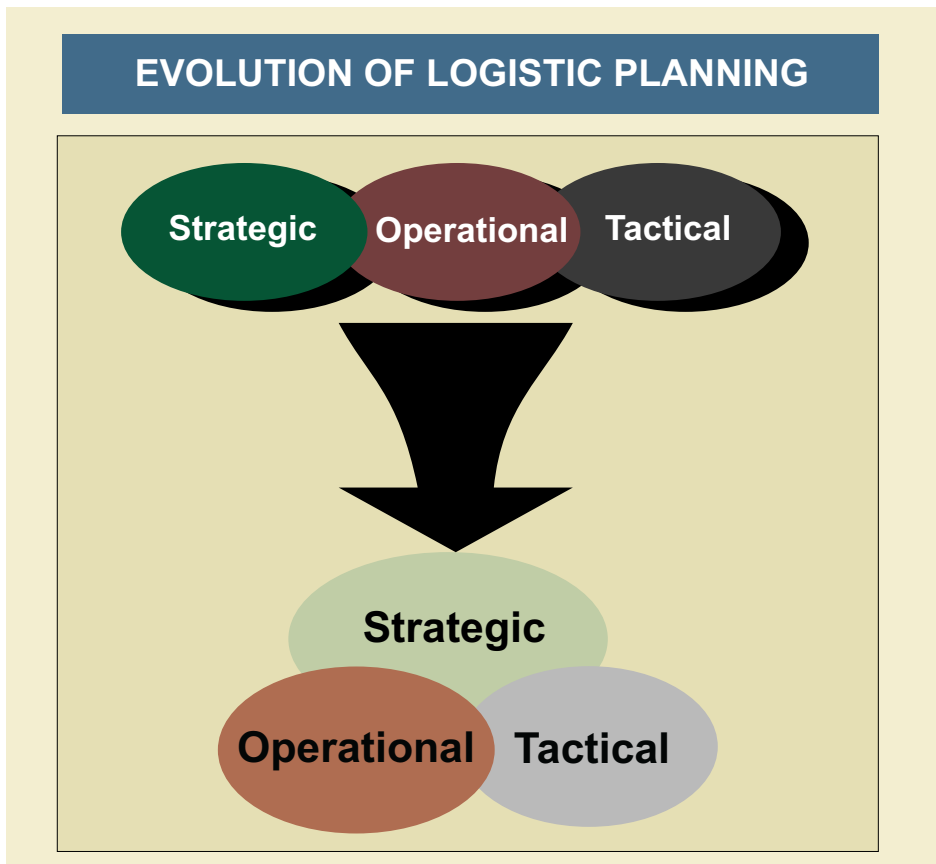


Figure III-1. Evolution of Logistic Planning

operations. Military Services and defense agencies also focus their planning on providing force capabilities to conduct various aspects of global distribution operations. Strategic level organizations focus planning on establishing reserves of equipment and acquiring supplies for joint operations in support of US national policy. They also plan for the expansion of peacetime global distribution capabilities to meet the needs of anticipated operations and provide for the continuous modernization of distribution networks and functions. Strategic level distribution planning has traditionally had a long-term focus spanning a 5- to 10-year period. It now has a shorter-term focus, as well, in support of deliberate and crisis action planning by the combatant commands for execution of distribution operations. **The role of strategic logistic organizations has evolved to the point where they now provide distribution capabilities or access to inventories in theater.** Strategic level agencies and commands can now provide alternative means of generating the required flow of materiel needed to support a combatant commander's concept of operations — particularly when operational conditions permit commercial vendors direct access to US forces.

- **Operational.** Operational distribution planning is conducted by the geographic combatant commands, subordinate joint forces, and their Service component commands, with critical contributions made by strategic level Service and defense agency planners. **Operational level planning is primarily concerned with preparing the means to generate and move required combat and supporting forces and materiel to desired operating locations in theater.** This must be achieved while maintaining the inherent capabilities and readiness of

assigned forces. To accomplish this, operational distribution planners identify requirements, harmonize strategic-to-theater distribution interface, develop theater distribution capabilities and resources, and manage their resources in support of the combatant commander's concept of operations for a given operation or campaign. Operational level distribution planners determine the basic mobilization, deployment, employment, sustainment, and redeployment requirements for the forces and materiel required by the JFC. In addition, they determine, in coordination with strategic level agencies, those resources and capabilities needed to shape and manage various commodity supply chains to fulfill planned requirements.

- **Tactical.** Tactical distribution planning is conducted by operational elements of a Service component in a theater or JOA. **This planning focuses on execution of the distribution functions of supply, maintenance, and transportation in direct support of combat forces.** The primary goal of tactical distribution planning is to attain and maintain combat readiness and provide materiel support to Service forces for near-term military operations. Tactical distribution planning includes line item planning to support discrete military unit mission capabilities. It involves the detailed application of the best planning factors available. Tactical distribution planners determine the composition, capabilities, and precise location of logistic facilities and units to best support the concept of operations.

b. **Planning Focus.** Understanding the supported combatant commander's concept of operations is the distribution planner's main focus. Early involvement by the logistic staffs and planners at all levels is paramount. Distribution planning focuses on the transition from peacetime military and

associated commercial distribution techniques to those required for contingency or wartime operations. Planners must consider the impact and constraints of war or contingency operations on each of the distribution networks and functions involved in the flow of materiel. **The product of distribution planning is a concept designed to provide a versatile and continual flow of materiel to support dynamic operational requirements.**

c. **Planning Balance.** Distribution planning must synchronize and balance materiel distribution flow with the other operational processes, such as deployment of military units and their accompanying logistic resources, to bring them together at the decisive place and time. Moreover, distribution planning must ensure that intertheater and intratheater deployment and sustainment requirements are balanced and compatible with the theater's JRSOI and theater distribution capabilities. In addition, distribution planning should ensure that these requirements can be satisfied within the resource constraints imposed on the supported commander for mission execution.

- **Distribution Requirements Versus Other Operational Requirements.**

Planners will be continuously challenged to provide the proper balance of combat forces, support forces, and materiel support within the time constraints imposed by the mission and consistent with the supported combatant commander's intentions. Supported combatant commanders may have to increase US military or seek out non-US military resources such as multinational partners or contracted sources in order to expand the infrastructure, facilities, and capabilities to support current or future distribution operations. These choices are made throughout an operation and range from the subtle to the direct. Devoting strategic lift to deploy military

port opening forces is a distribution decision that has operational implications. That same strategic lift also may be used to transport additional combat forces or materiel for force protection or other mission requirements. In a direct choice, a commander may use combat power to seize forward operating bases or main supply routes from adversary forces to expand logistic capability and gain freedom of action. **Planning decisions concerning the in-theater balance of operational requirements and distribution support requirements have an impact at the strategic level.** Tradeoffs on theater distribution capabilities may require compensating application of strategic level resources. For example, limitations on 40-foot container handling and transporting capabilities in-theater may require additional investments in 20-foot containers at the origination end of the distribution pipeline.

- **Deployment Versus Sustainment.**

Logistic planners must avoid focusing solely on deployment tasks at the expense of distribution actions needed to sustain the employment concept of the campaign or operation. Efforts to reduce deployable unit level supply stocks among all Services, decrease logistic support forces and the "logistic footprint," and accelerate force closure times all hasten the commencement of sustainment actions. **Achieving a greater velocity and earlier flow of sustainment materiel requires significant estimating and forecasting capabilities and accurate allocation of lift resources between deployment and sustainment purposes.** Figure III-2 illustrates the shift in deployment and sustainment flows.

- **Balance Between the Services and Other Organizations.** Distribution

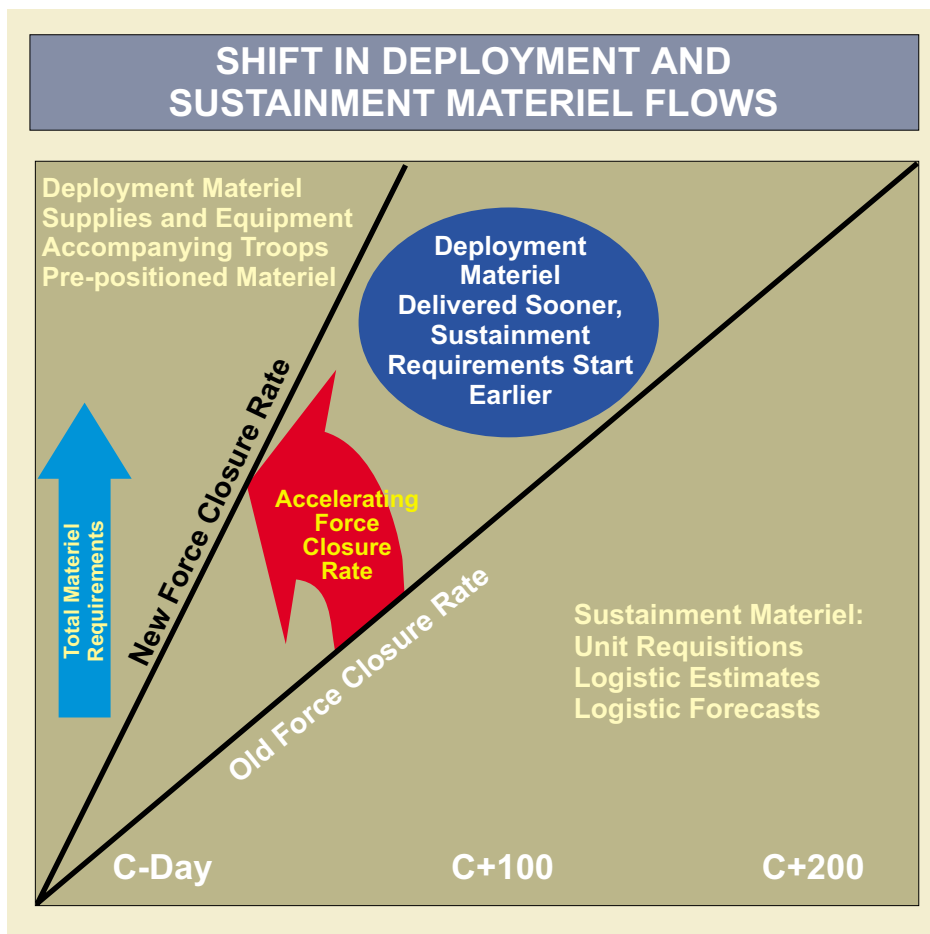


Figure III-2. Shift in Deployment and Sustainment Materiel Flows

balance issues become more complex when multinational military services, US Service components, and NGOs operate simultaneously within the theater and the LOCs approaching the theater. **Coordination of distribution functions among all affected commands, nations, agencies, and organizations is essential** to gain control of networks, avoid congestion of LOC nodes, and reduce duplication of effort. Combatant commanders should provide general guidance, by function and area, wherever needed to ensure unity of effort.

d. **Understanding Tradeoffs.** Planning global distribution of materiel requires the

calculation of tradeoffs between requirements, inventory, and the physical capability to provide materiel when, where, and in the quantity required. Tradeoff decisions are a function of the warning time prior to commencement of operations, resources available, and constraints and restraints imposed on a JFC by the mission. **These tradeoff decisions involve choices among the numerous variables present within materiel supply chains.** Requirements variables include differing physical characteristics of materiel (e.g., volume and special handling characteristics) and required delivery dates to support the joint force operation. Inventory variables include source, location, and quantity of the required materiel.

Physical distribution variables include distance, velocity, and the capacity and capability to move or store materiel. Combinations of these variables are present in every materiel distribution transaction, with flexibility in one variable capable of offsetting constraints imposed by reality or intentionally reduced capability in another. The use of premium air transportation, for example, can offset low inventory levels and provide materiel from geographically dispersed sources. In assessing these tradeoffs, distribution planners must consider numerous constraints such as finite resources in money, materiel, and forces and achieve materiel support that is effective and efficient.

3. Global Distribution of Materiel Planning Considerations

Global distribution of materiel involves essential planning considerations that must be used by planners at all levels to successfully accomplish distribution operations. **Logistic planners must apply a supply chain management perspective and the fundamentals and tenets of global distribution to create logistic plans and support concepts.** These considerations include the following.

a. **Requirements Determination and Stocking Policy.** Requirements determination and stocking policy **determine the size and location of inventory to meet the materiel demands of the supported force.** At the strategic level, planners must determine inventory quantities and locations to support objectives as articulated in the NMS and approved OPLANs. Operational stock planning determines the materiel inventory levels and locations to support a particular campaign or operation. At the tactical level, stock planning determines the inventory needed to support battles or engagements. At all levels, size and location of inventories are governed by the ability to resource, procure,

and move materiel. **An essential planning element is critical item planning, which identifies critical supplies and materiel early in the planning process.** Critical items are materiel vital to operations that are in short supply or will require intense management because of their inherent impact on physical distribution resources. These items will normally require more extensive distribution planning. At the operational and/or tactical level, distribution planners must consider the ability to surge or position stocks necessary to support a main effort. Accurate and timely requirements determination is a critical element in successful execution of global distribution of materiel.

b. **Organizations and Sources.** Organization and source considerations are **factors involved in determining sources of distribution support** that consider the supply chain from the commercial source to the end user. Although ultimate source decisions involving strategic level equipment and materiel procurement are typically beyond the purview of distribution planners, they do cause distribution planners to make critical up-front decisions on sources of distribution support that relate to the intermediate links in the supply chain, particularly in terms of organizational responsibilities within joint forces. **The major planning decision is whether to source materiel and distribution functions using DOD-owned and operated capabilities, commercial sources, or a combination of both.** Commercial sources could be national-level contracted capabilities, capabilities contracted within a theater or operational area, or those provided by an HN. The JV 2020 goal of reducing the logistic footprint suggests that planners should evaluate alternatives to the use of uniformed US logistic support forces.

- **Executive Agents.** DOD executive agents are DOD components that have been formally designated by the President, the Secretary of Defense, or

Congress as the sole agency to perform a function or service for others by Presidential directive, legislative action, or Office of the Secretary of Defense directive, instruction, or memorandum.

- **Service Components.** At the operational and/or tactical level, the primary source of distribution support is the Services' own deployable combat service support capabilities. These units are the backbone of the theater distribution system. Factors to consider in selecting military capabilities, active or reserve, as a source of distribution support are political considerations, nature of the threat and security considerations, unit availability, tactical footprint, lift availability, operational costs, and the time available to mobilize required units. **The following military distribution organizational options are available as planning considerations.**

- **Single Service Logistic Support.** Each Service is responsible for the logistic support of its own forces. This Service responsibility extends into the theater, but may be modified when logistic support is otherwise provided for by agreements with national agencies or allies or by combatant commander assignment of common, joint, or cross-servicing responsibility.

- **Lead Service Logistic Provider.** The combatant commander may determine that common-servicing would be beneficial within the theater or operational area. If so, the supported combatant commander may delegate the responsibility for providing or coordinating distribution support for all Service components in the theater or designated area to the Service component that is the dominant user or the most capable provider. This delegation will

typically be included in the combatant commander's OPLAN and/or OPORD.

For more information on types of Service support, see JP 4-07, Joint Tactics, Techniques, and Procedures for Common-User Logistics During Joint Operations.

- **Cross-Servicing.** Cross-servicing is one Military Service providing dedicated logistic support to another. If one Service has the preponderance of a particular skill, capability, or class of supply in theater (such as ground transportation, ammunition storage, or fuel) it may be tasked by the supported combatant commander or by the Secretary of Defense to provide support to other Services operating in that theater. Combatant commanders may task the Services under directive authority for logistics, which is an inherent authority of COCOM, whereas the Secretary of Defense may task the Services under the executive agent designation system. Employing cross-servicing helps to reduce the logistic footprint within the theater. Cross-servicing requires the receiving Service to reimburse the providing Service.
- **Contract support planning** considers contracting with external and in-theater sources. Contracting can include any of the following types of contracts: theater support contracts (e.g., local labor or service contract); external theater support (e.g., Service logistic civil augmentation programs); and systems support contracts (e.g., CLS or PV contract). **The key planning criterion for distribution planners in considering contract support to operations is the willingness and ability of the contractor to perform in the expected operational environment and the challenge of**

integrating PV and CLS contracts into the military distribution management system. In accepting contractors in theater as an integral part of support, planners must include contractors, their equipment, supplies, and distribution practices in deployment and sustainment movement requirements. Planners also must consider any additional force protection requirements associated with contractors in theater. Ideally, contractor personnel should be included in SOFAs. Contingency contracting capabilities are planned in support of joint operations to provide for local acquisition of facilities, supplies, and distribution services. US and multinational forces often deploy during joint operations to areas without established logistic support structures. Contingency contracting is an effective distribution support force multiplier that can bridge gaps that may occur before, during, and after sufficient military support is in place. Contingency contracting is particularly valuable where HNS is unavailable or inadequate.

For additional information on contracting, see JP 4-0, Doctrine for

Logistic Support of Joint Operations, Chapter V, “Contractors in the Theater.”

•• Civil Augmentation Programs. Civil augmentation programs are separate Military Department contracting options most often used when HNS is insufficient or unavailable. They employ contracts with US and other vendors to provide support in such areas as facilities, engineering (construction), supplies, services, maintenance, and transportation. Additionally, planners should consider initiating civil augmentation services contracts if SOFAs do not already contain those provisions. The goals of civil augmentation programs are to: (1) allow planning during peacetime for the effective use of contractor support in a contingency or crisis, especially as a quick reaction response to contingencies; (2) leverage global and/or regional corporate resources as facility and logistic force multipliers; and (3) provide an alternative augmentation capability to meet facility and logistic services shortfalls.



Contract support planning and coordination must determine the willingness and ability of the contractor to provide contracted support in the anticipated operational environment.

• **Weapon System Product Support.** Weapons systems product support considerations are factors relating to the **use of civilian personnel, either government employees or contractors, to support weapon systems instead of uniformed personnel.** A major feature of DOD acquisition and logistic reform initiatives is the effort to capitalize and expand on the best practices — commercial and government — to transform weapon system support processes to meet the urgent operational needs of warfighters. This includes competitive sourcing of weapon system product support increasing direct contractor materiel and maintenance support. If DOD product support shifts include an increased presence of contractor personnel at the theater level, support strategies must be consistent with the supported combatant commander policies for contractors in theater. Theater distribution interfaces with strategic level product support providers should be transparent to the warfighter, regardless of support source.

- **HNS Considerations.** HNS considerations are factors involved in obtaining materiel or services from HNS sources instead of traditional DOD sources. **HNS should be considered as a source of distribution capabilities that can extend resources or mitigate resource shortfalls for a particular contingency.** HNS responsibilities are negotiated through bilateral or multilateral agreements and memoranda of support. HNS agreements are wartime support vehicles. These agreements provide an alternative to the use of DOD resources for the following: labor support for port and terminal operations, use of available transportation assets in country, use of bulk petroleum distribution and storage facilities, availability of other materiel, and the development and use

of other field services. The supported combatant commander may appoint one Service component to be lead agent for all Service components to conduct contracting arrangements with the HN to avoid duplication of efforts and to control costs. HNS factors to consider are the availability of agreements and capability of the HN to provide reliable levels of support. Maintaining current, comprehensive base support plans and conducting periodic site surveys are critical for validating HNS agreements required for implementing specific OPLANs. If agreements do not exist, or have limited application, then the supported combatant commander, in coordination with the DOS, should immediately start negotiation of HNS agreements and arrangements combined with an integrated contracting plan to obtain necessary support. While HNS agreements provide the US pre-negotiated support for potential war scenarios, **acquisition cross-Service agreements (ACSAs) provide the legal authority for the US military and the armed forces of other nations to exchange logistic goods and services during contingencies.** Transactions under this program must be reimbursed, replaced in kind, or exchanged at equal value, which may not always be the case with HNS agreements. Allied nations design their logistic systems to facilitate self-sufficiency within their fiscal capabilities. The sustainment of forces is each participating nation's responsibility; however, varying degrees of mutual logistic support among nations can be expected. If an ACSA does not exist, the supported combatant commander can take steps to initiate an ACSA (if such authority has been delegated by the Chairman of the Joint Chiefs of Staff) with the HN functional government when required.

- **Procurement Planning.** Procurement planning considers **the ability to procure materiel in terms of resource availability and the ability of the industrial base to provide the materiel in a responsive fashion.** Financial resource constraints will not allow unlimited inventory investment to meet all potential requirements. Fundamentally, procurement planning determines if DOD or federal agency inventories are adequate, if it is necessary to invest in new or additional government-owned and controlled stocks, or if items can be readily acquired to meet the needs of the joint force.

- If materiel is to be sourced commercially, planners must consider whether materiel will be acquired from the CONUS industrial base or whether it can be sourced in-theater (or from other OCONUS areas.) In-theater procurement of materiel can streamline and reduce requirements on other elements of the global distribution system when enabled by adequate procurement infrastructure in theater.

- When vendor support arrangements such as subsistence and medical PV programs are the peacetime norm, planners must integrate these programs into distribution planning. Planners must determine if DVD of materiel is possible and/or appropriate for a given operation.

- Planners should be aware that shipments generated through vendor support arrangements are often frustrated by HN customs authorities because of issues of ownership, documentation, duties, and taxes.

c. **Requisition Planning.** Requisition planning considers **factors that affect the timeliness and performance of distribution systems driven by the requisition process.**

These considerations are known by a variety of terms: order and ship time, logistic response time, or customer wait time. Planners apply basic standards to identify and determine the performance of a commodity supply chain responding to theater requirements. They also establish the overall standards of distribution performance and identify distinct standards, when necessary, for supporting the joint force main effort over supporting forces. Planners establish control mechanisms in collaboration with strategic level organizations to cause supply chains to react effectively. Planners must understand how these requisition processing standards transition from peace to contingency support. For example, requisition priorities may need to be upgraded or a project code established for a particular contingency.

d. **Physical Distribution and Transportation Planning.** Physical distribution and transportation planning for materiel distribution operations **considers physical capabilities to move materiel, infrastructure capabilities to support that movement, facility and equipment capabilities to store and maintain materiel inventories until required, and the controls required to manage all three.** In doing so, transportation planners determine the capacity of the LOCs that support global distribution operations. The variables that normally affect these calculations are distance, transit time, and capacities across the range of transportation modes and nodes spanning strategic movement and physical distribution operations within the theater. These calculations are dynamic, with varying solutions driven by changes in environment or operations. Operational-level distribution planning must articulate force requirements to perform physical distribution operations in theater.

e. **Retrograde and Return Planning.** Retrograde and return planning considers the **factors affecting the reverse distribution of reparable or excess materiel from the**



Early assessment of the physical infrastructure supporting joint force operations is critical to timely and precise global distribution support.

tactical level of operations back to designated repair or storage points. It is used to determine requirements for repair and transportation capabilities and the necessary logistic management systems to administer the materiel flow during retrograde and return. Retrograde planning must consider: the type and amount of reparable components used by designated Service components, the maintenance concepts associated with these components, and the repair cycles that apply, particularly for major combat equipment items. The JV 2020 “reduced logistic footprint” goal includes revised maintenance concepts that depend on fewer in-theater maintenance resources. Expeditious and visible movement of reparable items rearward, and a similar movement of repaired items forward to the joint force, are essential in order to maintain operational readiness. Strategic

decisions on weapon system maintenance support, often permanently fixed during the acquisition process, must be reflected in corresponding distribution capabilities at all levels. Retrograde and return planning must include arrangements for cleaning and USDA inspection prior to shipment from the theater. Failure to do so may result in serious delays to the shipment and significant costs to the shipper Service.

Procedures for requesting USDA preclearance and cleaning cargo are outlined in the DOD Directive 4500.9R, Part V, Defense Transportation Regulation, Customs/Border Clearance Regulation.

f. Surge Planning Considerations. Surge is **the ability to meet increased requirements for goods or services caused by rapidly increased demands during war or other contingencies.** Typically, surge requirements are directed at the industrial base and the transportation industry. Identified surge requirements are communicated to the industrial base and transportation industry and analyzed to determine a course of action (COA) to rapidly meet the emergent demand. Planners must understand the following: surge capabilities, the avenues available to fulfill initial demands, the surge requirements that the transportation system can support, and what special requirements or procedures need to be put in place to accommodate surge demand. **With reduced DOD-owned inventories, the reliance on the industrial base for timely resupply has grown.** Recent procurement practices, as described in Chapter V, “Enablers,” include surge requirements in procurement contracts and establish contractual guarantees of a supplier’s surge response capability.

- **Industrial Base Surge and War Reserves.** Strategic level organizations and combatant command distribution planners must factor response times for mobilization of the industrial base into

plans to support their operations. Definitive DOD plans to support a combatant command must be in place prior to the start of any campaign or operation to ensure timely response from the Services, DLA, and industry. Although the greatest demand normally occurs within the first 30 to 60 days of an operation, industrial surge to meet the demands of more prolonged operations or campaigns requires significant additional time to build to maximum output. The Department of Defense will frequently compete with private sector customers for a manufacturer's industrial capacity and inventories.

•• The joint industrial mobilization planning process (JIMPP) is the mechanism that ensures that the CONUS industrial base is capable of producing critical military items essential to the readiness and sustainment needs of the Armed Forces of the United States across the range of military operations. The JIMPP is the deliberate planning tool that documents industrial mobilization plans and analytical processes to respond to a crisis or war. The process unifies industrial mobilization planning and analytical efforts by focusing on warfighting requirements and capabilities. The JIMPP is used by the Joint Staff, the Services, and defense agencies to: (1) estimate the capability of the industrial base to support execution of OPLANs developed through deliberate planning or COAs derived through crisis action planning (CAP); (2) establish a baseline national industrial mobilization capability assessment mechanism based on the potential military demands identified through the JSPS; (3) coordinate the industrial mobilization planning of the Services and the defense agencies; and (4) identify and provide

DOD industrial mobilization requirements to the industrial preparedness program.

•• War Reserve. War reserves are **stocks of materiel maintained in peacetime to meet the increase in military requirements consequent upon the outbreak of war or other crisis.** They represent a special category of inventory upon which global distribution planners may draw and can be used to offset the lead-time constraints of industrial surge response, expansion of the DTS to contingency levels, and establishment of transportation LOCs. **War reserves are intended to provide the interim support essential to sustain operations until resupply can be effected from the industrial base.** Defense planning policy requires the Services to: (1) acquire and position critical assets to maximize warfighting capability; (2) repair only those war reserve assets for which there is a valid requirement; and (3) procure new or additional war reserve items to fill demonstrated shortfalls or significantly improve joint force capability or survivability. Service component commanders must assess the risks of relying on war reserve stocks during planning and provide input to guide their Service's use of investment dollars to secure war reserve materiel. **Some war reserve materiel may have strategic significance and be unavailable, or available in limited quantity, for support of specific operations such as MOOTW.** Conversely, some war reserve requirements may be offset by industrial base planning (such as financial investment) by the Department of Defense to guarantee industrial base response and/or access. Similarly, commercial access, rapid transportation, and asset visibility may also mitigate the necessity for war reserve investment.

The key to war reserve management is accurate identification of total requirements and investment in critical materiel where access may be constrained or the lead-time is unsatisfactory to meet operational requirements. As the resource sponsors for war reserves, the Services need to be sensitive to the requirements of supported combatant commanders when determining the levels of acceptable risk.

- **Transportation Surge.** USTRANSCOM and its TCCs determine lift availability and assess the need for mobility augmentation based on projected movement requirements to support proposed COAs. **Shortfalls in strategic common-user transportation assets may cause activation of several stand-by programs** (discussed in Chapter V, “Enablers”) to augment military capability. In addition, depending on movement control requirements, port support activities, and the theater reception capability required for a particular operation, USTRANSCOM assets may be required to facilitate and manage transportation. For example, MTMC will assess CONUS surface transportation and common-user water terminal management requirements for both CONUS and OCONUS. AMC will assess anticipated CRAF requirements and MSC and/or MARAD will review RRF and VISA for possible augmentation requirements.

g. Strategic to Theater Distribution Interface. During the transition to war or MOOTW, distribution plans must provide the supported combatant commander with the capability to influence the distribution of materiel support. To accomplish this the distribution planner should:

- Evaluate existing peacetime distribution practices to determine applicability to the operational environment;
- Coordinate in-theater distribution networks and functions with the flow of materiel from strategic level sources;
- Minimize or eliminate seams and handoffs in the global distribution system (Time is lost and cost is incurred at every additional node or modal transfer);
- Balance materiel distribution and unit deployments with theater distribution capacity and capability;
- Control distribution priorities and materiel flow; and
- Execute and implement arrangements with supporting commands to clearly fix responsibility for specific distribution functions such as port operations or providing common user logistic support.

h. NGO Considerations. NGO presence and operations may place additional or different demands on the distribution system. **They must be factored into distribution plans as potential additive requirements.** In almost all military operations, there is a requirement to provide or factor in support of populations affected by the operations. The JTF civil-military operations center (CMOC), as a coordination center, can assist the NGOs to quantify these requirements within the JOA. Planners must also consider that military forces in theater may be in competition with NGOs for limited global distribution capabilities. Policy may dictate that these entities receive priority.

See Chapter VI, “Other Missions,” for more information on distribution support for NGOs.

i. **Multinational Considerations.** In any multinational arrangement, the essential planning issue is **determining which entity will provide what support and who will pay for it.** Multinational arrangements are subject to variation based on the involved nations and the multinational force structure, and should address interoperability and coordination of distribution support to and from forces of other nations.

For more information on multinational operations, see JP 4-08, Joint Doctrine for Logistic Support of Multinational Operations.

j. **Distribution Network Constraints.** Distribution network constraints are the **factors that place limits on global distribution networks and functions** through the phases of mobilization, deployment, employment, sustainment, and redeployment during joint operations. Logistic 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 Constraints.** Physical network constraints are **restrictions in the flow of materiel for CONUS, intertheater, and intratheater movements.** These restrictions can also be described as bottlenecks that limit or degrade the ability of the distribution system to support a campaign or operation. Planners must take action to identify and offset or adapt to these constraints. Identifying constraints en route to or within the theater is the first step in coordinating activities to avoid overloading theater LOCs. Traditionally, limited numbers of ports and airfields, limited unloading capacity at ports and airfields, lack of asset visibility, and limited inland transportation have

constrained logistic support of combat forces. Distribution planners must anticipate congestion and seek solutions 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 in the initial deployment of forces to facilitate the deployment of combat forces, as well as for determining facility upgrades required to enhance operations. The supported combatant commander, with assistance as required from USTRANSCOM, determines whether the theater is adequate for employment of assets, forces, facilities, and supporting systems. In cases where the geographic area is inadequate, options available to the supported combatant commander include increasing the infrastructure capacity, reducing the distribution flow, or extending allowable force closure times.

- **Financial Network Constraints.** 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 rapidly disburse financial resources to obtain needed distribution capabilities and materiel. The compartmentalized nature of DOD financial apportionment between the Services and defense agencies may affect both long-term and short-term elements of global distribution. Planners may influence long-term financial apportionment through the establishment of materiel and capabilities requirements in combatant command OPLANs.



Global distribution planners must review compatibility and interoperability of information systems and communications during planning.

- **Information Network Constraints.**

Information network constraints are **limitations that may affect the flow of information, or the utility of that information**. Planners must identify potential information network constraints and take action to offset or adapt to these constraints. **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 wartime levels. Restrictions imposed for operations security purposes may shut down or limit access to some peacetime information networks used in the global distribution process. The growing peacetime use and dependence on

Internet-based ordering systems or other enabling technologies with both DOD and commercial providers may be vulnerable to disruption during military operations from either hostile action or limitations on in-theater Internet access.

- **Communications Network Constraints.**

Communications network constraints are **physical or administrative restrictions within the communications network** that may limit the amount of logistic communications traffic below that which is needed to effectively conduct logistic operations. Planners must recognize these potential limitations and take action to increase the network capacity available for logistic communications, reduce logistic communications traffic, or establish alternative communications methods which are not in competition with higher priority users. Joint communications systems such as GCCS and GCSS, in concert with Service communications capabilities, provide the means to achieve the unity of effort necessary to successfully conduct distribution operations. In past military operations, some logistic communication processes dependent on defense communications network transmission have been delayed or displaced entirely by higher priority operational communications.

4. **Operational Planning for Global Distribution of Materiel**

The J-4 of a supported combatant command is the proponent for global distribution planning for a given operation, campaign, or theater. The J-4 is supported in this planning effort by the Service components of the joint force, supporting combatant commands, defense agencies, Service logistics commands, and key commercial partners. The task of distribution

planning is fundamental to accomplishing joint theater logistics management (JTLM).

The essence of planning global distribution of materiel is in determining the materiel requirements and distribution capabilities needed to support joint forces and verifying sourcing and resourcing for both. These distribution requirements and capabilities must be integrated into the framework supported by formal joint operation planning processes and systems. All distribution planning is supported by the framework of the Joint Operation Planning and Execution System (JOPES) and its associated processes. The product of successful distribution planning is a distribution concept tailored to anticipated operational requirements and circumstances and articulated in distribution plans within combatant command OPLANs and/or OPORDs. These distribution plans must guide the planning of supporting commands and organizations within the Department of Defense, external departments and agencies, and HNs that will be supporting mission execution.

a. Joint Operation Planning and Execution System. JOPES is the integrated joint C2 system used to support military operation monitoring, planning, and execution activities. JOPES provides policies and procedures to ensure effective management of planning activities across the range of military operations. JOPES has two principal planning processes, deliberate and crisis action, to accomplish joint operation planning. **Plans for the mobilization, deployment, employment, sustainment, and redeployment of military forces are prepared using a set of known or assumed threats or circumstances.** Supporting plans should include an integrated and synchronized distribution concept with the appropriate level of detail.

For information about JOPES, see CJCSM 3122.01, Joint Operation Planning and

Execution System Vol I: (Planning Policies and Procedures).

- **Deliberate Planning.** Deliberate planning is the process used to plan military operations for contingencies identified in joint strategic planning documents. Conducted principally in peacetime, deliberate planning is accomplished in prescribed cycles in accordance with the JSPS. The NCA provide guidance for joint operation planning to the Chairman of the Joint Chiefs of Staff in the contingency planning guidance produced by the Secretary of Defense. The Chairman produces the JSCP to implement the NCA's guidance. The JSCP provides guidance to the combatant commanders and the Services to accomplish tasks and missions based on current capabilities. From this document, the combatant commanders develop their plans.

•• Deliberate planning is a highly structured process that engages combatant commanders and staffs in the methodical development of fully coordinated, complex plans for anticipated contingencies and the transition to and from war. **Plans developed during deliberate planning provide the foundation for and ease the transition to crisis operations.** Work performed during the deliberate planning process allows the joint planning and execution community to develop the processes, procedures, and planning expertise that are needed during CAP.

•• Deliberate planning is the combatant commander's best opportunity to determine and provide accurate logistic planning information that will ultimately affect the capacity and throughput capability of the global distribution pipeline. **Planning efforts during this**

phase apply a disciplined approach to global distribution planning. Commencing with the logistic estimate process, planners identify materiel requirements for supported forces and determine the global distribution capabilities and capacities needed to deliver materiel when, where, and in the quantities required. Planners must also assess the availability of resources to make both materiel and distribution capabilities available. **Distribution planning identifies shortfalls in both materiel and capabilities and determines alternative COAs to resolve those shortfalls.** Applying key distribution considerations to estimate materiel and capability requirements provides the initial basis for a distribution plan.

- A critical aspect of this planning process is determining facts and assumptions as they relate to the elements of distribution. Assumptions must eventually be converted to facts. The critical nature of distribution support and the changing manner in which global distribution elements are executed requires a disciplined approach to verifying and converting planning assumptions to facts.
- The resulting products of the deliberate distribution planning process should be distribution plans that are adequate, feasible, acceptable, and consistent with joint doctrine.
- **Crisis Action Planning.** CAP is based on current events and conducted in time-sensitive situations using assigned, attached, and allocated forces and resources. **Crisis action planners base their plans on the actual circumstances that exist at the time planning occurs.** They follow prescribed CAP procedures that parallel deliberate planning, but are

more flexible and responsive to changing events and the time available. CAP procedures provide for the timely flow of information and intelligence, rapid execution planning, and the communication of decisions of the NCA to combatant commanders. As in deliberate planning, CAP must incorporate distribution considerations and articulate a distribution concept of support that is integrated and synchronized with the concept of operations.

For information on the joint operation planning process, see JP 5-0, Doctrine for Planning Joint Operations.

b. Key Distribution Planning Tasks.

Distribution planning tasks provide guidance to distribution planners assessing the adequacy and feasibility of concepts of support for campaign and operation plans. For distribution planning, logistic planners should take the following steps:

- **Analyze Sourcing.** JOPES planning is capabilities based. Military planners use the forces and resources specified for regional or global planning, as appropriate, in the JSCP, CJCS orders, Service capabilities documents, and approved OPLANs or OPORDs. Using the forces and resources apportioned for planning, supported combatant commanders select those forces they intend to employ within their plans or operations to complete the assigned task. **The assessment of apportioned forces and sustainment against actual sourced forces and sustainment and risk may identify shortfalls.** JOPES contains specific procedures for the supported command to identify shortfalls between the planned requirement and the identified capability at various points in the planning process. The supported command then attempts to resolve

shortfalls, conduct risk analysis if the shortfalls are not resolved, and modify the combatant commander's strategic concept if the resultant risk is too great. Planning in JOPES begins with a comparison of planned required forces and resources with actual forces and resources available. During this stage in the planning process, personnel and logistic requirements are evaluated to assess force sustainability and transportation feasibility and to develop an end-to-end distribution concept. This process involves coordination and cooperation with supporting commands and agencies. Supporting commands and agencies confirm force and resource availability and source unit and materiel requirements during the execution planning. **Sourcing decisions are critical to the acceptability, adequacy, and feasibility of the concept of support.** Modernization of DOD logistic processes created major changes in the sources of materiel inventories, physical distribution capabilities, and the processes for accessing those sources. Planners must understand the current distribution concepts for various commodity supply chains and be able to accurately source and incorporate new distribution capabilities.

- **Verify Sustainment.** Sustainment planning is directed toward providing and maintaining levels of personnel, materiel, and consumables required to sustain the planned type of activity for the appropriate duration and at the desired level of intensity. **Sustainment planning is the responsibility of the combatant commanders in close coordination with the Services and defense agencies.** Detailed planning is necessary to determine force and sustainment requirements from the beginning of the deployment flow,

determine available resources to fill identified requirements, and validate and reconcile shortfalls. Sustainment planning is an iterative and continual refinement process. The time-phased force and deployment data (TPFDD) must reflect the total materiel requirements of the joint force, to include sustainment materiel. **With the increased emphasis on reduced Service logistic footprints, the importance of up-front sustainment planning cannot be overstated.** Sustainment requirements included in combatant command OPLANs and OPORDs must be realistic and reflect the detailed distribution analysis required to ensure timely materiel support.

- **Analyze Transportation.** Supported combatant commanders develop concepts of deployment based upon mission taskings and guidance found in CJCSI 3110.11B, *Mobility Supplement to the Joint Strategic Capabilities Plan*. During planning, subordinate component commanders are tasked to determine specific forces (unit) and materiel (non-unit) requirements (including personnel replacements) and recommended time-phasing of these requirements. Component command force and support requirements are submitted to the supported combatant commander who integrates these requirements with other requirements to develop the joint force TPFDD. Strategic movement requirements are analyzed against apportioned transportation assets found in CJCSI 3110.11B using the joint flow and analysis system for transportation (JFAST) to determine gross transportation feasibility of plans and operations. Refinements are made to the total movement plan, as required, and the TCCs prepare movement tables for the plan or operation.

- **Refine Logistic Support. Logistic refinement is the process of resolving shortfalls in logistic support during the planning process.** It is conducted by Service sourcing agencies, DLA, combatant command components, and supporting combatant commands under the overall direction of the Joint Staff and the supported combatant commander during deliberate and crisis action planning. During deliberate planning, the Commander in Chief, United States Transportation Command (USCINCTrans) hosts logistic refinement conferences for the Joint Staff and supported combatant commands to review the logistic support of OPLANs. The purpose of the logistic refinement conference is to confirm sourcing of logistic requirements in accordance with JSCP, Joint Staff, and Service guidance and to assess the adequacy of resources provided by support planning. The logistic community begins refinement of a TPFDD when a completely sourced and adequate TPFDD is provided by the supported combatant command. **Sourcing includes identification of facilities and materiel support requirements.** During the logistic refinement conferences, the combatant commands, Services, and defense agencies will resolve problems (or shortfalls) related to unit and non-unit related personnel, cargo, retrograde, medical evacuation, and resupply. At the conclusion of the logistic refinement conference, USCINCTrans will reassess gross transportation feasibility for the supported combatant commander to ensure that the TPFDD can be executed. The refined TPFDD articulates the combatant commander's distribution concept and highlights "warstopper" materiel requirements. If the TPFDD fails transportation feasibility analysis, distribution planners must consider alternative actions to achieve deployment

and sustainment goals within the envelope of transportation capability. Creating or increasing theater materiel stocks and shifting pre-positioning ships are potential responses to transportation shortfalls. Refinement of logistic support during CAP is conducted using the same considerations as deliberate planning, with the fundamental difference being constraints on the time available to conduct refinement.

- **Review Logistic Support Analysis (LSA).** LSA is a continuous process during the development and maintenance of combatant command OPLANs and assesses requirements and sourcing of requirements at the tactical, operational, and strategic levels. The LSA provides a broad assessment of key logistic factors by: documenting the results of a process that assures an integrated evaluation of key logistic capabilities, identifying logistic support deficiencies and assessing their risks, and providing a baseline for the Joint Monthly Readiness Review (JMRR) process. **LSA assesses combined support capabilities and describes and validates planned distribution concepts.** Preparation of this analysis is a two step process. It begins with the Services' and DOD agencies' assessment of their ability to support a combatant commander's plan, followed by the combatant commander's assessment of the inputs along with analysis of theater requirements and capabilities. Where other portions of the JMRR assess the readiness of the commodity stocks against the total requirement, LSA identifies possible shortcomings in the distribution system. During the planning process only the commodity requirements that would actually enter the TPFDD on execution should be considered to include all substitutions and secondary stock. LSA assesses the impact on the distribution

system as reflected in the movement of large numbers of substitute and secondary weapons that carry significantly different logistic requirements.

- **Develop Commodity Distribution Concepts.** Develop a distribution concept for each commodity supply chain.

- Determine the impact of each element of global distribution on the commodity supply chain, adjusting or adapting as necessary to meet the requirements of the supported combatant commander's concept of operation and concept of support.

- Determine the impact of each global distribution network and function supporting these commodity supply chains, adjusting or adapting as necessary to meet the requirements of the supported combatant commander's concept of operation and concept of support.

- Determine if the major planning considerations of this chapter have been

taken into account for each commodity supply chain.

- Tie commodity supply chains together by adding up all the requirements, comparing the sum total of requirements to resources needed to execute the distribution plan.

- **Apply Joint Theater Logistics Management.** JTLM integrates the logistic capabilities of the forces in theater to fulfill common-user and cross-Service support missions. **JTLM optimizes resources by synchronizing all logistic support efforts in theater.** The objective is to provide rapid, timely delivery of personnel and materiel, in accordance with the supported combatant commander's concept of operation. The supported combatant commander may choose among a variety of options when organizing to implement JTLM in support of theater operations.

- **Ensure Force Protection.** Comprehensive force protection requires the employment of the full array of active and passive measures and the integration and



Commanders are responsible for ensuring that requisite force protection measures are enforced consistent with the threat.

coordination of intelligence and security programs, information operations, risk management techniques, and safety programs to increase individual awareness of potential threats. Planning for weapons of mass destruction should also be considered.

5. Distribution Planning Products

The products of successful distribution planning are distribution plans that are articulated in the annexes and supporting plans of a combatant commander's OPLANs and OPORDs. Combatant command distribution plans must guide the planning of other supporting commands and organizations

within the Department of Defense, as well as external departments, agencies, and HNs that will be supporting the combatant command. Appendix A, "Commander's Checklist for Global Distribution of Material," contains a generic list of issues or questions that distribution planners should consider when they integrate distribution activities into OPLANs or OPORDs. The questions in this checklist can be used to develop a distribution appendix to Annex D ("Logistics") to an OPLAN. The commodity supply chain descriptions provided in Chapter IV, "Distribution Execution," provide a basis for development of distribution plans to ensure that critical warfighting materiel is identified, available, and can be placed into action by joint forces at the required time and place.

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