

CHAPTER 7

**FUTURE OPERATIONS
OF THE QUARtermaster CORPS**



INTRODUCTION

The QMC sustains soldiers. This has been proven during fairly recent operations, such as Urgent Fury, Just Cause, and Desert Storm, and throughout the winning of the cold war. The Army is being reshaped and downsized to adjust to changes in our national strategy. The QMC of the future will continue to provide the total spectrum of support to sustain soldiers and their systems.

QMC FOCUS

The QMC has supply and field services responsibilities at the strategic, operational, and tactical levels of logistics. See Figure 7-1.

Strategic Level

At the strategic level, the QMC acquires supplies from the source (Defense Logistics Agency

(DLA), manufacturers, suppliers, other nations) and coordinates their displacement to the theater of operations. Positioning of field service support is also important at this level.

Operational Level

At the operational level, the QMC allocates and distributes resources to support the tactical logistics functions. These are manning, arming, fueling, fixing, moving, and sustaining soldiers and their systems. Contingency operations by their very nature will be joint and, very likely, combined or interagency operations. QMC doctrine will encompass all these probabilities. Emphasis must first be on effective (successful) logistics operations. Emphasis is then placed on further refinement to identify the most efficient means to mission accomplishment.

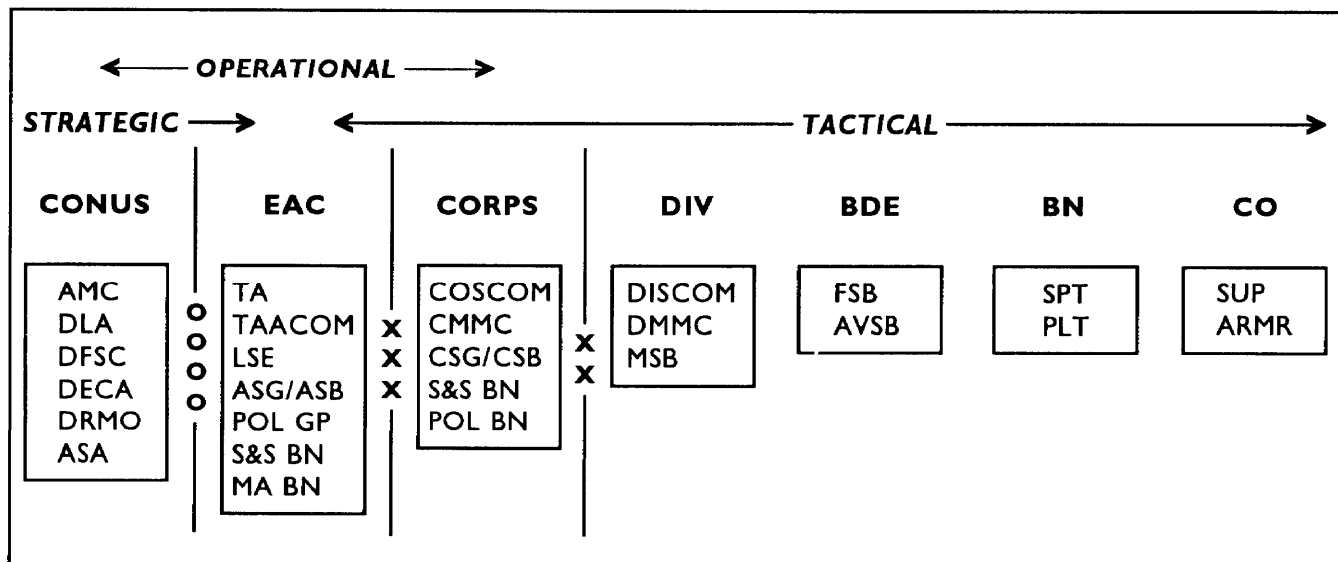


Figure 7-1. Supply and field services continuum

RESPONSIBILITIES

In most scenarios the QMC will have theater-level (to include joint) responsibility for various distribution and field service functions. There are implied responsibilities as well.

Improved standardization between the services for those functions for which the QMC has total force support responsibility is required. The QMC will actively participate in the creation of joint doctrine (to include interagency). RSI with allied forces will continue to be promoted.

There is a virtual explosion of emerging technology in QM areas of interest. This must be fully exploited. Automation, satellite communications, distribution techniques and equipment, and significant improvements in the quality of life for our most-forward-positioned soldiers are near-term capabilities that are being pursued. Also, development of food items using thermostabilization, freeze-drying, dehydration, and irradiation technology will yield a longer shelf life. Many field service functions will take advantage of advancements being made in containerization. This will enhance deployment and forward support to the soldier. Shrink- and vacuum-pack technology can reduce the bulk of a wide range of items. This will reduce storage space and shipping and handling costs. This technology will also provide an enhanced level of protection to the material. Implementation of a "single fuel on the battlefield" policy will be pursued. Use of emerging technology to improve fuel testing, oil and lubricants, refuel-on-the-move operations, and hot refueling operations will continue. In repair parts resupply, use of automation and artificial intelligence advancements will be pursued. This will allow for the provision of the needed part at the right place, in the right quantity, at the right time. Costly, ineffective layering will end.

Changes that the Army undergoes will demand more effective and efficient training programs for soldiers, leaders, and units. Downsizing of the Army, the growing use of new

technology, development of new combat service support strategies, and reductions in training support resources will cause changes in the current training system. The proposed training strategy will combine MOSs and provide generic advanced individual training. It will also refine noncommissioned officer (NCO) and officer training and provide reduced course lengths supported by distributive training. Doctrinal and training literature requirements will be reduced.

STRATEGIC-LEVEL SUPPLY AND FIELD SERVICES

Strategic supply and field service operations focus on support to the theater of operations from our economic and industrial base. See Figure 7-2 (page 7-3)

Strategic Vision

The QMC is focused on the determination of realistic, supportable resource requirements; the acquisition, management, and positioning of nationally-owned supplies and equipment; and the coordinated displacement of that materiel into the theater of operations. Supplies must be packaged for tactical transportability. They must also be configured in such a way that they can be throughput to the user with minimal additional handling in the theater of operations.

At the strategic level, required improvements in the areas of doctrine, training, leader development, organization, materiel, and soldiers (DTLOMS) are examined by the US Army Training and Doctrine Command. In addition, efficiencies or support that can be garnered from the various QM-related defense agencies must be considered. These include the Defense Fuel Supply Center (DFSC), the Defense Personnel Support Center (DPSC), and the Defense Reutilization and Management Office (DRMO).

The design of materiel to be used by supply and field services units in mission support is important. Consideration must be given to the

development of lightweight systems with enhanced capabilities and transportability characteristics. A smaller, more capable force must be developed. It must capitalize on the strengths of the Army, Air Force, Marine Corps, Navy, non-DOD agencies, and potential allies. The goal must be to provide centralized management of particular functions (reducing redundant effort).

Strategic Challenges

Detailed analysis and prioritization of potential threats are critical to decisions on where limited war reserve materiel, supplies, and equipment are positioned. Wartime sustainment will determine what should be stockpiled. Nontraditional alternatives available to compensate for the lack of a “warm” production base will also be examined.

Supply sustainment can be viewed as a four-tier system that encompasses the military and

civilian economic base. Tier one will be supplies pre-positioned in selected overseas regions (primarily with forward presence forces) for initial support. At tier two selected supplies and unit equipment will be located afloat to provide flexible sustainment support to forward presence, reinforcing, or contingency forces. The optimal composition of QM functions and capabilities to be stored afloat is a key ingredient in the force projection equation. Tier three consists of CONUS military stockpiles of supplies and equipment. Tier four is material routinely available directly from the economic base. This includes food, petroleum products, and construction supplies. When required, tier three and four stocks will be unitized or packaged in CONUS to reduce handling requirements in the theater. For example, rations should be packaged so that each pallet contains a combination of breakfast and dinner meals with adequate variety for a specified period and number of soldiers.

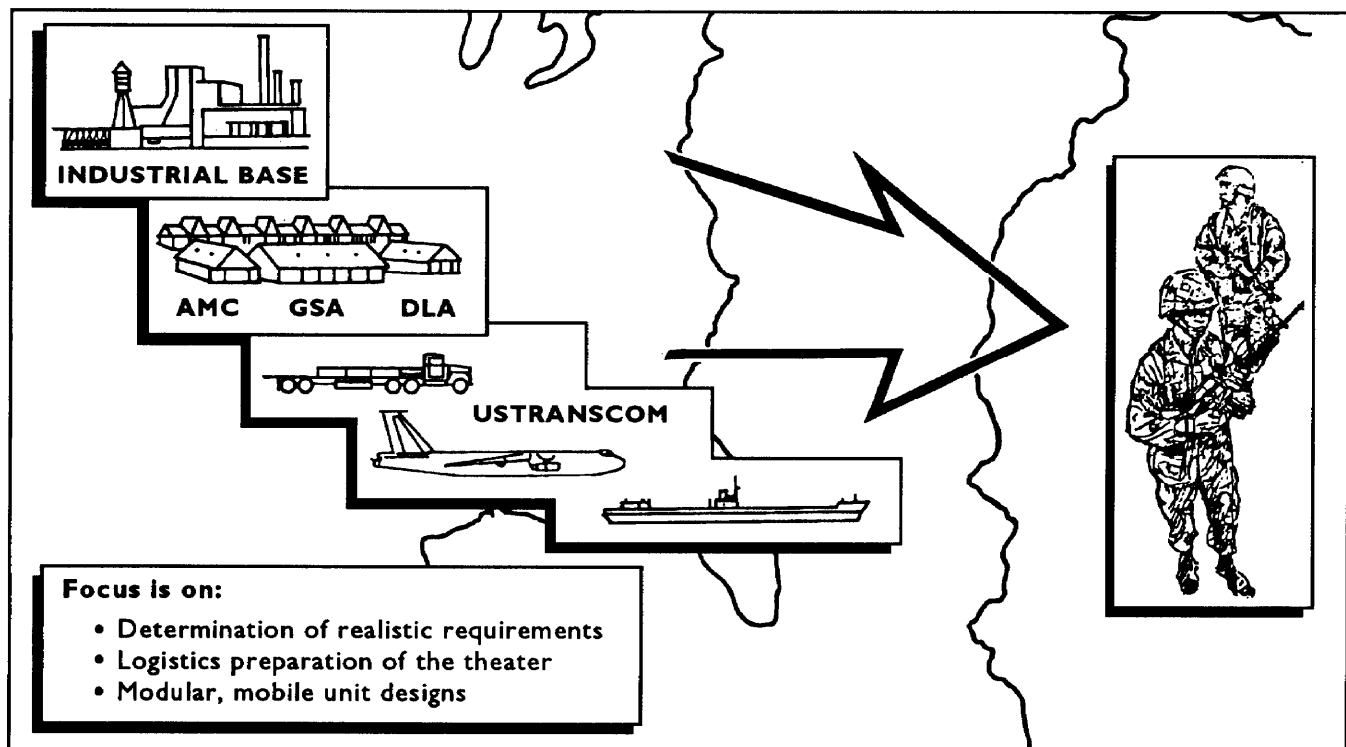


Figure 7-2. Strategic supply and field services

Responsive supply sustainment, especially when resources are constrained, relies heavily on worldwide, real-time automation and communications capabilities. These capabilities must be seamless and integrate the full spectrum of logistics functions into a single system. They must also be tailored so that unnecessary accounting, bookkeeping, and status or advice information can be suppressed during operations. This will reduce the burden on the communications systems. It will also prevent units from being burdened with large quantities of unneeded data.

Bold steps must be taken to integrate fully the supply and transportation functions into a vertically integrated distribution system. With use of enhanced communications capabilities, much of the distribution management function can be accomplished from CONUS locations. Only those management functions absolutely necessary will be deployed in the theater of operations. The initiatives in the total distribution action plan (TDAP), when carried out, will guide the development of doctrine in making the transition from peace to war. They will also provide total asset visibility and control from the origin of supplies in the economic base to their delivery to the consuming unit. This will be done by the packaging of supplies in CONUS for throughput to the supported unit. This will eliminate the need for break-bulk operations and in-theater repackaging.

A challenge facing the logistician is the proper deployment of supply and field service support. Logisticians must be able to address deployment capabilities with the operational commander to ensure that supply and field service support is provided when and where it is needed and in the proper amount. Responsive, tailorable, and multifunctional support to a force projection Army must be provided. Restructuring of supply and field services organizations will enhance this capability.

Development and training to standards which relate to overall readiness of supported units and systems is an imperative, along with the design of

systems to attain these standards. This will be important in the area of repair parts resupply.

Units and equipment must be designed to provide responsive support on an extended battlefield. They should be modular (building block principle), containerized, small, and lightweight and have an improved support capability. Increased intra-theater mobility requirements are expected on the extended battlefield. Therefore, designs will, where practical, permit both internal movement on C-130 type aircraft and external air transport (sling load) using UH-60A type aircraft.

OPERATIONAL-LEVEL SUPPLY AND FIELD SERVICES

Operational logistics is the combination of activities needed to sustain the major operations that will mean success at the tactical level. See Figure 7-3 (page 7-5)

Operational Vision

Operational logistics overlaps the remainder of the logistics continuum during the initial buildup in a theater of operations. The operational commander may, depending on the scope of the operation, assume some strategic-level logistics responsibilities. The tactical commander may, initially, have to assume some operational logistics responsibilities. The focus of operational logistics is on sustainment--reception, facilities, and distribution management and processes. Of these, the QMC is primarily involved in reception and the distribution management processes. These include acquisition, receipt, storage, control, and issue of supplies and equipment.

Operational logistics can be viewed as the bridge between strategic and tactical operations. This bridge will accommodate both of the primary QM functions--field services support to soldiers and supply support to the force. Quality of life for the soldier during transition operations will be improved. A transition complex will be established for use by arriving soldiers as they undergo

the acclimatization process. Supply support to the force will be enhanced through a variety of DTLOMS actions.

Operational-level units must be modularly designed. They must be tailorable to support deployments from brigade to corps-plus size. As force structure is developed, consideration must be given to all operational logistics alternatives. These include the extension of strategic capabilities into operational roles and expanded in-theater operations by civilian contractors and activities, normally CONUS-based. The distinction between general supply support and direct supply support will become less clear. Some of these types of units may be required to perform both functions.

Operational Challenges

Under the developing force deployment strategy, the QMC must be prepared to provide operational-level support to battalion- or brigade-sized

or larger units deploying to multiple locations. See Figure 7-4 (page 7-6).

The greatest challenge at this level will be the anticipation of tactical-level requirements and the tailoring of the right organization for a given scenario or environment. The capability must exist to execute operational-level functions on a modular basis while providing sustainment support from multiple, independent locations. This approach will conserve strategic lift by deploying only that capability required to support a given operational and tactical level of activity. And, it will allow the introduction of operational-level sustainment functions concurrently with tactical-level units.

The entire contingency force will not necessarily be deployed. As a result, QM units at all levels, theater through division, must be modular and agile. A proper mix of capabilities in the active and reserve components in support of deployments is required.

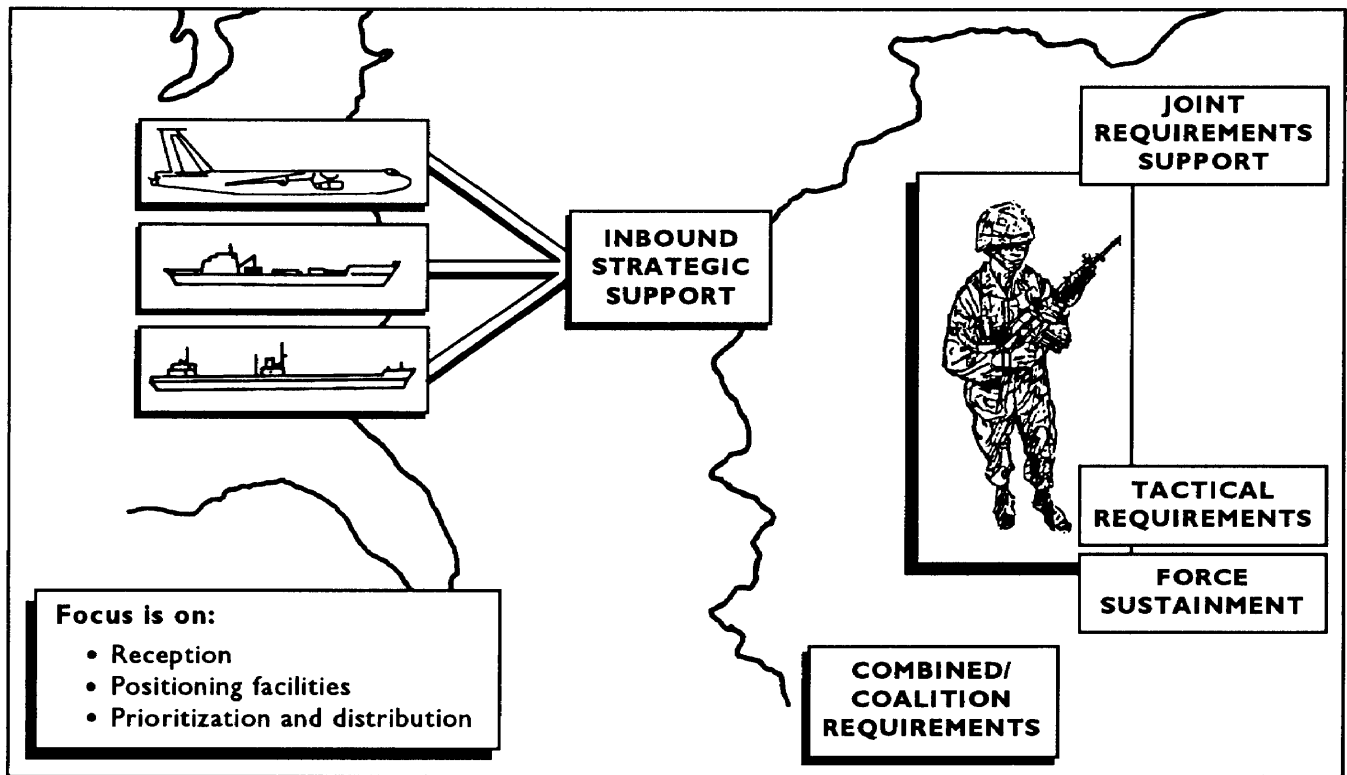


Figure 7-3. Operational supply and field services

Logistics requirements determination is another critical function. Requirements must be accurately determined not only for the Army, but also for other joint and allied forces. Good consumption estimates and current, accurate planning factors coupled with a knowledge of how the commander plans to employ his forces are essential. This allows for the anticipation of requirements.

Knowledge of distribution system capacity and capability is the other key to solid logistical estimates. In addition to knowing the requirements, the effective logistician must also know where supplies are, how rapidly they can be moved, how they are packaged, and when supported units need them. A knowledge of reception and clearance capabilities, transportation availability, and commodity criticality is also essential. Total asset visibility will allow the operational commander to provide

responsive sustainment support on a vertical and lateral basis. This will reduce in-theater storage requirements.

QMC responsibilities at the operational level are diverse and complex. These responsibilities are discussed here.

Class I. It is important to ensure early and continued availability of subsistence. The active component force must be capable of quickly deploying an operational capability to receive and further distribute perishable and shelf-stable subsistence items and health and comfort packs. Throughput of health and comfort packs to supported battalions will be effected. Standardized containers will allow unitization to battalion-size elements. The use of commercially available food products will increase. A dependence on industry to offset requirements for CONUS-based war reserves will become more predominant.

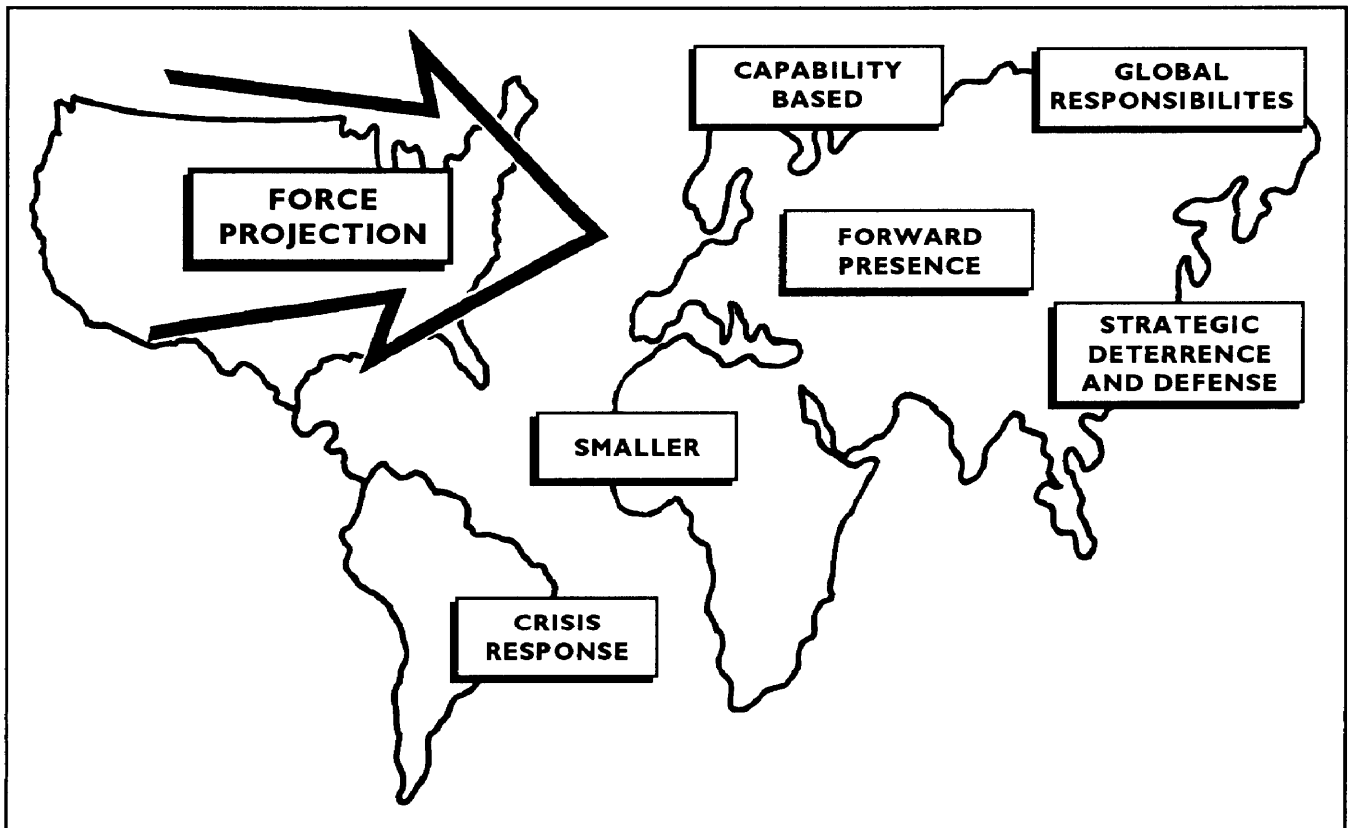


Figure 7-4. Force deployment strategy

General supplies. Handling of these supplies at the operational level will be enhanced by selective unitization and packaging of supplies in unit loads in the industrial base. Along with improved packaging, more versatile MHE will be developed. This MHE will increase capabilities (particularly in unstuffing containers with extended boom design). It will also reduce transport requirements as it will be intra-theater air-lift compatible. New containers, in varying sizes, will be provided. They will increase the capability for packaging supplies by unit load as well as provide protection during storage and movement.

Class III. At the operational level, QM units will provide fuel support for all US (and, potentially, coalition) land-based forces. Petroleum handling, storage, and pipeline equipment will be maintained afloat on pre-positioned ships or located in CONUS near ports of debarkation. This will allow the introduction of this function into the theater of operations quickly. Establishing a single battlefield fuel will simplify petroleum management and enhance force structure capabilities. The entire fleet of trailer tankers used in the operational area will, when determined appropriate, be capable of performing direct support operations. The tractors that pull them will be more mobile because of their central tire inflation features. Additionally, unmanned caches, pod-mounted on flat racks and positioned at critical locations around the battlefield, will provide emergency fuel. This will allow maneuver units to refuel and maintain their momentum.

Class VI. Soldiers usually deploy with a 60-day supply of health and comfort items. Health and comfort packs (Class I) can be supplied through supply channels. Tactical field exchanges (TFEs) provide Class VI supply support beyond the health and comfort packs. Class VI support can be limited to basic health and hygiene needs or expanded to include food, beverages, and other items based upon the requirements outlined by the theater commander. The availability of health and

comfort packs and Class VI items can greatly enhance morale.

Class IX. Significantly reducing the density and redundant layering of repair parts, particularly at the DS level, is an imperative. This will be accomplished through two steps. First, asset visibility of critical repair parts on the battlefield must be maintained. And, the transportation to distribute them quickly to requesting units must be effectively coordinated. Automation will allow tactical and logistics commanders to direct critical repair parts to any location on the battlefield.

Water. There is a need to move from supply point distribution to unit distribution of water at the divisional level. This will precipitate new and better packaging concepts. Some packaged water requirements will be handled as dry cargo. This may require change of some supply unit personnel and equipment requirements at the tactical level to handle the increased tonnages involved. Hard wall tankers and water hose line systems will also be used in moving and distributing bulk water through the operational level to the tactical level.

Airdrop. In-theater airdrop support will be provided primarily from the tactical (corps) level. However, quantities of all classes of supply prerigged for airdrop are maintained in CONUS. This means that airdrop doctrine must be extended to include procedures for requesting and providing strategic airdrop resupply support. Developmental airdrop systems need to provide the capability of airdropping from low altitudes and at fast speeds.

Mortuary affairs. A remains tracking system will be developed. It will provide real-time information on the location of remains from the collection point to the CONUS port of entry mortuary. It will also be linked to the casualty affairs system to ensure timely, official notification. Mortuary affairs units will be able to decontaminate human remains. Decomposition of remains will be slowed through increased use of refrigeration. Mortuary

affairs doctrine will be jointly developed and published. A concept and force structure for mortuary affairs will be developed as the basis for personnel and equipment to support requirements from disasters and regional conflicts to mobilization.

Laundry and shower. This function will be provided by corps units. Support will be projected as far forward as the brigade area. In the rear areas, this function will be provided primarily through HNS or contractor support. The goal is to provide soldiers with two showers per week. In addition, soldiers will be provided up to 15 pounds of laundered clothing per week. Laundry and shower capability will be enhanced through the development of containerized units. These will improve deployment, mobility, and productivity.

Clothing and light textile repair. Technological advances in self-application repair are being examined. If adopted, these will provide opportunities for further in-theater force structure off-sets.

Fieldfeeding. The Army requires that soldiers be provided with three quality meals a day. One of these must be an A/B-Ration meal served hot (METT-T allowing).

Water purification. Water purification, storage, and distribution equipment will be maintained on pre-positioned ships. This will permit the timely establishment of water support operations in the operational base.

TACTICAL-LEVEL SUPPLY AND FIELD SERVICES

QM tactical logistics includes all the supply and field service activities needed to support military operations. These include activities in preparation for operations, such as unit training, exercises, and rehearsals. Also included are follow-up military operations, such as post conflict humanitarian assistance, reconstitution, and redeployment. Tactical logistics will focus primarily on readiness--direct and organizational support

to units and soldiers in the corps and division areas. See Figure 7-5 (page 7-9).

Tactical Vision

Tactical-level logistics involves the synchronization of the tactical logistics functions. These are manning, arming, fueling, fixing, moving, and sustaining soldiers and their systems. The QMC is primarily responsible for sustaining soldiers and their systems and for fueling the force. Sustaining soldiers involves the provision of food, water, shelter, and field services. There is a one-to-one relationship between quartermasters and individual soldiers. This is a critical factor in the success of all missions. It has been the keystone to the heritage of the QMC.

QM leaders must know logistics doctrine and the commander's plans and intent. This allows for the right tactical logistical support to be provided. This allows the combat commander to focus on the fight. Supporting over an extended (width and depth) battlefield will also influence organizational structure. The QMC will move away from the large, slow-moving units and stockpiles designed under the Army of Excellence concept. Smaller, more mobile, and better protected units will be required. The functional differences between DS and GS supply units will become less clear. The seamless logistics philosophy allows for a smoother supply flow between the strategic, operational, and tactical levels.

A primary QMC focus at the tactical level will continue to be on sustainment of the soldier. Each company-sized unit will have two cooks and a small, state-of-the-art field kitchen. This provides a limited capability to prepare or heat meals and supplements. An improved containerized capability for providing responsive laundry and shower support well forward on the battlefield must be developed. Frontline soldiers require brief respites from the rigors associated with combat. A facility complex (Force Provider) will be available in which they can shower, clean their clothes, eat hot meals, and rest in an environmentally controlled shelter.

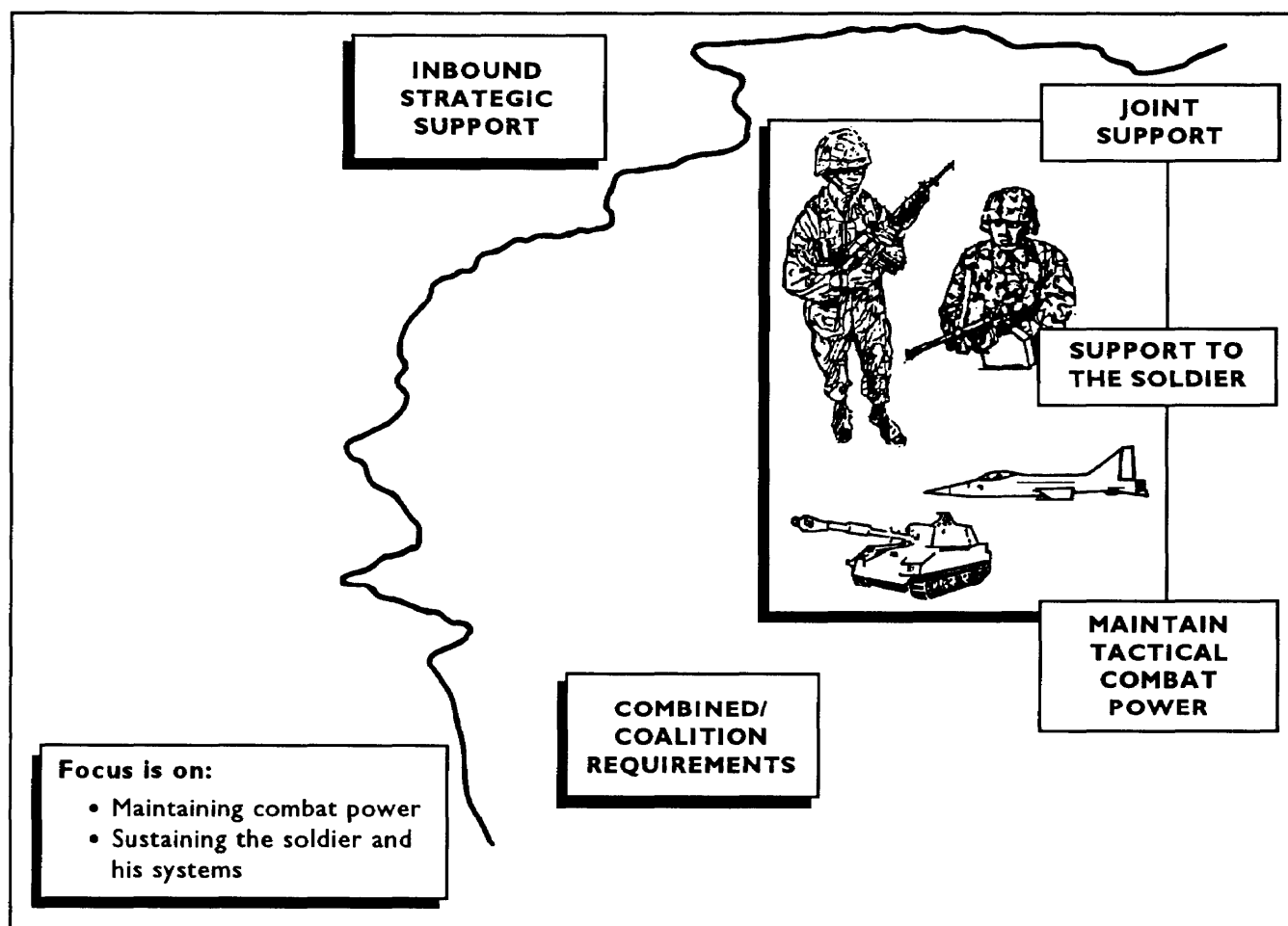


Figure 7-5. Tactical supply and field services

Tactical Challenges

To implement anticipatory logistics at all three levels fully, leaders must be technically proficient and tactically tough. They must understand and support the combat commander's intent and scheme of maneuver. Anticipation of supported unit requirements will come through a knowledge of the maneuver commander's intent, solid planning factors, current consumption data, and an appreciation of the operational environment. The flow of vital information is expected to be enhanced through the CSSCS and its relationship with the other systems of ATCCS. Tactical communications must be capable of handling automation and command and control requirements. They must provide near-real-time requisition status.

Asset visibility is needed to identify where supplies are and when they should arrive.

Doctrine and training literature must keep pace with the significant changes being made in the way supply and field service operations are conducted. Defense-related resources are becoming increasingly scarce. Efforts must be made to reduce (selectively) the volume of doctrinal literature in the areas of supply and field services. More efficient, cost-effective procedures must be found for the publication of all types of doctrinal literature.

In the areas of materiel and organization, solutions to the myriad of identified shortfalls

must be vigorously pursued. These include the enhancement of supply and field service unit mobility at the tactical level and the upgrading of combat and combat support unit capabilities in QM proponent areas.

Enhancing unit mobility. This can be achieved through increased containerization, the design of modular organizations, and extensive use of the new generation of transport equipment. This includes equipment with self-loading capabilities.

Upgrading support capabilities. Units will be provided standard containers that are flat rack/ Organization for International Standards (ISO) compatible. These will be used for moving PLLs, unit property, and unit basic loads (UBLs). The size of PLLs will be drastically reduced by

resupplying repair parts through a responsive, readiness-based system. This system will provide asset visibility and assured transportation. Unit commanders will be able to order and receive maps using the same procedures as for other general supply commodities. Commanders will be able to select, based on METT-T, the appropriate meal from a family of rations. They will be provided with a state-of-the-art containerized kitchen. It will allow rapid food preparation and a capability to warm food in the company trains area.

The QMC of the next decade will be reshaped to meet the challenges of a force projection Army. See Figure 7-6. The QMC mission will drive the solution sets developed in the areas of doctrine, training, leader development, organization, materiel, and soldiers.

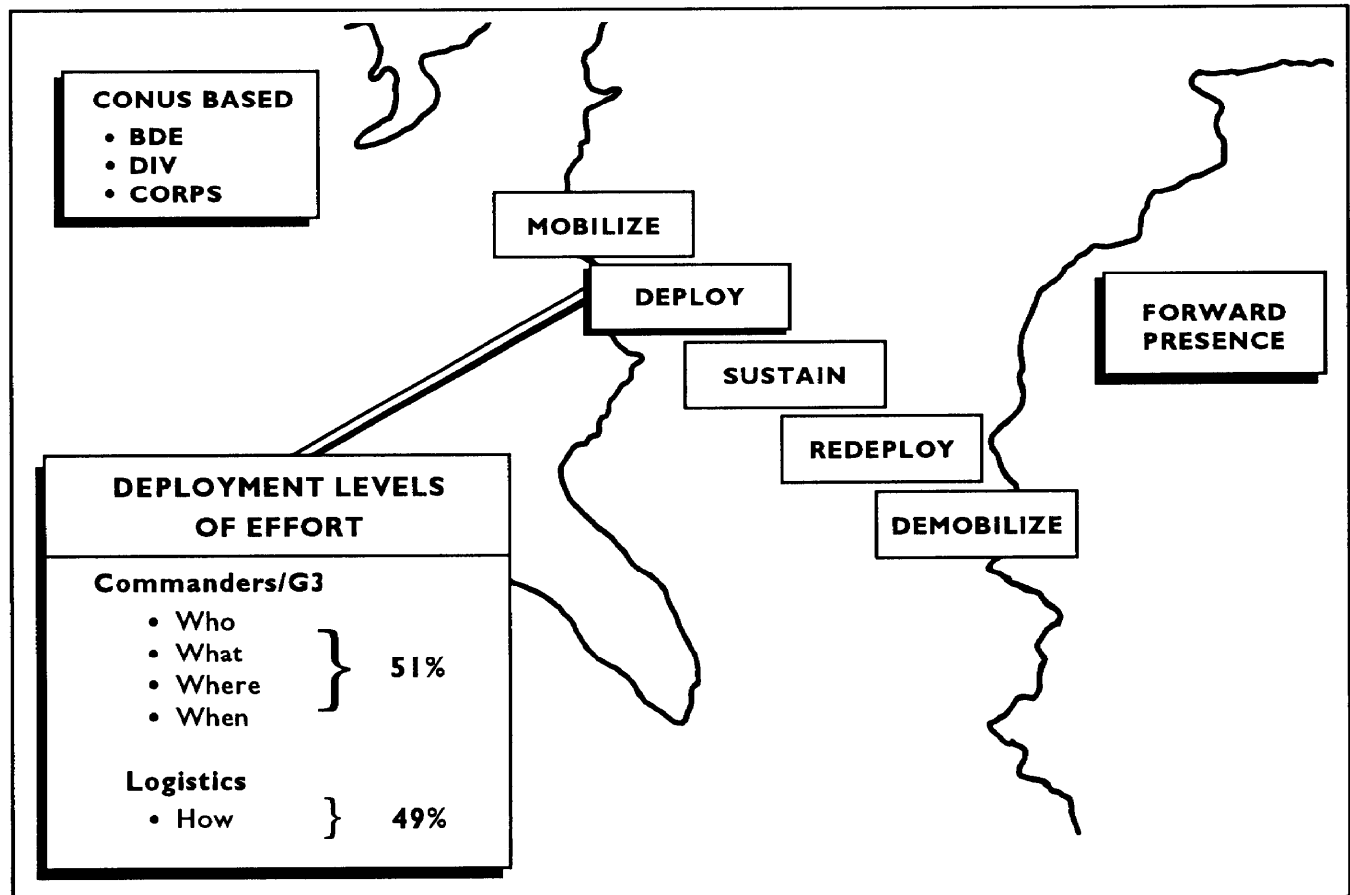


Figure 7-6. Logistics for a smaller, force projection Army