

TRADOC PAMPHLET 525-200-6

# COMBAT SERVICE SUPPORT



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**US ARMY BATTLE DYNAMIC CONCEPT**

1 AUGUST 1994

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## FOREWORD

**The functions of logistics have not changed in many centuries. Logisticians supporting both Sun Tzu and Operation DESERT STORM had similar requirements to man, arm, fuel, fix, move, and sustain soldiers and their systems. Differences in the execution of logistical support are a result of political, economic, social, and technological changes. Successful armies recognized and adapted to this change, harnessed it to their benefit, and were ultimately victorious.**

**The U.S. Army faces the most significant period of change since the emergence of the post-World War II nuclear era. Changes in the international political system and military technology are yet to emerge in a clear, definitive pattern and will continue to have a significant impact on the Army. These changes have resulted in a changed strategic environment and a new National Military Strategy. The Army, in turn, rose to the challenge and has a new visionary concept for the 21st century: "Future Full Dimensional Operations" (draft December 1993). These changes, absorbed with history in mind, require Army logisticians to adapt, modernize, discard antiquated methodologies, and seek innovative approaches to supporting a power projection Army.**

**This document provides a conceptual framework for the accomplishment of combined arms support in the mid- and long-term. It is intended as a living document that presents emerging doctrinal ideas to support power projection. It is based on historical lessons learned and has been adjusted to fit the realities of the current world. It will require additional adjustment. The concept facilitates the type of imaginative and innovative approach required of not only the leadership in future military operations, but their supporting logisticians as well.**

**The Combat Service Support concept encompasses a number of new programs, initiatives, and modernization efforts. It continues to be influenced by the strategic, operational, and tactical levels of war. Implementation of the concept will enable logisticians and their commanders at all levels to visualize their real-time logistics posture, potential problems, and their available options. Moreover, they will have an enhanced capability to respond to changing circumstances in joint, combined/coalition, and interagency operations.**

1 August 1994

Military Operations  
**COMBAT SERVICE SUPPORT BATTLE DYNAMIC CONCEPT**

**Summary.** This concept serves as the basis for developing doctrine, leader development, organizations, and materiel changes focused on soldiers (DTLOMS) requirements and solutions for logistical operations in support of a power projection Army. Under this concept, logistics capabilities are projected to meet mission requirements over the full range of the operational continuum. This concept links the strategic to the operational level of logistics, which provides logistical power at the tactical level in the form of arming, fueling, fixing, moving, and sustaining the soldier.

activities which develop DTLOMS requirements and products.

**Suggested Improvements.** The proponent of this pamphlet is the Deputy Chief of Staff for Combat Developments. Send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) through channels to Commander, TRADOC, ATTN: ATCD-BP, Fort Monroe, Virginia 23651-5000. Suggestions may also be submitted using DA Form 1045 (Army Ideas for Excellence Program (AEIP) Proposal).

**Applicability.** This concept applies to all TRADOC

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**Chapter 1**  
**Introduction**

**1-1. Purpose.** This concept describes the capabilities the Army requires to logistically support the conduct of joint, interagency, and combined operations across the full range of military operations in support of the National Military Strategy (NMS).

**1-2. References..**

- a. FM 100-5 (Operations).
- b. TRADOC Pam 525-5 (Full Dimensional Operations) (To be published).
- c. TRADOC Reg 11-16 (Development and

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Management of Concepts).

- d. TRADOC Vision of Future Battle, 23 Sep 93.
- e. Vision of Combined Arms Support, 30 Oct 92.
- f. Concept for Split-Based Operations (To be published).

**1-3. Explanation of abbreviations and terms.**  
Abbreviations and special terms used in this concept are explained in the glossary.

## Chapter 2 Overview

**2-1. Why the concept is needed.** In order to comply with the NMS, the Army must generate, deploy, and sustain forces capable of rapid and decisive victory, across the operational continuum. Recent operations such as URGENT FURY, JUST CAUSE, DESERT STORM, and RESTORE HOPE have demonstrated the Army's capability to deploy when required. These operations, however, underscored the deficiencies of a logistical support scheme that must be as responsive and capable as the forces it supports. The Army remains the nation's preeminent land-based strategic force and, as such, will be increasingly called upon to provide sustainment operations in joint, combined/coalition, and interagency environments. Army logisticians must be fully prepared to respond to these worldwide challenges.

### 2-2. Assumptions.

a. **Threat.** Conditions or events that would cause forces to be employed will challenge Army forces. Such conditions include drug trafficking, natural or man-made disasters, regional conflicts, civil wars, insurgencies, and intimidation by irrational and often ruthless extremists who have available for their use all types of state-of-the-art weapons and systems, including weapons of mass destruction.

b. **The Reserve Component (RC).** Both the U. S. Army Reserve (USAR) and the Army National Guard (ARNG) will be relied upon by the Active Component to provide a number of logistical functions in support of combat operations and Operations Other Than War (OOTW). Given a shrinking force structure and declining defense expenditures in general, this reliance on RC logistical capabilities may increase in the future. The RC will continue to maintain a significant portion of the Army's logistics force structure.

c. **Civilians in support of military operations.** Depart-

ment of Defense (DOD) civilian personnel, personnel from non-DOD organizations, civilian contractors, and elements of civilian host nation support organizations will provide an ever-increasing number of capabilities in support of military operations. Use of these non-uniformed, or nontraditional, support personnel will require their integration into command and control structures, and logistical support frameworks.

d. **Joint, combined and coalition, and interagency operations.**

(1) **Joint operations.** Missions that require the projection of Army forces are intrinsically joint operations. Joint force logistical interoperability is crucial to the success of logistic operations. Further, joint force logistics must be able to use and integrate national intelligence systems linked into joint command, control, and communication systems. During peacetime, the Army must properly train, structure, and equip its units to prepare for joint logistical operations in support of the projection of U.S. forces.

(2) **Combined and coalition operations.** Combined and coalition operations will require a different logistical integration process than the one used during the Cold War. Historically, the provision of logistics support has been predominantly a national responsibility. Multinational efforts, designed to streamline the focus of combat power, are supplanting national doctrines. The Army can expect combatant commanders to be more prone to exercise their directive authority and ask national commanders to take on logistics missions in support of the combined or coalition force. Given the demands of these types of operations, interoperability between forces of different nations in tactics, techniques, procedures, and equipment will be required. Logistics automation and communications must support these efforts. While standardization is the ideal, it is rarely fully achievable; therefore, interoperability efforts must continue where they are feasible and practical. Combined forces and coalitions must capitalize on the unique strengths of individual members who can best provide specific support to deploying forces.

(3) **Interagency operations.** Army forces may operate in support of non-DOD civilian agencies in achieving objectives associated with the economic, political, and informational elements of national power. These interagency operations may require support from the Army's logistics system.

e. **Technology.** The Army will continue to leverage existing and emerging technological capabilities to enhance support operations across the full range of military operations. Application of technologies to enhance and assure communications are vital to the concept.

### 2-3. Limitations.

a. Successful long-term implementation of this concept is contingent upon assured communications/automation, which will impact total asset visibility, in-transit visibility, and split-based operations, for all logistics elements.

b. Logistical support will be influenced by the resources available in the area of responsibility (AOR), including materiel prepositioned ashore or afloat. The level of infrastructure development (i.e., port facilities, intratheater lines of communications, and other facilities) will measurably affect logistical operations and force closure into the AOR. Resources not available locally must be brought into the AOR, committing scarce strategic lift resources.

c. Maximum use of available strategic air and sea assets will be achieved through the allocation of lift to modular logistics elements. In order to conduct logistics operations during OOTW, logistics capabilities may be deployed by any mode of transportation.

### Chapter 3 Concept

3-1. Overview. Rapid force projection from Continental United States (CONUS), extended lines of communication, and potential forcible entry into logistically bare-based areas of operations require Army development of a logistics system that is versatile, deployable, and expandable. The Army logistics system must be as capable as the joint and combined forces, to include Special Operations forces, it supports. While Army logistics has undergone a degree of modernization in recent years, the effort has focused on improving the efficiency of our current operating systems. Logistics paradigms developed to support the general conflict mold of the Cold War are now inadequate and have caused the development of a number of improvements. But the Army's historical mind-set of echeloned support and structured tooth-to-tail ratios has little place in light of the new strategic environment. For this reason, Army logisticians must examine existing paradigms. The challenge is to keep those useful practices, and to establish new ways of doing business where needed. As a minimum, Army logisticians should consider the creation of a system in which the realities of force projection necessitate the weaving of the current strategic, operational and tactical levels of logistics into a seamless continuum. In this manner, the impetus of Army logistics will shift from echeloned support to projecting and sustaining force capability.

3-2. Concept description. Defining the term "logistics" as it is applied in this concept is critical. It includes both the

deployed logistics force and the sustainment base. Its purpose is to maintain readiness and sustain Army forces in combat operations. Therefore, the holistic purpose of logistics is to support mobilization, deployment, reception and movement, sustainment, reconstitution, redeployment, and demobilization of military forces. In this sense, logistics also includes such functions as manning the force, financing the force, and providing health services for the force. The orientation of logistics must remain on soldiers and their weapon systems. Consistent with military operations, logistics operates in a continuum across strategic, operational, and tactical levels. It generates power at the tactical level in the form of manning, arming, fueling, fixing, moving, and sustaining the soldier.

a. Strategic logistics. Strategic logistics is a subset of the power of the nation. It includes the nation's industrial/economic base and Department of Defense's link to its military forces. The strategic level is primarily the purview of the DOD, the individual services, and non-DOD governmental agencies, with support from the private sector. The strategic logistician's focus is on requirements determination, personnel and materiel acquisition, prepositioning, stockpiling, strategic mobility, and reconstitution in support of force mobilization, deployment, redeployment, and demobilization.

(1) Strategic deployment. Strategic agility requires the development of a dynamic deployment capability. This capability begins at the posts, camps and stations; transitions through routes to ports of debarkation; and culminates with the discharge, reception, and onward movement of forces within the theater of operations. Posts, camps and stations must become launch platforms for force projection. Installations with deployable units must treat deployment as their primary mission, and the installations themselves must be equally as capable of short notice response as the force they support. Likewise, installations selected as Reserve Component mobilization stations must become launch platforms for their units and must respond with the sense of urgency the Joint Force Commander requires. As installations perfect their launch capabilities, attention must continue to be paid to the commercial transportation infrastructure, to include the declining U.S. maritime industry, in CONUS and abroad. Under the guidance of the United States Transportation Command (USTRANSCOM), successes like the Civil Reserve Air Fleet (CRAF), the Contingency Response (CORE) Program, and the Sealift Readiness Program (SRP) must continue. These programs must consistently exercise their partnership with the civilian sector. Likewise, the critical infrastructure assets of ports, highways, airfields, and railroads in support of the national defense must be strengthened. Requirements for sophisticated strategic mobility capabilities and responsive transportation systems must be continually advocated and

refined.

(2) **Army Mobility Position Statement.** The Army mobility requirement is to provide, from CONUS, a sustainable, tailorable corps, consisting of five divisions capable of early entry into an overseas theater. The lead brigade of this force must be on the ground by C+4, and the lead division by C+12. A prepositioned heavy brigade must be available by C+15. Two heavy divisions in the corps must arrive from CONUS and close on the theater by C+30. A full five-division corps and a supporting corps support command, is required with closure by C+75. Functional training is a key component of this concept. Emergency Deployment Readiness Exercises (EDRE) by sea, Joint Logistics Over the Shore (JLOTS) operations, etc., are training opportunities equivalent to National Training Center (NTC) rotations for logistics units and are essential to ensure this capability is available when required.

b. **Operational logistics.** Operational logistics ties tactical requirements to strategic capabilities in order to accomplish operational plans. It encompasses support required to sustain joint/combined campaigns and other military activities within an area of responsibility. Military units, augmented by DOD civilians, contractor personnel and available host nation resources, make up the organizational structure of elements found at this level. The primary focus of the operational logistician is on reception, discharge, onward movement of forces, positioning of facilities, materiel management, movement control, distribution, reconstitution and redeployment.

(1) **Seamless logistics system.** The linkage between strategic and operational logistics operates in both directions and all but eliminates distinct boundaries. The operational logistician places requirements on the strategic level and the strategic logistician fills them. Current doctrine dictates that the Army force commander is the integrator of all tactical and operational level organizations in his area of responsibility, and defines logistical priorities for support to Army forces. The challenge to the operational logistician is to make the strategic-operational-tactical linkage transparent to the user.

(2) **Civilians in support of military operations.** Non-uniformed and/or non-traditional support personnel, from DOD organizations, non-DOD governmental agencies, and the civilian sector, will deploy in support of future operations. This has major command, control and logistical support implications.

(a) To support the Joint Force Commander's logistics mission, elements of the strategic logistics base, such as the Army Materiel Command (AMC), the Defense Logistics Agency (DLA), U.S. Transportation Command

(USTRANSCOM), the Defense Finance and Accounting Service (DFAS), and U.S. Army Medical Materiel Command (USAMMC), Army and Air Force Exchange Service (AAFES), and possibly others, may deploy into a contingency theater.

(b) Additionally, a flexible, theater-level sustainment support activity, called the Logistics Support Element (LSE), will be deployed into a theater to enhance "green suit" logistical capabilities. The LSE will consist of highly skilled and properly equipped DOD/DA civilian technicians, private sector contractors, and elements of Army Active and Reserve Components. It will provide contract oversight and administration of Forward Repair Activities (FRA) and deployed Active and Reserve Combat Service Support (CSS) sustainment forces. Additionally, the LSE will provide the theater a rapidly deployable, forward presence organizational structure upon which to build repair capabilities and technical assistance for critical weapon systems. The LSE minimize the retrograde and expedite the repair of critical repairables, shorten the supply pipeline for critical line replaceable units (LRU) and shop replacement units (SRU), thereby optimizing sustainment support.

(3) **Host Nation Support (HNS).** An objective area's infrastructure is a key consideration. An immature, bare-based or nonexistent infrastructure will be taken into consideration in the development of the operational commander's campaign plans. After DOD identification of likely areas of deployment, Joint Commanders will examine, through the logistics preparation of the theater (LPT) process, the adequacy of facilities and resources such as communications, airfields, seaports, road/rail networks, power grids, warehousing capabilities, natural fuel reserves, banking facilities, medical capabilities, water, and food. Inadequacies identified in the infrastructure as a result of this analysis can be directed to appropriate national and coalition agencies. A concerted effort can be used to identify those missions and functions that can be satisfied by the private sector. Capitalizing on available HNS is one means of resolving support shortfalls without placing additional demands for deployment of CSS units. Efforts must be made to prenegotiate host nation support agreements that fulfill the unified commander's requirements. Additionally, logistics planners must consider the early deployment of host nation support negotiation and contracting capabilities.

c. **Tactical logistics.** Tactical logistics is the synchronization of all logistics activities required to sustain soldiers and their systems. Military units, organic to the deployed tactical force, make up the bulk of the logistics organization at this level. However, the organization may include some support from DOD civilians and civilian contractors. The

focus of the tactical logistician is on the logistics sinews of manning, arming, fueling, fixing, moving, and sustaining the soldier and his equipment.

(1) Focus of the tactical commander. At the tactical level, regardless of the force deployed, tactical commanders will focus most of their attention forward, while assuring proper links are maintained with the strategic/operational levels of logistics. In some cases, tactical commanders will be responsible for both operational and tactical logistics missions. In other scenarios, such as in Operation JUST CAUSE, the preponderance of support at the operational level will remain in the CONUS base. In most cases, however, there may very well be a mix of strategic, operational, and tactical level logistical units operating at the tactical level. While planning, tactical commanders must understand that the logistics capabilities built at the strategic and operational levels will, in large part, determine the flexibility and responsiveness at the tactical level. However, tactical logisticians must improvise to solve problems not anticipated at the strategic and operational levels. Depending upon the needs of the force deployed, the tactical logistician may be required to perform other functions, normally found at the operational level (i.e., personnel replacement, finance services, postal, and port operations). However, this must be kept to a minimum.

(2) The impact of technology on the tactical level.

(a) Recent innovative demonstrations of digitized communications in support of Force XXI exercises will undoubtedly have a profound impact on Army logistics. This "digitization of the battlefield", demonstrated with a FORCE XXI Battle Command Equipped unit at the National Training Center (NTC), allows all elements of a combined arms unit to share a common, accurate picture of the battlefield relevant to the level of command. Digitized communications linkages across battlefield operating systems (BOS) allow the commander an unprecedented situational awareness of enemy and friendly elements, a shorter decision cycle, and a capability for extremely rapid and decisive action against the enemy. Future tactical units will be able to operate with significant advantages over the enemy (in terms of lethality, survivability, and tempo), and may not necessarily operate within the parameters of current doctrine.

(b) The impact of FORCE XXI Battle Command on logistics doctrine, organizations, and materiel is not yet fully known. FORCE XXI capabilities will permit an unparalleled level of logistics support, allowing extremely efficient materiel distribution and maximum use of available resources. With digitally-linked tactical and supporting organizations, the historical hierarchical echeloning of logistics elements (and their respective

"stockpiles" of materiel) at the company, battalion, brigade, and division levels may no longer be relevant. Full asset visibility at the tactical level will allow the proactive redirection of supporting assets when and where they are needed. Logisticians will be able to assess the logistical "health" of supported organizations and synchronize support to the plans and operations of the tactical commander. Company teams will be able to provide accurate, detailed, timely digital logistical status reports which will allow staff officers to build a composite picture of the status of supported units and support assets alike. All logistics assets (company trains, maintenance teams, combat trains, field trains, etc.) will routinely report position location and their status to provide the logistics staff officer an accurate picture of their assets and their efforts. Asset visibility will become a reality, negating a need for manpower-intensive logistical "bookkeeping tasks", and staffs will be able to concern themselves with proactive, as opposed to reactive, management by exception. Improved status updates from supported units will permit better forecasts of supply requirements and allow a greater capability to logistically weigh the battle than ever before. For the first time in history, the provision of logistical support will have the capability to become truly anticipatory in nature.

(c) Tactical-level logistics will be less manpower intensive. Timely and accurate reporting, coupled with asset visibility across the battlefield, minimizes requirements for materiel and supervisory redundancy. During operations, digital capabilities will minimize human intervention, yet allow the allocation of the proper support, at the appropriate place and time. Recovery and maintenance assets (provided with position location equipment) will be dispatched precisely to locations needed. The evacuation of casualties will be directed to the medical facilities with sufficient capability and capacity. Logistical packages (LOGPACs) can be specifically tailored to unit needs, available transportation allocated accordingly, and sent individually to unit locations, if desired. Link-up with tactical units does not have to occur at pre-determined fixed rendezvous locations, but can occur "on the fly". Improved knowledge of the friendly and enemy situation, shared between the Tactical Operations Center (TOC) and the Combat Trains Command Post (CTCP), will permit forward deployment of logistics assets, improving logistics response times by shortening the distance needed for travel, yet maintaining a safe distance based on the current threat situation. With the same level of situational awareness as tactical unit commanders, the commanders of logistics units will be able to fully ensure their organizations are synchronized with tactical schemes of maneuver.

(d) Use of Force XXI systems will allow greater survivability and less redundancy of logistics assets. Dispersion can be maximized, with a consequent reduction

in targeting and indirect fire vulnerabilities. Individual or small groups of LOGPACs, directed to specific points on the battlefield, will negate the need for the movement of large convoys which invite targeting and attack.

(3) Determining the proper mix. During preparation and planning for contingency operations, the most difficult challenge is in the determination of the appropriate mix of Active, Reserve Components, contractor, and HNS elements to support the force. Modular logistical organizations will help the tactical logistician in achieving the appropriate mix. Moreover, an increased presence of contractors and HNS elements may be used to minimize deficiencies in support operations. The key to proper execution, however, is the phasing of these elements into the theater of operations. Commanders and planners will create support structures to meet the initial logistic needs of the deploying force. These support forces must be sufficiently flexible to allow support across the operational continuum. Experience with deployment, employment, and redeployment operations has demonstrated the need for streamlined logistics command and control structures at this level.

### 3-3. Required capabilities.

a. Deployability. The future logistics system must place a premium on efficiency without compromising effectiveness. The most effective mix of Active and Reserve Components, DOD civilian and private-sector contractor personnel must be assembled and deployed to sustain the force. Some logistical organizations may be multifunctional and capable of performing support missions across the full range of military operations. DOD civilian and civilian-sector contract technicians will be present throughout the area of operations. When appropriate, host nation and contingency contracted support will augment or replace military support operations, freeing scarce force structure for other commitments. Also, support to other services and combined/coalition forces is a key facet of planning and resourcing for support and sustainment.

b. Sustainability. The future logistics system will leverage existing and evolving technologies to enhance the capability to generate, project, and sustain military forces. Improvements in the capability of rapid strategic airlift and sealift will facilitate the global projection of military power.

c. Automation and communications. Automation and communications are the links that hold together the logistics continuum. New automation and communications technologies and procedures must be leveraged to support force projection as well as joint and coalition operations. Improved communications (to include the use of satellites) for logistics automation will allow the processing of administrative functions at the strategic level, leaving only

highly mobile tactical automation in the tactical and operational levels to concentrate on analytical information and decision support systems (to include artificial intelligence applications). Source data automation and net-worked systems will permit logistical decision makers at all levels to anticipate rather than react to problems. Automation and communications will link vendors and transportation elements such as freight forwarders directly to the Army's logistics systems and provide better support for tactical units in the field. The logistics pipeline, stockage levels and necessary requisitioning will be reduced because of the improved asset visibility available at all levels of logistics. Three of the major initiatives which will achieve these required capabilities are:

(1) Total Asset Visibility (TAV). TAV is the capability which provides logisticians at all levels with a near real-time picture of asset availability throughout the supply system. Expansion of the current TAV concept will facilitate efficient management of assets and rapid distribution of materiel, people, postal effects, etc. TAV will allow overall stockage levels to be reduced without a reduction in materiel readiness or availability. Additionally, in-transit visibility (ITV) will enable the commander to know the location of resources in transit and to allocate them based on their projected arrival. Personnel readiness managers will be able to provide commanders a real-time personnel estimate of the situation, and financial managers will be able to provide commanders and DOD/Congressional overseers with real-time financial information necessary for efficient programming of resources. TAV will provide logisticians with the information needed to make decisions to rapidly divert in-transit assets to the most critical destination.

(2) Automated Identification Technology (AIT). AIT is a family of devices used for automatic identification, data collection, keyless data entry, and data processing, storage and retrieval. AIT devices allow source data automation to facilitate real-time automation by providing rapid and accurate acquisition, retention, and retrieval of source data. AIT devices include bar code scanners, voice recognition devices, magnetic strip cards, laser cards, radio frequency tags, and other similar equipment. AIT can be used to track items from origin (vendor or depot) to destination (tactical unit). They can be used to enhance in-transit visibility by automatically reporting cargo arrival and departure at critical points in the distribution system as well as providing "in-the-box visibility" of containers and air pallets. These capabilities will allow rapid location and distribution of critical supplies and equipment. AIT can also be used in a multitude of other situations to improve the arm, fuel, fix, move, and man functions on the battlefield, including the entire range of Personnel Service Support (PSS) functions.

(3) Split-Based Operations (Split Ops). Improved and assured communications will allow routine management functions to be accomplished in CONUS while critical wartime functions can be projected forward early in an operation. For example, part of the Corps Materiel Management Center (CMMC), which could include parts of a Corps Movement Control Center (CMCC) and a Personnel Management Center (PMC), can remain in CONUS or its peacetime forward-presence location, while force projection cells (i.e., Forward CMMC/CMCC/PMC) deploy to an area of operations with the force they support. The rear CMMC/CMCC/PMC would continue to support the stay-behind force while concurrently interfacing with the deployed cells to provide the required support forward. Expansion of the split ops concept will provide critical wartime functionality like readiness management through personnel and casualty reporting, local procurement and asset visibility on a notebook/laptop computer linked to CONUS by assured communications. The split ops capability also allows for the modular growth and tailoring of the logistics elements deployed in support of the force that is being projected. Split ops, however, is an objective capability which can only be achieved through greatly improved communications capability which integrates command, control and data management functions within the theater as well as from the theater to CONUS.

(4) Space-based capability. Army logistics will expand the use of space-based systems far beyond current levels. Additional applications of space-based technologies will significantly upgrade the speed and accuracy of logistics information available to commanders.

d. Modular design. The requirement to deploy from a cold start to anywhere in the world, with a force that may range from a company to a reinforced corps, will complicate the requirement to provide the appropriate CSS organizations with the necessary capabilities at the proper time. To minimize complications, modularly designed logistics units may be employed. Modularity will enhance the Army's ability to rapidly respond to a wide range of global contingencies with a force projection of required functions and capabilities. Modularity will provide force elements that are interchangeable, expandable, and tailorable to meet the changing missions and needs of the Army. These force elements will mirror the functional capability of the organizations from which they originate, and are geared toward the combat commander's vision and intended outcome. Planners and commanders can mix and match support structures as required to supplement forward presence to meet the logistical challenges of discharge, reception, onward movement, and sustainment of a deploying force and yet be flexible enough to support across a broad logistics spectrum. Use of modularly designed force elements may require expansion of automated data fields,

such as Unit Identification Codes (UIC), Department of Defense Activity Acquisition Codes (DODAAC), and others. Expanding identification capabilities will allow modularly designed sub-organizations to be identified as deployable modules, facilitate their placement in Time Phased Force Deployment Lists (TPFDL), and differentiate them from their parent organizations. In addition to modularly designed units, the capability provided by contracted Logistics Civil Augmentation Capability (LOGCAP) may provide initial and continuing base operations support to the deploying force. For large formations, experience with deployment, employment, and redeployment operations shows the need to scrutinize the logistics command and control (C2) structure at the Theater Army force level, especially in an environment of modularly designed logistics units.

e. Prepositioning Army Reserve Stock. It is essential for the Army to have a logistics capability that deploys and sustains contingency and reinforcing units over an increasingly shorter time frame. A coordinated strategy of airlifted, sealifted, and forward prepositioned stocks, both ashore and afloat, provides for a force projection capability, permitting a reduction in forward deployment requirements and a more efficient and rapid deployment flow. Prepositioned Army reserve stock and floating sustainment capability, configured to support selected force deployments and positioned in selected overseas regions for initial support, kept afloat for rapid response, and stored in CONUS for reinforcement, will help strategic warfighting sustainability. To accomplish logistical missions across the full range of military operations, including support of non-DOD agencies, the Army must reexamine its policies, requirements determination process, and positioning decisions to provide for a force projection capability that is effective, cost efficient, and flexible. Major changes in the Army's reserve stockage policy will affect how we plan and sustain operations. The most significant of these changes is the delinking of Army reserve and operational project stockpiles from the CINCs. AMC and the Office of the Surgeon General (for Class VIII) will assume roles as the Army's managers of all Army reserve and operational projects stocks, providing the Army central management oversight and, more important, the flexibility to rapidly posture stocks based on the geopolitical environment. One of the key elements of this program is the use of prepositioned ships. The Army envisions a prepo fleet capable of delivering a heavy brigade, port opening capability, and initial supporting theater stocks to a regional contingency by C+15. The use of prepositioned ships, together with the reallocation of Army reserve stocks, will greatly increase the Army's ability to rapidly respond to contingency requirements.

## Chapter 4 Implications

### 4-1. Doctrine.

a. This concept will affect logistics doctrine at all levels. Emerging terms and concepts will require doctrine writers to update and modernize doctrinal publications to reflect the vision of the logistical planners. Doctrine must provide common, unifying terminology and establish procedures that will facilitate task organization and the tailoring of logistics forces across the operational continuum. Logistics doctrine must emphasize the joint and combined nature of logistics operations and be linked to and consistent with emerging joint doctrine.

b. The following terms and concepts, not all-inclusive and subject to change, should be considered for inclusion in the appropriate logistics doctrinal publications:

- AC/RC Mix
- Automated Identification Technology (AIT)
- Anticipatory Logistics
- Assured Communications
- Civilian Support on the Battlefield
- Combined Logistics
- CSS Synchronization
- Distribution Synchronization
- Force Projection
- Host Nation Support (HNS)
- In-Transit Visibility (ITV)
- Joint Theater Centralized Distribution
- Lines of Communication (LOC)
- Logistics Command and Control (Log C2)
- Logistics Preparation of the Theater (LPT)
- Modular Design of CSS Units
- Movement Synchronization
- Personnel Management Center (PMC)
- Prepositioning
- Split-Based Operations
- Total Asset Visibility (TAV)
- Central Control and Management of Logistics
- Logistics Support Element (LSE)
- Real-Time Automation
- Reconstitution

c. The above terms and concepts will be defined, developed, and communicated across the logistical spectrum.

### 4-2. Training.

a. Logistics forces require standardized, realistic joint and combined training programs to develop effective rapid deployment and sustainability capabilities at all levels.

Logistics units must continually train to operate in coordination with elements of other services, agencies and nations. Joint and combined training will ensure adequate knowledge of tactics, techniques, and procedures of other services or countries. The logistics units must coordinate training and readiness cycles with key elements of other services and allied coalition forces. Common training in many logistics skills, especially for support to joint operations, must be a routine part of the logistics force training. The use of simulations, accomplished on the same automation and communication systems already used by logisticians, should be maximized, along with the application of models, and other training exercises. EDRE by sea, JLOTS operations, etc., can be made training opportunities equivalent to National Training Center (NTC) rotations for logistics units and are essential to ensure successful implementation of the Army Strategic Mobility Plan (ASMP).

b. The Army should identify military skills identical to occupations in the civilian sector. Individuals with specific skills, such as morticians, financial managers, crane operators, maintenance personnel, and commercial telecommunications experts, could be banked for the national defense. The Army should locate, recruit, certify, and register such personnel for activation and service in a crisis. The Army's mobilization base will be enhanced by using these programs. Even in the face of the increasing use of multifunctional logisticians, retention of a number of military subject matter experts will be required.

### 4-3. Leader Development.

a. The Army must train leaders at all levels to adapt to the changing global situation. The Army should aggressively train in the joint environment and assess requirements for coalition training on a routine basis. A heavier reliance on the industrial base suggests that the services combine and expand the Training With Industry (TWI) Program. Leaders should be concerned with enriching peacetime training, thereby enhancing readiness for deployment.

b. Quality soldiers and confident, competent leaders remain the Army's most valuable, yet perishable commodities. Leader development is ultimately the overmatch capability that will ensure our Army remains the world's dominant land power and a viable component of the Nation's strategic force. The Army must continue to invest in long-term programs to groom future leaders. Benchmarking from productive industry management strategies will help Army processes become more efficient. Training Army logisticians to anticipate requirements will be key to battlefield success. The primary goal remains: to enable soldiers to fight effectively and survive on the

battlefield.

#### 4-4. Organizations.

a. The ability to tailor logistics forces with the necessary capabilities is essential. The logistics force structure must be totally responsive to the Joint/Combined Force Commander. The support will grow from a nucleus of established logistics functional capabilities to meet the requirements of the supported force. As the deployed force grows, the logistical structure gains required functional capabilities and expands. These logistics forces will be modularly designed, which should make them more agile, more capable, and easier to be trained. Established habitual support relationships, however, should be used when possible.

b. The logistical system must be tailored across the joint, coalition, and commercial spectrum. Force tailoring is a function of logistics preparation of the theater, the identification of Mission, Enemy, Troops, Terrain, and Time (METT-T), determination of strategic lift availability, evaluation of prepositioned assets and an analysis of host nation support capability. A key consideration is the selection of an appropriate force mix for the mission, and sequencing the flow of forces to permit simultaneous deployment, employment, and sustainment.

c. The use of DA/DOD civilians and civilian firms for technical support will expand, with contractors performing specific functions such as port operations, logistics infrastructure construction, and weapons system maintenance. A flexible theater level sustainment support activity, a component of the AMC, called the Logistics Support Element (LSE) will deploy into a theater of operations to provide logistics support.

#### 4-5. Materiel.

a. The Army must continue to exploit technological opportunities to design, acquire and field more capable weapons systems and support systems to achieve higher productivity and a more efficient and effective force. Embedded software, to include diagnostics, will enhance materiel reliability and maintainability. Robotics and unmanned vehicles will remove soldiers from high-risk situations.

b. The Army must improve its global automation and communications capabilities. Assured logistics communications supporting high data transmission rates are essential to achieve TAV. Technological advances in the communications arena must be concurrently designed with future automation in mind. Automation and communication are inextricably linked. Distributed communica-

tions networks and enhanced command, control, communications, and automation will increase the ability for dispersed operation over greater distances.

c. The Army should consider interoperability with DOD systems in the combat/materiel developments processes. Simple, reliable and maintainable materiel systems will enhance joint power projection capability. The Army must design equipment to operate more efficiently. Reducing ammunition, fuel, and maintenance requirements will assist in decreasing logistics support requirements for combat forces. Sophisticated, real-time cost information and support systems (such as the Finance Battlefield System (FBS)) will enable the Army to both identify inefficiencies as well as demonstrate assumed efficiencies.

#### 4-6. Soldier.

a. The Army is firmly committed to a single, high standard of preparedness for the total force. Soldiers and their supporting logisticians must continue to train in the most realistic battlefield conditions possible. The Army needs to lighten the soldier's combat load and improve individual equipment, to include chemical biological protective equipment. Items like rations, water, and shelter are required to help maintain high morale among soldiers. The Army must continue to improve morale and welfare support for deploying soldiers; i.e., postal and legal support, laundry/shower capabilities, and family support systems. The health of soldiers must be maintained at the highest level. Improvements are required in forward surgical care and other life-sustaining techniques, and methods to minimize combat-related stress require serious scrutiny.

b. The Soldier Modernization Program (SMP) and the Soldier Enhancement Plan (SEP) are exploring improvements in all aspects of a soldier's environment, including personnel services. Output from these programs must continue to be integrated into doctrine, training, leadership development, organizations, and materiel acquisition programs to guarantee a cohesive soldier support program.

### Glossary

AAFES	Army and Air Force Exchange System
AC/RC	Active Component/Reserve Component
ACR	armored cavalry regiment
AIEP	Army Ideas for Excellence Program

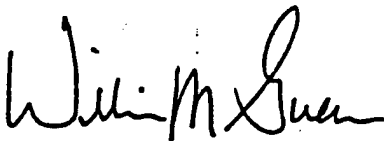
AIT	automated identification technology	ITV	in-transit visibility
AOR	area of responsibility	JLOTS	joint logistics over the shore
AMC	Army Materiel Command	LOC	line(s) of communication
ARNG	Army National Guard	LOGCAP	logistics civil augmentation capability
ASMP	Army Strategic Mobility Plan	LOG C2	logistics command and control
BOS	battlefield operating system	LOGPAC	logistical packages
CIN	Commander in Chief	LPT	logistics preparation of the theater
CMCC	Corps Movements Control Center	LRU	line replaceable unit
CMMC	Corps Materiel Management Center	LSE	logistics support element
CONUS	Continental United States	METT-T	mission, enemy, terrain, troops, and time available
CORE	Contingency Response Program	MMC	Materiel Management Center
CRAF	Civil Reserve Air Fleet	NMS	National Military Strategy
CSS	combat service support	NTC	National Training Center
CTCP	combat trains command post	OMA	Operations, Maintenance, Army
C2	command and control	OOTW	operations other than war
DA	Department of the Army	PMC	Personnel Management Center
DBOF	defense business operating fund	PSS	personnel service support
DFAS	Defense Finance and Accounting Service	RC	Reserve Component
DLA	Defense Logistics Agency	SEP	Soldier Enhancement Plan
DOD	Department of Defense	SMP	Soldier Modernization Program
DODAAC	Department of Defense Activity Acquisition Code	Split-Ops	split-based operations
DTLOMS	doctrine, training, leader development, organizations, materiel, and soldiers	SRP	Sealift Readiness Program
EDRE	emergency deployment readiness exercise	SRU	shop replacement unit
FBS	Finance Battlefield System	TAV	total asset visibility
FRA	forward repair activities	TOC	tactical operations center
HNS	host nation support	TPFDL	time-phased force deployment listing
		TWI	training with industry

UIC	unit identification code	USAR	United States Army Reserve
USAMMC	United States Army Medical Materiel Command	USTRANSCOM	United States Transportation Command

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