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COMBAT SERVICE SUPPORT

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Preface

The purpose of this manual is to provide the authoritative doctrine by which the Army combat service support (CSS) system as part of the national-theater system supports the conduct of operations at all echelons and across the fill range of military operations. This manual provides the basis for subordinate CSS doctrine, training, leader, organizational, and materiel development during the post-Cold War era.

The intended audience of this manual is threefold: combat and combat support commanders, to provide a more universal understanding of how CSS is organized and provided; CSS commanders and staffs, to institutionalize the integration of CSS into the total Army mission; and students, to provide a broad knowledge of the CSS structure and how it works.

Although the manual addresses CSS at the strategic level in support of the combatant commander, it focuses on operational and tactical CSS as executed by the Army-in-the-field.

The goal of Army CSS is to enable the commander to execute his mission and sustain the force. The doctrine in this manual is a major component of the Army's overall doctrine as described in FM 100-5, Operations. FM 100-10 is the Army's capstone manual for combat service support of all Army forces, sister services, and multinational forces. It explains how Army CSS elements support combat, combat support, and other CSS forces in conducting combatant strategies, campaigns, major operations, battles, and engagements in war, and military operations other than war activities in conflict and peacetime.

Joint Publication 1-02 defines combat service support as the essential capabilities, functions, activities, and tasks necessary to sustain all elements of operating forces in theater at all levels of war. As used in this manual, CSS includes numerous functions and activities required to ready a force for operations, deploy it to its intended operational area, support it during the duration of its mission, and to redeploy it when the desired military end state is achieved. It includes the fictional areas of supply, transportation, maintenance, combat health support, personnel support, and field services. Also, besides supporting an "operating force" that may be joint, multinational, and/or interagency in nature, Army CSS may involve providing support to civilians, such as refugees, disaster victims, or members of other agencies.

Users of this publication are encouraged to recommend changes which will improve its clarity and utility. Changes and comments should be forwarded to the Commander, US Army Combined Arms Support Command, ATCL-CAL, Fort Lee, Virginia, 23801-6000, using DA Form 2028 (Recommended Changes to Publications and Blank Forms).

Unless otherwise stated, whenever the masculine or feminine gender is used, both men and women are included.

CHAPTER 1

Fundamentals of Army Combat Service Support

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"Combat Service Support: The essential capabilities, functions, activities, and tasks necessary to sustain all elements of operating forces in theater at all levels of war. Within the national and theater logistic systems, it includes but is not limited to that support rendered by service forces in ensuring the aspects of supply, maintenance, transportation, health services, and other services required by aviation and ground combat troops to permit those units to accomplish their missions in combat. Combat service support encompasses those activities at all levels of war that produce sustainment of all operating forces on the battlefield..."

Joint Publication 1-02..

The fundamental role of the Army has not changed. Its mission is to operate across the full range of military operations to deter war, and if deterrence fails, to provide land forces to joint force or combatant commanders to achieve decisive victory. However, the dynamic and uncertain strategic security environment in which it operates and the resources available have transformed it into a force projection Army predominantly based in the continental US (CONUS).

THE EVOLVING ROLE OF CSS

Events in the closing years of the last decade and the first years of the 1990s changed the world and will affect the Army into the 21st Century. The collapse of the Soviet Union, the proliferation of conflict between and within Third World nations, and the Gulf War have all had an impact on the missions of the Army. Events in the 1980s and 1990s contributed to a change in the focus of the Army and highlighted the importance of developing and maintaining the Army's capability for rapid deployment.

A changing environment has diminished the probability of a prolonged, large-scale conventional war. However, the potential for numerous global actions on a smaller, regional scale has increased. At the same

time, available resources are declining. Such changes in the national environment drive changes in national strategy.

In responding to those changes, the Army has become a force projection, rather than a forward deployed, Army. Though its focus has been, and will continue to be, on warfighting, it requires greater versatility and flexibility. Military operations other than war will consume much of the Army's resources and energy. Nevertheless, the Army must remain ready and able to accomplish its traditional mission of prosecuting land warfare as part of a joint team and, where applicable, a multinational force. Our national values also require that Army operations are environmentally sustainable. They must meet current needs without compromising the integrity of the environment for future generations.

Such an Army demands more of its CSS system. A force projection, multi-missioned Army will be largely CONUS-based and must be able to operate around the globe, often on short notice. Supporting that Army requires support personnel to work faster and smarter. They must take advantage of current and developing technology and of all possible resources. Their mission is to ensure that operations succeed.

CSS CHARACTERISTICS

The tenets of Army doctrine--agility, initiative, depth, versatility, and synchronization-are basic to successful operations. They also establish the framework for organizing CSS. An effective and efficient CSS system allows the Army to operate in accordance with these tenets. Such a system has several fundamental characteristics as discussed in FM 100-5. These characteristics are anticipation, integration, continuity, responsiveness, and improvisation. They are closely related to the logistics principles as outlined in Joint Publication 4-0. Table 1-1 lists these principles, but, in reality, this entire manual relates to how the Army's CSS system applies these precepts across all levels.

Table 1-1. Joint Principles of Logistics

JOINT LOGISTICS PRINCIPLE	RELATED CSS CHARACTERISTIC(S)	COMMENTS
Responsiveness	**Responsiveness**	This principle relates to providing the right support at the right time. As discussed in the text, it requires the ability to anticipate requirements as well as the flexibility to adapt to changing situations.
Simplicity	**Anticipation, integration**	Simplicity leads to efficiency at all levels whether it involves streamlining the acquisition process at the national level or establishing concise standing operating procedures at the tactical level. Integration of all support activities simplifies operations by avoiding duplication. Integration of CSS and operations planning leads to clearly understood priorities which facilitate the support system's ability to anticipate requirements.

Table 1-1. Joint Principles of Logistics (continued)

JOINT LOGISTICS PRINCIPLE	RELATED CSS CHARACTERISTIC(S)	COMMENTS
Flexibility	**Improvisation, continuity**	Like improvisation, flexibility involves the ability to adapt CSS structures and procedures to meeting changing requirements. It involves positive command and control over CSS operations. Concepts associated with continuity, such as alternative planning, reserve assets, and redundancy, are also central to the support system's ability to adapt to evolving situations.
Economy	**Integration**	In a world of constrained resources, economy is critical. It involves providing support at the least cost. As discussed throughout this text and particularly in Chapter 3, economy requires assembling the most effective and efficient mix of active and reserve components, DOD civilians, and private sector personnel to provide support.
Attainability	**Anticipation, integration**	Attainability is the ability to provide the minimum essential supplies and services required to begin operations. This requires close coordination between the operations planners and their CSS counterparts at all levels. It relates to anticipation, that is, the ability to identify and accumulate the resources required to initiate an operation. The logistics preparation of the theater discussed in Chapter 2 is especially relevant to this principle.
Sustainability	**Continuity, anticipation**	The CSS system's ability to maintain support to the entire force throughout the duration of an operation is sustainability. All the notions talked about under continuity apply. However, so do the characteristics of anticipation and improvisation. Maintaining support requires both anticipating changing requirements as well as the ability to come up with innovative solutions to unexpected support challenges.
Survivability	**Continuity**	Survivability is the ability of CSS elements to prevail in the face of potential destruction. The METT-T and rear operations discussions in Chapter 2 and Annex G expand on this principle.

Anticipation rests on the ability to foresee future operations and to identify, accumulate, and maintain the assets, capabilities, and information required to support them. At the strategic level, anticipation ensures that CSS capabilities are versatile and mobile enough to accommodate potential operational and tactical events. Accurate forecasts are essential in acquiring and properly positioning required materiel. Accurate predictions of potential future operations are also necessary to develop a force that is both strategically deployable and fully capable of performing the missions it is likely to receive. Maintaining an industrial base is fundamental to anticipation. Also, anticipation enables CSS planners to provide input on the CSS forces required and the proper sequencing of these forces in the time-phased force and deployment data (TPFDD) process. At operational and tactical levels, CSS leaders and staffs anticipate future events and requirements by understanding the commander's intent and by foreseeing events as operations develop. While continuing to support current operations, they plan for future operations and attempt to foresee and prepare for changes in the course of operations.

CSS *integration* has two aspects. One is the integration of the CSS and operational efforts. The other is the integration of Army CSS with the support operations of other services, nations, and agencies. The higher the level of war, the more interwoven CSS and operations become. At the national and theater strategic levels, they are inseparable as planners and combatant commanders ensure that deployable and sustainable Army capabilities are available. At the operational and tactical levels, support planners and operators must understand the commander's intent and work closely with operations planners. They develop a support plan and structure CSS forces to give the commander the greatest possible freedom of action. As discussed in Chapter 3, this integrated planning can result in enhanced CSS capabilities and greater combat power and flexibility by ensuring that combat support assets appropriately support the CSS effort.

Army forces frequently operate in unified actions as part of a joint, multinational, and interagency team. Integrating the CSS operations of the various components at all levels of support--

- Takes advantage of particular CSS competencies of each component.
- Allows for efficiencies through economies of scale.
- Ensures the highest priorities of the total force are met first.
- Avoids duplication of effort and wasteful competition for the same scarce resources.

Successful Army operations depend on *continuity* of support. Though other Army elements may encounter periods of relatively low levels of activity, CSS requirements never cease. In fact, a number of support functions require peak activity during lulls in combat operations to prepare the force for the next battle or engagement. Planning for support continuity involves providing for multiple sources and means of support. At the strategic level, it may mean setting priorities and arranging for more than one source of supply. Operational planners consider factors such as multiple lines of communication (LOCs), ports, and modes, and cross-leveling of theater assets. At the tactical level, continuity may involve such considerations as security of support areas and echeloning the functional capabilities of a support organization. At all levels, the focus is on ensuring that an interruption in CSS does not jeopardize the Army's mission.

Responsiveness is the ability to meet changing requirements on short notice. Though the CSS system is based on anticipation of support needs, no planner can accurately predict the course of all future operations. At the national level, we live in a dynamic global society that places shifting demands on our military. At the operational and tactical levels, operations often evolve in unexpected directions as commanders constantly seek to exploit fleeting opportunities. Support personnel at all levels must be ready to rapidly tailor available capabilities to meet changing priorities and types and quantities of support requirements. This requires visibility of all available resources and flexible CSS organizations that leaders can quickly restructure to efficiently satisfy the new demands on the system.

Improvisation is often necessary to provide continuous and responsive support. CSS personnel try to anticipate all support requirements and build a CSS structure capable of responding to any eventuality. However, it is inevitable that situations will arise in which even tailored resources will not be available to meet requirements if leaders apply them as out lined in doctrine or support plans. Therefore, support personnel must be prepared to seek innovative solutions to problems. If established support procedures are not providing the support required by the force, CSS personnel must be willing and capable of rapidly devising new ones that meet the needs. If required assets are not available through the normal system, they must be creative in acquiring them. Extraordinary means may be necessary to get things done. This is especially true at the tactical level where short time frames often require greater use of improvisation.

DIRECTIONS IN CSS SYSTEMS DEVELOPMENT

In order to more fully develop the characteristics discussed earlier, as the Army's role evolves, the CSS system must develop or improve capabilities in several areas. This section discusses specific attributes the system must possess. Elements of the current CSS system are at various stages of developing these attributes. Some have already been attained; others are goals.

To meet all these goals, the system must not be constrained by traditional paradigms of functional and organizational boundaries. It will have to provide capability-based CSS to meet the anticipated needs of any joint force projection scenario. It must also be resilient, taking advantage of all available resources. The system must be efficient as well as effective. Support for a force-projection operation will begin with a nucleus of established CSS fictional capabilities. As the deployed force grows, the CSS structure will gain required fictional capabilities and expand. Additionally, it will effectively use technology whenever possible to synchronize global resources into a disciplined and seamless projection of soldiers and their weapon systems.

The CSS system will have to anticipate requirements to create a predictive push and a responsive pull of resources to meet joint and multinational needs. Support to and from other services and other nation's forces will be a key facet of planning and resourcing. A thorough logistics preparation of the theater, coupled with enhancements in CSS war-gaming simulations and artificial intelligence decision modeling, will improve the formulation of CSS force projection requirements. Strategic stocks of initial entry force equipment and supplies, sustainment materiel, and equipment repair capability will be prepositioned on land and afloat in likely force projection areas. The CSS system will deliver them under a coordinated sea and air movements strategy. Operational support personnel will link these stocks with deploying forces in accordance with the theater commander's priorities and his need to strategically concentrate forces and their support.

The CSS system will have to be resilient. Incorporating the total range of CSS resources, it will balance the need for CONUS-based projection and sustainment against a reduced military structure to support forcible entry into bare-based operational areas. There will be a shifting of certain support tasks from the uniformed services to Department of Defense (DOD) civilians and the private sector, as discussed in Chapter 3. The use of contractors for technical support will be widespread. Contingency contracting will take full advantage of available resources in the theater base. The CSS system will capitalize on host nation and multinational support, but only when available and reliable.

The CSS system will place a premium on efficiency without compromising effectiveness. It will assemble and deploy the most effective mix of active and reserve components, DOD civilians, and private sector contracted personnel to sustain the force. The logistics support element discussed in Chapter 3 is one example of a means to achieve this mix. CSS units will be flexible and, in many cases, modular and multipurpose in design. They will be more agile and better trained to

perform the support mission. The combination of all these elements will be capable of performing support missions at the strategic, operational, and tactical levels. DOD civilians and civilian sector contract technicians will often be present throughout the area of operations. When appropriate, host nation and contingency contracted resources support or augment military operations, freeing soldiers to perform other missions.

Further, the CSS system must be seamless. Real-time automated CSS information will provide CSS commanders timely and relevant information on support requirements and capabilities. Total asset visibility will expand beyond materiel and transportation into the personnel and finance arenas. Centralization of routine accounting functions will make the system more responsive to the military forces it supports. Total asset visibility, combined with in-transit visibility and communications, will produce a CSS system that is disciplined, reliable, and responsive to the soldier and his weapon systems. With such a system, the supported commander can confidently expect to receive support within established timelines.

Implementation of an Army single stock fund will consolidate wholesale and retail stock funds under one organization at the national level for inventory and financial management. Installation supply activities will operate as forward storage activities managed by the national inventory control point (NICP). Consumer finds will reimburse the Defense Business Operating Fund for supplies sold to the direct support supply support activities (SSAs) or customers. In addition to transactional efficiencies, the system will enhance the NICPs' vertical asset visibility of stocks. This will help achieve a seamless supply system and provide a broader base of assets from which to fill requests from users.

The CSS system will exploit technology. Emerging technology applied to operations requirements will enhance the capability to generate, project, and sustain military forces. Distributed communication networks and enhanced command, control, communications, and automation will increase the ability to conduct dispersed operations over greater distances without degrading effectiveness. Satellite communications capabilities will allow increased utility of our automated systems by providing near real-time CSS data. Lightweight composite materials and increased microelectronics applications will increase fuel economy and lessen strategic mobility requirements. Space systems offer the Army new or enhanced capabilities to achieve land force dominance. They are particularly important where the area of operations lacks the infrastructure to support Army operations and the US has no forward presence. The effect of digitization on CSS is discussed in Annex H.

Improvements in the capability of rapid strategic airlift, strategic sealift, and mobility will facilitate the global projection of military power. Enhanced vision technology will provide our CSS forces with the ability to conduct support operations at night and in periods of low visibility. In addition, emerging technology in the man-machine interface will allow higher productivity and better use assets. Robotics and artificial intelligence systems will further enhance CSS capabilities in materiel handling, planning, maintenance efficiency, and automated resupply operations.

ENVIRONMENT

Though the primary focus of the Army is to fight and win the nation's wars, it is also a frequent participant in military operations other than war (MOOTW). The CSS functions described in this manual must be performed in all environments as the Army operates across the full range of military operations.

WAR

The primary role of Army CSS is to support Army forces in combat operations. The CSS effort is successful only if it concentrates and supports forces as required to meet the commander's intent. Its focus is the mobilization, deployment, sustainment, reconstitution, redeployment, and demobilization of military forces.

Though many of the functions are the same in war as in MOOTW, the scope of operations is much broader during war and involves more risk. Modem warfare consumes massive quantities of resources. The CSS system must provide those resources in such a way that it minimizes constraints on the commander. The characteristics of a system that effectively meets these requirements and the principles on which such a system rests are the focus of this manual.

MILITARY OPERATIONS OTHER THAN WAR

The types of CSS required during MOOTW are very similar to those required during combat. Support personnel perform many of the same functions they do in wartime. They provide supplies, they purify water, they transport materiel and people, they repair equipment, they house people, and they treat injuries and disease. They manage materiel and movements, receive forces, select and improve LOCs, and so on.

However, the situational analysis discussed in Chapter 2 typically identifies different support requirements and leads to different support relationships than those applicable during war. The environment in which support personnel perform their tasks may be different. They may or may not be at risk from hostile forces. Their chain of command may be different; they may work for a non-DOD department of the US or a local civil authority. The complexity of support may vary from traditional combat CSS due to continuous interaction with private volunteer organizations (PVOs), nongovernmental organizations (NGOs), and United Nations (UN) organizations such as the UN High Commission on Refugees (UNHCR). The supported population may also be somewhat different. Whereas in war CSS personnel focus on supporting the force, in MOOTW they may provide direct support to civilians in the area while continuing to support soldiers who are performing both CSS and non-CSS functions. Further, in some MOOTW situations, CSS may be the primary mission of the Army. The senior Army CSS commander in theater may also be the commander of a joint or multinational CSS task force. Maneuver forces may be in a supporting role as CSS personnel assume the lead in many MOOTW activities. However, support personnel still anticipate hazardous conditions requiring continual risk management. Also, environmental (ecological/cultural) considerations during MOOTW may be more prominent than in war. US and host nation environmental laws may pose stringent compliance requirements on CSS operations.

In many MOOTW situations, the Army provides support only temporarily until it can transfer the mission to the appropriate civil agency. The Army and supported civil authorities must agree on exactly when and how the Army will transfer responsibility for specific support functions. Other important factors in CSS during MOOTW include resource management, early deployment of CSS command and control cells, interagency coordination, and legal implications. FMs 100-19 and 100-23 cover these considerations.

CSS THROUGHOUT THE LEVELS OF WAR

The levels of war are the strategic, operational, and tactical levels. The levels are defined by the intended outcomes, authorities, scopes, responsibilities, and concepts. The strategic level has two components. The national strategic level deals with the attainment of national security objectives. It involves the integrated efforts of the National Command Authorities, the Joint Chiefs of Staff, and several national agencies, DOD being only one. The theater strategic level involves a theater strategy and campaign plan that achieve national military objectives. The theater combatant commander's perspective is theater strategic in nature. He provides strategic direction to his principal subordinates. His unified efforts in the theater integrate joint, multinational, interagency, nongovemment and private voluntary, and United Nation's activities. The operational level normally consists of the armed services conducting supporting campaigns and major operations. The Army service component commander usually operates at this level. The tactical level involves organized mission forces fighting battles and engagements. Corps and lower commanders are

typically responsible for conducting operations at tactical levels.

However, in today's international environment, it is difficult to determine with certainty the level at which an organization is operating. For example, a battalion commander may be the senior commander in an area of operations. As such, he is certainly involved with tactical operations. However, he may also have to perform tasks (such as interfacing with other services or the host nation) which are normally associated with the operational level. In many cases, organizations require augmentation to assist them in performing such functions. In addition, the effects or results of military actions at one level can simultaneously achieve objectives at higher levels.

CSS activities are performed at all levels of war. There is no definitive line distinguishing activities at one level from those at another. The distinction lies in the intent, not type, of the activity. For instance, establishment of CSS facilities may be an activity at any level. A support battalion setting up a brigade support area to sustain troops conducting a battle represents a tactical CSS function. Establishing a base in support of Army forces conducting a major operation is an operational function, while establishing the theater base itself is a theater strategic activity. Building a permanent base or CSS facility in CONUS represents a support function performed at the strategic level since it supports the national strategy in general and not just one operation or even theater campaign plan.

However, the distinction is not always clear. The CSS system in which the Army operates is a continuous one; one level meshes with another so that demarcation lines are blurred. This is especially true in MOOTW where CSS personnel do not support forces fighting battles in the traditional sense. The level at which a commander is executing his mission has very little relevance when support personnel are providing life support to victims of a natural disaster in the United States. The following paragraphs deal primarily with CSS in war. Figure 1-1 depicts the overlapping nature of CSS across the levels of war.

CSS AT THE STRATEGIC LEVEL

CSS at the national strategic level is largely the purview of the CONUS industrial and civilian sector. National political and military-strategic leaders, as well as civilian and military suppliers and contractors, effectively combine efforts to provision US forces. CSS at this level links the nation's economic base (people, resources, and industry) to its military operations in theaters. The focus of support personnel at the national strategic level is forward to meet the needs of the combatant commanders.

CSS at the strategic level is global and regional; it supports all commanders-in-chief (CINCs). It is this level of CSS that enables the nation, and particularly its armed services, to execute its aims. The Army, DOD, other government agencies, civilian contractors, and combatant commanders execute strategic CSS. It is the realm of the Defense Logistics Agency (DLA), the General Services Administration (GSA), the US Army Materiel Command (AMC), the US Transportation Command (USTRANSCOM), other agencies, and the largely civilian industrial base. It also involves service CSS elements accomplishing theater strategic tasks for the theater commander and his campaign plan. The integrated effort of all segments of the strategic CSS system enables the combatant commanders and services to project and sustain forces. (See Figure 1-2, page 1-10.) Strategic support personnel closely coordinate these activities with CSS elements at the operational level as discussed in Chapter 2. Strategic and operational CSS normally interface in a theater.

CSS personnel at the strategic level focus on--

- Determining resource requirements.
- Acquiring resources.
- Integrating personnel and resource management information systems of all components of the Total Army and other services and governmental agencies.
- Providing base support and services.
- Maintaining national-level medical systems and facilities.
- Stockpiling resources and positioning them around the world.
- Deploying and maintaining assigned and forward presence forces in peacetime.

- Identifying mobilization requirements and mobilizing resources.
- Providing strategic mobility.
- Establishing the theater base and communications zone.
- Concentrating forces and CSS assets prior to the campaign.
- Reconstituting the nation's military capability.
- Demobilizing forces.

Strategic agility depends on deployment capability and the deployability of Army strategic forces as described in FM 100-17. Deployment begins at posts, camps, and stations, continues over routes to ports of embarkation, includes strategic movement, and culminates with the discharge, reception, and onward movement of forces in a theater. As discussed in FM 100-22, posts, camps, and stations must become launch platforms for force projection. Installations with deployable units treat deployment as their primary mission. They must be as capable of quick response as the force they support. Installations serving as reserve component mobilization stations must be able to rapidly provide the forces required by the theater commander. Deployment capability also depends on the ability of the national infrastructure to move forces to and through ports of embarkation to theater staging areas. This capability requires an adequate national infrastructure and efficient use of both government assets (such as the Air Mobility Command's air assets and the ready reserve fleet) and commercial resources (such as the Civil Reserve Air Fleet) as discussed in Annex B.

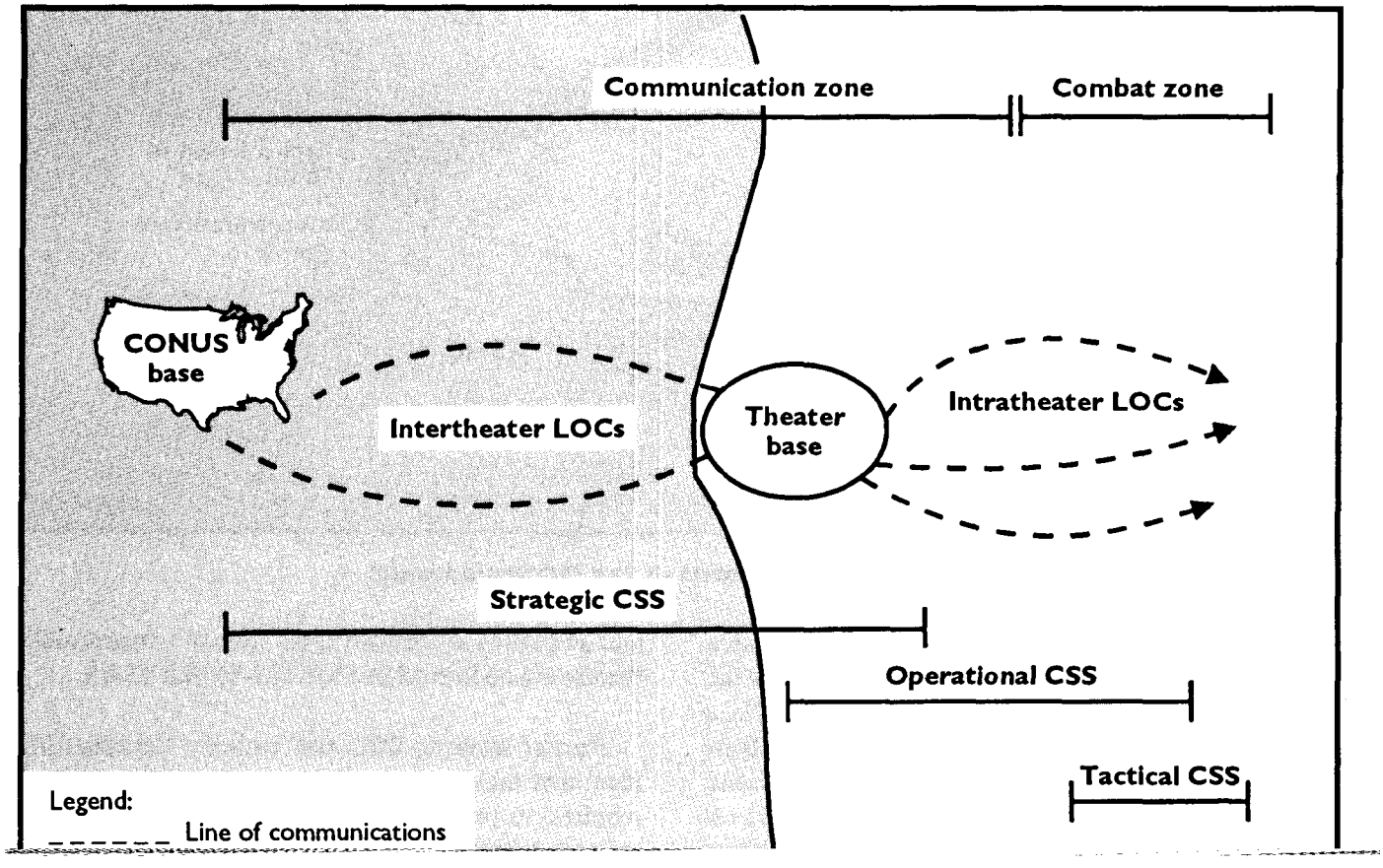


Figure 1-1. CSS across the levels of war

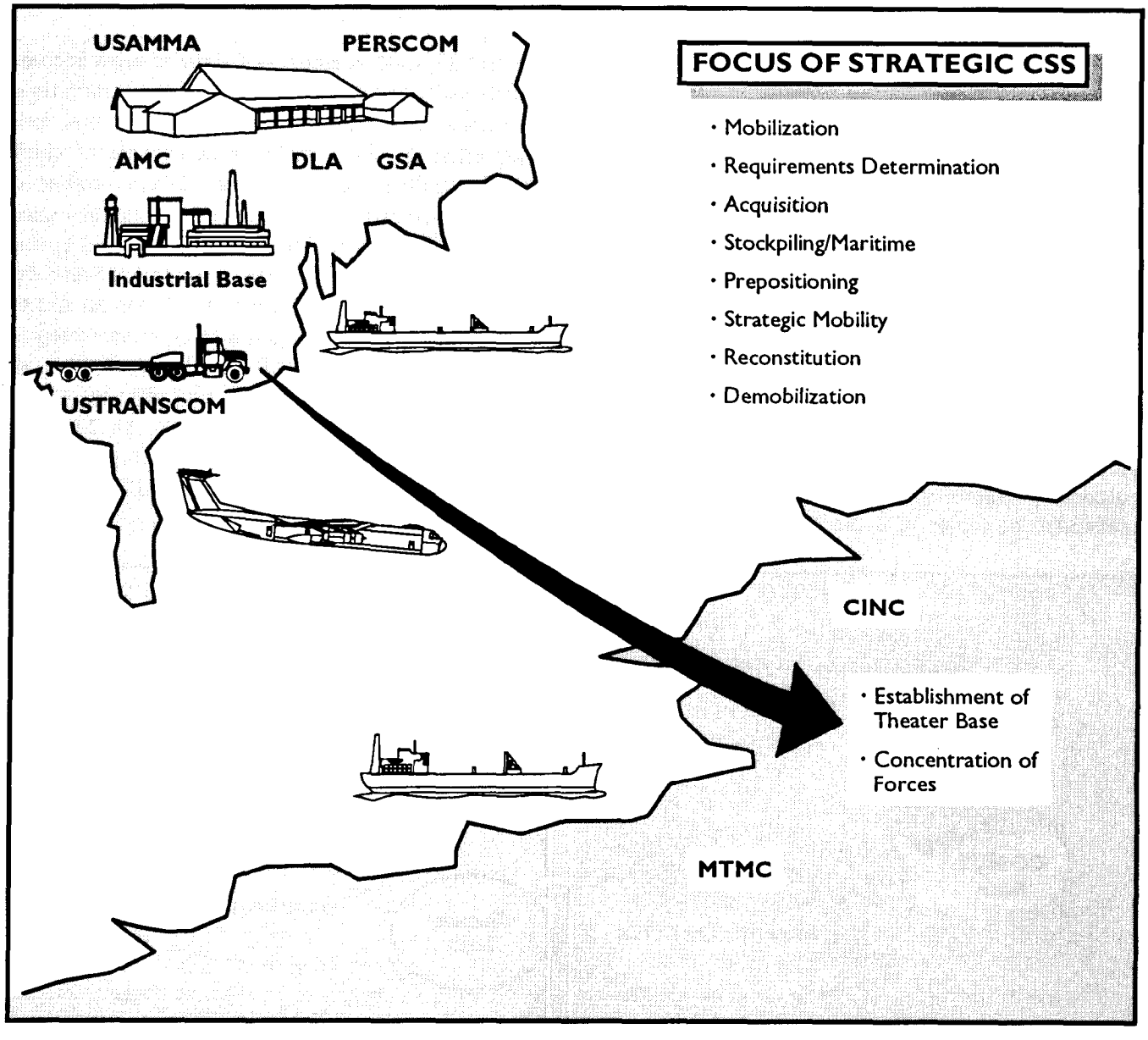


Figure 1-2. CSS focus at the strategic levels

A force-projection Army's strategic agility also depends on the capability to receive troops into the theater and to move them forward. Reception in a theater includes air and sea port reception and clearance to process forces and sustainment supplies and equipment through the port of debarkation (POD). It also involves moving personnel and equipment from PODs to marshaling areas and linking them up. The types of elements required to perform these services and when they are needed in the flow of forces into the theater are addressed in FMs 100-17 and 55-65.

Theater strategic CSS also includes the establishment and maintenance of the theater base (or bases) required to provide all the supplies and services to support reception and onward movement as well as those to sustain forces executing the theater campaign plan. Related functions include setting theater stockage

levels, identifying and managing critical items, and coordinating joint and multinational support.

Many of the same considerations involved in mobilizing and deploying the force apply to redeployment and demobilization. These stages of a force-projection operation require extensive CSS management and coordination across the operational and strategic levels.

Details on the stages of force projection and many of the functions at the strategic level are in FM 100-17. FM 100-17-1 discusses how the Army will preposition a brigade set of equipment afloat.

CSS AT THE OPERATIONAL LEVEL

CSS at the operational level links the strategic and tactical levels. Support personnel at the operational level identify requirements to strategic CSS personnel and coordinate distribution of resources with them. However, they also look forward to the tactical level to ensure that requirements are met. Operational CSS encompasses the support required to conduct supporting campaigns, major operations, and other military operations within an area of operations. Operational CSS personnel attempt to balance current requirements with the needs of subsequent operations. They sustain the force in theater consistent with the CINC's strategic priorities. Military units augmented by DOD civilians, contractor personnel, and available host nation resources comprise the organizational structure of elements which operate at this level.

CSS at this level differs from tactical CSS in that a longer planning and preparation period is normally involved and the supported operation lasts longer. Its effects are measured over weeks and even months rather than hours and days. Yet, like CSS at the tactical level, it deals with the entire area of operations. The operational commander conducts operations to defeat the main enemy force. He also deals with deep targets and activities in order to thwart the enemy's future plans. In addition, he must protect his rear support bases. CSS personnel must support those three aspects of operations (close, rear, and deep), which are covered in Annex G.

As discussed in Chapter 2, CSS personnel focus on bringing together the separate functions and activities associated with this level. (See Figure 1-3, page 1-12.) Their main concerns are:

- Reception of Army forces and onward movement of units, personnel, and equipment.
- Distribution of materiel.
- Allocation, management, and redeployment of units and soldiers.
- Reconstitution of capabilities when operations demand and the situation allows.
- Establishment and management of medical facilities, and medical materiel management.
- Planning, coordination, management, and supervision of the positioning and security of CSS activities.

The commander's concept for the campaign or other major operation is the basis of CSS planning. It proceeds concurrently with operations planning lest commanders and operations officers develop plans that available resources cannot support. CSS planners must consider a host of factors and variations to plans. Their goal is to ensure operations succeed. Army operational and theater strategic support personnel work closely with each other. For instance, operational CSS personnel focus on reception and onward movement of Army fores in the theater of operations. That role is closely related to theater reception and onward movement.

Like theater strategic CSS, operational CSS is almost always a joint effort. It is also often a multinational effort. Therefore, Army support forces should establish and practice support agreements with services and allies in peacetime to facilitate wartime CSS. Chapter 3 covers considerations for joint and multinational CSS.

Theater strategic and operational CSS begins with the logistics preparation of the theater (LPT) for potential operations. LPT encompasses all the planning and preparation activities taken to ensure the CSS system can provide the resources required to enable the commander to achieve his mission. Chapter 2 has a detailed discussion of LPT. It also discusses the management activities required to coordinate and direct the support efforts throughout the operation.

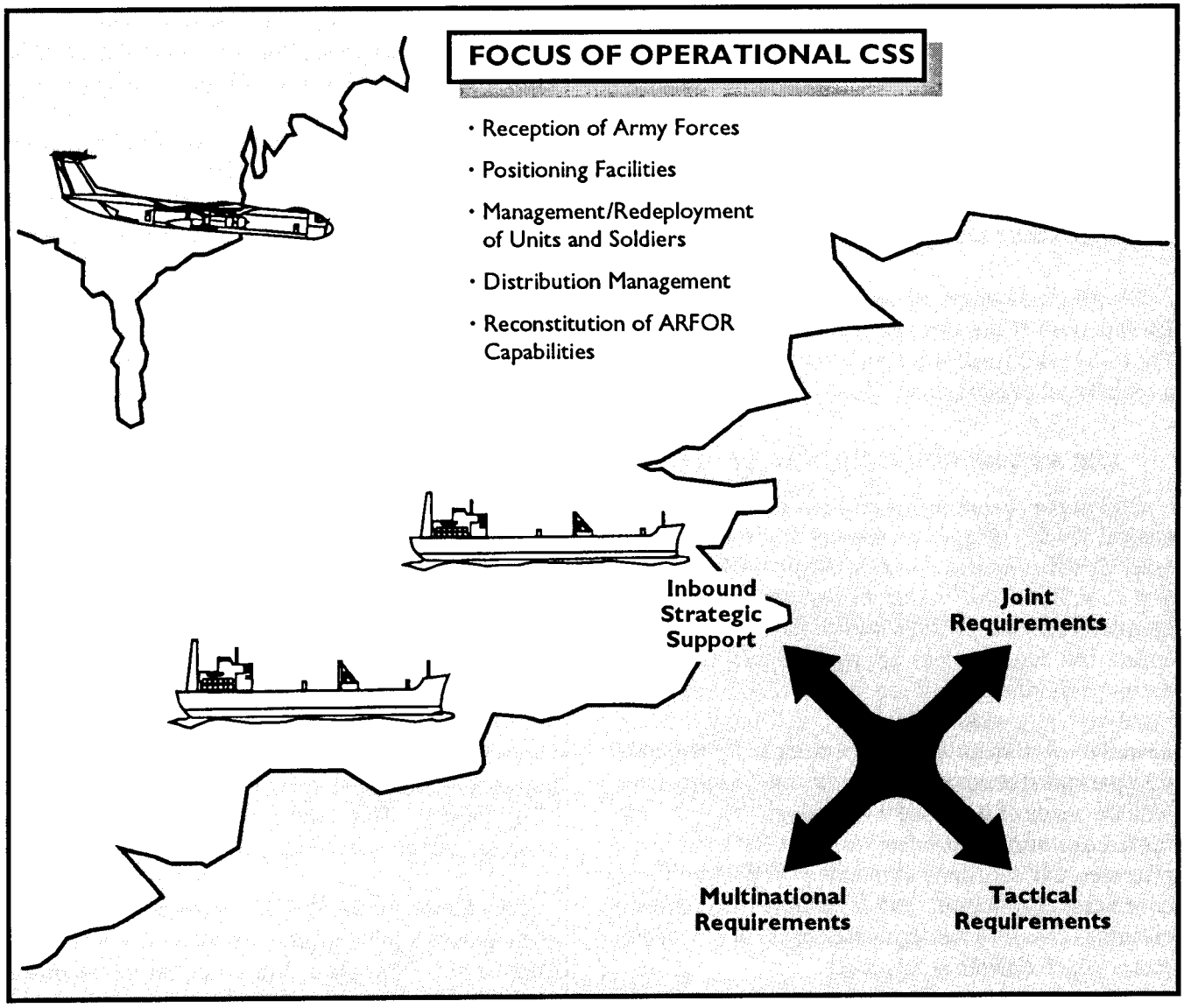


Figure 1-3. CSS focus at the operational level

Initially, CSS efforts concentrate on making the force ready for the supporting campaign. The personnel system ensures that qualified soldiers man units and weapon systems. Medical organizations work toward returning sick and wounded-soldiers to duty. Maintenance elements ensure the force begins operations with operational equipment. Transportation organizations deploy early to best support the movement requirements of the force. Supply elements marshal required supplies both in the theater and, at the strategic level, globally in anticipation of theater demands.

As the campaign unfolds, CSS leaders and planners stay ahead of the situation. They remain ready to reinforce successes with priority of support. They plan for forward logistics bases as the force advances and extend lines of support accordingly. As earlier support plans become obsolete as a result of tactical developments, planners formulate new ones. The CSS system remains flexible enough to support the commander's revised guidance. When it appears that existing support systems may inhibit a commander's options, CSS leaders take extraordinary and innovative measures to

limit the inhibiting conditions. FM 100-16 has additional details on operational support.

CSS AT THE TACTICAL LEVEL

CSS at the tactical level comprises activities required to support the conduct of battles and engagements. It involves the synchronization of all support functions required to sustain soldiers and their weapon systems. (See Figure 1-4.) It normally involves support to corps and smaller formations. CSS at this level is more immediate than operational CSS. While battles may last for weeks, they are normally measured in days or even in hours.

Military units organic to or supporting the deployed tactical force make up the bulk of the CSS organizations at this level. However, support may also come from the host nation, joint and multinational sources, Department of the Army (DA) and DOD civilians, and civilian contractors, as discussed in Chapter 3. In any case, flexibility and innovation are crucial. CSS organizations at battalion and higher level are largely multifunctional; one organization can deliver nearly total support. This allows supported units to deal with a single point of contact for support. CSS leaders form and revise task organizations to support the tactical commander's plans. The execution of tactical CSS should enhance the commander's momentum. The CSS system must fuel, arm, fix, and man weapon systems at the place and time most supportive of force operations. The aim of tactical CSS is the removal of inhibitors to the tactical commander's scheme of operations. This includes taking action to ensure the survivability of scarce CSS assets at the tactical level.

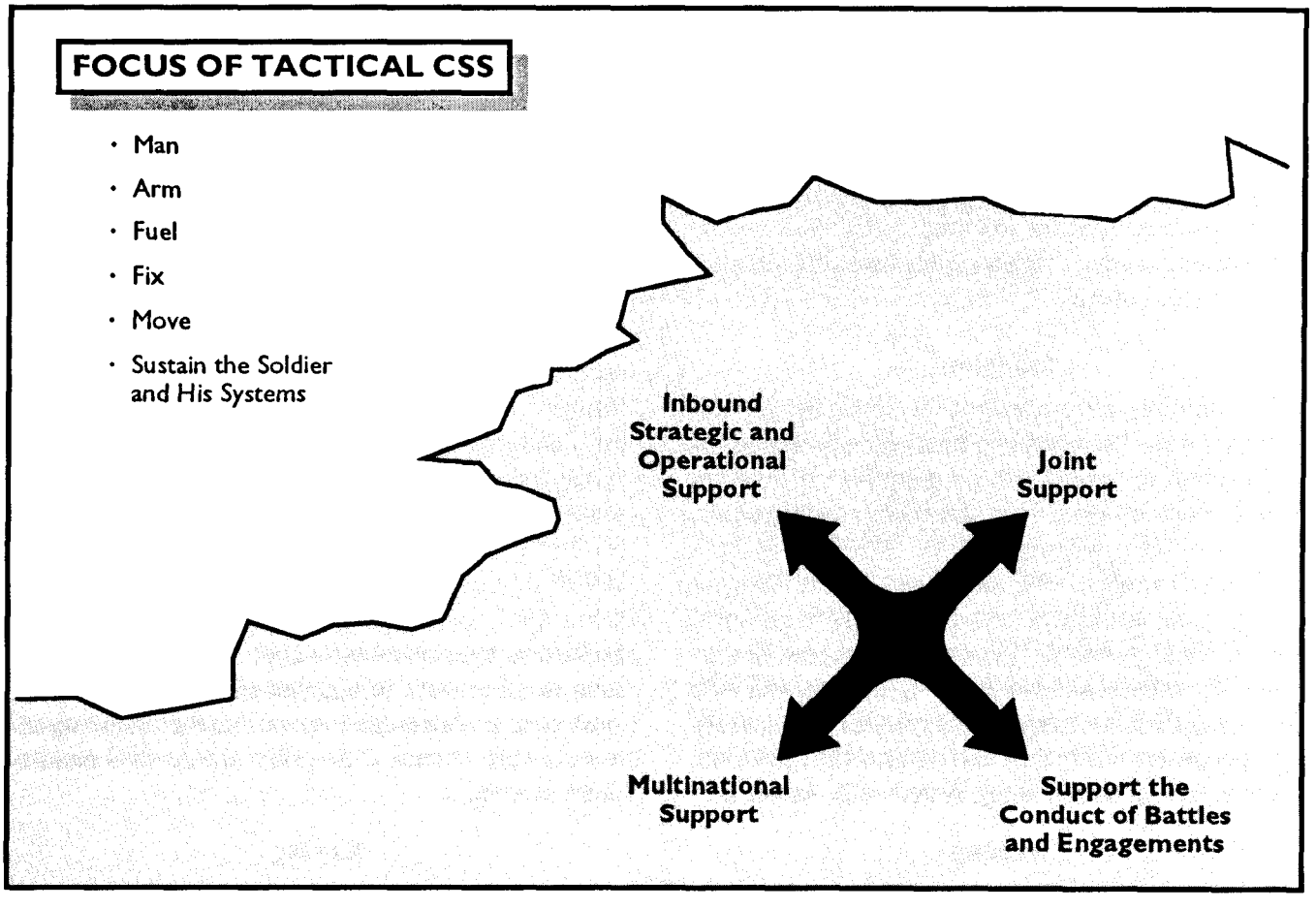


Figure 1-4. CSS focus at the tactical level

At the tactical level, support personnel focus most of their attention forward while maintaining proper links with the operational level of CSS. They must also take steps to ensure survivability of support assets. Tactical CSS, like operational CSS, includes support to the three elements of the battle--close, deep, and rear. Just as the tactical commander conducts operations throughout the depth of his area of responsibility, the CSS commander is responsible for supporting the battle in those three areas. While CSS principles remain the same in supporting the various forms of maneuver, different techniques are used in each. Annex G covers support to close, deep, and rear operations.

The goal of CSS at all levels is to deliver combat power at the tactical level. The focus of the support system is ultimately on the functions of manning, arming, fueling, fixing, moving, and sustaining soldiers and their systems. These functions all depend on distribution and the effective management of CSS operations, which in turn rely on a highly refined command, control, and communications (C3) system. Distribution is not a separate function; it is the integrated system which pulls together all the CSS activities required to deliver required capabilities to the tactical commander. Chapter 2 discusses the distribution system in depth.

Manning

Manning the force involves the personnel support activities which ensure the commander has the personnel required to accomplish his mission. It involves management of personnel readiness, replacements, and casualties. Managers must take into account civilian personnel as well as soldiers. Also, the manning systems must be able to interface with joint and multinational systems. Personnel managers coordinate with materiel and movement managers, and with the medical and mortuary affairs systems to ensure the right people are where they need to be at the right time. An overview of the manning system is in Annex E.

Arming

During intense combat, arming the force is a critical, demanding, and time-sensitive logistics function. Army forces use a wide variety of sophisticated weapon systems that consume high tonnages of ammunition during combat. The arming system must be able to meet these needs through integration of supply, transportation, and maintenance functions. The system must be flexible enough to provide a surge capability to meet the high requirements of combat. Supply considerations are in Annex A, and Annex C describes maintenance aspects of the arming function.

Fueling

Like arming, fueling the force is demanding and requires a surge capability during combat operations. The mobility so critical to tactical success depends on the provision of large quantities of fuel. However, the routine requirements for fueling are significant throughout all Army operations, not just combat. All operations depend on movement of personnel, equipment, and supplies, as well as the operation of equipment. Such activities are only possible if logisticians are able to accurately forecast and effectively provide the fuel to meet these needs when required. Measures to reduce the varieties of required fuels greatly reduce the complexity of fueling the force. Annex A has details on the fueling function.

Fixing

Fixing the force is a vital component of ensuring maximum availability of scarce equipment to the commander. It involves maintaining, recovering, repairing, and replacing equipment. Such activities require managers to integrate several CSS systems. The personnel system provides soldiers and civilians with the required skills. The supply system ensures repair parts as well as tools and equipment are available. Transportation assets must be effectively controlled to move maintenance personnel and equipment, parts, and equipment needing work to maintenance sites. Typically, these sites are positioned forward to facilitate responsive support. Annex C describes the Army's maintenance system.

Moving

Movement is inherent in the operations of all Army elements. The tactical logistics function of moving the

force specifically relates **to** planning and executing movements of personnel, equipment, and supplies in the performance of CSS functions. It also involves assisting in the execution of tactical movements. The long distances potentially involved in an operation, high volume of movement requirements (tactical as well as CSS), and limited transportation networks require extensive coordination and control. Annex B discusses the transportation role in moving the force in terms of mode operations, movement control, and terminal operations.

Sustaining Soldiers and Their Systems

Sustaining soldiers and their systems involves provision of a wide range of services and supplies. Quality of life for the soldier is a command responsibility. It has a considerable effect on the soldier's readiness and willingness to fight. It is associated with all the services which directly ease his personal concerns. These include personnel service, combat health, field service, and general supply support. Quality of life also depends on the knowledge that a soldier's family is being taken care of.

Personnel service support (PSS) enhances soldier performance by providing services which enhance his morale and sense that he is being cared for. It also includes support to promote efficient management of funds. Specific functions include personnel services, religious support, legal service support, finance services, and resource management. Annex E includes a discussion of PSS.

Combat health support provides a continuum of health care from all locations throughout a theater to the CONUS base. It provides state-of-the-art medical evacuation, treatment, and preventive care. The medical system is critical in establishing the soldier's sense that his welfare is important to the Army. It is also a significant source of replacements. Annex D describes the combat health support system.

Field service support consists of a variety of capabilities designed to provide essential services and enhance a soldier's quality of life during operations. It includes food preparation, water purification, mortuary affairs support, airdrop support, laundry and shower services, and clothing and light textile repair. Details on field services are in Annex F.

General supply support refers to supply of subsistence, clothing, water, barrier material, and major end items. Annex A covers supply of these items.

CHAPTER 2

Orchestrating the Combat Service Support Effort

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Components of the CSS system can be categorized in a number of ways. One way is to look at the functional areas of supply, transportation, maintenance, personnel support, combat health support, and field services. Another approach is to analyze the CSS activities performed at each level of war. Alternatively, the discussion could also be organized by the functions performed during each stage of a force projection operation or by the activities ultimately associated with the tactical-level functions of manning, arming, fueling, fixing, moving, and sustaining soldiers and their systems.

Any such system of categorization results in some arbitrary, imperfect grouping of elements of the system. The CSS system is one system consisting of many interrelated components. This manual is organized by functions in the annexes and by other means in other sections only to facilitate discussion. The intent of this chapter is to introduce how the different elements of the system must come together to make CSS happen.

SITUATIONAL AWARENESS

The goal of CSS is to enable the commander to execute his mission by providing the right resources at the right time and place. Resources include trained personnel, ready equipment, supplies, and the services required to get them where they are needed and to sustain them through all stages of the operation. Providing those resources is a complex process; it is only possible through extensive coordination and management. The CSS effort begins with the translation of potential Army missions into resource requirements. It continues with the acquisition and distribution of those resources to ensure required resources will be available to support anticipated operations. (See Figure 2-1, page 2-2.)

These activities are integrated in the situational awareness of support personnel. They must determine what the commander requires to support operations, what resources are available to meet the requirements, and how to control CSS activities to bring those resources to bear on the situation. Beyond that, they must anticipate changes in any of these situational aspects and be able to adjust to them.

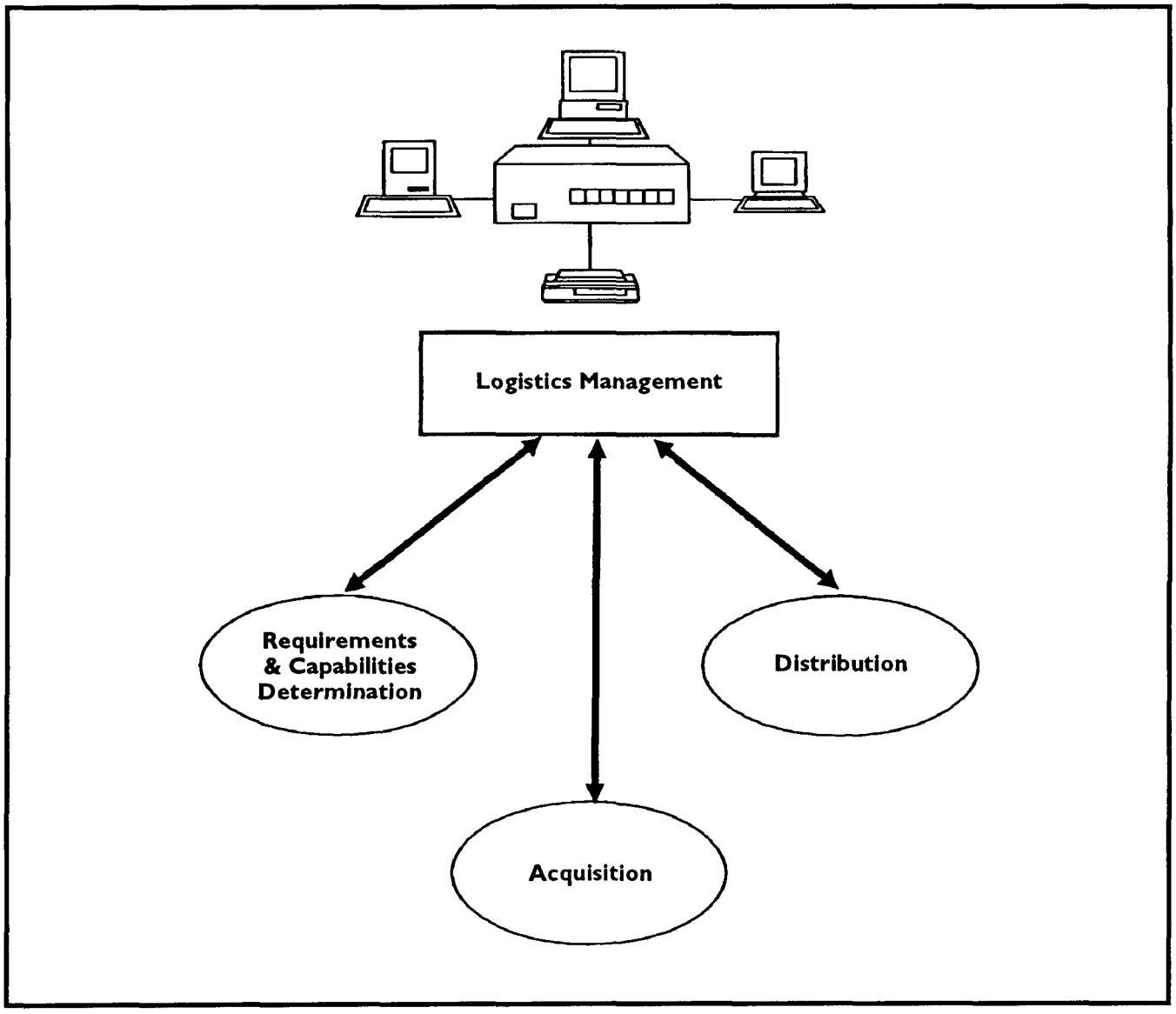


Figure 2-1. Orchestrating logistics activities

METT-T FOR CSS PERSONNEL

The situational awareness for support personnel is developed through an analysis that is analogous to the mission, enemy, troops, terrain and weather, and time available (METT-T) process (Figure 2-2). The mission of CSS personnel is to provide support required by the force to enable it to achieve *its* mission. Hence, support requirements vary with the mission of the supported force. Considerations for defensive, offensive, and retrograde operations in war are in Annex G. In MOOTW, the CSS effort may *be* the force's mission. In all cases, support planners must work with operation planners. They must clearly designate what the supported force consists of as well as the specific support functions to be provided so that they can prepare for the total requirements. As discussed in Chapter 3, supported elements may include multinational forces, forces of other services, and US or foreign civilians.

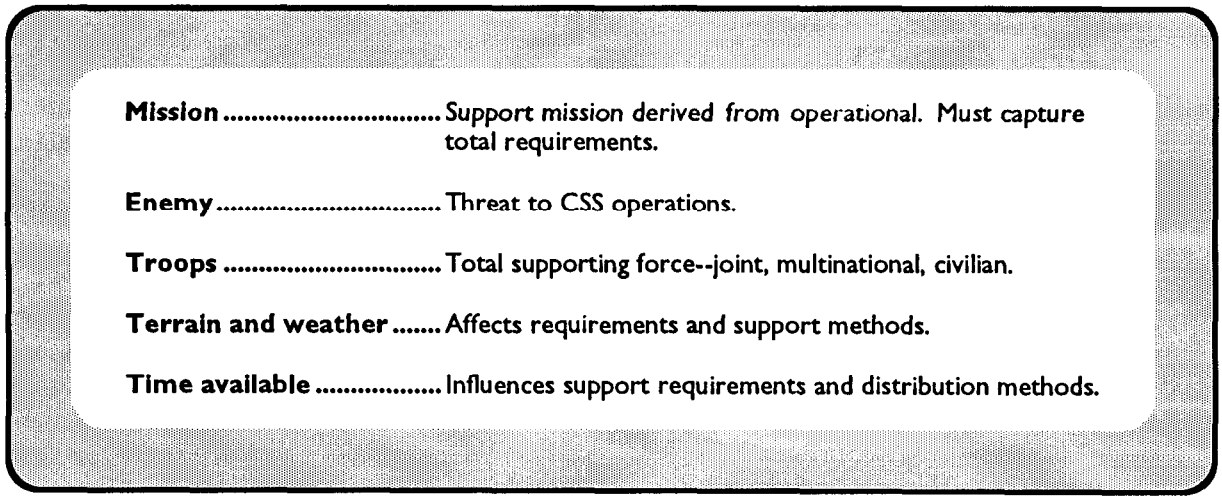


Figure 2-2. METT-T for CSS personnel

CSS personnel at all levels must consider the enemy. CSS facilities are easy to detect, limited in mobility, and difficult to protect. Hostile elements may target support facilities and transportation networks. Support personnel take such threats into account, whether they are strategic logisticians building prepositioned stocks or tactical CSS personnel planning the security of a support area. In addition, because the intensity of operations may place extraordinary demands on CSS systems, supped personnel can expect an unprecedented risk of accidental loss. For success, they anticipate the risk and determine how to best manage it. They identify key CSS assets and provide them greater risk protection. In any case, they must understand what they must do to prepare for and overcome threats which may restrict or disrupt their ability to support the commander's intent.

As with all other operations, the number and type of troops available affect the support plan. However, "troops" has a broader meaning for CSS personnel. First, the proper mix of active and reserve component elements is necessary. Reserve component elements make up a significant portion of CSS forces. Such factors as mobilization times are considerations in planning the CSS force. The supporting force may also include joint and multinational support troops, DA civilians, contractor, and host nation support (HNS) assets. CSS planners must integrate all these elements into the support plan to maximize the efficiency of the system. Strategic mobility assets are limited; use of these other resources can often enhance deployability of the required force. Chapter 3 discusses the various resources that may be available to perform CSS activities and some specific considerations involved in integrating them.

Terrain and weather affect the CSS effort in two ways. First, as described later in this chapter, they influence the operations of the supported force and the requirements for certain categories of support. Terrain and weather also influence how those who execute the support plan operate. For instance, such factors as snow, rain, and rough terrain slow down CSS activities. Use of fixed facilities in urban terrain may increase the efficiency and effectiveness of support operations.

Generally, time available to plan support operations decreases as one moves across the continuum from the strategic to the tactical level. However, at each level it may vary substantially. CSS planners carefully evaluate the time available in each situation since it has a major impact on resources available and support methods employed. For example, time constraints may dictate use of air movements, reliance on contingency contracting, use of prepositioned war reserves, dependence on exchange of components rather than repair, and other methods of expedited support.

LOGISTICS PREPARATION OF THE THEATER

One of the processes associated with the situational awareness for CSS personnel at each level is the logistics preparation of the theater (LPT). This process includes all the actions taken by CSS personnel to maximize the means of supporting the commander's plan. These actions include identifying and preparing bases of operations and LOCs, forecasting and building reserves forward and afloat, and improving the theater infrastructure. It involves anticipating requirements, identifying resources available to meet requirements, and taking the steps necessary to ensure the CSS system will be able to provide required resources at the right time and place and in the proper condition. LPT involves two closely related types of activities--information gathering and management and activities required to prepare the theater to receive and sustain forces (Figure 2-3).

Information Gathering and Management

CSS personnel require several types of information to develop theater support plans. This information includes all the factors which influence support requirements and the conduct of CSS operations. As discussed elsewhere in this chapter, these factors include terrain and climate. They also include any theater-specific agreements to provide support to joint or multinational forces.

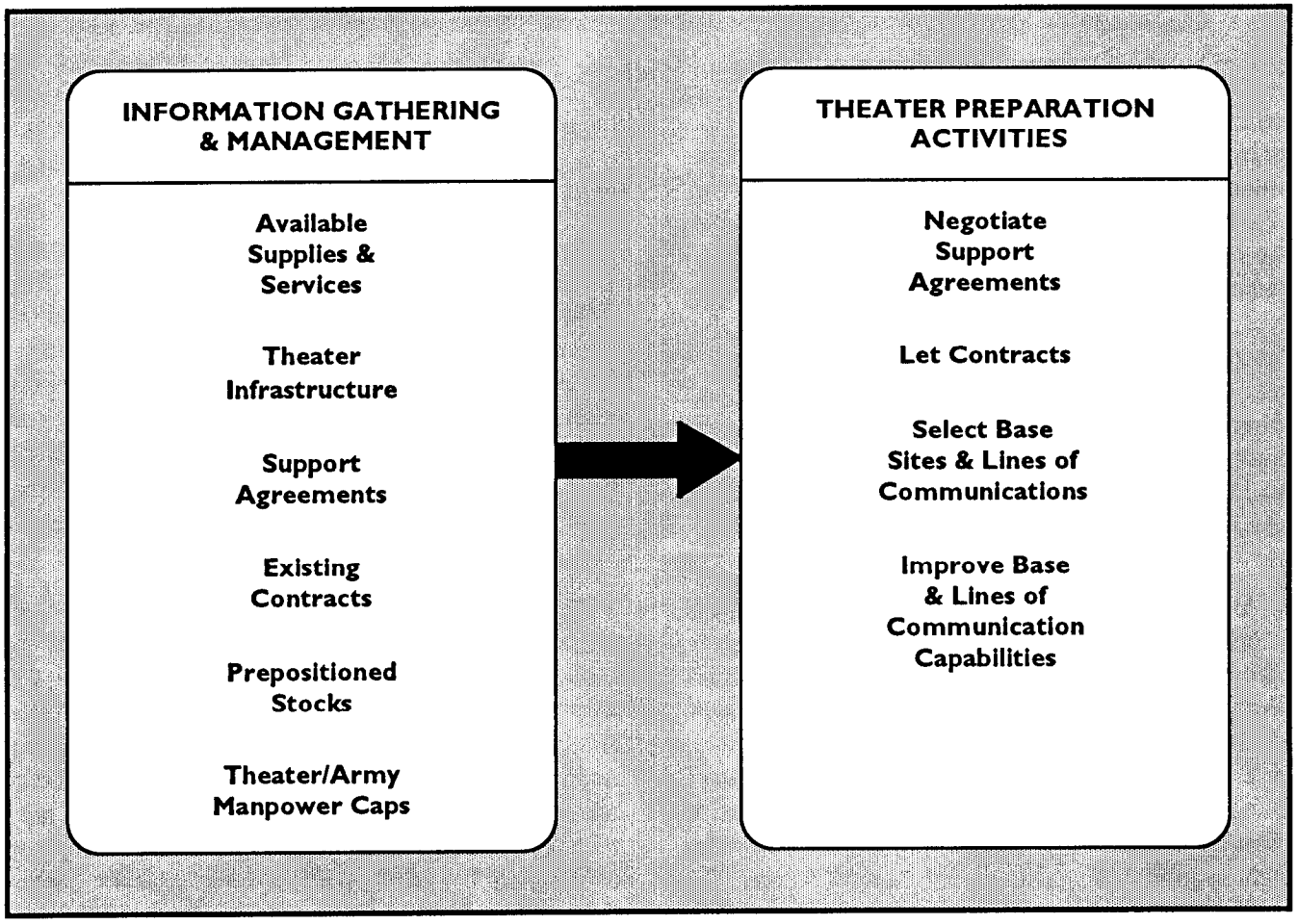


Figure 2-3. Elements of the logistics preparation of the theater

Critical information also includes all information on available resources in the operational area. This includes actual available support assets such as supplies (particularly such items as food, water, fuel, construction material, and repair parts), service capabilities (such as medical, laundry, shower, or baking services), transportation assets (such as trucks, buses, and aircraft), and labor. Resource availability information also includes data on the area's infrastructure. This encompasses a wide-ranging set of considerations including--

- Seaport and airport capacities.
- Transportation networks.
- Communications networks.
- Fuel storage and distribution facilities.
- Utility systems.
- Medical facilities.
- Hotels.
- Financial institutions.
- Postal systems.
- Other fixed facilities.

CSS personnel must also know any factors which may influence access to local resources, such as political or economic conditions.

Another critical category of information relates to any arrangements already in place which affect support to theater operations. These may include HNS; foreign national (third country) support agreements; interservice support agreements; multinational force compatibility agreements; security assistance agreements; the Logistics Civil Augmentation Program (LOGCAP); and prepositioned stocks.

Sources of all this information vary. They may include automated CSS management systems as well as intelligence and civil affairs elements, and State Department or local government officials. They may also include Central Intelligence Agency and Defense Intelligence Agency country studies, country team products, and J2 staff products. Other sources may be as informal as the local telephone directories or chambers of commerce. Coordination with the intelligence system is particularly important. CSS leaders use intelligence to anticipate support requirements, locate routes and sites for CSS operations, and focus and protect their resources. Intelligence preparation of the battlefield provides weather and terrain information to the LPT process. Intelligence also identifies the vulnerability of CSS sites and operations to enemy action, in both forward and rear areas. FM 34-130 discusses the intelligence preparation of the battlefield.

CSS personnel carefully manage information flows. They need to know what information is available and clearly identify their information requirements. They must also know with whom to share the information they have acquired. For example, they may have acquired information which may be useful to those developing the intelligence preparation of the battlefield.

Theater Preparation Activities

LPT also includes actions taken to enhance the theater's capability to receive, move forward, and sustain the force. Part of this process consists of making arrangements to gain access to the resources identified in the information-gathering stage. This may include negotiating specific host nation support agreements and letting contingency contracts. It also includes coordinating with CSS managers at the strategic level to gain access to prepositioned stocks or assets received through national-level agreements.

Preparation also includes establishment of the theater base through the selection of base locations and facility improvements. The initial lodgment or support base requires adequate port facilities that can support the throughput requirement identified in the operations plan. The base should include container-handling capabilities. It should also include secure facilities for maintenance operations, soldier support functions, and storage of all commodities including fuel and ammunition. Transportation networks from potential base locations to forward areas must be capable of handling the theater onward movement requirements. Network

elements include roads nets with adequate capacities, bridges, rail nets, inland waterways if applicable, and materials-handling equipment.

It is unlikely that all required facilities are available at potential base locations. In some theaters, facilities with adequate capacities have never been developed; in others, hostilities may have seriously damaged the existing infrastructure. In such cases, maintenance, engineering, and terminal operations can restore or improve the capabilities of the theater base. CSS personnel synchronize activities of all available resources--host nation, contractors, other services, and Army capabilities--to ensure improvements are accomplished in accordance with CINC-established priorities. As indicated in FM 100-5, when forces are entering into an area requiring infrastructure enhancement, CSS elements must be early in the flow, with a resulting decrease in the number of combat units arriving early. In some cases, the first elements to deploy should be terminal operators or engineers to enhance the base's capability to receive additional forces. However, their capability to augment the capacity of the support base is limited, and in the case of a lodgment area with an austere infrastructure, operation planners must understand that significant deployment of CSS personnel will typically be required early on. The requirement for adequate CSS capability is especially critical in the early stages of operations. In addition, support planners consider opportunities for training which also serve as nation-building activities in austere environments. Such environments may be the best locations for realistic training conditions for activities such as building or repairing airstrips, piers, and roads, and preparing marshaling sites. Engineering considerations are discussed in Chapter 3, and terminal operations in Annex B.

Responsibilities

The primary responsibility for LPT is at the theater strategic and operational levels with the CINC's and Army service component commander's (ASCC's) support staffs. The CINC's staff considers available resources and requirements across all the services. It ensures limited resources go to the organizations most essential to mission accomplishment. The ASCC's staff performs LPT activities in accordance with the CINC's priorities. These staffs thoroughly coordinate LPT activities with support personnel at the national strategic and tactical levels. At the national strategic level, planners need information on all theaters to be able to build national-level capabilities to meet potential requirements. Specific programs to meet theater shortfalls include security assistance, prepositioned stocks, and nation-building programs. Also, strategic mobility is closely connected to establishment of the theater base and selection and improvement of LOCs.

Tactical CSS planners depend on information gathered in the LPT process. Support personnel at the tactical level employ LPT methods as the logistics preparation of the battlefield (LPB). The LPB is a conscious effort to identify and assess the factors which facilitate, inhibit, or deny support to forces at the tactical and sometimes operational levels. LPB is a subset of the LPT process that refines the LPT products. It involves support planners using IPB products; personnel, supply, and movement planning factors; and planning guidelines to develop CSS estimates. Thorough information-gathering in the early stages of LPB ensures that adequate information is available to expeditiously complete estimates and develop a feasible concept of support. A sound LPB process ensures non-CSS personnel know what information and data they need to provide to allow support planners to develop a concept of support. LPB also includes establishment of bases including any forward logistics bases required to reduce distances supported elements must travel. Many of the factors listed above for LPT in general apply to LPB. Table 2-1 lists some of the basic factors particularly applicable to the LPB process.

DISTRIBUTION

Distribution is inherent in the LPT process and continues throughout CSS activities at all levels of operations. Distribution includes the receipt, storage, maintenance of equipment in transit, movement, and control of resources between the receipt of materiel and personnel into the system until final delivery to the user. Distribution is the key to CSS operations. The ultimate goal of both requirements determination and

acquisition of resources is the provision of personnel, materiel, and services to the supported force. Identification of available resources (and in some cases, requirements for certain types of support) depends on the capability of the distribution system. The system is discussed in depth later in this chapter.

Table 2-1. Logistics Preparation of the Theater/Battlefield Planning Factors (not all inclusive)

FACTOR	EXAMPLES
Type of operation	Movement to contact Hasty/deliberate attack Exploitation Peacekeeping Disaster relief
Priority of support	
Policies	Repair Cannibalization Theater mortuary affairs
Geography	Climate Terrain Water sources
Facilities	Warehouses Cold storage facilities Fuel storage tanks Utilities Sanitation assets Bathing/shower facilities Administrative facilities
Transportation	Road nets Rail nets Bridges/tunnels Available trucks Container-handling equipment and MHE available Traffic flows/choke points
Supply	Bulk fuel Barrier and construction materials
Maintenance	Maintenance facilities
General	Language Religion Labor pool

DISTRIBUTION MANAGEMENT

All the CSS activities involved in preparing for or sustaining Army operations depend on effective management, which in turn relies on timely and accurate information flows. At each level, managers must be able to provide commanders with information on the location and status of resources. They must have visibility over personnel, maintenance operations, medical assets, supplies and services, and movements. They must also know the location and status of support units. Moreover, visibility must cross CSS operations at the various levels. For example, supply managers in the materiel management element at the operational level must know the status of supplies at the tactical level to anticipate requirements. They must also know what supplies are planned to be available at the strategic level to meet the needs. This knowledge includes an understanding of the CINC's priorities.

However, management does not end with knowledge of resource status. Managers must also be able to control the systems to make resources meet requirements. This almost always involves integration of several fictional areas. As a simple example, it is not enough for the Class VIII manager of a corps or division to anticipate a requirement or receive a request for medical materiel and to know what is currently available in the area of operations (AO), at the supporting activity, and in transit to the AO. He must also know how to interface with the transportation system to make sure the materiel gets moved where and when it needs to be.

A somewhat more sophisticated example is the CSS component of weapons system replacement operations (WSRO). WSRO involves personnel, equipment, and training. Weapon system managers (WSMs) at each command level maximize the number of operational weapon systems in accordance with the commander's priorities. They must coordinate with materiel managers, Class VII supply units, transportation managers, maintenance elements, personnel managers, and the operations staff. Supply units deprocess weapon systems arriving in theater and make them ready to issue. They install all ancillary equipment and ensure that basic issue items are on board and that equipment is fueled. Ready-to-issue weapon systems then move forward, typically via rail or heavy equipment transporter. Tactical-level weapon systems managers provide for receipt of the systems. They also coordinate receipt of weapon systems returning from the maintenance system. The commander provides personnel elements with guidance on crew replacements. He also tasks qualified personnel to provide required training and ensure that established training standards are met. In coordination with the operations staff and personnel elements, WSMs link weapon systems with trained crews and ensure they have been fueled and boresighted. They also make sure systems have received their basic loads of ammunition. Such systems are now ready to fight, and the WSMs coordinate delivery to the unit on the basis of the commander's priorities.

COMMUNICATIONS AND AUTOMATION

The situational awareness of support personnel and their ability to manage CSS operations depend on effective communications and automated systems that will interface with all the services' automated CSS systems, global transportation network, global positioning system, and theater command and control systems. This requires voice and data communications. Nodes within the distribution system must be able to communicate with each other within specified time and design parameters. Data transfer must be accomplished in near realtime and at a rate not less than the maximum possible for any of the systems with which the system interfaces. More details on the signal support required by CSS personnel are in Chapter 3. Annex H discusses digitization.

CSS also depends on support requirements generated by and managed through the respective Standard Army Management Information Systems (STAMISs). Future developments will bring together fictional STAMISs into an integrated CSS system. CSS automation management offices in support commands serve as system integrator for CSS STAMIS support. In addition, the Combat Service Support Control System (CSSCS) component of the Army Battle Command System (ABCS) provides critical CSS information for

theater and force-level commanders. Details on the STAMISs at each echelon are in the related support organization manual. For instance, FM 63-3 covers the role of CSS STAMISs at corps, and FMs 63-2 and 63-2-1 detail STAMISs at division level.

INTERRELATIONSHIPS OF FUNCTIONS

The annexes to this manual discuss the fictional areas of CSS. However, though the functions are covered in separate annexes, they are all elements of a single system. As such, they are closely related in two ways. First, as described above and later in this chapter in the distribution section, CSS personnel must coordinate several of the functions to make support happen. For example, they integrate the Class IX and II supply, maintenance, and transportation systems to effect equipment repair. Shower and laundry support depends on water supply. Mortuary affairs elements coordinate with the personnel responsible for casualty reporting.

However, beyond such interdependence is the notion that fictions may in some cases represent alternative options. For instance, component replacement may bean alternative to repair of components if time is a critical consideration, components are readily available, and/or maintenance assets are scarce. Other examples of interrelatedness are the key roles that soldiers returned to duty from the medical system can play in replacement operations and the use of air and airdrop in the transportation plan. Understanding of such interrelationships ensures efficiency of CSS operations and enhances the ability of CSS personnel to improvise when necessary.

CSS THROUGHOUT LEVELS OF WAR

Chapter 1 associates CSS activities with levels of war. However, this association is not intended to indicate that any activity is exclusively within the domain of a single level. The CSS system is a single system which requires integrating activities of all system components. There is no clear-cut boundary which separates activities at different levels. Similarly, there is no clear relationship between CSS organizations and levels of war. Elements of the sustainment base may deploy to an AO and help provide support at the tactical level. Conversely, in a small-scale MOOTW, an augmented support battalion may perform CSS activities typically associated with the operational level such as reception of forces and CSS management.

REQUIREMENTS DETERMINATION

CSS personnel at all levels must anticipate and understand support requirements as the first step in ensuring the capability to support the commander's plan. This is part of their situational awareness. They can apply a CSS METT-T analysis to help develop requirements. The process begins with development of the CSS mission. This requires a thorough understanding of the commander's intent, whether the intent involves the strategic role of the Army or a battalion's role in a battle. Support planners must be able to translate a mission or role into CSS requirements. They must understand what actions the supported force is likely to take and how such actions affect requirements for specific support functions.

The mission analysis also includes careful identification of the supported force itself. CSS planners must capture all stated and implied requirements. As described in more detail in Chapter 3, requirements may include those generated by special operations forces (SOF), supported multinational forces, other US services, other agencies, civilians, and even enemy prisoners of war. Such requirements are influenced by interoperability considerations. Support planners must understand the specific types and quantities of support required by each element of the supported force. CSS management information systems support the CSS planner in the mission analysis.

Support planners also consider the enemy and his effect on requirements. For example, a significant potential disruption to the CSS effort may result in a requirement for development of more LOCs or dispersion of CSS assets. At the operational and tactical

levels, the capabilities of the enemy in an operation or battle obviously influence consumption of resources such as fuel, ammunition, and maintenance. In all cases, the capacity of the CSS system is finite with critical nodes that constrain throughput capacity. Though effective management can maximize the system's capability, at some point additional requirements demand expanded CSS structure.

As mentioned previously, terrain and weather have a major effect on support requirements. For instance, environmental conditions may affect consumption rates or aviation maintenance requirements. High temperatures increase heat injuries and engine wear. Open terrain increases fuel and transportation requirements. Arid environments require large capabilities for water, maintenance, and medical support. Cold weather operations increase the need for some specific Class II items such as parkas and sleeping bags. Rugged terrain creates a large requirement for clothing and tires since they tend to wear faster.

The time associated with an operation also influences support requirements. In a very short-duration operation, commanders may suspend some support functions. For instance, morale, welfare, and recreation (MWR) may not be required for a domestic support operation expected to last only one or two weeks. Short time frames limit support to meet only the most critical requirements. However, the system must be flexible enough to adapt to a situation where the operation expands beyond originally anticipated time frames.

At the strategic level, requirements determination involves the identification of resources required to support the Army's role in the national military strategy, theater strategies, and campaign plans. The Army's participation in joint strategic planning is the basis for identification of materiel requirements. These include both the need for new equipment and systems and the need to stock and preposition supplies to meet operational needs given the industrial base's capability to provide materiel. Strategic planners also determine manpower requirements on the basis of the required force structure. Requirements include active and reserve component personnel and DA civilians. Strategic requirements also cover service capabilities, strategic mobility, and CSS force structure.

Operational-level requirements are the resources required to conduct a supporting campaign or major operation. A major part of the process of determining requirements at this level is the METT-T analysis. Planners use it to compute the supply, maintenance, transportation, medical, personnel, and field service support required to sustain the force, which is likely to be a joint/multinational/interagency composite. Support staffs use planning factors to compute requirements for soldiers. Many factors, such as food, water, and services, also apply to supported civilians. (Specifics on support to civilians are in Chapter 3.) Extensive liaison activity is necessary to determine support requirements for SOF, other services, and supported multinational forces. In addition, operational planners consider capability requirements for force reception, base development, materiel management, movement control, and other operational activities. Tactical requirements determination involves much of the same analysis as at the operational level, but it is likely to involve a smaller scale and shorter time period.

ACQUISITION OF RESOURCES

In this context, acquisition refers to activity at all levels to gain access to the support resources identified in the requirements determination. The process is closely related to requirements determination in two ways. Not only is acquisition aimed at attaining the resources identified in the determination, but also barriers to acquisition may influence the support requirements. For example, if weapon systems are not available, maintenance requirements may increase. Acquisition is also associated with distribution. What is acquired and where and how it is acquired may depend on distribution capabilities. At all levels, CSS

personnel are aware of and exploit all possible sources of support.

At the strategic level, acquisition of resources involves such varied activities as--

- Procuring materiel.
- Ensuring adequate production capacity for required commodities.
- Negotiating interservice and international support agreements at the national level.
- Arranging LOGCAP (Chapter 3 has details) and host nation support agreements.
- Recruiting of military and civilian personnel.
- Conducting mobilization activities.

Planners must understand the availability of support capabilities from all possible sources to most efficiently acquire them. They need to understand the requirements and assets available in all theaters, as identified in LPTs, to ensure arrangements are in place to acquire additional required resources.

The LPT ties together requirements and acquisition at the operational level. The LPT process ensures CSS personnel have considered all possible sources of support. As detailed in Chapter 3, they consider such sources as joint and multinational capabilities, host nation support, and LOGCAP and contingency contracting. They are also the link to the support capabilities available in the sustainment base. As such they coordinate their acquisition activities with strategic-level support elements.

Gaining control of required support capabilities at the tactical level involves the link to operational and strategic sources. In many operations, the primary source of supplies and other resources is from the sustainment base as coordinated through the support managers at the operational level. However, CSS personnel at the tactical level, as part of the LPB process, identify resources that may be available through such sources as local purchase, support agreements developed at their command echelons, and foraging. Cross-leveling of assets is also part of the process of determining what resources are available to meet the needs of the supported force.

DISTRIBUTION

The goal of all the requirement determination and acquisition activity is the ultimate provision of materiel, personnel, and services to the commander. The key to this process is distribution. The distribution system is the complex of facilities, installations, methods, and procedures designed to receive, store, maintain, move, and control the flow of materiel, personnel, and services between the point of receipt into the military system and the point of provision to using activities and units. Distribution relates to the CSS pipeline activities associated with sending, moving, and receiving resources. All of these require effective automation and communication. The supply and transportation systems described in Annexes A and B are critical components, but the system relates to all CSS functions, including maintenance, personnel, field service, and combat health support operations.

An effective distribution system depends on the synchronization of these various components. One of the critical elements in effecting this synchronization is the meshing of materiel management and movement control through all levels to create a seamless system and provide total asset visibility. Total asset visibility is the capability to provide timely and accurate information on the identity, status, and location of DOD materiel from the source of production to delivery to the user and ultimate disposal.

At the strategic level this capability allows the Army to acquire, position, and move materiel to the theater when required to meet the needs of the force according to the theater commander's strategic priorities. The CINC/JTF commander coordinates with the National Command Authorities to prioritize strategic movement of assets to the theater. He may create a joint materiel priorities and allocation board to recommend priorities for allocation of resources to meet theater requirements. Joint Publication 4-0 discusses the duties of this and other joint logistics boards, while

the 5- series of joint publications addresses planning for joint operations. The link with the theater distribution system allows operational support forces to prepare to receive and move materiel forward as well as retrograde assets.

A principal goal of the Army's theater distribution system is to move critical supplies and other resources as rapidly as possible under positive control through a distribution system from the port of debarkation (or in-theater source) to the using unit. They will bypass routine warehousing and supply activities as appropriate. Such a system depends on centralized distribution management. The Army's theater distribution management relies on the coordination of the materiel management and movement control functions of the Army from brigade through echelons above corps. These functions are described in the annexes. Distribution management also integrates the activities of other theater CSS managers including the personnel management elements. It involves the distribution of supplies, personnel, equipment, and mail, as well as resources to be retrograded. Finally, effective distribution requires close coordination between the distribution managers and the leaders ofthe operating elements who must execute the support activities to effect distribution.

Materiel managers will have visibility of all resources in the supply and maintenance systems. Their integration with the movement control system will also give them visibility of assets in transit. In-transit visibility is the capability to identify the location of resources at any moment in the distribution pipeline. It will allow distribution managers to reroute supplies in the pipeline to different units or locations. This will enhance the capability to support shifts in operations. Visibility will allow cross-leveling of assets throughout the theater and provide status of supplies in transit to reduce the need to requisition supplies through the strategic system. It will also eliminate the need to build up large stockpiles of supplies in the theater. This capability will depend on synchronized CSS information management systems, communications, and automated identification technologies.

Army distribution elements deploy early to manage initial reception of personnel, supplies, and equipment, and to assess available distribution assets, such as container-handling equipment. The Army's distribution system for sustainment supplies is a continer-based system. Managers consider HNS, contracted equipment, and multinational capabilities. Distribution managers are also responsible for the development of any distribution overlays to be included in operations plans or orders. Overlays may include locations of management cells, receiving and shipping points, supply support activities, main supply routes, and trailer transfer points. They should also specify road conditions, bridge classifications, and alternate routes.

The preferred distribution method is throughput from the port of debarkation to the supply support activity or even the using unit if possible. Distribution managers at the theater strategic and operational levels will manage the assets required to accomplish this throughput. Movement managers are responsible for the tasking of all theater transportation assets available to the Army. These include common user land transportation, host nation support, and contracted vehicles, watercraft, aircraft, and rail resources. If cargo requires sorting before shipment to the supply point, managers will direct it to a supply facility to perform that function and prepare it for forward movement.

Theater managers will also anticipate when a new supply support activity (SSA) becomes responsible for supporting units moving around within a theater. If a unit moves into an area supported by a different SSA, materiel managers at theater level should have visibility of the new servicing SSA. The SSAs and managers coordinate customer list changes. Timely updating of address codes will enhance continuous support to units moving rapidly within a theater. Materiel managers must also ensure that the unit's supply requirements requested through the old supporting SSA are routed to the new one. This will minimize units reordering supplies and burdening the distribution system with duplicate requests.

The distribution system deals with all assets entering, leaving, and moving within the theater. Therefore, distribution management elements also coordinate with

personnel and postal activities to manage the receipt and movement of personnel replacements and mail to and within the theater. Mail that requires sorting will be shipped to a general support (GS) postal unit. Depending on the volume of personnel moving into and within the theater, dedicated transportation may move replacements from the aerial POD to the personnel replacement organization.

CSS managers at the tactical level must be linked to the management systems at the operational level to make the system work. They must prepare to receive support from higher levels. In addition, as mentioned above, managers and leaders of the distribution components at the tactical level must coordinate to manage and execute the activities required to provide supplies, personnel, and services to the supported force.

CHAPTER 3

Support Structures and Responsibilities

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ORGANIZATION FOR ARMY SUPPORT 3-1
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Support for Army operations is a complex activity involving numerous interrelated organizations. This chapter outlines the CSS structure of Army organizations and other elements with which they interrelate. It discusses support sources and responsibilities. It also covers the various elements which may receive support from the Army and the non-CSS Army components which support the CSS effort.

ORGANIZATION FOR ARMY SUPPORT

The CSS organization supporting an Army operation will be a tailored organization. It may include Army CSS elements as well as elements from other services, multinational forces, and other governmental and nongovernmental agencies. It may also include DOD civilians and contracted personnel. Support relationships must be specified for support of missions, forces, or areas. However, to effectively tailor and deploy CSS organizations requires an understanding of the support organizations at each Army command level. Figure 3-1, page 3-2, is an overview of Army CSS structures associated with each echelon. These structures are tailored to the METT-T. Elements of organizations locate where they can best fulfill their support mission.

COMPANY/BATTERY

CSS begins with support provided by individual soldiers for themselves and each other. This includes medical self- and buddy-aid, combat lifesaver support, crew preventive maintenance, and maintenance of basic loads of supplies. Soldiers also initiate any change to their next of kin information and report casualties.

The company typically has only a rudimentary support structure. It relies primarily on CSS assets in its parent battalion. The battalion commander may provide assets dedicated to support of the company. For example, in a maneuver battalion, aidmen from the battalion medical platoon habitually operate with maneuver companies. They ensure basic life-saving skills are constantly at hand and effect rapid evacuation to the battalion aid station. Also, a maintenance team from a heavy battalion maintenance platoon normally operates with a company to fix forward and to assist the company in recovering inoperable equipment to the unit maintenance collection point. However, aside from personnel such as the supply sergeant and armorer, most unit-level assets are centralized at battalion level.

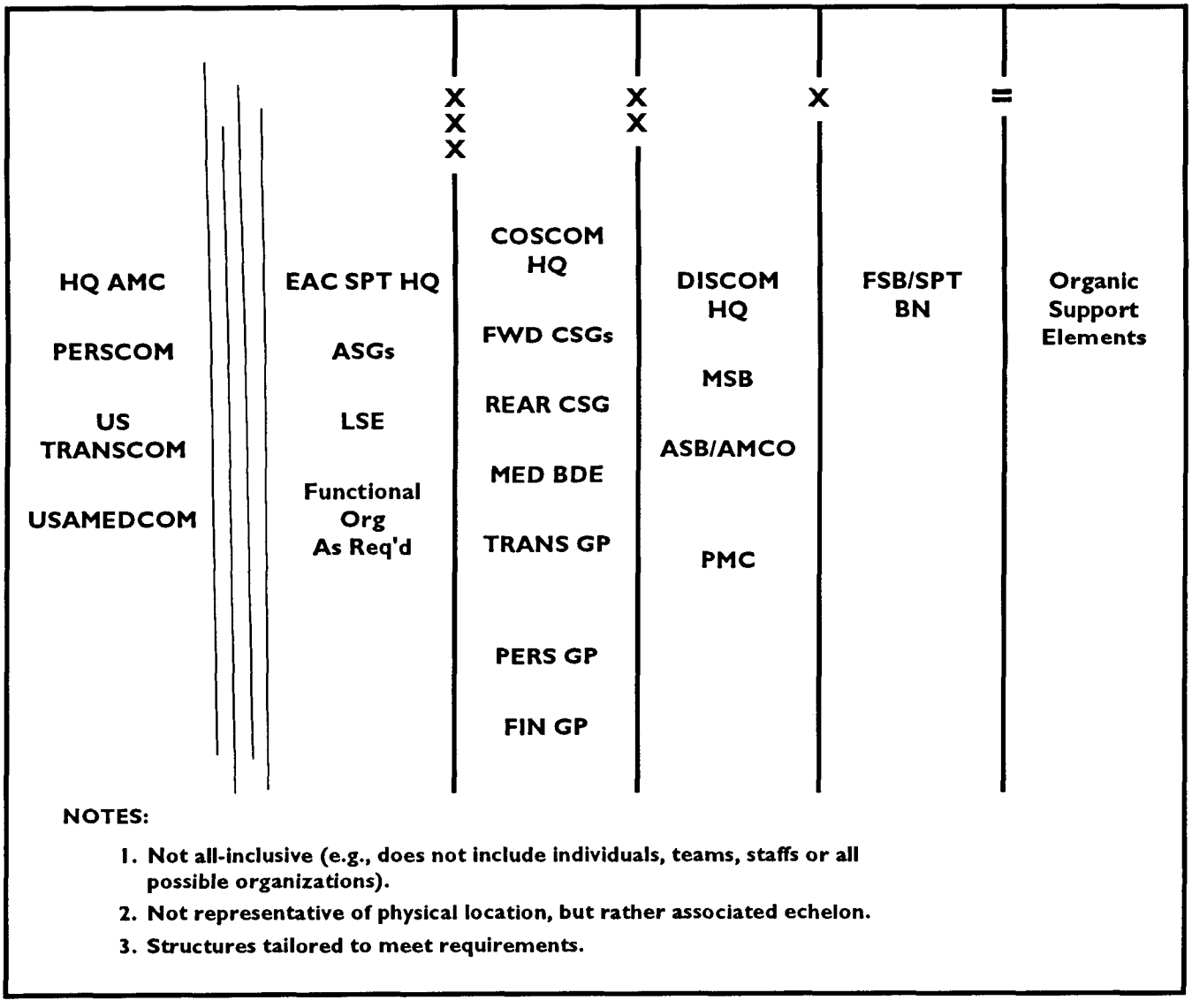


Figure 3-1. Representative Army support structures in fully developed theater

BATTALION/SQUADRON

The battalion S1 and S4, under the XO's direction, plan and coordinate CSS for battalion operations. CSS assets organic to the battalion vary with the type of battalion.

Maneuver and many combat support battalions have maintenance, supply, and medical elements to provide unit-level support. During combat operations, the preferred method of employing these assets is through echeloned trains, consisting of combat and field trains.

Combat trains usually locate between the brigade support area and the company trains. The battalion S4, assisted by the S1, supervises combat trains activities. The combat trains include resources immediately needed by the maneuver companies and other forward elements of the battalion. Trains assets are tailored to the mission. Resources normally include--

- The battalion aid station.
- Medical evacuation vehicles from the forward support battalion (FSB) medical company.

- Elements of the battalion maintenance platoon augmented by teams from the FSB maintenance company.
- Elements of the battalion support platoon which carry uploaded critical supplies, mainly ammunition and fuel.

The maintenance elements for heavy forces normally operate separately from the combat trains in a nearby unit maintenance collection point. The S1 and S4 continually coordinate with the companies to determine the CSS status. They also coordinate with the field trains to ensure that they provide required supplies, services, mail, and replacements.

The battalion field trains are normally in the brigade support area. They serve as a link between the FSB, combat trains, and supported companies. Field trains elements normally include the battalion personnel and administration center (PAC), elements of the S4 section, the remaining elements of the maintenance and support platoons, and the battalion headquarters company. These elements typically support companies by assembling preconfigured supply packages or logistics packages (LOGPACs). LOGPACs may include replacements and return-to-duty soldiers and supplies. Cargo trucks, fuel tankers, and ammunition trucks transport LOGPACs to company resupply points.

In some cases, as when the battalion is in an assembly area or participating in an operation other than war which does not require substantial dispersion, leaders may centralize all battalion CSS assets in a single battalion trains. FMs 71-2 and 7-20 cover maneuver battalion CSS.

The CSS system in many nonmaneuver battalions operates similarly. For example, field artillery batteries, which frequently operate in maneuver battalion and brigade areas, receive support from their service batteries. The organization of these batteries is much like the support elements of the maneuver battalions.

Battalions which operate principally in rear areas have fewer organic CSS assets. For instance, they may receive unit-level medical support on an area basis from medical companies, and they can typically refuel vehicles at service points operated by direct support supply companies.

A significant challenge is support to battalion (or separate company) elements smaller than companies operating in dispersed areas. The battalion support staff must coordinate carefully with CSS planners for each area in which elements of the battalion are operating. The commander and staff must allocate the battalion's limited organic resources to maximize the support they can provide to their units. They must also make arrangements with other organizations to ensure they agree on procedures to provide support that the parent battalion cannot. For instance, division military intelligence (MI) battalion elements typically disperse so widely during operations that battalion support assets cannot meet all their requirements. The MI battalion S4 must coordinate with the brigade/maneuver battalion S4s to work out what support the maneuver battalion assets can provide and how the system will work. The MI battalion may have to augment maneuver battalion assets to the extent possible to meet such requirements.

BRIGADE/REGIMENT

Divisional maneuver brigades have no organic CSS assets beyond the CSS personnel on the brigade staff. However, a forward support battalion from the division support command (DISCOM) directly supports each maneuver brigade and provides area support within its capability to other units in the brigade area.

The base of operations for the FSB is the brigade support area. The brigade support area (BSA) is generally on a main supply route in the brigade rear area. Selected corps support battalion elements may also locate in the BSA. They support nondivision units operating in the brigade area. These units may include artillery, engineer, military intelligence, and aviation units. In certain circumstances, FSB elements also provide critical support from forward logistics bases, usually on a temporary basis. This technique involves the FSB echeloning its assets. (Other support units may also employ this technique.) A forward logistics element with critical capabilities operates from a

location nearer to supported units. This may effectively reduce the distances units must travel to receive support when fast-paced operations or security considerations result in extended distances between supported units and the BSA.

The FSB supply company provides supply support in the brigade area. At its supply points, it receives bulk fuel, rations, and bulk Class IV delivered by echelon above division (EAD) transport (normally truck and air, possibly rail). It also transloads ammunition received from EAD assets onto unit transport. It receives other supplies and equipment by throughput from EAD whenever possible.

The FSB maintenance company consists of a base shop and mobile maintenance support teams (MSTs). It provides maintenance support in the brigade area. Some of the mobile MSTs operate forward in the maneuver and artillery battalion areas as discussed above. The company repairs recovered equipment, arranges evacuation of major systems to its area or the division support area (DSA), and operates the repair parts supply system for the brigade.

The medical company of the FSB provides combat health support in the brigade area. Its ambulances evacuate patients from battalion aid stations and other collection points to its clearing station for treatment.

The FSB is designed to support division units operating in the brigade area. As mentioned above, it requires assistance to support other elements operating in the area. In addition, it is designed to support a brigade operating as part of a division. Hence, certain support assets have been centralized in the DISCOM headquarters and main support battalion to provide greater efficiency. Materiel and movement management, motor transport support, water supply, more extensive maintenance operations (such as track pack splitting and radar repair), and several medical functions are some of the key functions that fall into this category. Therefore, if a maneuver brigade is operating independent of its parent division, planners must tailor the FSB to provide this support or be able to rely on other sources. This condition does not apply to separate brigades and armored cavalry regiments (ACRs). They have organic support battalions/squadrons capable of providing such support. FM 63-1 covers these organizations. The FSB is the topic of FM 63-20.

Heavy divisions are evolving to a structure which includes an aviation support battalion (ASB). Like an FSB, the ASB provides supply and ground maintenance. It also provides aviation intermediate maintenance to the division aviation brigade. It operates in the division rear near the aviation brigade's base of operations. FM 63-23 will address the ASB.

Postal services platoons attached to the FSB provide mail and postal services at brigade level. The S1 coordinates the handling and transportation of brigade mail from the mail delivery point.

DIVISION

The DISCOM provides division-level logistics to all organic and attached elements of the division. All DISCOMs consist of a headquarters and materiel management center (MMC), FSBs, a main support battalion (MSB), and an ASB or aviation intermediate maintenance (AVIM) organization. The base of operations for the headquarters, MMC, and MSB is the division support area. A corps support battalion also typically operates out of the DSA. It supports nondivision elements operating in the division area. In addition, certain combat support units may locate in the DSA. These may include signal, military police, engineer, and chemical elements. The DSA is normally in the division rear adjacent to air-landing facilities and main supply routes (MSRs). FM 63-2 is the doctrinal manual for heavy DISCOMs, while FM 63-2-1 addresses light DISCOMs. The MSB of heavy DISCOMs is discussed in FM 63-21.

The DISCOM support operations section, MMC, and division medical operations center provide planning, management, and coordination to ensure support for all division and attached units.

The MSB supply element provides supply support for units in the division rear. It also maintains the

division's reserve of critical supplies (Classes I, II, III, IV, and VII) to support the FSB/ASB supply companies with supplies that cannot be throughput to forward areas. It provides water purification and supply as well as salvage collection service.

MSB maintenance companies perform division-wide maintenance tasks. The number and types of companies vary with the type of division. They provide DS maintenance for division units in the division rear. They also provide support beyond the capabilities of the FSB/ASB maintenance companies. In addition to their base shop operations in the DSA, they provide teams to work in the areas of supported units as appropriate. The companies also maintain the authorized stockage list of Class IX for the division.

The aircraft maintenance company is either organic to the ASB or a separate company under the DISCOM. It provides AVIM support for the division aviation brigade aircraft, aircraft armament, avionics, and aircraft-peculiar items of ground support equipment. It also provides aircraft repair parts, aircraft end item support, and reinforcing aviation unit maintenance.

The motor transportation company of the MSB provides transportation for personnel, supplies, mail, and equipment to support division CSS operations. The movement control officer in the DISCOM coordinates transportation support for division operations. The division transportation officer on the division staff provides staff planning and highway regulation.

The medical company in the DSA provides unit-level medical support to units in the division rear. It augments forward medical companies or battalion aid stations as required. It also provides division-level medical support to both division and nondivision units in the division rear area.

The division's personnel management center is the key to managing critical personnel systems. It consists of fictional area elements of the G1. It deploys in advance of the G1 main to support split-based operations, provide the full range of personnel system-related functions, and synchronize the personnel systems of all organizations within its area of responsibility. A finance battalion, under the command and control of a finance group, provides finance support to the division. A personnel services battalion, under the command of the personnel group, provides other personnel services to the division.

CORPS

The corps support command (COSCOM) supports all corps forces and, when directed, other forces and civilians. Like all support organizations, the COSCOM is organized to meet the needs of the situation. However, unlike DISCOMs and support battalions which are tailored by modifying established organizations, the COSCOM does not have one fixed structure to modify. It is built to meet requirements and therefore must be developed to meet the needs of the operation. It includes a headquarters, MMC, movement control center, corps support groups (CSGs), medical brigade, and (if required) transportation group. However, the number of CSGs and the structure of all these components vary. FM 63-3 covers COSCOM operations.

The MMC provides centralized management of corps supply and maintenance operations. It uses split-base operations, deploying only minimal essential assets. Materiel management teams collocate with each deployed CSG to facilitate effective support operations. The forward MMC headquarters collocates with the COSCOM headquarters to manage the deployed teams and provide materiel management at the COSCOM level. The rear element provides support from the home station.

The MCC provides centralized movement control and highway regulation in the corps area. With the MMC, it develops the movement program for distribution within the corps rear and to divisions, separate brigades, and ACRs.

The COSCOM typically includes forward CSGs as well as one rear CSG for the corps. There is no set structure for either type of CSG. FM 54-30 gives detailed information on both CSGs and their subordinate corps support battalions (CSBs).

Each forward CSG consists of multifbnctional CSBs. There is no fixed structure for a CSB. One CSB is tailored to support nondivision units operating in the division area. It locates in the division rear. The other CSBs of the forward CSG are behind the division rear boundary. In addition to providing direct support to nondivision units in their areas of responsibility, they provide GS supply, backup maintenance, and field services to the division, separate brigade, and ACR.

The rear CSG consists of multifunctional CSBs as well as functional battalions. The CSBs provide support on an area basis to units operating in and passing through the rear portion of the corps rear. These supported units may include hospitals, replacement units, corps headquarters elements, and corps units supporting a division in reserve. The fictional battalions of the rear CSG provide corpswide support to corps forces. They also provide reinforcing support to the forward CSGs. They may include supply and service, ammunition, petroleum supply, transportation, AVIM, water supply, and base support battalions.

The medical brigade is also a tailored organization. Its units provide hospital, dental, psychiatric, laboratory, preventive medicine, veterinary, optometry, health service logistics, and medical evacuation services.

If the operation requires more than two transportation battalions, the COSCOM may include a transportation group. The group focuses on corpswide transportation support of operations. It may include units performing both mode and terminal operations. A transportation group is normally required when the corps performs both tactical and operational transportation mode and terminal support. This may occur during the initial deployment of the corps into an austere theater when port-opening and line haul transportation units are attached to the corps to perform functions normally associated with theater strategic or operational logistics.

In addition to the COSCOM, the corps includes a personnel group and finance group to provide corpswide support. The task-organized corps personnel management center under the direction of the G1 is the personnel support link among the tactical, operational, and strategic levels of support.

The personnel group sustains corps (or echelon above corps) personnel readiness. It exercises command and control over assigned personnel units. It also manages critical personnel systems and synchronizes the corps personnel network. The size and composition of the group depend on the supported population. The corps adjutant general (AG) is dual-hatted as the group commander. As the group commander, he commands and controls personnel service battalions, replacement companies, postal companies, and bands assigned to the group. In support of small deployments, a small task-organized group or battalion may be the senior personnel organization in the theater.

The finance group provides financial support to all designated Army, joint, and multinational commands, units, and individuals in its area. It provides command and control, staff planning, and supervision for all assigned finance units in the corps area. The number of finance battalions and detachments assigned to the group depends on the supported population. The group coordinates the deployment and operations of these finance battalions and detachments. It also coordinates with supported units to ensure they are receiving required support.

To enhance the ability to tailor CSS forces, force developers will pursue opportunities to develop modular CSS elements. Modularity will provide force elements that are interchangeable, expandable, and tailorable to meet the changing missions and needs of the Army. Modular units will combine the assets required to provide a support function or group of related functions. A module can be sent to support a deploying force without adversely affecting the ability of its parent unit to function at a reduced level.

ECHELONS ABOVE CORPS

The Army service component commander (ASCC) is the senior Army operational-level commander assigned to a unified command. He is the principal advisor to the CINC for supporting and employing

Army forces in theater and forces outside the theater tasked to support theater operations.

He performs three roles:

- Establish the link among Army, joint, multinational, and interagency or United Nations elements.
- Execute Title 10, US Code, support through the administrative (or service) channels, or delegate to an intermediate headquarters.
- Plan and execute operations in support of the joint campaign.

FM 100-7 fully describes the roles of the ASCC and his options for executing these functions.

The ASCC establishes a support command and control headquarters in the communications zone (COMMZ). This headquarters orchestrates the CSS effort for the ASCC. In a force-projection Army, the organization of this headquarters must be flexible and capable of deploying essential capabilities rapidly in support of operations across the entire range of military operations. Early in the planning process, support planning and management elements on the ASCC staff ensure rapid establishment of support command and control and distribution management. They also determine support requirements for all stages of the operation. In addition, at the discretion of the CINC and with proper augmentation, this headquarters may provide command and control for any other support organization in theater. Joint and multinational support considerations are covered later in this chapter.

The actual types and sizes of the units under the support headquarters vary with operational requirements. Units will include both active and reserve component elements. The commander will tailor the support structure throughout the operation to meet changing requirements. Critical elements of the support headquarters should deploy rapidly to an AO to support entry operations, contracting activities, port operations, and rear operations planning, and to enhance the theater base's capability to receive and move forces forward.

The tailored nature of the EAC support organization minimizes strategic lift requirements by allowing the commander to deploy only essential support elements. As much as possible, the support headquarters uses split-base operations by only deploying those elements of an organization actually required in the theater. In addition, functional elements will be modularized as appropriate to provide flexibility.

Functions of the EAC support organization may include:

- Receiving forces.
- Equipping, marshaling, staging, and moving units forward into tactical assembly areas.
- Providing for the efficient sustainment and reconstitution of the Army forces (ARFOR).
- Helping establish and adjust theater LOCs.
- Providing integrated distribution management in support of Army forces in the theater.

Support elements at this echelon may also coordinate projection of support assets from CONUS or intermediate staging bases.

Area Support Groups

An area support group (ASG) is a tailored CSS organization in the COMMZ. It is subordinate to the EAC support headquarters. It serves as a subordinate command and control element for the EAC support headquarters with area responsibility for supply (including petroleum support), field service support (including water purification and mortuary affairs), and maintenance (including AVIM). It may also have area responsibility for real property maintenance activity. It provides nuclear, biological, chemical (NBC) warning and reporting and controls rear operations in its assigned area. The ASG may include other capabilities to fulfill designated theater support responsibilities. Though it has no fixed structure, it may include civil affairs, supply and service, petroleum supply, and maintenance battalions. The ASG commander may also choose to task organize multifunctional organizations to provide support for specific missions or organizations. FM 54-40 covers ASGs.

Logistics Support Element

The logistics support element (LSE) is a flexible, civilian-oriented table of distribution and

allowances (TDA) organization which provides limited GS- and depot-level logistics. It has a small peacetime cadre with the bulk of the positions being battle-rostered. Its elements will retain technical lines with their major commands. The LSE will be rapidly deployable, and its structure will evolve during the course of the operation to adapt to changing requirements and capabilities of deployed organizations. Like other supporting organizations, it supports the CINC with personnel and equipment that deploy to the area of operations. It provides support to the CINC, though within the theater it is OPCON to the ASCC. The LSE can shorten the logistics pipeline by providing the same support in theater that US Army Materiel Command (AMC) provides in CONUS.

Functions that the LSE may perform include:

- Receipt, storage, issue, and retrograde/redistribution of high-dollar, high-tech, low-density items and selected maintenance items.
- Limited GS- and depot-level maintenance to return items to the support system or to support the reparable exchange program. Capabilities include flexible, modular GS-/ weapon system-oriented teams from CONUS depots, and organic or contractor forward repair activities. The senior Army logistician will identify maintenance requirements to the LSE, who will workload attached and operationally controlled (OPCON) maintenance units and activities.
- Designated maintenance services in support of the theater aviation maintenance program.
- Technical, logistics, training, and other specialized services for theater ammunition functions.
- Logistics software management, including troubleshooting and software replacement, until a support group takes over the mission.
- Oversight of contractor-operated activities in the theater through the contracting officer's representatives and administrative services to the representatives.
- Test, measurement, and diagnostic equipment (TMDE) Support.
- Linkage between the theater and the technology base and other research, development, test, and evaluation resources. The LSE provides concrete assistance through interim materiel modifications, operational suggestions, and battle damage assessment and repair (BDAR) of weapon systems.
- Logistics Assistance Program support to provide on-site technical assistance to users of AMC-fielded equipment in theater.
- Army Oil Analysis Program support.

The LSE may also be useful during MOOTW in controlling the transition of support functions to host nation authorities, the UN, contractors, or other agencies. This allows other Army forces to redeploy and prepare for the next contingency. More details on the LSE are in FM 100-16.

SPECIAL OPERATIONS FORCES SUPPORT

As prescribed by Title 10, US Code, the parent service retains responsibility for support of SOF. Several factors influence the ASCC's ability to fulfill that responsibility. Most scenarios envision early Army SOF (ARSOF) employment, often in austere areas removed from conventional support resources. Support considerations include different densities of common items than conventional forces and SOF-unique requirements. Two ARSOF entities assist in SOF support.

The Army special operations theater support element (ASOTSE) has a coordination cell with the ASCC staff. It provides special operations staff expertise and coordinates access to the support infrastructure. It ensures ARSOF requirements are included in the support plan. It also provides the capability for deploying ARSOF to gain access to the Army support structures on arrival in theater. FM 100-25 describes the ASOTSE and its capabilities and responsibilities.

The special operations support battalion (SOSB) provides limited direct support to ARSOF. It provides support from the ARSOF's early arrival until the theater support structure capability can take over. The SOSB provides supply and maintenance support similar to that provided conventional units. It also provides low-density and SOF-peculiar item support. The unit is capable of deploying anywhere in the world to provide early support. It provides support only until

the theater support structure is established and capable of meeting ARSOF requirements. Once that occurs, the SOSB prepares to redeploy in preparation for another contingency. FM 63-24 describes the SOSB.

Adequate and timely support to ARSOF depends on three components:

- The ASOTSE as the theater planning agent.
- The SOSB as the contingency provider of direct support.
- The theater support structure as the long-term provider of support.

The SOSB and ASOTSE complement and enhance, not replace, other support structures.

Support principles that are critical for SOF include:

- Maximum use of foreign national support, to include local and third country resources.
- Maximum use of existing fixed facilities.
- Minimum handling of supplies.
- Maximum use of accompanying supplies, pro-positioned stocks, and preplanned resupply packages.
- Anticipation of high attrition during resupply missions into denied territory.

US ARMY MATERIEL COMMAND

AMC through its major subordinate commands and separate reporting activities operates the national materiel-related logistics system for the Army. It performs research and development; development test and evaluation; acquisition and logistics support as well as technical assistance (to include logistics assistance officers) for materiel systems; and other materiel acquisition management functions. It provides the Army's national logistics system-level maintenance support for items used by the Army. It also serves as the DOD single manager for conventional ammunition. It manages the policies, programs, objectives, and resources associated with its worldwide Logistics Assistance Program, and it accounts for and manages Army reserve stocks worldwide. In keeping with the continuous nature of force projection logistics, AMC also deploys required capabilities to provide support at the operational and tactical levels. The LSE discussed above provides the mechanism for this involvement.

INTEGRATED SUPPORT STRUCTURES

The ability to tailor CSS forces with the right capability is essential. They must be able to meet all identified support requirements. These may include support to other countries' forces, other services and agencies, and civilians. To provide such support, leaders tailor the CSS system across the joint, multinational, and commercial spectrum, and Army elements may receive support from any one of these sources.

The key principle in receiving support from or providing it to other elements is to ensure that clearly stated agreements exist. These may include interservice support agreements between US military departments, cross-servicing agreements between the US services and other countries, and foreign military sales agreements. In each case, all parties must specifically agree on what the Army will receive or provide to whom, in what quantities, and for how long. The "what" must include the exact types of support including specific standards as required. For example, bulk fuel may have to meet identified specifications.

SUPPORT RECEIVED FROM OTHER SOURCES

The US Army receives support from DOD agencies, joint forces, multinational forces, the host nation, other agencies, and civilian sources. This section discusses the principles involved in each. The next section covers support the US Army provides to other elements. Many of the principles overlap.

Support from DOD Agencies and Joint Forces

Missions that require the projection of Arrny forces are intrinsically joint operations. The Army receives support from and provides it to elements of other services and agencies. Several key organizations are discussed here. Others are mentioned in the fictional annexes.

USTRANSCOM, a unitied command, provides global air, land, and sea transportation used to project and sustain US forces to meet national security objectives. USTRANSCOM has three component commands. The Military Traffic Management Command, the Army component, provides traffic management, CONUS-based surface transportation, strategic seaports or common-user ocean terminals, intermodal moves, and transportation engineering. It manages CONUS and outside CONUS (OCONUS) sea ports of embarkation and mandates cargo arrival times at them. The Air Mobility Command, the Air Force component, provides worldwide airlift and aerial refueling support to DOD components and operates aerial ports. The Military Sealift Command is the Navy component. It provides strategic sealift worldwide to meet military requirements.

The Defense Logistics Agency (DLA) mission is to provide effective logistics in the areas of supply, contract administration, and technical services to all the military services and to federal civil agencies and foreign governments as assigned. DLA procures, stores, and distributes common use items in support of the military services. In concert with the CINC's directives and priorities and the prioritized available lift, DLA coordinates for common use items to be pulled from existing stocks or shipped directly from the manufacturer to the theater for theater management. These common use items are categorized into eight commodity areas. Three commodity groups (food, medical items, and clothing/textiles) are managed by the Defense Personnel Support Command. Hardware commodity centers manage the other five:

- Electronic supplies.
- General supplies.
- Industrial supplies.
- Fuels.
- Construction material.

DLA has regional commands that provide commodity storage and customer consolidation prior to overseas movement. Other DLA commands provide contract administration services, technical logistics services, and defense reutilization and marketing services both stateside and into the COMMZ.

The Armed Services Medical Regulating Office (ASMRO) is a joint agency which regulates patients from theaters of operations to appropriate CONUS treatment facilities. It coordinates closely with USTRANSCOM to optimize use of transportation assets in patient evacuation. The ASMRO is also responsible for medical regulation within CONUS.

The Army and Air Force Exchange Service (AAFES) supports major installations and units deployed to remote areas. It also supports field operations and exercises. During operations, AAFES support may include a combination of direct retail operations, tactical field exchanges, and AAFES imprest funds activities.

How these and other organizations provide support to forces conducting an operation may vary. Within a theater, the combatant commander exercises combatant command (COCOM) authority over assigned forces, including all CSS forces. CSS is a function of command. As described in JP 3- and FM 100-7, CINCs may exercise COCOM--

- Through the service component commanders.
- Through fictional component commanders.
- Through a commander of a subordinate unified command.
- Through the commander of a joint task force (JTF).
- Through a single-service force commander.
- Directly over specific operational forces.

The CINC always has directive authority over CSS forces within his command. During a crisis action or war, his authority expands to include use of all facilities and CSS resources of the forces assigned to his command in order to accomplish the mission.

Each service is responsible for the support of its own forces unless that support is provided for by agreements with other services, national agencies, allies/coalition members, or the host nation. However, when deployed for major operations, support to the services is likely to become interdependent. CINCs may designate a service, usually the primary user or the service with unique or dominant capabilities in support functions, to provide common support functions for

other elements within the theater. For instance, the Army is the only service with the capacity to produce large quantities of potable water for land forces. It is also the service with the greatest capability to provide life-support functions for large populations. The CINC capitalizes on such capabilities to provide efficient and effective support to the total force. He also ensures that competing demands from the various service components for host nation or contracted resources are prioritized in accordance with contribution to mission accomplishment. JP 4-0 provides doctrine on logistics for joint operations.

If a CINC elects to exercise combatant command through a joint task force, the ASCC retains responsibility for support to the ARFOR of a JTF unless there is specific direction to the contrary. Normally, support comes from Army CSS elements either directly under the control of the ASCC or OPCON to the JTF. The JTF J1 and J4 develop support plans and policies. They also coordinate and supervise JTF support operations. In addition, they advise the JTF commander on support capabilities and considerations which may influence JTF mission accomplishment. They establish and supervise joint logistics centers and boards as required. These organizations may include a joint movement center, subarea petroleum office, joint medical regulating office, joint transportation board, and joint medical blood program office. These and other joint boards and centers are described in JP 4-0 and the annexes of this manual.

Support from Multinational Forces

Multinational operations require a different integration process than the one used during the Cold War. Historically, CSS was predominantly a national responsibility. Multinational efforts, designed to streamline the focus of combat power, are supplanting national doctrines. Though CSS is a national responsibility, the Army can expect combatant commanders to be more prone to exercise their directive authority by having national commanders take on CSS missions in support of the multinational force. Multinational forces must capitalize on the CSS strengths of individual members. Therefore, not only will the Army be supporting forces of other nations, but our forces will also be receiving support from other forces. Standardization of tactics, techniques, procedures, and equipment is the ideal. However, it is difficult to achieve. Interoperability is realistically achievable, and efforts to interoperate with allies must be pursued. Army CSS personnel must ensure the support the Army receives is available at the right time and place and meets the specific requirements of the force. Authority and other principles for multinational support are addressed later in this chapter under the discussion of support to multinational forces.

Support from Other Agencies

Support from other agencies falls into two categories--support other agencies habitually provide the Army and support provided for specific operations.

Several agencies have missions to provide support to the Army as required on a habitual basis. The GSA provides general supplies and services that are common to more than one department of the government. To DOD it provides supply support for such common items as office furniture and supplies, machines and hand tools, and photographic supplies. The Army also receives support from such agencies as the Office of Management and Budget and the General Accounting Office.

In specific instances, Army forces also 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 CSS system as discussed later in this chapter. However, Army elements supporting other agencies may also receive some of their support from the supported agency. At times, the civil authorities may have enough support resources to support not only themselves but also the Army personnel providing assistance. For example, civil authorities may provide housing, food, and fuel to troops assisting in a counterdrug or firefighting operation. Army CSS personnel negotiate such support on a case-by-case basis with the appropriate civil authorities.

Host Nation Support

An objective area's infrastructure is a key source of support. Provision of support from the host nation reduces the requirement to deploy Army CSS units. This allows more combat power to deploy quickly. Host nation support may be appropriate at all echelons from the combat zone through the COMMZ. It is a key consideration in the LPT. Factors which influence the suitability of using host nation resources to accomplish specific missions and fictions include:

- The capability, dependability, and willingness of the host nation to provide and sustain identified resource needs. The theater commander and ASCC seek to arrange as much support as is practical. They conclude the necessary agreements with the host nation in peacetime to ensure capability and dependability.
- The effect on security and reliability of support.
- The risk associated with host nation support being available in wartime in the type and quantity agreed upon.

Host nation support is normally based on agreements that commit the host nation to provide specific support according to prescribed conditions. Agreements occur at various levels. They include agreements made between nations; among component commands, major commands, and services; and, in lower levels, between units. Formal agreements are preferred but not required.

Host nation support may include--

- Government agency support. Host nation government agencies build, operate, and maintain facilities and systems such as utilities and telephone networks. They may provide services in support of US needs. Police, fire companies, and border patrols may be available to support US forces.
- Host nation civilians. Required host nation civilians may include laborers, stevedores, and truck drivers as well as technicians and managers.
- Host nation military units. Host nation military or paramilitary units support US needs with functions such as traffic control, convoy escort, installation security, cargo and troop transport, and fuel storage and distribution.
- Host nation facilities. US forces use host nation buildings or facilities. The LPT discussion in Chapter 2 details these resources. Host nation facilities may be nationalized, come under host country government control, or be provided by contractual agreement.
- Function or area support. A host nation may perform a particular function in a designated area or for particular organizations with national boundaries. Some examples are rail operations, convoy scheduling, air traffic control, and harbor pilot services.

The degree of command and control exercised by US forces over host nation support depends on the type of support, location, tactical situation, political environment, and provisions of umbrella and technical agreements. Language-proficient personnel provide the interface between US Army and host nation elements. Implementing plans must include request procedures and legal restrictions imposed by the host nation. However, their focus should be on ensuring the availability of support.

In a friendly country, Army forces control host nation resources through coordination with local officials when possible. Treaties or HNS agreements coordinated with the staffjudge advocate (SJA) should cover control relationships. Civil affairs personnel aid this civil-military cooperation by providing an interface with indigenous authorities or military forces.

Support from Civilians

Support from civilians is not a source of support exclusive of the sources listed above. Civilians play a key role in each of those categories and others (such as contracted support). However, there are unique considerations associated with the support they provide.

There are three basic categories of civilians who have a role in providing support *to* Army elements. These are DA/DOD civilians, civilians of other governmental and nongovernmental agencies, and contracted civilians. Like the use of host nation support, civilian support frees soldiers for other duties. Commanders may employ civilians without a mobilization

while much of the military CSS structure is in the reserve components. Also, civilians may possess technical skills either not available or not present in sufficient quantities in the Army. Planners must consider all these factors in working out use of civilians.

DA/DOD Civilians. Civilian personnel are a key component of the Total Army. In peacetime they have a large role in the CONUS/home station CSS system. However, their participation is not limited to that role. Selected, highly competent civilian staff members have signed agreements to remain in place in overseas activities or to deploy with the force to support Army operations. In addition, any DOD civilian is subject to deployment if the need for his skills is critical to support of the force. Critical skills may include working in or supervising high-tech maintenance operations, identifying and solving weapon system problems, and providing automated systems assistance. Civilians may also play a key role in such activities as AAFES support to Army operations. DOD Directive 1404.10 gives guidance on employment of DOD civilians.

There are many considerations that commanders and planners must take into account when they deploy civilians to a theater of operations. Some issues have been clarified; some solutions are still evolving. One consideration that is clear relates to the control relationship and how civilians are deployed.

The preferred method of deploying DA civilians is by detailing them to an organization assigned to the theater. They may deploy as part of a logistics support element discussed earlier in this chapter. Civilians may also be detailed to other units in the theater or they may be sent to the theater in temporary duty status, in which case their home station manages their performance. Even in the case of a temporary duty status, they must be attached to an element in the theater. It must be clear who in theater is responsible for supervising their work, managing their work schedule, reporting their hours worked to their home station, and evaluating their performance and conduct. Support *to* civilians is discussed later in this chapter.

No matter how DA civilians deploy, the following considerations apply:

- They cannot be required to do jobs outside their job description, such as guard duty or cleanup details.
- They are entitled to danger pay and foreign post differential which the Department of State controls.
- Their home station manages their pay, and some employees are subject to a pay cap. This cap does not include danger pay and foreign post differential.
- Physical and medical readiness for deployment is a part of the general job requirements determination. The CINC may identify specific theater considerations.
- They are not subject to the Uniform Code of Military Justice except during a declared war.
- Commanders may not place them in imminent danger of grievous bodily injury or death (unless emergency essential employees have agreed to be put in such situations before the contingency deployment). The CINC determines the general threat level.
- The legal status of DA civilians (and contractors) in the area of operations or accompanying the force is that of a combatant. They require DA Form 1602 identification cards and Geneva Convention identification cards. They should have uniforms and may be issued arms if authorized by the theater commander. However, civilians cannot be required to carry weapons.
- Private insurance exclusions for death or injury in wartime may apply.

Civilians from Other Agencies. Though the Army typically provides support to other agencies, in certain circumstances, to take full advantage of integrated support systems, civilians from other agencies may be part of the system providing CSS to Army personnel. This is particularly likely when Army elements are operating in support of civil authorities. Civilians may be apart of other US governmental agencies such as the Department of State, the Department of Commerce, the Environmental Protection Agency, the Department of Agriculture, the Department of Justice, and Federal Emergency Management Agency. They may also belong to state and local governmental organizations,

or, as mentioned above, host nation governments. The Army may also interface with civilians from a wide variety of other organizations. These range from United Nations agencies and the American Red Cross to international charitable organizations.

The key consideration in all such cases is to ensure that support responsibilities are clear. If other agencies are to provide support to Army personnel, specific procedures should be agreed upon in advance. The exact support they will provide, how the Army will request and receive it, and the period of time involved must be absolutely clear to all parties.

Contracted Personnel. Contracting is a critical source of support for a CONUS-based, force projection Army. Use of contractor releases military units for other missions or fills shortfalls. It provides the Army with an additional means to adequately support the current and programmed force. Contracts supporting military operations can be divided into two categories--contingency contracts and weapons system support contracts. While contingency contracts are written with a crisis in mind, weapon system support contracts are written during the acquisition cycle. CSS personnel planning an operation must carefully review weapon system support contracts. They may not cover all the METT-T elements of importance to the theater commander.

Usually contracting elements organic to the deploying force (such as within the corps or division MMC) write contingency contracts. Among other functions, they can provide support during reception and onward movement, or they may fill shortfalls in the CSS structure for such functions as transportation, maintenance, and field services.

The Logistics Civil Augmentation Program (LOGCAP) is a special contingency contracting concept. The concept is to maintain, based on multiregional needs, a worldwide umbrella contract let by the US Army Corps of Engineers. The program includes the contracting equivalent of contingency plans for various regions. It allows the swift acquisition of contracted combat support or CSS required in a crisis. The CINC may choose to execute the plan for his theater to increase his flexibility and fill shortfalls in the force as he evaluates the TPFDD. The commander decides where to use force structure or contracted support to accomplish his mission. The using major command funds the execution cost.

During the LPT, planners consider the resources available through existing HNS agreements, any existing in-theater contracts, and potential support available through contingency contracts, including LOGCAP. The contracting elements of deploying commands along with supporting finance and judge advocate general elements must be among the first to arrive in theater if contingency contracting is to provide essential support early in the operations. Army Federal Acquisition Regulation Supplement Manual #2, Contingency Contracting, provides guidance concerning these types of contracts. It also gives preparation information to assist in the deployment of contracting elements.

When weapon systems support contracts cover deploying systems, coordination between the contracting officer and the theater is vital. The contracting officer is normally assigned to a program/project manager's shop or to an AMC major subordinate command. Numerous METT-T factors must be considered to deploy contractors, as discussed later in this chapter. The contracting officer should provide an in-theater representative so that the contracting chain of authority can interface with the theater chain of command. The LSE is typically the unit to which the in-theater representative of the contracting officer is assigned.

SUPPORT TO OTHER ELEMENTS

In addition to receiving support *from* other sources, Army CSS units also provide support *to* non-Army elements. These include military personnel and units from other services, other members of a multinational force, and civilians.

Although planners cannot foresee every contingency, they forecast all customers and their requirements as accurately as possible. If the Army is going to be responsible for support to other elements, CSS personnel at the strategic level must have arranged for

resource acquisition. Also, planners of specific operations must know the requirements in time to tailor the Army CSS force appropriately. Deployed resources will be austere; Army units will not be able to support a substantial unprogrammed number of personnel or equipment items that arrive at support locations seeking support. On the other hand, in an emergency, Army units, within their capabilities, provide other elements of the total force with support to preserve their health and safety.

All customers must understand the procedures for receiving support. They must know request procedures, priorities, and support point locations and operating times. How long the Army will continue to provide support must also be understood. In some cases, the requirement for a support function ends with the completion of a specific mission. At other times, the Army transfers the function to another agency. This may be another service, an ally or coalition member, another agency such as the United Nations or a private volunteer organization, or a civil authority. In any case, all involved parties must carefully plan the transition, including any transfer of assets.

Support to Joint Forces

As discussed above, the Army provides support to other services and receives support from them. The Army may routinely provide fuel to the Air Force. It may provide Class I and water supply support to the Air Force, Marine amphibious forces, and Navy elements operating ashore. It may also support those elements with ground and some intratheater air transportation. The list of support the Army could provide for other services is long and could include any support the CINC deems is in the best interest of the joint force. Army CSS personnel must think in joint terms and be prepared to provide support to other services when so directed by the CINC and augmented with the required resources. The annexes of this manual have joint considerations for specific CSS functions.

Support to Multinational Forces

Although CSS may be a national responsibility in multinational operations, there are many instances in which the Army provides CSS to allies and coalition members. Our policy in this regard is to provide that support specified informal agreements and any authorized additional support which facilitates US operations. For example, the Army may provide an allied division operating as part of a US corps with fuel, food, and other common items of supply, particularly common ammunition items, for as long as it is operating with the corps. US formations operating under alliance commands may similarly receive support from the allied major command. To a greater extent than in the past, Army elements will be providing support to forces of other countries. These will include both allies with whom we have an established relationship and coalition members participating in a contingency operation.

Support to (and from) multinational forces may be provided under one or more possible authorizations. For example, Chapter 138 of Title 10 authorizes the interchange of support between US services and other countries. It authorizes DOD acquisition *from* other countries by payment or replacement-in kind, without the necessity of a cross-servicing agreement.

With Secretary of State agreement, the US may also make transfers *to* other countries. Such transfers include Title 22 security assistance sales or grant transfers pursuant to the Foreign Assistance Act (FAA). They also include reciprocal services or replacements-in-kind under Title 10, Chapter 138.

Unlike security assistance transfers, CSS authorized under Title 10, Chapter 138, does not include major end items, missiles, or bombs. It does authorize food, billeting, petroleum, oils, transportation, non-distinctive clothing, communications services, medical services, ammunition, storage, spare parts, maintenance services, and training.

In many cases, security assistance will continue, at least initially during an operation, to provide support to allies and friendly countries. In some cases, however, the President may also direct an emergency drawdown of military department stocks. Section 506 of the FAA authorizes such drawdowns for emergency assistance

or counternarcotics programs. Section 552 authorizes them for peacekeeping operations. However, all materiel, services, and training must be drawn from existing stocks. The emergency authority does not authorize new procurement or expenditures of service funds.

The US has also agreed to allow, in some cases, a multinational force commander to redistribute support assets of the nations that make up the force (North Atlantic Treaty Organization Military Decision 319). This authority may include certain restrictions. For example, nations can designate resources not eligible for redistributions. Also, redistribution only applies within operational boundaries.

In any case, CSS cooperation among the elements of a multinational force is essential. Multinational operations require extensive coordination. Forces should exchange liaison officers who speak the language and understand the culture and CSS systems. They must work to ensure supported elements understand the capabilities and limitations of the US CSS system and how it works. They must clearly articulate staff relationships and procedures. In some cases, support personnel from other countries operate with different concepts of urgency and timing. US CSS personnel must understand that and be able to avoid or work out problems.

Another set of potential problems involves varying expectations of support. Soldiers from other countries may have different expectations regarding the types and levels of support. For example, cultural differences may affect such support as subsistence, medical, and laundry and shower operations. Also, there may be varying expectations regarding such factors as compensation and leave, especially in MOOTW. Such differences can lead to resentments within the coalition if not handled carefully.

Support to Other Agencies

In interagency operations, the CSS role of the Army is typically in support of civil authorities. Usually authorities request the Army to meet needs beyond the capabilities of the agency. Again, thorough liaison is necessary to ensure Army support responsibilities are clear. In addition to supporting troops involved in the support mission, Army elements may provide CSS to members of the civil agency and to civilians in the area of operations. Support to all these elements must be integrated to ensure efficient operations. FM 100-19 discusses such specifics as legal and resource management issues for such operations.

Support to Civilians

There are three broad categories of civilians that the Army may have to support--DA/DOD civilians, civilians of other agencies, and civilians dwelling in the area of operations. In some cases, the Army may also provide agreed upon support to contractors.

Support to deployed DA civilians should be the same as that for soldiers. It is planned on a case-by-case basis and should include the full range of support functions. These include medical support, housing, supply support, transportation, maintenance, MWR, legal assistance, postal support, field service support, and support services to the family. DA civilians receive full medical services with the same priority of care as soldiers. Medical services include treatment in theater as well as all service-related care required after they redeploy. DA civilians also receive the same mortuary affairs, laundry, and shower support in theater. They receive legal support for any affair connected to their deployment. In addition, they receive supply, maintenance, and transportation support through the unit to which they are assigned. In the case of food service support, even in a temporary duty status, there is no food charge when orders specify field conditions. The theater commander may authorize civilians to carry sidearms. (However, civilians may not be required to carry weapons.) Generally, planners consider the same support requirements for DA civilians as for military personnel through all stages of an operation. These include training, individual readiness, equipment, deployment, sustainment, and redeployment requirements. Additional information is in ARs 690-11 and 600-8-101 and DOD Directive 1404.10.

Generally, it is not desirable for the Army to provide support to contractors, and the contractor is responsible for providing all the support functions discussed

above. However, on a case-by-case basis the Army may negotiate with the contractor to provide support. In all situations, it is important that the contract clearly state who is responsible for support to contracted personnel. If the Army is responsible, planners must enter the requirements into the system so that adequate Army resources are available. The same is true for support to DA civilians. Planners coordinate support to civilians of other agencies during interagency operations in a similar fashion.

Another critical consideration for support to DA civilians or contractors is personal security. Commanders may not place civilians in imminent danger of bodily harm. Also, planners must consider the effect of having significant numbers of civilians performing CSS functions in the rear since it reduces the number of personnel available for security tasks.

Some Army operations involve direct support to US or foreign citizens. In fact, in disaster relief and other humanitarian assistance operations, this is typically the primary mission. In war or civil emergencies, there may be a large number of displaced persons requiring support. In general, support personnel plan and provide support to civilians in the affected area as they do for any other supported personnel. However, there may be cultural implications for such support as food service and mortuary affairs. Also, there are some legal restrictions governing Army support to civilians. FMs 100-19 and 100-23 discuss these considerations. Required functions may include distribution of relief supplies, provision of medical aid, provision of essential services, and disposition of human remains. Such operations are often interagency operations; coordination with other agencies is critical to spell out exactly what functions the Army will perform.

Supported US or foreign citizens may also include civilian news media representatives. The Army may have to provide such support as personal protective equipment, communications, transportation, billeting, subsistence, medical care, and other essential services on a reimbursable basis when they are not available through commercial sources. This is especially true for members of the DOD national media pool and other media representatives accredited by the Army and authorized to accompany a unit during operations.

SUPPORT TO THE CSS EFFORT

Successful CSS operations depend on the performance of many non-CSS functions. This is particularly true at the operational and tactical levels. CSS depends on such activities as engineering, battlefield circulation control, communications, and civil affairs. Like the CSS functions they support, these activities may be performed by Army elements, other services, allies, or civilians. Yet, in all cases, planners must synchronize them with the CSS effort.

ENGINEERING

As discussed in Chapter 1, establishment of the theater base and other bases is a critical CSS function. The ability of CSS elements to support an Army operation depends on the capacities of the facilities within the support bases throughout the theater and of the lines of communication. General engineering functions expand and maintain these capacities. Activities include construction, acquisition, and maintenance of facilities and transportation routes. The activities which dominate the engineering effort during a particular operation depend on a number of factors including the type of military operation, the maturity of the theater, the size of the committed force, and the anticipated duration of operation. For example, war in a mature theater likely requires concentration on modification and repair of existing facilities and roads. On the other hand, during peace operations in less developed theaters, engineers may focus on construction of austere facilities to expand the existing infrastructure.

Priorities also vary in different phases of a force projection operation. In the early stages, expansion of port and airfield capability and initial establishment of the lodgment area are likely to be the primary concerns. Engineer units may be acquiring or constructing reception facilities, developing logistics-over-the-shore sites,

dredging ship channels, providing diving support in the harbor, and improving the transportation routes required to clear the port area. As the operation develops, priorities shift to development of intratheater LOCs, expansion of the lodgment area, and establishment of additional support bases.

The specific tasks performed by theater engineer units vary with all these factors as well as the particular mission and the location in the theater. For example, the fiction of "constructing facilities" may involve tasks ranging from building a warehouse in the COMMZ to providing a berm for a collapsible storage tank in a maneuver brigade support area. In the COMMZ, engineers typically acquire or construct facilities for off-loading and storage of supplies and the reception and staging of reinforcements. They construct pipelines and perform limited repair of railroads to increase the capability to move large tonnages of supplies. Their improvement or repair of air bases enhances the capability of the theater to support both Army and Air Force missions. In other areas of the theater, construction and maintenance of roads and airstrips, and hardening of support facilities require earth-moving and fixed bridging assets. In forward areas during war, CSS efforts to sustain close combat may depend on engineers continuously emplacing tactical bridging to reopen damaged supply routes.

In any case, synchronization with the CSS mission requires force planners to take into account the functions and specific tasks required, evolving priorities, and all the other factors discussed here as they tailor Army engineer organizations or secure engineer support from other sources.

MILITARY POLICE SUPPORT

Military police (MP) interrelate with CSS activities through several functions. These include battlefield circulation control (BCC), security operations, and enemy prisoner of war (EPW) and civilian internee confinement.

BCC is a normal mission of MP in support of all forces. It involves route reconnaissance and surveillance, traffic control, and straggler and refugee control. To CSS personnel, it is critical. As discussed in Annex B, the movement of personnel, equipment, and supplies is inherent in all CSS functions. At the operational and tactical levels, effective use of the road network is likely to be a key component of the movement function. Numerous users need to move on limited roads. In addition to CSS movements, the road network must support requirements placed on it by combat and combat support units. Also, stragglers and refugees may clog routes. BCC performed by MP as specified by movement control elements ensures maximum utilization of scarce road capabilities. MP help identify possible routes and alternates, monitor the condition of roads, and keep routes clear for vital military movements.

MP also perform security functions in support of CSS activities and facilities. They may protect essential facilities such as fuel points or ammunition supply points. Throughout the theater they may reduce pilferage and the possibility of sabotage at support facilities. Their mobility also enables them to provide security for pipelines and supply routes. In addition, they are frequently the best available force to function as the response force for a support base facing a threat which the base does not have the assets to defeat.

Another MP responsibility relating to CSS is EPW operations. In addition to their normal responsibilities involving EPWs, MP may provide EPW and civilian internee confinement support. They coordinate this support with CSS and engineering elements since internees must be moved, fed, and so forth. If the number of internees is large enough, this could involve a considerable burden on the CSS system.

SIGNAL SUPPORT

Like all other Army activities, CSS operations require effective communications support. In addition to the communications required for command and control of CSS units, extensive communications capability is required to pass support requirements, status reports, management information, and information to synchronize CSS activities. CSS elements must maintain links

with supported elements, their sources of support, and other CSS units with whom they must coordinate activity. Often these links entail significant distances, such as when split-based operations separate components of management organizations or when a fast-paced operational tempo results in supported units operating at considerable distances from support bases.

CSS personnel coordinate closely with their signal counterparts to ensure CSS communications requirements are adequately identified and met. At the national strategic level, CSS personnel work with communications systems designers to ensure communications capabilities include all CSS needs. During operations, the CSS system depends on signal elements to provide the voice and data transmission capabilities to maintain required links. This service involves two basic components--an area system within the theater and a link to the sustainment base.

CSS forces use the area system to communicate with customers, coordinate with other deployed CSS elements, and effect command and control of CSS units. Signal elements provide this service by providing the link to the commercial and other host nation communications systems available in the theater and by operating the area common user system. This area system consists of a grid network with signal nodes which provide automatic switching and circuitry for telephones, facsimile machines, and data terminals. It also interfaces with FM radios.

As discussed previously, the ability of the CSS system to sustain the deployed force depends on communications with the sustainment base. Efficient force projection requires use of innovative concepts such as split-based operations and total asset visibility. The ability of CSS management cells to deploy with minimum assets means they must be able to communicate with their home base counterparts. They must be able to pass force requirements and to receive processed command and control information. Also, a total distribution system relies on communications. Requisitions must flow from the theater to the NICPs. Total asset visibility, including in-transit visibility, depends on communications. Managers must know the status and locations of all resources in order to ensure scarce assets get to the units with highest priority first. In-transit visibility also minimizes costly multiple requisitions for supplies. These systems depend on communications between the theater and the sustainment base. So do other CSS functions such as medical evacuation, patient management, personnel replacement, resource management, ALOC supply, casualty reporting, and many more. They all depend on signal units establishing and maintaining the satellite links to allow these functions to happen.

Signal elements will support the COSCOM or senior support headquarters in the theater with a link to the sustainment base. The initial in-theater area communications system will include a force entry component of the mobile subscriber equipment network and a tactical multi-channel satellite capability. Materiel management teams will effect split-based operations via a fly-away box linked to the home base through either tactical or commercial satellite.

CIVIL AFFAIRS

Two aspects of civil affairs (CA) activities directly relate to CSS operations. First, CA personnel assist in identifying and coordinating acquisition and use of resources available in the theater to help achieve the CSS mission of the force. With their linguistics skills, they also identify requirements for and help administer support provided to local civilians and civil authorities.

Use of local resources can be invaluable in enhancing the capability of the CSS system to support operations with the smallest requirement to project CSS assets. CA elements have a critical role in effective use of such resources. Their area studies and HNS agreement analyses enable them to identify host nation and third country resources available. These resources may include land, buildings, rights-of-way, piers, docks, bridges, railways, communications systems, utilities, labor, materiel, and services. Furthermore, their expertise in the areas of international and local laws; US policies; and local cultural, economic, and political factors (including populace and resources control) is

crucial to allowing the Army to acquire and use local resources, especially in such a way as to minimize local resistance and hostility.

CA elements also play a part in identifying and coordinating the additional CSS required to support the local civilian populace. Humanitarian assistance programs are short-term efforts to help civil authorities or other agencies relieve suffering. They rely heavily on CSS operations to support such missions as disaster relief, noncombatant evacuation operations, nation assistance, and displaced civilian operations. CA elements also plan and conduct military civic action programs to win support of the local population. These are short-range development programs such as construction projects (roads, bridges, and irrigation systems), public health programs (hygiene and immunization projects), and education programs. In some situations, they involve direct support to local civilians. In others, they require support to troops or other elements providing non-CSS support to the population. However, in all these cases, support elements must meet additional CSS requirements associated with CA activities.

PUBLIC AFFAIRS

CSS personnel, and the Army in general, operate in the global information environment under the scrutiny of the media. As demonstrated in all recent operations, one of the central areas of interest for the media is the adequacy and efficiency of support operations. The American people want to know, and therefore the media reports on, whether or not our forces are cared for properly. They want to know that our soldiers have the appropriate supplies, equipment, and health and welfare support. They also want to know, and the media reports on, the efficiency and economy of the CSS effort. They want to know, among many other things, that the Army is spending its money properly, and that it is operating ethically and in an environmentally sound manner. As numerous recent operations have shown, media representatives cover every aspect of the effort, from home station preparations and the mobilization of reserve CSS forces through redeployment and demobilization.

This coverage influences decision making and the determination and achievement of the end-state. It is a factor that all leaders must be aware of and must plan for, especially as the media's ability to provide instantaneous, live, real-time coverage from anywhere in the world increases as a result of technological developments. Public affairs (PA) operations and the commander's public affairs officer provide the commander with critical guidance on interacting with the media. PA personnel serve as the interface between the media and the organization. They work to ensure that the Army fulfills its obligation to keep the American people and the Army informed. They help establish the conditions which lead to confidence in the force and its execution of the operation.

ANNEX A

Supply

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THE SUPPLY SYSTEM A-2
SPECIFIC SUPPLY CONSIDERATIONS A-3

Supply is a wide-ranging function that extends from determination of requirements at the national level down to delivery of items to the user in the theater. It involves activities at all levels of logistics. It includes a broad assortment of items categorized in 10 classes and one miscellaneous category as depicted in Table A-1.

Table A-1. Classes of supply

CLASS	SUPPLIES
I	Subsistence, gratuitous health and comfort items
II	Clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, administrative and housekeeping supplies and equipment
III	Petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquids and gases, bulk chemical products, coolants, deicer and antifreeze compounds, components and additives of petroleum and chemical products, and coal
IV	Construction materials including installed equipment, and all fortification and barrier materials
V	Ammunition of all types, bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items
VI	Personal demand items such as health and hygiene products (soaps and toothpaste), writing material, snack food, beverages, cigarettes, batteries, and cameras (nonmilitary sales items)
VII	Major end items such as launchers, tanks, mobile machine shops, and vehicles
VIII	Medical materiel, including repair parts peculiar to medical equipment
IX	Repair parts and components to include kits, assemblies and subassemblies (repairable or nonrepairable) which are required for maintenance support of all equipment
X	Material to support nonmilitary programs such as agriculture and economic development (not included in Classes I through IX)
Miscellaneous	Water, maps, salvage, and captured material

THE SUPPLY SYSTEM

STRATEGIC CONSIDERATIONS

At the strategic level, supply activity focuses on the determination of realistic, supportable resource requirements; the acquisition, packaging, management, and positioning of supplies; and the coordinated movement of materiel into the theater base and staging areas.

Strategic planners determine requirements to support the force based on the national security strategy, the national miltary strategy, the missions the Army can expect to receive to achieve strategic end states, and theater strategies and campaign plans. They consider all potential sources of supplies in order to reduce the deployment requirements to support Army operations. These sources include all those discussed in Chapter 3, such as host nation support, LOGCAP, multinational forces, and contingency contracting. Actual management of supply operations at the strategic level is performed by commodity centers assigned to AMC, US Army Medical Materiel Agency (USAMMA), DLA, Defense Commissary Agency, and other defense agencies with the assistance of the ASCC in accordance with the CINC's directives and priorities.

Critical considerations include determination of stockpiling requirements and supply production capabilities. CSS personnel preposition some supplies in overseas regions (primarily where we have forward-presence forces) for initial support. They preposition certain critical supplies (as well as unit equipment) afloat to provide flexible support to forward-presence, reinforcing, or contingency forces. Some supplies are stored in CONUS military stockpiles. Other supplies, such as construction materiel, are routinely available directly from our economic base; the CONUS military system does not stockpile such supplies.

Centralized management of Army war reserve stocks enhances logistics responsiveness. AMC and the Office of the Surgeon General are the Army's managers of these stocks. The system provides central management oversight and the ability to rapidly posture stocks to respond to contingency requirements.

Strategic supply activities work closely with USTRANSCOM and its component commands. They synchronize their efforts with the CINC's Joint Operations Planning and Execution System (JOPES)-developed movement program to get supplies to the theater. They ensure that required supplies have unit line number designations and that supplies move from stockpiles or other sources to the theater to meet the priorities of the CINC. In CONUS, supplies in less than container loads move from storage locations to designated consolidation and/or containerization points for movement. When required to minimize handling in the theater, depots unitize and package supplies received from CONUS military stockpiles and the economic base and offer them to the transportation component command for movement. If a container contains multiple consignees, packaging will maintain consignee integrity. A copy of the documentation will accompany the container. Total asset visibility will provide an automated capability to track both the container and contents.

OPERATIONAL CONSIDERATIONS

Supply at the operational level involves the requisitioning or acquiring, receipt, storage, protection, maintenance, distribution, and salvage of supplies. Supply planners and managers must understand the CINC's priorities and the requirements for support of campaigns and major operations. Requirements include consideration of the needs of joint and multinational forces.

Supplies are throughput whenever possible from the POD or local sources to the appropriate SSA or receiving unit. Multiple consignee cargo comes to a supply activity to sort cargo before transshipment to the appropriate SSA or receiving unit.

The supply system depends on an efficient and effective materiel management system. MMCs must know the prioritized requirements of the force and the status of available resources. They manage distribution in coordination with movement control elements

who know the capabilities of the transportation system to move required supplies. This management requires an effective automated supply system as well as extensive coordination. MMCs will be linked to strategic and tactical supply and transportation elements to provide total asset visibility, as discussed in Chapter 2.

TACTICAL CONSIDERATIONS

Tactical-level supply focuses on readiness and supports the commander's ability to fight battles and engagements or achieve his MOOTW mission. CSS planners work with supporting commanders and MMCs to ensure the required supplies are available when and where the user needs them. Units carry a basic load of supplies with them to support their operations until the system can resupply them. When time and mission constraints require, a "push" system provides supplies. Under this type of system, planners estimate supply requirements and arrange to have supplies delivered to supported elements. As the theater matures and stocks become readily available, supply elements convert by commodity to a' 'pull" system. Requests generated by supported elements are the basis of a "pull" system. FM 10-1 discusses planning considerations and request procedures.

Both operational and tactical supply systems include SSAs operated by general support (GS) and direct support (DS) supply units. These units establish SSAs from the COMMZ as far forward as the brigade support area. On a temporary basis, DS elements may operate even further forward at forward logistics bases to reduce the distances users have to travel to receive support. The support structure at each command level from separate brigade / division up also includes a materiel management organization to manage supply and maintenance operations.

Improved communications will allow management elements to perform routine functions in CONUS or forward-presence locations while critical capabilities required in theater deploy early in an operation. For example, as discussed in Chapter 2, part of the corps MMC (CMMC) may remain at its home station while force-projection cells (the forward CMMC) deploy to the area of operations with the force they support. The rear CMMC continues to support the stay-behind force while concurrently interfacing with the deployed cells to provide the required support forward. This split-base capability ensures only required elements deploy. This eliminates unnecessary forces in theater with related CSS demands. It also minimizes strategic lifi requirements.

Under a "pull" supply system, requests enter the supply system when a using unit submits a request to its supporting DS supply element. If stocks are available, the DS element fills the request and notifies the MMC, which initiates replenishment. If it cannot fill the request, the supply unit passes it to the MMC. In that case, the MMC directs issue from GS stocks to the DS unit or passes the requisition to the appropriate MMC or commodity center to meet the requirement.

Retrograde of materiel usually involves supplies and repairable equipment. Repairable items are generally in maintenance facilities and returned to supply channels when restored to serviceable condition. Salvage items are unserviceable and uneconomically repairable. They are evacuated through the supply system, destroyed, or demilitarized on the basis of theater policy and commodity center instructions. FM 10-1 has details.

SPECIFIC SUPPLY CONSIDERATIONS

In addition to the generic principles guiding all supply operations, there are specific ones for each commodity. This section discusses the principles for Classes I, II, III, IV, V, VI, and VII, and water. Annex D covers Class VIII, and Class IX coverage appears in Annex C.

CLASS I

Class I supply is directly linked to the field service of food preparation. The system for supply of Class I items is similar to the system used to distribute other classes of supplies. During the initial phase of a conflict, the system pushes rations--meals, ready-to-eat (MREs), T-rations, and B-rations. Personnel strength, unit locations, type of operations, and feeding capabilities determine the quantities and types of rations ordered and pushed forward. As the battlefield stabilizes, the supply system converts to a pull system with limited fresh fruit and vegetable supplements. The distribution system throughputs rations as far forward as possible.

Introduction of A-rations involves significant logistics expansion. They require refrigerated storage and distribution equipment. They also require potable ice for unit storage of items. FM 10-1 discusses these considerations as well as garbage disposal.

Bread or bread-like components are essential Class I components. Pouched bread will be the initial source for bread in a theater of operations. HNS or commercial vendors provide fresh bread as METT-T permits.

Health and comfort packages (formerly referred to as ration supplement sundry packages) are Class I supply items managed by the Defense Personnel Supply Center. They have a national stock number and are issued through the standard supply system without cost to soldiers in the early stages of a deployment. They contain items such as disposable razors, toothbrushes, toothpaste, and other personal care items. The Class I system provides packages until AAFES tactical field exchanges are operational and providing Class VI support. AR 30-7 has additional information on these packages.

The US Army Support Activity, an element of AMC, forecasts Army needs for semiperishable subsistence, computes Class I war reserve requirements, and approves requisitions (except during contingency operations) for operational rations. The Defense Personnel Support Center, an element of DLA, procures, inspects, stores, and distributes Class I supplies. It provides various rations including individual (operational) rations and unitized group rations (UGRs). The UGR is configured in boxes which contain all semiperishable components. It is palletized in unit increments to meet task force needs. The UGR modules require separate issue of supplements (milk and bread). In addition, the system also provides menu enhancements such as cereal, salads, and fruit separately.

The operational level of Class I supply includes a total system manager. He plans supply operations to ensure that facilities and personnel are adequate to receive, store, and issue Class I supplies. MMCs at operational and tactical levels manage Class I supplies. A theater subsistence distribution company will process and distribute most subsistence in the theater. Perishable subsistence platoons will convert to subsistence platoons and work in conjunction with the distribution company and GS supply companies at corps and EAC levels. Teams from the platoons may operate at DS ration points. They will be OPCON to the DS supply unit commander in such cases.

CLASS II

Class II supplies include a wide variety of supplies and equipment from clothing and individual equipment to tools. (Unclassified maps will also be Class II items in the near future.) In most cases, Class II consumption is predictable. Demand history, together with anticipated fluctuations, can provide accurate forecasting of needs. Divisions carry a very limited stockage of Class II items since such items are bulky and impede mobility. Division supply elements normally only carry critical items. Such items may include chemical defense equipment, helmets, and mechanics' tools. Clothing supply creates a special challenge due to its excessive transportation and storage requirements. It requires intensive management to ensure an even and uninterrupted flow. Distribution plans for protective clothing and equipment also consider the threat and the service life of protective overgarments and filters.

CLASS III

Today's Army consumes large quantities of petroleum products in support of operations. Its ability to move and fight depends on its supply of fuel. There are two categories of Class III supplies--bulk fuel and packaged petroleum products.

Bulk Fuel

During peacetime, each service is responsible for planning and preparing for bulk petroleum support to its own forces. This includes managing war reserve and peacetime operating stocks. It also includes operating bulk storage, handling, and distribution facilities. Each service computes its requirements and submits them to the Defense Fuel Supply Center for supply and acquisition action.

During war (or in specified military operations other than war), the Army is responsible for the inland distribution of bulk fuels. This includes distributing bulk fuels to Air Force bases and Marines. This inland distribution responsibility requires the Army to provide the necessary force structure to construct, operate, and maintain overland petroleum pipelines and to distribute bulk fuels via non-pipeline means. (However, the Air Force and Marines remain responsible for the retail distribution of bulk fuels to their units.) Inherent in this responsibility is the requirement to manage the distribution of bulk fuels within the theater.

In an effort to obtain the optimum fuel distribution system, the services continue to reduce the number of bulk fuel products distributed by the military logistics system. The goal is to have one fuel on the battlefield. In addition, the services use standardized fueling procedures and organizations whenever possible and ensure interoperability of fuel containers and handling equipment.

Forces obtain bulk fuel locally within the theater whenever possible. Tanker ships bring in supplies not available in the theater. In developed theaters, they are received at marine petroleum terminals and transferred by pipeline to tank farms. Army assets may have to renovate the existing system or supplement it with hose lines and collapsible tanks. Pipelines and hose lines extend as far forward as practical to reduce transportation requirements. Other means of bulk delivery, such as barges, rail tank cars, tankers, and aircraft, supplement the system.

Units pass forecasted requirements up S4/G4 channels to MMCs which manage distribution in coordination with movement control and GS supply elements. Tankers, rail tank cars, and hose lines move bulk fuels from GS to DS supply elements. Deliveries bypass intermediate storage locations whenever possible. Bulk transporters normally move fuel from the DS level to using units. Using units maintain a prescribed load of fuel to allow them to operate until the system can resupply them. They use organic equipment to receive the product and refuel their vehicles and aircraft. A key exception to this principle is refuel-on-the-move operations. Though these operations may use unit assets, typically they involve use of equipment of supporting fuel units. The purpose is to ensure a unit's vehicles and bulk fuel assets are topped off before they arrive in the tactical assembly area prior to an operation. Details are in FM 10-71.

Limited availability may require fuel allocations. Logistics staff officers recommend allocations based on priorities provided by operations planners. They pass approved allocations to MMCs.

Undeveloped theaters receive bulk supplies from the Navy's offshore petroleum discharge system in over-the-beach operations. Hose lines move fuel to collapsible storage tanks. In emergencies, US Air Force aircraft may resupply ground forces. As in a developed theater, the system uses pipelines and hose lines as much as possible to move bulk fuel forward; rail, motor, air, and water transportation assets supplement the pipeline and hose line system.

Packaged Petroleum Products

Packaged products include lubricants, greases, hydraulic fluids, compressed gasses, and specialty items

that are stored, transported, and issued in containers with a capacity of 55 gallons or less. (Normally, this category does not include fuels.) Managers use the principles of distribution associated with Class II supplies to manage packaged petroleum products. These products require intense management due to quality surveillance needs and criticality to combat effectiveness.

CLASS IV

Class IV items consist of fortification, barrier, and construction materials. Units use barrier and fortification materials to prepare fighting and protective positions as well as field fortifications. Engineers use Class IV materials to prepare fortifications beyond the capabilities of units. They also use them for such functions as--

- Upgrading, maintaining, or building roads, bridges, and bypasses.
- Repairing airfields or building expedient airstrips and landing zones.
- Assembling rafts or bridges for river crossings.
- Upgrading, repairing, or building facilities in support of the CSS effort or to enhance the infrastructure of the host nation as part of an MOOTW.

Most materials are standard items used by both the military and civilian sectors. Whenever possible, forces obtain them locally. Otherwise, items are requested, managed, and distributed using standard supply procedures. Because of their bulk and weight, transportation units throughput them as far forward as possible to avoid overburdening the limited transportation assets of using units and to minimize handling.

CLASS V

Class V includes all munition items from small arms ammunition, grenades, mines, rockets, missiles, and tank and artillery cartridges to all components for separate loading artillery rounds, chemical rounds, and pyrotechnic/specialty items such as explosive bolts, ejection cartridges, and demolition charges.

The ammunition logistics system provides the right type and quantity of ammunition to the force in any contingency from general war to MOOTW. The challenge is to move required amounts of modern high-lethality ammunition into a theater from the CONUS sustaining base and other prepositioned sources in a timely manner to support a CONUS-based contingency response force. The system must also be flexible enough to meet changing ammunition requirements in simultaneous operations around the world. The objective of the system is to provide configured Class V support forward to the force as economically and responsively as possible with a minimum of handling or reconfiguration. The unique characteristics of ammunition complicate the system. These factors include its size, weight, and hazardous nature. It requires special handling, storage, accountability, quality assurance, and security.

Effective and efficient ammunition support requires integrated information and distribution management at all levels from the combat user to the CONUS sustainment base. Ammunition managers use combat loads rather than the previously used days of supply. Combat loads measure the amount of Class V a unit can carry into combat on its weapon systems. The exception to this principle is field artillery where the unit of measure is the battalion load. That is the amount of Class V that an artillery battalion can move uploaded on its weapon systems as well as with all its organic supply vehicles.

The management process begins during peacetime planning. CINCs, Army component commanders, and service/readiness commands determine Class V requirements for possible contingencies. They consider the availability of stocks, storage locations, deployability into various theaters, and the responsiveness of the production base to meet shortfalls. It is unlikely that future conflicts will require the massive volumes of stocks needed to support the European AirLand force of the 1980s. New technologies, such as liquid propellants and fixed cannon cartridges, coupled with future high-lethality technologies like laser and directed energy weapons will further reduce the volume of required Class V materiels.

As the force receives these new weapon systems and munitions, there will be an evolving mix of

"high-low" technology munitions which the logistics system must be able to support. The Class V system must also be capable of supporting joint forces and a variety of multinational forces. Multinational forces may not be able to utilize efficiencies of US logistics technologies, such as the palletized load system or container/materials-handling equipment.

Ammunition planners must integrate these factors into the LPT. Integral to the LPT and requirements determination process is the planned development of the theater. Ammunition units deploy to handle incoming stocks and support the force as it matures to meet the CINC's plan. Initial theater Class V unit requirements may be small. For example, they may include the organic support for an airlifted light brigade, a port ammunition accountability detachment, and a company to handle initial receipt of prepositioned stocks and support of a brigade task force. The theater, however, requires follow-on ammunition capabilities in proportion to the combat forces deployed. Along with being rapidly deployable, these ammunition units require mobility, and C3 and computer capability to control operations and provide the critical decision support and management link within the theater and with the CONUS sustaining base.

Because of the nature of Class V support, strategic planners must consider not only the operational level but also the needs of the tactical system. At the strategic level, the ammunition system involves:

- Total requirements.
- Army stockpile management, including acquisition, long-term storage, and strategic projection (distribution) into the theater.
- Recovery.
- Retrograde.
- Disposal of Class V stocks.

The operational level is the enabling link between the strategic and tactical levels. The theater strategic- and operational-level systems are responsible for establishing the theater-level reception, management, and distribution of stocks. These stocks arrive in theater either from CONUS or OCONUS storage sites on surface vessels or via aerial delivery. They may also arrive from fast-response prepositioned afloat ships. Containerization is an effective intermodal system at the strategic and operational levels. However, it requires large CHE and the capability to unstuff containers and load ammunition onto cargo transport for distribution to forward ammunition transfer points. Breakbulk ammunition is an inefficient configuration for large volume movement in CONUS, at ports, and loading/offloading of ships. However, it allows more flexible handling and movement by smaller non-CHE ammunition units in the theater. Logistics planners ensure a proper mix of stocks in theater. At the end of a conflict, theater strategic and operational logisticians redeploy stocks out of the theater and into the national strategic system.

Combat forces initially deploy into theater with their ammunition basic loads. Commanders project their Class V needs (required supply rate) and allocate available stocks (controlled supply rates) in accordance with combat priorities to weight the battle. Forces receive resupply in the forward areas from the tactical Class V system. That system operates required ammunition storage, supply, and transfer points.

FM 9-6 details the doctrinal layout of a mature ammunition system in a developed theater.

CLASS VI

Class VI supplies are Army and Air Force Exchange Service items for sale to troops and authorized individuals. Class VI supplies may be available through local procurement, through transfer from theater stocks, or through requisitioning from the AAFES in CONUS. Available shipping space dictates Class VI supply to the theater. Class VI supply responsibilities differ significantly from other classes of supply.

Command logisticians include Class VI in operations plans. Soldiers deploy with limited quantities of health and comfort items to meet initial personal requirements. The command may authorize the issue of Class I health and comfort packages (HCPs) as long as necessary. AAFES provides Class VI support beyond the issue of HCPs to meet the theater commander's needs. Class VI can be limited to basic HCP items or

expanded to include food and beverages and entertainment items. The availability of Class VI is a morale multiplier.

AAFES has responsibility for worldwide planning and monitoring of all tactical field exchanges. HQ AAFES-Europe plans and monitors tactical operations within the NATO area of responsibility. In the Pacific area, HQ AAFES-Pacific is responsible. Other regions are the responsibility of HQ AAFES. AAFES determines requirements; procures, stores, and distributes supplies; operates resale facilities; designates the parent exchange; and determines whether an operation requires an operational site general manager. AAFES support is tailored to meet the theater commander's needs.

Tactical field exchanges (TFEs) become branches of a parent exchange designated by the appropriate AAFES headquarters. These TFEs have a unique facility number used on all transactions--all of which are routed through the parent exchange. The parent exchange orders the merchandise, prepares the equipment and supplies required, and prepares a change fund and petty cash fund. These are then shipped/issued to the tactical field exchange officer.

When an operation involves a large number of TFEs, AAFES may assign an AAFES civilian manager as the operational site general manager. The site general manager becomes responsible for many of the responsibilities of the parent exchange. The operations plan or exercise directive and the AAFES support directive specify responsibilities. AAFES may also assign a liaison officer. The liaison officer is usually a military officer assigned full time to AAFES. He assists the site general manager. He serves as the liaison between the military commands and AAFES.

The TFE officer (TFEO) is an officer or noncommissioned officer appointed by the Army service component commander or subordinate commander to manage a TFE. He is responsible and accountable to AAFES for all phases of TFE operations. He is the store manager.

The unit supported by a TFE assigns military personnel to operate it. The TFEO and all military personnel assigned to the TFE work for the local commander. The local commander provides operational and administrative support for the TFE.

TFE operations have three phases. The pre-deployment phase is the loading/shipping phase. Military planners working with AAFES determine the stock assortments and quantities. AAFES orders these items and ships them to the parent exchange for consolidation and loading into containers.

During the deployment phase the containers are shipped to the operational area. The theater commander determines their movement priority. The TFEO deploys and arranges for container movement to the TFE site. When the containers arrive at the TFE site, the TFE staff conducts the appropriate inventories and establishes TFE operations.

At the end of the opemtion. TFE personnel package remaining supplies and return them to the parent exchange. The parent exchange inventories. accounts for, and returns the merchandise and operating supplies and equipment to AAFES stocks. It also reconciles all documentation, sales receipts, and returns. At this time, the TFEO is relieved of accountability for the TFE.

General planning guidance for Class VI support is in AAFES Exchange Service Regulation 8-4. Specific guidance on operating a TFE is in AAFES Exchange Operating Procedure 8-6.

CLASS VII

Class VII supplies consist of major end items such as launchers, tanks, vehicles, and aircraft. A major end item is a final combination of end products which is ready to use. Due to their importance to combat readiness and their high costs, Class VII items are usually controlled through command channels. If not, the supporting MMC controls them. Each echelon intensely manages the requisitioning, distribution, maintenance, and disposal of these items to ensure visibility and operational readiness.

Forces report losses of major items through both supply and command channels. Replacement of losses requires careful coordination and management. As discussed in Chapter 2, weapon system managers at each command level work to maximize the number of operational weapon systems. Replacement requires coordination among materiel managers, Class VII supply units, transporters, maintenance elements, and personnel managers.

Supply units at the operational level deprocess weapon systems arriving in theater from storage or transport configuration and make them ready to issue. They install all ancillary equipment and ensure that basic issue items are on board and that equipment is fueled. Weapon systems stored in war reserve stocks must be at a low level of preservation so supply elements can make them ready for issue within a few hours, not the several days required to deprocess from Level A storage.

WATER

Annex F discusses water purification, a field service. Normally, units receive water by supply point distribution with only limited unit distribution. Water elements set up water points as close to the using units as practical given the location of a water source and the commander's intent.

The DISCOM operates the water points in the division area. In most areas of the world the division is self-sufficient. In arid regions and other unusual circumstances, the division support units require additional storage and distribution capability. Under these special conditions, the division receives water as outlined in Annex F.

EAD supply companies provide water to nondivisional customers on an area basis. They operate supply points at approved water sources. In most areas of the world these DS units are capable of meeting the water purification and distribution needs of all nondivisional customers. Like division elements, they require augmentation under arid or other special conditions.

FM 10-52 has more details on water supply.

ANNEX B

Transportation

CONTENTS PAGE

STRATEGIC MOVEMENTS B-1
OPERATIONAL AND TACTICAL TRANSPORATION B-2

Army transportation operates as a partner in the defense transportation system to deploy, sustain, and redeploy forces in all military operations. Transportation provides vital support to the Army and joint forces across the strategic, operational, and tactical levels of war. It is a seamless system that unites the levels of war with synchronized movement control, terminal operations, and mode operations. Army transportation incorporates military, commercial, and supporting nation capabilities. It involves the total Army--active and reserve components. More detailed information on Army transportation is in FM 55-1.

In a force-projection Army, rapid deployment of forces is a critical element of warfighting. The right quantity and types of military and commercial transportation, coupled with C3, are essential to provide forces and support resources where and when required. Transportation assets include motor, rail, air, and water modes and units; terminal units, activities, and infrastructure; and movement control units, activities, and systems.

STRATEGIC MOVEMENTS

Strategic movements are movements from one geographic area of operations to another. They encompass all activities involving movement from origin to the port of debarkation. This movement is called deployment when referring to relocation of units and their sustainment equipment and supplies. During the initial stages of a deployment, the primary emphasis is on deploying high priority units by air and establishing sea lines of communication (SLOC). Planners at all levels participate in strategic movement planning.

Military units, commercial activities, and installations perform transportation functions at the strategic level. Installations and movement control units use automated systems to plan, program, and allocate resources, synchronize transportation activities, and provide in-transit visibility of movements. Mode operating units and commercial activities provide motor, rail, air, and water transportation. Terminal units and commercial activities provide terminal operations at highway, air, water, and rail terminals to handle cargo and personnel.

At the strategic level, the United States Transportation Command (USTRANSCOM) is the senior movement control, mode operations, and terminal operations command. Synchronizing all three activities provides USTRANSCOM, in conjunction with supporting and supported commanders, control of strategic movements.

USTRANSCOM controls movements within CONUS through the Military Traffic Management Command (MTMC) and Air Mobility Command (AMC).

MTMC, as the Army component of USTRANSCOM, plans and routes CONUS commercial movements through CONUS water terminals. It issues port call messages to deploying units which direct this movement. MTMC coordinates with the servicing installation transportation office (active and reserve components) or US Property and Fiscal Office (National Guard).

AMC, the Air Force component, plans and routes air movements from aerial ports of embarkation (APOEd) to aerial ports of debarkation (APODs). AMC uses military and Civil Reserve Air Fleet aircraft. It establishes the air lines of communication (ALOC). The ALOC is a sustaining strategic transportation system for the air movement of supplies, equipment, and follow-on unit deployments by air.

The Military Sealift Command (MSC), the Navy component of USTRANSCOM, provides strategic sealift. The majority of forces deploy equipment via roll-on/roll-off ships. In conjunction with MTMC, MSC establishes the SLOC. The SLOC provides the means to move the majority of supplies required for long-term sustainment of the force. MSC also operates ships that the Army uses for prepositioned afloat force modules and sustainment supplies.

USTRANSCOM schedules strategic deployment on the basis of the supported commander's priorities. The time-phased force deployment list (TPFDL) is the commander's expression of his priorities. Both MTMC and AMC generate port call messages based on the TPFDL. These messages specify when units and equipment must beat a POE. Port call messages set in motion the movement from the installation or depot. The Army service component commands (ASCCs), both in CONUS and overseas, ensure units and equipment arrive at the POE as directed.

In CONUS, installation transportation offices (ITOs) in conjunction with movement officers at each echelon coordinate movement to the port of embarkation. The defense movement coordinator in each state movement control center plans and routes CONUS surface movements in accordance with port calls issued by MTMC. Outside CONUS, the ASCC has movement control units that perform similar functions as the ITO. Deployable movement control units and personnel organic to Army units at operational and tactical levels of war also play an active role in preparing their forces for deployment. However, their focus is on their own early deployment to develop the operational and tactical level theater transportation capability.

Strategic transportation also includes redeployment and movements from ports of debarkation to home station. In CONUS it may include transportation associated with demobilization. FMs 100-17 and 55-65 have additional information on strategic deployment.

OPERATIONAL AND TACTICAL TRANSPORTATION

The variety and complexity of military operations require the Army to establish a transportation system that is expandable and tailorable. The objective is to select and tailor required transportation capabilities at the operational and tactical levels to achieve total integration of the system. These capabilities include movement control, terminal operations, and mode operations.

At the theater strategic and operational levels, sufficient force structure deploys early to open ports; establish inland LOCs; and provide C3 for movements. This same force structure is required to redeploy the force when operations conclude. Ports, terminals, and inland LOCs are critical nodes in the distribution system. At the theater strategic and operational levels, transportation supports the reception of units, personnel, supplies, and equipment at PODS and provides for their movement as far forward as required.

Theater transportation requirements largely depend on METT-T. Logistics preparation of the theater prior to deployment is essential in determining requirements. Additionally, the Army supports other services

and nations when directed by the CINC or joint force commander. Establishing communications linkage to other than Army forces is a challenge; however, transportation planners must integrate all requirements and support considerations into movement plans and programs.

At the tactical level, transportation weights the battle through the same functions as found at the operational level. However, the force structure and focus are directed to forward support. Such support is often achieved through multifunctional organizations.

MOVEMENT CONTROL

Movement control is the linchpin of the transportation system. Movement control units and staffs plan, route, schedule, control, coordinate, and provide in-transit visibility of personnel, units, equipment, and supplies moving over lines of communication. They are the using unit's point of contact for transportation support. They commit (task) allocated transportation modes and terminals to provide support in an integrated movement program according to command priorities. They remain responsive to changes in METT-T which require adjustments to the plan.

Effective movement control requires access to communication and information systems to determine what to move, when, where, and how. It also provides visibility of what is moving, how it is moving, and how well it is moving. Source data automation and automated identification technology are essential aspects of control. So is integration with other management information systems.

Transportation staff planners and movement managers at each echelon perform movement control activities. They coordinate routinely with operations planners and other CSS personnel since movement control is tied directly to maneuver and distribution. It also relies on support from military police in their battlefield circulation control role. All these staffs work together to plan movements. Otherwise, congestion on lines of communication and at terminals hinders maneuver and other movements and degrades combat effectiveness.

In addition to synchronizing movements with other Army elements, movement control personnel coordinate movements with other services and countries when operating as part of a joint or multinational force. A CINC may delegate transportation responsibilities to a service component, or he may allow component commanders to plan for and perform their own movement control. Frequently, he creates a joint movement center (JMC) and joint transportation board with elements from each service component to plan operations and monitor overall theater transportation performance. JP 4-01.3 covers specific responsibilities of a JMC. Similarly, a multinational force commander may form a multinational movement control agency.

At the operational level, the senior movement control organization looks forward to activities within the area of operations, as well as rearward to the sustaining base. This requires communications that connect both systems and decision makers at the strategic and operational levels to facilitate reception and onward movement. This information exchange is crucial to the supported commander for operations planning.

As discussed in Chapter 2, movement control personnel coordinate with materiel managers for efficient distribution of materiel. They develop movement plans which take into account all movement requirements, the transportation system capabilities, and the commander's priorities. Movement control elements use these factors when tasking transportation units to meet movement requirements. FM 55-10 has more information on movement control.

TERMINAL OPERATIONS

A terminal is any facility, regardless of size, at which cargo or personnel are loaded, unloaded, or handled in transit. Transportation and other CSS units establish terminals at origins and destinations. Transportation units also establish in-transit terminals along lines of communication. Terminal operators transfer cargo only when necessary. The preferred delivery

method is movement from origin to destination on one mode when possible.

Ocean water terminals include major port facilities, unimproved port facilities, and bare-beach facilities:

- Major port facilities are improved networks of cargo-handling facilities specifically designed for transfer of ocean-going freight, vessel-discharge operations, and port clearance. They normally have roll-oral roll-off service and container-handling capability.
- Unimproved port facilities are not as fully developed as major ports. They may require support from terminal units and shallow-draft lighterage to discharge vessels.
- Lack of fixed terminal facilities at bare-beach locations requires that lighterage deliver cargo across the beach.

Planners must be aware of the latest status of ports. Ports maybe degraded by enemy action such as sinking vessels or damaging cranes or piers. Such activities can quickly turn a major port into the equivalent of an unimproved port.

Army transportation units establish inland terminals wherever required throughout the theater to transship, load, and unload cargo. They operate motor transport terminals and trailer transfer points at both ends of and at intermediate points along line-haul routes. These terminals link local-haul and line-haul service and assist in changing the carrier or transportation mode where required. Army units and host nation assets operate terminals at both ends of and at intermediate points along rail lines. Army cargo transfer units may also operate intermediate transfer points on inland waterway systems.

Army cargo transfer units clear Army cargo and personnel from air terminals served by the Air Mobility Command or from theater airlift aircraft. They may also provide such assistance at forward landing fields that are not regularly scheduled stops for theater airlift aircraft

MODE OPERATIONS

Army transportation units perform motor, rail, air, and water movement fictions. While a given situation may not require all of these functions, the Army must maintain the capability to deploy and provide them.

Motor

Tactical vehicles are the backbone of the support structure. They are mobile, flexible, and reliable. The motor transportation unit and equipment mix for an operation depends on METT-T. Planning factors include the planned flow of personnel and materiel and the availability and quality of the road networks. Motor transport provides the connecting links between the PODs and the receiving units. The right tactical trucks, in the right place, at the right time, are essential to the success of any military operation. Trucks are characterized as light, medium, and heavy:

- The light tactical vehicle (under 2.5 tons) fleet consists of the high mobility multipurpose wheeled vehicle (HMMWV), commercial utility cargo vehicle (CUCV), and small unit support vehicle (SUSV) family of vehicles.
- The medium tactical vehicle (2.5 to 5 tons) fleet consists of the cargo trucks and tractor trailers.
- The heavy tactical vehicle (over 5 tons) fleet consists of the heavy expanded mobility tactical truck (HEMTT), heavy equipment transporter system (HETS), line-haul transporters, and the palletized load system.

Light vehicles serve as battlefield transporters for unit commanders and communications and weapons systems. Medium vehicles are the *workhorses* of the battlefield, serving as primary movers of unit equipment and personnel. Heavy vehicles perform a variety of functions which significantly influence the outcome of battles as the key ammunition, weapons system, and petroleum transporters. Medium and heavy tactical vehicles are most commonly organized in motor transport units for common-user support.

Common-user motor transport assets are centrally controlled at each echelon to respond to the commander's priorities and weight the CSS effort. At division level, the DISCOM provides motor transport support under control of the movement control officer. At corps and above, motor transport units provide

support on an area basis and respond to taskings of the movement control teams in the area. Host nation or multinational force support elements may augment the Army capability. FM 55-30 has detailed information on motor transport units and operations.

Rail

Rail is potentially the most efficient method of hauling large tonnages of materiel by ground transportation. However, the Army normally depends on the host nation to provide this mode of transportation. The Army has limited railway construction and repair and railway-operating capability. These Army assets augment host nation support or provide those capabilities in theaters where host nation support is not available or is not capable or reliable. Rail operations are limited to existing rail networks. Information on rail transport units and operations is in FM 55-20.

Air

Air is the most flexible transportation mode. While wide-ranging CSS needs within a theater require US Air Force (USAF) and Army airlift assets to support forces, commanders normally employ Army aviation in a combat support role. However, the ALOC becomes increasingly important as the intensity, depth, and duration of operations increase. Airlift relieves forces from total dependence on ground lines of communication which can become congested or interdicted. It also allows rapid support to the force with minimum regard to terrain peculiarities. It makes possible rapid resupply of critical items overextended distances directly to or near forward units. Therefore, commanders should allocate Army aviation assets for transportation use when required.

Air Force and Army airlift assets provide airlift within a theater of operations. Army cargo and utility helicopters provide support at the operational and tactical levels through movement control channels in response to mission requirements and the commander's priorities. Likewise, the USAF provides theater airlift support to all services within a theater through a process of allocating sorties on a routine basis or providing immediate support to operational requirements.

While airland is the preferred method of delivery, airdrop is a field service which can provide flexibility to the transportation system by extending ALOCs. Annex F fully discusses this field service, which planners include in the development of transportation plans.

Water

Army watercraft are an essential component of theater transportation. They provide efficient transportation to relieve other lines of communication. They may augment capabilities of other modes when integrated with appropriate terminal operations. Army watercraft move materiel and equipment along inland waterways, along theater coastlines, and within water terminals. Their primary role is to support cargo discharge and onward movement from the sea port of debarkation (SPOD) to inland terminals or to retrograde from inland terminals.

Army watercraft have a role in joint operations along with Navy and Marine Corps vessels, or in conjunction with host nation support assets. They perform docking and undocking services for ocean-going transport vessels. Terminal commanders may also employ watercraft in utility missions. These may include patrolling, ship-to-shore transport of personnel, harbormaster duties, and command and control functions.

Watercraft are integral to port-opening capabilities, whether employed at fixed terminals or for bare beach operations such as logistics-over-the-shore (LOTS). They must deploy into the theater prior to the arrival of the first ocean transport vessel.

The watercraft fleet consists of logistics support vessels (LSV), amphibians, medium and heavy landing craft, and a wide variety of specialized vessels, cause ways, barges, and equipment. Army watercraft are assigned to watercraft companies and detachments, which operate in transportation terminal battalions. FM 55-50 has details on Army watercraft units and operations.

ANNEX C

Maintenance

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Tactical success on today's battlefield demands that equipment be maintained, recovered, repaired, or replaced as quickly as possible. Good maintenance practices, forward positioning of maintenance units, effective repair parts and equipment replacement systems, and clear priorities for recovery and repair are vital. Likewise, sound theater policies on repair and evacuation as well as sufficient general support and depot repair and replacement facilities greatly contribute to battlefield success.

PRINCIPLES

Maintenance is a combat multiplier. Where opposing forces have relative parity in numbers and quality of equipment, the force which combines skillful use of equipment with an effective maintenance system has a decided advantage. It has an initial advantage in that it enters battle with equipment that is operational and likely to remain so longer. It has a subsequent advantage in that it can return damaged and disabled equipment to the battle faster. Gaining these advantages is the real purpose of a maintenance system.

Elements at all levels work together to ensure the attainment of the strategic goals and objectives. They must have the proper personnel, equipment, tools, and replacement parts. Personnel must be well trained in the theory and principles of systems and capable of diagnosing and correcting faults. Additionally, they must have immediate access to high usage repair parts. Unit-level maintained and direct support maintenance units concentrate on the rapid turnaround of equipment to the battle, while general support maintenance units and depots repair and return equipment to the supply system. METT-T and command policy guide the type or level of repairs each unit performs; units do not strictly adhere to established repair time intervals.

The fixing function is central to tactical and operational success. A viable maintenance system is agile and synchronized to the combat scheme of fire and maneuver. It anticipates force requirements. A commander who has 65 percent of his tanks operational may wisely delay an attack if he can realistically expect the fixing process to have 90 percent ready within 24 hours. Alternatively, he can weight the battle by allocating replacement systems as discussed in Annex A.

The guiding maintenance tenets are:

- Fix forward. This enhances the ability to repair and return the maximum number of combat systems, at the earliest opportunity, as close to the using unit as possible.
- Anticipatory support built on flexible levels of maintenance. To maximize the number of combat systems available, maintenance leaders and managers anticipate the requirements for support and preposition that capability. The system does not lock maintainers into artificially divided levels of maintenance where they perform only repairs indicated by maintenance allocation charts. Rather, they perform necessary repairs within the limits of their capability (skills and test equipment) and the tactical situation.

The type and location of maintenance units that best support the tactical commander's requirements are a prime concern of the theater logistician. A viable maintenance system complements the capabilities of the supply system. When equipment is in short supply or otherwise unavailable to support requirements, commanders use the maintenance system to offset the shortfall. As equipment becomes more technically complicated, it is easier to meet surge requirements by redirecting the maintenance effort than by influencing the supply effort. The proper mix of the type and location of the maintenance units best supports the tactical and operational commander's requirements. In addition, early arrival of essential maintenance capabilities is important in force projection operations to ensure deployed and prepositioned equipment is operational.

THE MAINTENANCE SYSTEM

MAINTENANCE SUPPORT

The Army maintenance program is a flexible, four-level system. The levels are operator/unit, direct support (DS), general support (GS), and depot. (Army aviation maintenance, discussed later in this annex, has three levels.) Each level has certain capabilities based on the skills of the assigned personnel and the availability of tools and test equipment. While these are distinct levels, there is flexibility built into the system due to overlapping capabilities. Maintainers do not lock themselves into rigid levels of maintenance. The maintenance levels used to repair a system or component are flexible. If a system or component is not repairable, it requires activity (replacing and discarding the item) at just one level. When properly integrated, the levels serve as a logistics multiplier, adding an extra dimension to the commander's action plan.

MAINTENANCE MANAGEMENT

Strategic, operational, and tactical maintenance managers coordinate maintenance operations among the various activities. National strategic maintenance managers coordinate operations in industrial base and depot activities. Theater strategic and operational maintenance managers coordinate GS maintenance, specialized repair/forward repair activities, and Directorate of Logistics operations. Tactical managers oversee operator/crew, unit, and DS maintenance operations.

The various management functions required result in the classification of maintenance management into two echelons--readiness and sustainment. Commanders are responsible for equipment readiness. Readiness maintenance managers at corps and lower echelons support commanders by managing operations to enhance equipment readiness. Readiness echelon managers maximize combat readiness by coordinating repairs as far forward as possible for quick return into the battle. Sustainment maintenance managers at corps and above focus on materiel management. They focus on fixing by repair, sustaining units, and supporting joint/multinational equipment and standard Army systems.

Readiness maintenance managers assigned to support battalions support brigade size units. Sustainment maintenance managers are assigned to theater and DA support commands. Managers use their maintenance knowledge and experience, along with aid from their management interfaces and CSS computers, to determine

potential and developing problems, and facilitate avoidance or resolution. Logisticians use numerous CSS management information systems to identifty roblems.

The MMC is the maintenance manager for deployed Army forces. It is the link between the deployed forces and the support base. The MMC maintains a close working relationship with the LSE. Theater-level GS maintenance companies may come under the LSE for workloading. Also, they may support equipment of other services or multinational forces. The commander of the LSE maintains a coordination relationship with AMC and other organizations providing assets to the LSE. This coordination ensures receipt of timely support from the CONUS base.

STRATEGIC SUPPORT

The strategic base is the backbone of the maintenance system. At this level, maintenance supports the supply system by repairing or overhauling components or end items not available or too costly to procure. Maintenance management concentrates on identifying the needs of the Army supply system and developing programs to meet them. Strategic support also includes maintenance of prepositioned equipment.

OPERATIONAL SUPPORT

The goal of the overall maintenance plan is to support the operations plans and objectives of the commander. Its primary purpose is to maximize the number of operational combat systems available to support the tactical battle. Commanders tailor and position maintenance units in the theater to best support this goal. Maintenance at the operational level supports the tactical battle by ensuring that the maintenance system supports campaigns and sustains theater forces. Through the judicious use of maintenance assets, the commander can alleviate shortages in the supply system or support unexpected requirements.

The operational support plan ties together the requirements of the tactical units with the capabilities of the strategic base. The maintenance system both drives and supports the supply system. DS maintenance units meet tactical requirements through close support, while GS maintenance units alleviate supply shortfalls. Surge maintenance capabilities from all sources, including the industrial base, meet unexpected demands.

TACTICAL SUPPORT

The nature of the modem battlefield demands that the maintenance system repair equipment quickly and at, or as near as possible to, the point of failure or damage. This requirement implies a forward thrust of maintenance into division and brigade areas. There the battle is more violent and the damage greater. Maintenance assets move as far forward as consistent with the tactical situation to repair inoperable and damaged equipment and to return it to the battle as quickly as possible.

The structure of maintenance units includes highly mobile maintenance support teams (MSTs). Teams provide support forward on the battlefield as directed by the DS maintenance company commander and maintenance control officer. They send people, parts, TMDE, and tools to forward areas as required and pull them back when no longer needed.

Battle damage assessment and repair (BDAR) may also be critical at this level. BDAR is the procedure used to rapidly return disabled equipment to the battlefield by expediently fixing, bypassing, or jury-rigging components. It restores the minimum essential combat capabilities necessary to support a specific combat mission or to enable the equipment to self-recover. BDAR is done by crews, maintenance teams, MSTs, and recovery teams.

MAINTENANCE LEVELS

OPERATOR/UNIT MAINTENANCE

Preventive maintenance checks and services (PMCS) serve as the key to quickly identify potential problems. Operator / unit maintenance serves as the linchpin of the maintenance system. It involves quick turnaround repairs by component replacement, minor repairs, and performance of scheduled services. Command emphasis

is vital to ensure an effective PMCS program. The program requires trained operator/crews and routine supervisory and implementing procedures. Ineffective command emphasis can lead to cursory PMCS programs that fail to correct deteriorating effects before they adversely affect readiness and combat capability and unnecessarily burden technical maintenance systems.

Unit maintenance efforts concentrate on returning equipment to the user quickly enough to influence the outcome of a given task or mission. The operator or crew identifies malfunctions through the use of on-board sensors and visual inspections. Personnel make quick repairs by using on-board spares and tools.

Most units, organizations, and activities have organic unit maintenance personnel to perform unit maintenance on equipment assigned to or used by them to accomplish their mission. When METT-T permits, maintainers assigned to these units may also repair selected components to eliminate higher echelon backlogs and maintain technical skills. Mobility considerations and time available for repairs are the only factors which limit the organizational repair capability. Mobility requirements restrict the unit's ability to carry special tools, parts, and maintenance backlog.

DIRECT SUPPORT MAINTENANCE

DS maintenance organizations consist of a base maintenance company augmented with maintenance support teams designed to support specific types of supported units. The composition of the supported units determines the type and number of teams assigned or attached to the base company. These teams directly support units on an area basis or dedicated basis. Those which support units on a dedicated basis accompany the supported unit as it moves around the area of operations. They receive repair parts and backup maintenance support through the nearest DS maintenance company.

DS maintenance units and maintenance teams expected to operate in forward areas must be as mobile as the supported cutomer. Maintainers in these units focus on repair by replacement. If these units cannot repair equipment due to lack of time or specialized tools and/or test equipment, supporting teams from a higher maintenance echelon repair the equipment on site or evacuate it. As with unit maintenance elements, maintainers in DS maintenance units may repair selected components to eliminate higher echelon backlogs and maintain technical skills when METT-T permits.

SUSTAINMENT MAINTENANCE SUPPORT

Sustainment maintenance support includes general support and depot maintenance levels. It consists of several different types of activities modularly designed to meet maintenance demands anywhere in the world.

General support and depot repair activities locate where they can best support the theater operations plan. They support the theater supply system through TOE/TDA units, host nation support, and contract personnel. These activities generally move into freed or semi-fixed facilities in the theater. They remain there for the duration of operations. While they are able to displace forward, it is a very time-consuming, labor- and equipment-intensive process. However, they can deploy platoons, sections, or teams as far forward as required to support the tactical situation. When deployed forward, the elements are attached to the nearest maintenance company, and all requirements pass through that headquarters.

General Support Maintenance

The primary mission of GS component repair activities is the repair of components for return to the supply system. Managers set priorities on the basis of the anticipated consumption rates of components. Sustainment maintenance managers determine consumption rates. Secondary repair missions include end item repair and repair of components in support of depots. The tertiary mission of GS maintenance elements is to provide backup support to DS maintenance units. They only perform this mission when no other assets are available and when the supply pipeline is sufficiently viable to accept the disruption in operations. GS maintenance activities also serve as training bases to develop specialized maintainers.

Depot Maintenance

Depot maintenance supports the strategic level of war. AMC depots or activities, contractors, and host nation support personnel perform this level of maintenance in support of the supply system. They operate in fixed facilities in CONUS and the theater. Production-line operations characterize this support.

Normally, elements perform depot maintenance where it is most appropriate to support the force. This may be in the COMMZ, in CONUS, offshore, or in a third country. Such operations support the overall DA inventory management program. They are an alternative or supplement to new procurement as a source of serviceable assets to meet DA materiel requirements.

HQDA approves and AMC controls programs for depot maintenance. Army arsenals and depot maintenance facilities execute some approved programs. In other cases, the Depot Maintenance Interservicing (DMI) Program plays an important role in depot maintenance. The DMI Program's main goal is the efficient and effective use of DOD depots by using the Depot Source of Repair (DSOR) decision process. The DSOR decision process is a mandatory milestone in the Integrated Logistics System planning and an integral part of maintenance planning. The DSOR process normally results in agreements with the other military services. Agreements with other military services and contractual arrangements with commercial firms carry out some depot maintenance programs. Strategic planners schedule repair programs to meet the needs of the supply system and the reparable exchange program. They also consider availability of repair parts and other maintenance resources.

When a logistics support element deploys to a theater, it may act as the command and control element for theater-level sustainment maintenance activities. As discussed in Chapter 3, the LSE is a flexible organization. Theater needs and shortfalls in the supply system dictate its capabilities and organization. The LSE may include theater GS maintenance companies, forward repair activities (FRAs), and specialized repair activities (SRAs) operating within the theater. FRAs are maintenance activities designed to provide limited depot repair support to the theater. SRAs repair components and return them to either the supply system or supported customers. SRAs have special tools and test equipment to repair/test components whose associated maintenance requires a high degree of training or specialized TMDE. FRAs and SRAs may employ military personnel, DOD civilians, contractors, or a mixture of all three. These units normally operate from fixed or semi-fixed facilities in the corps rear, theater base, or the CONUS support base.

AVIATION

The objective of Army aviation maintenance is to ensure maximum availability of fully mission-capable aircraft to the commander. Aviation maintenance elements accomplish this goal by performing maintenance on all aviation items, including avionics and weapon systems, as far forward as possible.

The aircraft maintenance system consists of three levels--aviation unit maintenance (AVUM), aviation intermediate maintenance (AVIM), and depot maintenance.

The aircraft crew chief and AVUM unit comprise the first line of aircraft maintenance. AVUM units are organic to aviation battalions and squadrons. They provide support as far forward as possible. Forward support teams perform on-aircraft maintenance tasks that require minimal aircraft downtime. AVUM elements also perform more extensive recurring scheduled maintenance tasks in rear areas. AVUM tasks include replacing components; performing minor repairs; making adjustments; and cleaning, lubricating, and servicing the aircraft.

The AVIM, or second level of maintenance, element provides one-stop intermediate maintenance support and backup AVUM support. It performs on-aircraft system repair and off-aircraft subsystems repair. AVIM

units also provide aviation repair parts to supported units. AVIM tasks normally require more time, more complex tools and test equipment, and higher skilled personnel than the AVUM element has available.

Depot maintenance is the third level of maintenance. Depot maintenance includes very detailed and time-consuming functions. It requires sophisticated equipment and special tools, special facilities, and maintenance skills. Typical depot tasks include aircraft overhaul, major repair, conversion or modifications, special manufacturing, analytical testing, and painting.

ARMY WATERCRAFT

Maintenance of watercraft used in Army water terminal operations poses problems and requires arrangements which are somewhat different from those for other types of equipment. Supporting maintenance facilities for watercraft must locate at or near the water's edge. Rather than echeloning along the forward axis of a theater as in other systems, these facilities generally spread out laterally along the theater's rear boundary. Except for some inland waterway systems, their orientation is toward the rear. Watercraft units typically get support from civilian shipyards either in theater or in other countries. Also, given the Navy's/MSC's worldwide access to ship/watercraft repair capabilities, it may be efficient to use that network as well as current Army procedures for repair of Army watercraft.

SIGNAL-PECULIAR EQUIPMENT

Maintenance for selected units has unique characteristics. Signal battalion companies may operate far from division or corps maintenance units. However, they must maintain exceptionally high levels of readiness. Combat electronic warfare intelligence battalions have highly complex, low density equipment. In such exceptional cases, the battalions rely on--

- An organic maintenance capability to perform diagnostics and minor repairs.
- On-board spares.
- Forward deployment of MSTs from rear areas by surface or air transportation.

REPAIR PARTS SUPPORT

Class IX items (repair parts) consist of any part, subassembly, assembly, or component required for installation in the maintenance of an end item, subassembly, or component. They support the maintenance and repair functions performed throughout the Army on all materiel except medical materiel. They range from small items of common hardware to large, complex line replaceable units.

OPERATING CONCEPT

The degree of management of repair parts is proportional to the contribution they make to the operational readiness of the end items they support. The type and quantity of stocked items directly relate to readiness requirements. Responsibilities at the strategic, operational, and tactical levels of CSS are discussed in the following paragraphs.

The management of repair parts at the national strategic level normally depends on the general classification of the item rather than its end item use. Therefore, requisitions in support of a unit's maintenance mission go to more than one NICP or commodity command. When the end item is a major system (for example, an M1A1 tank), a program manager ensures that the CSS for that end item is effective and efficient. Therefore, units experiencing problems have a single point of contact to handle their concerns. At this level, supply requirements may drive the NICP manager to use depot maintenance to repair unserviceable assets to support supply requirements.

The operational level of supply focuses on providing repair parts and a level of stockage for items not sent to the theater by ALOC. Easing these supply requirements are serviceable assets generated by the sustainment maintenance of line replaceable units. These items become theater-generated assets that can offset a requirement to provide support from the strategic level of supply.

Repair parts for the tactical level support unit and DS maintenance missions. Organizations can stock a limited number of items on the prescribed load list (PLL) to support their maintenance mission. Normally, the number of lines is restricted to about 300; however, they should be demand supported and combat essential. The commander has some latitude to accommodate expected requirements and for other justifiable reasons. Mobility of PLL items is another consideration. The PLL should be 100 percent mobile on unit transportation. GS- and DS-level missile system maintenance units maintain the theater authorized stockage list (ASL) for all supported missile systems. They provide missile parts supply for the theater.

GS maintenance units maintain shop stocks to support authorized maintenance tasks. They requisition replenishment stocks through their supporting MMCs and do not maintain ASLs. This does not apply to AVIM units.

CANNIBALIZATION AND CONTROLLED EXCHANGE

The commander who owns unserviceable equipment decides whether to perform cannibalization or controlled exchange. Cannibalization is the authorized removal, under specific conditions, of serviceable and unserviceable parts, components, and assemblies from materiel authorized for disposal. Controlled exchange is the removal of serviceable parts, components, and assemblies from unserviceable, economically repairable equipment and their immediate reuse in restoring alike item of equipment to a combat-operable or serviceable condition. Commanders may use supervised battlefield cannibalization and controlled exchange when parts are not available from the supply system.

Commanders as close to the site of damaged equipment as possible make cannibalization and exchange decisions consistent with Army regulations and MACOM policies. They base their decisions on guidelines established at higher headquarters. Cannibalization is a major source of critical repair parts in a combat environment. Maintainers use it aggressively according to the command's established policy.

MAINTENANCE IN AN NBC ENVIRONMENT

Logisticians avoid operating in a chemically contaminated environment whenever METT-T permits. Rather than conduct operations in a contaminated area, CSS units displace at the earliest opportunity, decontaminate their equipment, and resume support operations. Reduction in manual dexterity and effects of petroleum product spills on protective overgarments particularly degrade maintenance operations.

Avoiding contamination of equipment is easier than decontaminating it. Decontamination is time-consuming, and it may corrode and damage some types of equipment. Providing overhead cover for equipment and supplies significantly reduces liquid contamination of such material. Using units decontaminate their own equipment within their capabilities. Equipment turned over to maintenance personnel is as free of contamination as the using unit can make it. Using units establish standing operating procedures for recovery, handling, and decontamination of their own equipment.

When using unit personnel are not able to decontaminate equipment, they mark the equipment with the type and the date/time of contamination. If feasible, they mark the specific areas of equipment contamination to alert maintenance personnel of the danger. They also segregate contaminated material. When using units cannot decontaminate damaged or inoperable equipment that is critical to the battle, materiel managers consider equipment replacement.

ANNEX D

Combat Health Support

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The combat health support (CHS) mission is to conserve the fighting strength. Health services are employed to provide the most benefit to the maximum number of personnel. Patients are examined and treated and returned to duty as close to their unit as possible or, if unable to return to duty (RTD), evacuated further to the rear.

SUPPORTING THE FORCE-PROJECTION ARMY

The CHS system sustains and protects the health of the soldier in war and in MOOTW. Combat health support is a seamless integrated system. It operates across the range of military operations from the forward line of own troops to the CONUS sustaining base. The CHS system provides continuous medical management throughout all echelons of care. The goals of the Army's CHS system are to–

- Reduce the incidence of disease and nonbattle injuries through sound preventive medicine programs.
- Provide medical and surgical treatment for acute illnesses, injuries, or wounds.
- Evacuate patients to the appropriate medical treatment facility (MTF).
- Maintain soldiers on duty or promptly RTD those who have recovered.
- Maintain a science and technology base to enhance all capabilities related to health and the delivery of health care.

The challenge fining the CHS system is to simultaneously provide CHS to deploying forces; provide CHS to the CONUS base; and establish fictional area CHS operating systems within the theater. The CHS system also provides CHS to redeployment and demobilization operations.

Involvement at all levels of command ensures proper management of critical CHS resources. The following principles apply in planning and executing CHS of the force-projection Army:

- Rapid reinforcement of forward deployed medical units by mobile medical treatment squads and forward surgical teams (FSTs).
- Rapid mobilization and deployment of critical CHS capabilities.
- Rapid reinforcement/replenishment of medical personnel and Class VIII supplies and equipment.
- Rapid replenishment of patient evacuation resources.
- Rapid employment and expansion of hospital resources.

FORCE PROJECTION

Combat health support units must be able to mobilize, deploy, and support a crisis-response force. Commanders tailor the CHS force on the

basis of an analysis of METT-T, strategic lift, propositioned assets, and HNS. The modular medical system enhances the commander's ability to tailor CHS forces.

With adequate communications capabilities, medical personnel may provide support from a third country support base, a lodgment area, CONUS installations, or facilities afloat. Enhanced medical communications will eventually permit a split operations capability. Army medical centers will be able to provide real-time diagnostic consultative services to forward deployed MTFs. Also, an enhanced telecommunications capability will reduce the requirement to employ the most critical skilled physicians in forward deployed facilities. It will permit strategic managers to centralize critical professional skills and services.

STRATEGIC CONSIDERATIONS

National strategic CHS and supportive services include activities under the control of DA, DOD, and the National Command Authorities. These include the US Army Medical Materiel Agency (USAMMA), the DLA, NICPs, military hospital systems, and Department of Veterans Affairs (DVA) and civilian hospital systems (National Disaster Medical System). Strategic CHS focuses on--

- Support of force deployment by ensuring soldier medical readiness.
- Industrial-base mobilization.
- Requirements determination and acquisition of medical equipment, supplies, and blood and biological to support force projection.
- Stockpiling and propositioning of medical materiel (propositioning of medical materiel configured to unit sets and afloat prepositioning).
- Host nation support.
- Medical regulating, patient evacuation, and hospitalization.
- Mobilization.
- Reconstitution of the strategic force by returning injured soldiers to full health.
- Demobilization.

OPERATIONAL CONSIDERATIONS

Operational CHS encompasses all of the medical activities to support the force employed in campaigns, major operations, and MOOTW. Operational CHS focuses on--

- Support of deployment operations (reception and onward movement).
- Medical facilities in the theater.
- Distribution management of medical materiel and blood.
- Support of forward deployed forces.
- Reconstitution of medical units in theater.
- Support of redeployment operations.

At the operational level, managers balance current requirements with the need to extend capabilities along the LOCs and buildup support services for subsequent major operations. Whenever possible, planners take advantage of available HNS (infrastructure and contracted services).

TACTICAL CONSIDERATIONS

Tactical planning is proactive rather than reactive. CHS must be thoroughly integrated with tactical plans and orders. Commanders reallocate medical resources as tactical situations change. Combat health support commanders tailor medical units to adapt to the flow of battle and to meet reinforcement or reconstitution requirements. Elements to reconstitute attrited medical units normally come from the next higher echelon of CHS.

Due to the mass destructive and disabling capabilities of modern conventional and NBC weapons systems, medical units can anticipate large numbers of casualties in a short period of time. These mass casualty situations will probably exceed the capabilities of local medical units. Medical units are flexible. They alter their normal scope of operations to provide the greatest good for the greatest number. Key factors for effective mass casualty management are on-site triage, emergency resuscitative care, early surgical intervention, reliable communications, and skillful evacuation by air and ground resources.

Medical personnel may also have to defend themselves and their patients within their limitations. In certain situations, CHS units in rear areas must be able to defend against Level I threats and to survive NBC strikes while continuing to support the operation.

MILITARY OPERATIONS OTHER THAN WAR

In MOOTW, the provision of CHS and health education play a more direct role in countering both the medical threat and the general threat. Combat health support in MOOTW encompasses all military health actions taken and programs established to further US national goals, objectives, and missions. These actions and programs may differ to some degree from the traditional CHS role of delivery of quality care for US forces in war. For example, CHS operations can play a significant role in nation assistance by---

- Assisting with the development of the host nation medical infrastructure.
- Providing basic necessities of life for general populations through host nation civilian medical programs.
- Providing assistance in establishing, repairing, or improving basic health and sanitation services.

HOST NATION SUPPORT

Host nation support agreements can greatly assist in the areas of fixed facilities, utilities, maintenance, and patient evacuation. Maximum use is made of host nation transportation resources as they become available, especially rail and waterways. Conversion kits can be used to modify buses, trains, and barges for patient evacuation.

MASS CASUALTIES

Triage is the evaluation and categorization of patients for treatment and evacuation to facilitate the efficient use of available resources. Primary considerations for conducting triage include where it will take place and who is available to do it. Triage is best accomplished at the incident site where large numbers of patients are located. This ensures that patients requiring immediate evacuation to MTFs receive priority of care.

Medical personnel who are qualified in trauma treatment sort mass patients. These personnel identify each patient by a category that indicates the priority of his treatment and the likelihood of his survival. The four categories are minimal, immediate, delayed, and expectant.

Rapid sorting assures that personnel direct available treatment first toward the patients who have the best chance of survival and earliest RTD. In a rapidly changing battlefield environment, medical personnel separate NBC-contaminated patients from uncontaminated patients, as the situation dictates. They conduct triage in the same manner for contaminated and uncontaminated patients; however, individual protective equipment encumbers the patient and medical treatment personnel. Medical treatment requires more time because of decontamination procedures. FMs 3-5, 8-10-4, and 8-285 discuss the requirements for supported units to provide manpower for patient decontamination.

ENEMY PRISONERS OF WAR

In accordance with the Geneva Conventions of 1949, enemy prisoners of war (EPWs) receive the same medical care as US personnel. A specific hospital may be designated to treat EPWs; however, all Army MTFs in the theater treat EPWs when required. FM 8-10 has additional information on CHS for EPWs.

ECHELONS OF COMBAT HEALTH SUPPORT

Combat health support consists of echelons of care. They extend rearward throughout the theater to the CONUS base. Each echelon reflects an increase in capability, with the functions of each lower echelon being within the capabilities of higher echelon.

ECHELON I

The first medical care a soldier receives is at this level. The emphasis at this echelon is on measures necessary to stabilize a patient for evacuation to the next echelon of care. These include maintaining the airway, stopping bleeding, and preventing shock. Soldiers receive training in first-aid procedures which emphasize lifesaving tasks. Selected individuals in nonmedical units receive enhanced training. They are called combat lifesavers. All combat units and some combat support and CSS units have combat lifesavers. Their primary duty does not change. They perform the additional duties of combat lifesavers when the tactical situation permits. The combat medic is the first individual in the CHS chain who makes decisions based on medical military occupational specialty training. The treatment squad provides advanced trauma management to battlefield casualties and routine sick call when not engaged in combat. Effective medical evacuation is critical for the survival of seriously wounded casualties stabilized at this level. There is no patient-holding capacity at this echelon.

ECHELON II

Medical companies and troops of divisions, separate brigades, ACRs, and area support medical battalions (ASMBs) render care at this echelon. They examine the casualty and evaluate his wounds and general status to determine his treatment and evacuation precedence. This echelon of care duplicates Echelon I and expands services available by adding limited dental, laboratory, optometry, preventive medicine, health service logistics, mental health services, and patient-holding capabilities.

ECHELON III

This echelon is the first with hospital facilities. Within the combat zone, the mobile army surgical hospital (MASH) and the combat support hospital (CSH) provide resuscitation, initial wound surgery, and postoperative treatment. Although the MASH is an Echelon III facility, it is designed to locate within the division area. At the CSH, personnel stabilize patients for continued evacuation or RTD. Medical regulators coordinate movement of patients expected to RTD within the theater evacuation policy to a facility with the capability for reconditioning and rehabilitating.

ECHELON IV

At this echelon, the patient may receive treatment at the general hospital (GH) or the field hospital (FH). The GH provides general and specialized medical and surgical care. It stabilizes patients not expected to RTD within the theater evacuation policy for evacuation to an Echelon V (CONUS base) facility. The FH provides reconditioning and rehabilitating services for patients who will be RTD within the theater evacuation policy.

ECHELON V

Definitive care to all categories of patients characterizes Echelon V care. CONUS-based DOD and DVA hospitals provide this care. During mobilization, the National Disaster Medical System may be activated. Under this system, civilian hospitals care for patients beyond the capabilities of DOD and DVA hospitals.

FORWARD SURGICAL TEAMS

The FST is a corps augmentation for divisional and nondivisional medical companies. It will be organic to the airborne and air assault divisions and the light ACR. The FST provides emergency/urgent initial surgery. It also provides nursing care after: surgery for critically wounded/injured patients until they are stable enough to evacuate to a theater hospital. The FSTs not organic to divisions and the light ACR will be assigned to a medical

brigade or group. Normally commanders will attach them to a corps hospital when not operationally employed, and further attach them for support to a divisional/nondivisional medical company.

PATIENT CARE AND MOVEMENT

Patients with wounds of lesser severity may not need to pass through all echelons of care. They return to duty from the lowest echelon that meets their needs. The patient's condition, evacuation policy, and METT-T are important factors in selecting the evacuation platform. Centralized management and matching of the patient's condition and urgency of movement with the available evacuation assets ensure the effective and efficient usage of scarce medical resources. In the main battle area, patients do *not* normally bypass Echelon I or Echelon 11 MTFs. This ensures that they have abetter chance to be stabilized for further evacuation.

MEDICAL FUNCTIONAL AREAS

To meet the requirements for force projection, the Army employs a single seamless health care delivery system that integrates the medical functional areas discussed below.

PATIENT EVACUATION AND MEDICAL REGULATING

Patient evacuation is the timely, efficient movement and en route care of sick, injured, or ill persons from the battlefield or other locations to MTFs. It is the responsibility of the gaining echelon of CHS to evacuate or coordinate the evacuation from the lower echelon. The attending physician determines the mode and precedence of evacuation. Air evacuation is the primary means of medical evacuation.

In the combat zone, ground ambulance squads organic to medical companies evacuate patients within their areas of operations. Medical evacuation battalions evacuate patients from Echelon II MTFs to Echelon III hospitals. The battalion also evacuates patients laterally from hospital to hospital within the corps area, and from hospitals to USAF staging areas for evacuation out of the combat zone. Strategic evacuation is a function of the USAF aeromedical evacuation system. The theater surgeon recommends a theater evacuation policy through the CINC for approval by the Secretary of Defense. The policy establishes the number of days an injured or ill soldier maybe allowed to remain in the theater to return to full health. Soldiers who will not return to full health within the established time are evacuated to definitive care facilities in CONUS or other designated locations. FM 8-10-6 has more details on evacuation.

Medical regulating is the coordinated movement of patients to MTFs which are best able to provide timely and required care. The corps medical brigade/group medical regulating office (MRO) provides medical regulating in the combat zone. In the COMMZ, the medical command (MEDCOM)/medical brigade MROs and the joint medical regulating office (JMRO) provide support. The JMRO provides both intratheater and intertheater medical regulating. For example, if hospitals of other services within the theater have the necessary capabilities, the JMRO regulates Army patients to them. It also coordinates intertheater evacuation with the Armed Services Medical Regulating Office. The JMRO coordinates patient movement with the USAF aeromedical evacuation control center or, if air evacuation is not available or advisable, with the Military Sealift Command.

HOSPITALIZATION

Hospitalization is part of the theaterwide system for managing sick, injured, and wounded patients. It provides patients with surgical and medical resuscitative, definitive, and specialty treatment. Hospitals also provide specialized treatment for patients with rare and unusual or complex conditions.

There are four types of hospitals that may be employed in the theater. The GH and FH locate in the COMMZ. They support patients from the COMMZ and those received from hospitals in the combat zone. The MASH and CSH locate in the combat zone and support patients originating in that zone. The GH, FH, and CSH can handle all categories of patients. Hospitals consist of modules that allow for tailoring.

HEALTH SERVICE LOGISTICW/BLOOD MANAGEMENT

The health service logistics system encompasses all activities of medical supply, medical equipment maintenance, optical fabrication and repair, and blood management. The MEDCOM theater medical materiel management center (TMMMC) provides centralized theater-level management of Class VIII materiel for all US Army forces. It may also serve as executive agent (single integrated medical logistics manager) for supply of medical materiel for other services in theater.

Initially, resupply to a theaterconsists of preplanned, time-phased shipments of medical resupply sets from CONUS. As the theater stabilizes, normal replenishment based on theater demand replaces preplanned resupply. The medical logistics (MEDLOG) battalion (rear) supports units in the COMMZ and the MEDLOG battalion (forward). The corps MEDLOG battalion (forward) provides support in the combat zone. It coordinates with the corps movement control center for distribution of bulk medical materiel. It coordinates with the medical evacuation battalion for air movement of emergency resupply of blood products and other critical items. Medical supply offices in the division, brigade, and regiment provide Echelons I and II Class VIII resupply.

The TMMMC coordinates logistics data flow with the USAMMA in CONUS. It coordinates with the theater-level movement control agency for movement of medical materiel assets in theater.

The MEDLOG battalion (forward) provides DS maintenance on medical equipment for units in the corps, as well as area support for units without organic capability. The MEDLOG battalion (rear) provides GS maintenance on medical equipment for the MEDLOG battalion (forward), as well as DS on an area basis for units in the COMMZ.

Blood support is a combination of four systems: medical, technical, operational, and logistics. The management and distribution of all resuscitative fluids (including albumin) is a health service logistics function. Theater blood support depends on resupply from the CONUS base. Liquid blood products enter the theater through USAF blood transshipment centers for further shipment to Army blood bank platoons located at MEDLOG battalions. Army hospitals acquire necessary blood products from these blood bank platoons. Blood support for Echelon II MTFs consists of a limited number of Group 0 liquid red blood cell units. All hospitals have blood banking capabilities that allow them to store blood products.

The unified command establishes a single blood management program. The program is theaterwide and interfaces with the CONUS blood banking system. The theater and CONUS blood programs are a combined DOD effort. All components within the unified command maintain blood programs. The TMMMC manages the Army's blood program. The Army blood program office interfaces with the joint blood program office. The joint office interfaces with the Armed Services Blood Program Office in CONUS.

DENTAL SERVICES

Dental services within the theater return personnel to duty as soon as possible. Initially, dental personnel organic to Echelon II MTFs provide emergency / preventive care. In a mature theater, the dental service battalion of the medical brigade provides definitive dental care. Hospitals perform specialized dental (maxillofacial) surgery. FM 8-10-19 has additional information on dental support.

VETERINARY SERVICES

The Army is the DOD executive agent for military veterinary support to all services and other US agencies in the theater (DOD Directive 6015.5). The veterinary

headquarters detachment and its subordinate veterinary medicine detachments and veterinary service detachments provide support. They inspect food (FM 8-10-7), monitor incidence of zoonotic disease, and provide veterinary (animal) medical care. They may also provide training in these areas. The headquarters detachment consolidates all veterinary resources and ensures uniform and equitable support throughout the theater.

PREVENTIVE MEDICINE SERVICES

In many past conflicts, disease and nonbattle injuries rendered more soldiers ineffective than combat action. Preventable cases of disease and cold and heat injuries have greatly affected military operations. The prevention of disease and nonbattle injuries is the most effective, least expensive means of providing commanders with the maximum number of healthy soldiers. The Armed Forces Medical Intelligence Center conducts area studies on diseases for all regions. Main support battalion, separate brigade, ACR medical companies and troops, and ASMBs provide preventive medicine services. They receive additional support from the sanitation and entomology detachments of the combat zone/COMMZ medical brigade.

COMBAT STRESS CONTROL

Combat stress control (CSC) preserves the fighting strength by minimizing losses due to battle fatigue and neuropsychiatric disorders. The focus of Army CSC is on--

- Promotion of positive mission-oriented motivation.
- Prevention of stress-related casualties.
- Treatment and early RTD of soldiers suffering from battle fatigue.
- Prevention of harmfield combat stress reactions such as misconduct stress behaviors and post-traumatic stress disorders.

Main support battalion, separate brigade, ACR medical companies and troops, and ASMBs provide CSC support. They receive further support from CSC companies or detachments assigned to the combat zone/COMMZ medical brigade. FMs 8-55 and 22-51 have in-depth discussions of CSC.

AREA MEDICAL SUPPORT

Medical companies of the DISCOM and the ASMB of the medical brigade provide area medical support. These companies provide Echelon I and II medical care throughout the division, corps, and EAC areas. They employ medical squads/teams to establish clearing stations and aid stations, and to reinforce medical treatment elements of maneuver battalions. The ground ambulance platoons of these companies provide medical evacuation on an area basis from Echelon I MTFs and from supported units to clearing stations (Echelon II treatment facilities).

MEDICAL LABORATORY SERVICES

The COMMZ-based MEDCOM area medical laboratory includes capabilities in anatomic pathology, biochemistry, entomology, epidemiology, microbiology, and veterinary medicine. Its focus is the total health environment of the theater, not individual patient care. Its facility conducts studies in forensic pathology and toxicology, pest identification and the efficacy of pesticides, frequency and distribution of infectious agents and diseases, identification of microorganisms and monitoring for immune response, and transmission of zoonotic diseases. Its personnel also function as consultants to hospital clinical laboratory services within the theater. It may task organize teams and employ them forward to troubleshoot a particular problem.

All Echelon II MTFs provide basic medical laboratory services. They perform basic procedures in hematology, urinalysis, and serology. Echelon II MTFs also receive, maintain, and transfuse blood products. Echelon III MTFs (CSH) perform procedures in biochemistry, hematology, urinalysis, microbiology, and serology. The CSH also provides blood bank services. Echelon IV MTFs (general and field hospitals) provide a greater variety of medical laboratory procedures. If there is no area medical laboratory, the general hospital has the capability to provide a base for extending consultative services to other hospitals in the theater.

COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, AND INTELLIGENCE

The proper management of medical information is critical to providing medical support. Decisions such as those on where to treat casualties and when to evacuate to hospitals depend on knowing what medical resources are available at all times. An effective automated medical management information system provides the capability to track resources, requirements, and patients in support of theater operations. In particular, health service logistics relies heavily on automation. Communications link medical units and supporting MEDLOG battalions.

Dependent on the size of the deployed force, a MEDCOM, medical brigade, or medical group controls medical information management. Arriving with the lead element, units with an automated capability to manage medical information orchestrate both the arrival of medical units in the AO and the interface with other information systems (such as movement and personnel) at all levels.

ANNEX E

Personnel Support

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Soldiers are the focal point of Army operations. They are the foundation of the Army's will to win. Whether Army personnel engage in war or MOOTW, personnel support is a critical element of the CSS effort. Soldiers and their spirit, initiative, discipline, courage, and competence are the basic building blocks of a successful Army.

PRINCIPLES

Personnel support includes a wide range of functions at all levels to provide and support soldiers. It includes the activities associated with manning the force, as well as the sustaining functions of personnel service support. Personnel elements execute manning to ensure trained personnel in the right quantities are available when and where they are required for Army operations. Personnel service support (PSS) is the management and execution of personnel functions required to sustain soldiers and civilians.

These functions, along with public affairs, are usually within the purview of the tactical unit's G1/S1. However, at the various echelons they may involve different staff officers and units. Like other Army units, the elements that perform personnel functions are versatile, deployable, and expansible. They can operate as part of a joint or multinational force.

The focus of all these functions is ultimately to provide support at the tactical level. However, the success of these activities at the tactical level depends on actions taken at the strategic and operational levels. Also, the seamless nature of the personnel system is evident as personnel elements frequently perform functions which cross over levels.

At the strategic level, DOD and DA (including reserve component) systems that support the national political and military strategic leadership guide personnel support functions. In addition to active duty personnel support units, mobilization of reserves remains a requirement. Strategic support encompasses the acquisition, mobilization, integration, deployment, and demobilization of our national manpower. Reserve component units must be resourced and manned at appropriate levels of readiness. To support joint and multinational operations, the strategic-level personnel and resource management information systems must be able to transfer information not only among the components of the total Army, but also among the services and other governmental agencies.

Operational support focuses on reception, allocation, management, and redeployment of units and soldiers, as well as reconstitution operations. Personnel

support units execute these activities as well as some functions associated with the tactical level. These functions often overlap the two levels.

At the tactical level, manning provides commanders the troops necessary to generate combat power while personnel service support sustains the soldier. Personnel support elements and functions sustain the commander's ability to conduct battles and engagements.

The objective of personnel support at all levels is to ensure the success of operations. Personnel support activities begin with the initial planning of an operation through mobilization, deployment, war or MOOTW, redeployment, and demobilization. They encompass the full range of military operations from nation and humanitarian assistance to peace enforcement and conflict.

In addition to supporting operations, personnel support units may also be designated as part of the operational force. For example, task-organized elements of a personnel services battalion may support accountability of displaced persons in humanitarian operations. A postal company may forward deploy a platoon to provide support for units, while retaining a platoon in the rear to support nation building by training a country to set up and run its own operations.

To ensure unity of effort, formal agreements and memorandums of understanding for joint personnel services, and exchanges of liaison officers assist in developing critical management procedures. Personnel support leaders train to operate in the joint arena. Joint information systems and protocols will support a unity of effort. These efforts must expand to encompass the capabilities, services, and requirements of multinational forces. Plans must also include DOD/DA civilians, contractor personnel, and host nation or third country civilians in the execution of contingency operations.

FM 12-6 is the capstone manual on personnel doctrine. It establishes the foundation for the personnel support activities of personnel organizations and authorities throughout the US Army.

MANNING THE FORCE

The manning challenge is to ensure personnel support through the uninterrupted flow of soldiers to the battlefield. It is the commander's "troops available" part of the METT-T formula.

The manning systems of personnel readiness management, personnel accounting and strength reporting, replacement management, and casualty operations management meet Army personnel requirements from mobilization and deployment through redeployment and demobilization. The personnel information management system interconnects the manning subfunctions and PSS functions. The personnel services section of this annex describes this system.

Civilian personnel management provides essential civilian personnel and the management services necessary for their sustainment. The nature of joint and multinational operations requires that commanders know the status of all personnel under their control. The personnel system may have to support joint, multinational, or host nation personnel.

PERSONNEL READINESS MANAGEMENT

The mission of the personnel readiness management system is to distribute soldiers to subordinate commands based on documented manpower requirements or authorizations to maximize mission preparedness. Personnel readiness describes a state of mission preparedness. It is also a process for achieving and maintaining that state. The process involves analyzing personnel strength data to determine current mission capabilities and project future requirements. It compares an organization's personnel strength to its requirements. It results in a personnel readiness assessment and allocation decision.

Individual replacements are the norm. The deputy chief of staff for operations makes decisions on any

unit replacements. Officials in the operations channels determine squad, crew, and team requirements.

The management system depends on accurate and complete information. Therefore, personnel readiness managers quickly establish a personnel accounting and strength reporting system within a theater of operations.

PERSONNEL ACCOUNTING AND STRENGTH REPORTING

Personnel accounting is the system for recording by-name data on soldiers when they arrive in and depart from units, when their duty status changes (for example, from duty to hospital), and when their grade changes. Strength reporting is a numerical end product of the accounting process. It starts with strength-related transactions submitted at unit-level and ends with a database update through all echelons to the total Army personnel data base. Standard reports available from the personnel accounting and strength reporting (PASR) system include the:

- Battle roster.
- Personnel summary.
- Personnel requirements report
- Command and control task force personnel summary.

CASUALTY OPERATIONS MANAGEMENT

The casualty operations management system records, reports, verifies, and processes information from unit level to HQDA. It also notifies appropriate individuals and assists family members. The system collects casualty information from a number of sources, collates it, and analyzes it to determine the appropriate action.

Casualties can occur on the first day of a contingency operation. Thus, casualty managers from each echelon of command may need to deploy early. Units report all casualties found. These include DOD civilians, contract personnel, and military personnel from other US Army units, other services, and multinational forces. Reports go to the personnel services battalion (PSB) as well as through S1/G1 channels. Casualty liaison teams provide an interface between medical facilities, mortuary affairs collection points, and the personnel group.

Casualty operations require 100 percent personnel accounting reconciliation. The PSB verifies casualty information against the data base and emergency data in the soldier's and DA civilian's deployment packet. The PSB sends updated reports through channels to the US Total Army Personnel Command (USTA PERSCOM). USTA PERSCOM verifies information in the casualty report against available information systems. It then directs and coordinates notification actions through the appropriate casualty area commander. The casualty area commander makes the notification and provides casualty assistance.

All commanders, soldiers, and deployed civilians must be sensitive to the confidentiality of casualty information. Modem communications have increased the risk that family members will get casualty information from sources outside the official system. To combat this risk, casualty managers use all available means to get casualty information at the earliest possible moment.

REPLACEMENT MANAGEMENT

The replacement management system moves personnel from designated points of origin to ultimate destinations. Replacement management is the physical reception, accounting, processing, support, and delivery of military and civilian personnel. This includes replacements and return-to-duty (RTD) soldiers. The system provides primarily for individual replacements and groupings of individuals up through squad, crew, or team level as required by operations. Replacement management requires real-time access to information about all replacements, movement status from the point of selection, and personnel readiness management information to determine the final destination of replacements and RTD soldiers.

While the standard is individual soldiers, the replacement operations system must be able to provide squads, crews, or teams. It must also coordinate for their transportation to weapon system link-up and

training locations. Personnel readiness managers coordinate with materiel managers as described in Chapter 2 to link up weapon systems with squads, crew, and teams. Readiness managers also coordinate with the G3/S3 and other staff members with training resources for replacement training. Managers ensure replacements have all necessary qualifications. This includes use of additional skill identified when critical for positions or particular operations. The replacement unit maintains an element's integrity and accountability until the replacement section in-processes the squad, crew, or team.

The replacement network serves as the conduit for soldiers and civilians returning to duty from hospitals. Personnel readiness managers also help military police determine the duty status of stragglers and assist their eventual disposition through legal or replacement channels.

Readiness managers direct RTDs assignment to their original units unless the tactical condition clearly dictates otherwise. The decision to begin assigning RTDs to other than their original unit is an operational decision of the commander or operations staff with recommendations from the personnel staff.

Whenever METT-T allows, the replacement management system includes training of individual replacements. The training of replacements while they are in the replacement system unburdens the unit commander from having to do so. Training also helps reduce soldier/civilian isolation, anxiety, and fear. Training of replacements should begin at the CONUS replacement centers (CRCs). CRCs also certify soldier readiness for deployment. They coordinate the equipping, training, and CRC area transportation of replacement personnel, DA civilians, contract civilians, and personnel from the American Red Cross and other federal agencies and national organizations. CRCs also receive, outprocess, and account for individuals returning from the theater, including noncombatant evacuees.

The theater replacement directorate (RD) or the personnel element performing the RD mission coordinates transportation requirements when in-theater air assets must transport replacements from EAC to corps or division release points.

Replacement battalions command and control replacement companies at CRCs or at theater level. Replacement companies may be part of a replacement battalion, personnel group, or a PSB. The companies at theater level receive, support, and process replacements. They coordinate movement with the appropriate movement control element. The division replacement section coordinates with the G4 and division transportation officer for movement to the BSA. The brigade S1 processes and assigns replacements to battalions. The battalion S1 further assigns replacements to company level.

PERSONNEL SERVICE SUPPORT

PERSONNEL SERVICES

Personnel services support readiness as well as the human dimension of the force.

Personnel Information Management

The personnel information management system collects, validates, processes, and stores critical information about soldiers, units, and DA civilians. Personnel readiness managers, casualty managers, and replacement managers use the personnel information data base.

During split operations, the personnel information processing activity of the PSB element or military personnel division at the home station provides contenued support to deployed forces. The rear personnel

automation element performs sustaining base personnel information management. A forward deployed personnel detachment or a forward area support team provides only essential services in contingency operations. The forward element synchronizes data bases in the theater and transmits updates to and receives them from the rear element.

Postal Operations Management

The postal operations management system provides a network to process mail and provide postal services within a theater of operations. Processing mail involves receiving, separating, sorting, dispatching, and redirecting ordinary and accountable mail, conducting international mail exchange, and handling casualty, contaminated, and enemy prisoner of war mail. Postal services involve selling stamps; cashing and selling money orders; providing registered (including classified up to secret), insured, and certified mail services; and processing postal claims and inquiries.

Official mail moves through the postal system until it reaches the postal services platoon of the unit addressed. FM 24-1 and AR 25-51 address official mail.

The Military Postal Service Agency (MPSA) establishes policy and procedures required for the proper administration of the military postal system. The MPSA acts as the single DOD point of contact with the US Postal System (USPS) and other government agencies on policy and operational matters. The MPSA activates contingency Army post offices and coordinates initial mail routing schemes with the Joint Military Postal Agency (JMPA). It also coordinates an integrated network of major military mail distribution and transportation facilities in overseas areas. The JMPA is the single point of contact with the USPS at the gateways in CONUS and the theater. It coordinates transportation of mail to and within the theater.

The United States Postal Service (USPS) sorts to battalion level in CONUS. To support force deployment, the MPSA, in coordination with the USPS and the operational major command, assigns contingency Army post office numbers to contingency forces. A postal operations platoon routes the mail to postal services platoons which separate it by unit if not already separated by postal service platoon number. Postal elements coordinate mail transportation requirements with transportation managers at all levels. This applies to both inbound and outbound mail. They also coordinate operations within the joint operations community.

Morale, Welfare, and Recreation and Community Support

This system enables commanders to provide soldiers and civilians with recreational and fitness activities and goods and services not available through appropriated funds. For contingency operations, the MWR network provides unit recreation and sports programs and rest areas for brigade-sized and larger units. MWR personnel provide these services and facilities.

Community support programs include the American Red Cross (ARC), family support, and the exchange system. During mobilization and deployment, the ARC provides emergency communication and case management services to support the health, welfare, and morale of the Armed Forces and their families. ARC provides forward deployed units a direct link to their families during family emergencies. The mission of family support programs is to foster total Army family readiness. Mission accomplishment for forward deployed units depends on soldiers' confidence that their families are safe and capable of carrying on during their absence. AAFES, through its exchange system, provides basic health, hygiene, and personal care items to soldiers and deployed civilians.

Band

The band's mission in a force projection Army is to provide music to enhance unit cohesion and soldier morale. It also provides musical support to civil-military operations, multinational operations, recruiting operations, and national and international community relations operations. During contingency operations, mobilization and demobilization, and major training exercises, the mission may expand to include

musical support for civil affairs and psychological operations.

Other Personnel Services

FM 12-6 has details on other personnel services. These include:

- Awards and decorations.
- Officer/noncommissioned officer evaluation.
- Enlisted promotions and reductions.
- Officer promotions.
- Transfers and discharges.
- Issuance of identification documents.
- Line of duty investigations.
- Officer procurement.
- Leaves and passes.
- Retention services.

RELIGIOUS SUPPORT

The unit ministry team (UMT), composed of a chaplain and a chaplain assistant, provides unit, denominational, and area religious support. UMTs address the spiritual, ethical, and morale needs of soldiers and family members at all echelons. The UMT is a special staff section under the operational control of the unit chaplain who serves as a special staff officer responsible for implementing the commander's religious program. The UMT ensures the free exercise of religion for personnel and advises the commander on matters of religion, ethics, and morale.

The UMT provides the broadest range of religious support appropriate to the tactical situation. Direct unit involvement and forward positioning allow the UMT to perform ministry in support of soldiers in combat. This ministry includes support for soldiers experiencing combat stress and battle fatigue. Following an operation, the UMT provides unit memorial services and other religious activities as required.

LEGAL SERVICE SUPPORT

Judge advocates provide advice and assistance in the functional areas of the law, including administrative, contract, international, and operational law, as well as claims, legal assistance, and military justice. Judge advocate sections are at every major echelon of command from brigade to EAC. Legal specialists are at battalion and brigade to ensure liaison with unit commanders and soldiers. The staff judge advocate is a member of the commander's personal staff.

The ability of the commander to maintain morale, order, and discipline enhances unit combat readiness. Organizational morale depends on the command's ability to care for the soldier and protect the soldier from unnecessary concern about legal issues affecting his family. Order and discipline depend on the commander's ability to dispose of violations against persons and property effectively while protecting the rights of the soldier, the victims, and the unit. The soldier and family receive support through premobilization legal planning, payment of claims for damages and losses arising from military service, and preventive law programs. DA civilians deployed in military operations also receive premobilization legal support.

FINANCE SERVICES

Finance services sustain Army, joint, and multinational operations by providing timely commercial vendor and contractor payments, various pay and disbursing services, and all essential accounting as described in FM 14-7.

The Defense Finance and Accounting Service (DFAS) is a DOD agency that provides effective and efficient finance and accounting service to DOD. DFAS provides standard procedures, systems, policies, and oversight to the component services. DFAS centers consolidate finance and accounting functions, except for tactical operations and classified activities. They provide real-time quality financial management information, accounting, and payment services to all service components. DFAS integrates financial services with other related functions. These functions include those provided by personnel and supply elements operating on standard DOD systems. DFAS collects and disburses funds for many federal, state, and local government agencies. It also accounts for foreign government purchases from DOD. DFAS provides military members, retirees, annuitants, and civilian employees

payroll support and payment to contractors for goods and services provided to DOD.

Finance units provide deployed forces real-time, split-base support during wartime and MOOTW. Finance support includes two general areas: support to organizations and support to individuals. Organizational support encompasses the payment for local procurement of supplies and services, enemy prisoners of war, legal claims, and local national employees. It supports CSS units, military police units, the staff judge advocate, civil affairs units, intelligence elements, tactical field exchanges, and other unit commanders. Individual support deals with the personal pay entitlements of military personnel and civilians. It provides them currency in the area of operations. Finance units support deployed forces and the families and military communities of the forces' home stations.

Finance units have a modular force structure design. They can provide tailored support to operational task forces ranging in size from platoon to corps. This modular design allows finance units to task organize to support the rapidly changing situation.

The senior finance commander in the theater is responsible for providing finance policy and technical guidance to the Army service component commander. He determines which finance and accounting functions will be performed in the theater and which will be assigned to a designated finance support activity. The senior finance commander is also responsible for central funding support, commercial accounts, foreign national pay, accounting, and finding support to other US and multinational organizations when designated.

Commercial Vendor and Contractor Payments

Finance elements' commercial accounts branches provide local procurement support for supplies, equipment, and services procured by CSS or operational forces. Finance elements deploy with the advance tactical force and coordinate earl y on with procurement and host nation elements for contracting support, commercial vendor services payments procedures, and conversion rates. The commercial accounts function is divided into two areas: contract support and commercial vendor services support.

Contract support involves the payment of commercial accounts for goods and services such as all classes of supply, laundry and shower operations, transportation assets and facilities, and maintenance services obtained through formal contracting procedures.

Commercial vendor services support is for the immediate needs of the force that Army CSS elements cannot reasonably or economically satisfy. Imprest fund cashiers, finance support teams, and class A agents provide this support. Cash payments are for such items as pay for day laborers, Class I supplements, and the purchase of construction materials. This type of support increases during operations in austere theaters and remote sites.

In joint and multinational operations, Army finance units, when designated, prepare and pay commercial accounts vouchers for supplies and nonpersonal services procured by other US military services or multinational forces.

Central Funding

Finance units in coordination with host nation and military banking facilities provide central currency support for the theater. Currency support includes providing US currency, foreign currencies, and US Treasury checks to all US Army finance units and other US services.

Pay

The pay function includes the areas of military, civilian, foreign national, and travel pay. Finance units provide deployed forces requisite military pay support. Military pay support includes normal pay actions. Soldiers may receive casual payments and cash personal checks in accordance with theater policy.

Finance units provide travel pay services on a limited basis to military and civilian personnel in theater. These services include travel advances, settlement of travel claims, and maintenance of travel records.

Foreign national pay support is provided to non-US employees and day laborers who augment military labor to support mission accomplishment. Finance units provide advice and assistance to EPW camp commanders in the payment of EPWs and civilian internees.

Civilian pay support for DOD civilians in the theater may include technical guidance, leave and payroll data, pay inquiries, and pay actions.

Disbursing

Finance elements provide the following functions:

- Make check and cash disbumements on certified vouchers.
- Receive, collect, and control currencies.
- Exchange currencies.
- Maintain accountable records.
- Fund class A agents
- Replenish imprest funds.

US Army finance units may cash personal checks and similar negotiable instruments, exchange currencies, pay disbursement vouchers and receive collections for other services when authorized. Finance units may also cash personal checks for DOD contractor personnel.

Accounting

Finance units maintain appropriated and nonappropriated funds accounting records. They report the status of funds distributed or collected. The level of formal accounting performed in the theater depends upon the intensity, duration, and location of the conflict. A designated finance support activity outside the theater may perform the accounting function.

RESOURCE MANAGEMENT

FM 14-6 describes the resource management functions and organizational structure within a theater of operations. Resource management is essential to sustaining and modernizing the Army during peacetime, war, and MOOTW. During peacetime, it helps maintain the Army's readiness posture. During and war and MOOTW, it may be the key to success.

Resource management functions relate to funds acquisition, distribution, control, execution, and reporting. The resource manager advises the commander on time phasing and actions required for the transaction of resource management operations. Resource managers provide support on fund controls and reporting requirements. They facilitate the flow of financial documentation for resources used in the theater. They advise theater activities on obligation authority and fund documentation to permit local procurement and payment for services.

In operations where the Army is supporting other US or international agencies, it must ensure full accounting of expenditures and tracking of use of CSS assets to capture costs for reimbursement. Full accountability at all levels and accurate billing is essential to the reimbursement process. It is also essential for reporting to Congress on the costs of military operations.

PUBLIC AFFAIRS

The public affairs officer (PAO), a member of the commander's personal staff at separate brigade and above, assists the commander in fulfilling public affairs responsibilities. The PAO and other PA personnel assess the media environment in which operations occur, provide guidance and recommendations to the commander as part of the decision-making process, and plan and execute public affairs operations. They identify the news, information, and entertainment needs of internal and external audiences, and interface between news media representatives and members of the force. PA operations are designed to fulfill the Army's obligation to provide information to the American people and the Army. They are also critical to helping to establish the conditions which lead to confidence in the force and its operations. By advising the commander and assisting members of the command in media relations and media encounters, PA personnel

expedite the flow of complete, accurate, timely information appropriate with the mission and national security. They work to achieve a balanced, fair presentation which communicates the Army's perspective. This can enhance battle command, increase depth and agility, and result in greater operating freedom.

At brigade level and below, public affairs is a collateral duty normally assigned to the adjutant. At higher echelons, public affairs units are available to assist the command PAO and other units without a dedicated PAO. FM 46-1 fully describes PA operations.

ANNEX F

Field Services

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Field services are no longer classified as either primary or secondary. Instead, all field services receive the same basic priority. The commander decides which are most important. The Army service component commander influences priorities through the total Army analysis process or through the time-phased force deployment list. For instance, laundry and shower units may be top priority in desert contingencies, while airdrop resupply may be more important in mountain contingencies. During MOOTW, the priority depends on the type of support being provided. In some circumstances, field service units or activities may be the only support provided.

LOCATIONS

Quartermaster Corps personnel in a variety of units perform field service functions. During operations involving combat, military personnel provide most of the field services support in forward areas, with HNS and contractors providing a limited amount. Nonversely, HNS and contractors provide much of the support in rear areas. During MOOTW, field services support at all levels may come from a variety of sources. LOGCAP, discussed in Chapter 2, is one potential source of field service support in all operations.

FOOD PREPARATION

Food preparation is a basic unit function performed by food service personnel throughout the theater. It is one of the most important factors in soldier health, morale, and welfare. Virtually every type of unit in the force structure, divisional and nondivisional, has some organic food service personnel. These personnel support the unit's food service program as directed by the commander.

The field feeding system assumes theater-wide use of the meal, ready-to-eat (MRE) for the first several days following deployment. The theater then begins to transition to prepared group feeding rations. These include A-, B-, and heat-and-serve-rations. Initially, the theater transitions from the MRE to the B-and heat-and-serve-rations. Then as the operational situation permits, logisticians attempt to introduce the A-ration

(fresh foods) into the theater. This requires extensive logistics expansion since it requires refrigerated storage and distribution equipment along with a capability to make or acquire ice for unit storage. The feeding standard is to provide soldiers at all echelons three quality meals. The meals fed depend on the prevailing conditions. Disposal of garbage is important to avoid leaving signature trails. See FM 10-1 for details.

The bakery function, previously classified as a field service, is now an integral portion of field feeding. Production of bread on the battlefield, other than in the field feeding system or through contractor support, will no longer take place. Normal Class I supply channels will handle pouched bread. The bakery function is no longer a stand-alone field service.

WATER PURIFICATION

Water is an essential commodity. It is necessary for sanitation, food preparation, construction, and decontamination. Support activities, such as helicopter maintenance and operation of medical facilities, consume large volumes of water. It is critical to the individual soldier. Classification of the water function is somewhat different from other commodities; it is both a field service and a supply function. Water purification is a field service. Quartermaster supply units normally perform purification in conjunction with storage and distribution of potable water--a supply function. GS and DS water units do not store or distribute nonpotable water. Therefore, nonpotable water requirements (for example, water for construction, laundry, and showers) are the responsibility of the user.

Water supply units perform routine testing. However, water quality monitoring is primarily the responsibility of the preventive medicine personnel of the medical command or corps. The command surgeon performs tests associated with water source approval, monitors potable water, and interprets the water testing results.

Each service provides its own water resource support. However, the Army or another service provides support beyond a service's capability in a joint operation. AR 700-136 details the responsibilities of Army elements for water support.

The Corps of Engineers plays a major role in providing water to our forces. The engineers, through the Topogmphical Engineering Center, develop and maintain an automated data base for the rapid retrieval of water source related data. The engineers are also responsible for finding subsurface water; drilling wells; and constructing, repairing, maintaining, and operating permanent and semipermanent water facilities. In addition, they assist water units with site preparation when required.

The quantity of water required depends on the regional climate and the type and scope of operations. Temperate, tropic, and arctic environments normally have enough fresh surface and subsurface water sources to meet raw water requirements for the force. In arid regions, provision of water takes on significantly greater dimensions. Soldiers must drink more water. Water requirements are significantly greater in rear areas, where there is heavy demand for water for aircraft and vehicle washing, medical treatment, laundry and shower facilities, and construction projects. Planners may easily underestimate water requirements for enemy prisoners of war. They must consider the potential absence of water capability in enemy units and the requirement for on-site sanitation, shower, delousing, and medical support for in-coming prisoners. Since water is a critical commodity in arid regions, managers must strictly control its use. Commanders set up a priority and allocation system.

Because of the scarcity of potable water in some contingency areas, water support equipment is prepositioned afloat. This allows for initial support to a contingency force. Additional water equipment is available in CONUS depots to sustain operations. Most of this equipment is packaged for tactical transportability. Its configuration allows for throughput to the user with minimal handling in the theater of operations.

In nonarid regions, DS supply units in the DISCOM and at EAD provide water purification and water supply support on an area basis. During the early stages of a contingency operation, the DISCOM may provide water for nondivisional units until additional logistics units arrive.

In arid regions where sufficient water sources are not available, EAD units establish GS water systems. GS water purification elements supplement the capabilities of the DS elements. GS water supply companies set up and operate bulk storage and distribution facilities or terminals. Tactical water distribution teams can be assigned to water supply companies to augment capabilities for distribution via hose line. These GS water supply companies distribute potable water to DS supply units for nondivisional customers and to the divisions. Hose lines, pipelines, or trucks move potable water to forward areas. Division capabilities are augmented with storage and distribution systems to provide for one day of supply on the ground in both the DSA and BSA. Truck companies augmented with semitrailer-mounted fabric tanks provide line-haul of water at the tactical level.

MORTUARY AFFAIRS

The Mortuary Affairs Program is a broadly based military program to provide for the necessary care and disposition of deceased personnel. It supports both war and MOOTW. The program can have a direct and sudden impact on the morale of soldiers and the American public. It provides flexible support in a force-projection environment. Each service has the responsibility for the return of remains and personal effects to CONUS. The Army is designated as the executive agent for the Joint Mortuary Affairs Program. It maintains a Central Joint Mortuary Affairs Office (CJMAO) and provides general support to other services when their requirements exceed their capabilities. The Mortuary Affairs Program is divided into three subprograms:

- The Current Death Program operates around the world in peacetime and outside of areas of conflict during military operations. It may also continue in areas of conflict depending on the CSS and tactical situation. It provides mortuary supplies and associated services for permanent disposition of remains and personal effects of persons for whom the Army is or becomes responsible.
- The Graves Registration Program provides for search, recovery, initial identification, and temporary burial of deceased personnel in temporary burial sites. Temporary burials are a last resort, and the theater commander must authorize them. It also provides for the care and maintenance of burial sites and for the handling and disposition of personal effects.
- The Concurrent Return Program is a combination of the Current Death and Graves Registration Programs. This program provides for the search, recovery, and evacuation of remains to collection points and further evacuation to a mortuary. It provides for identification and preparation of remains in a mortuary and shipment to a final destination as directed by the next of kin.

The joint staff provides general guidance and policy to the unified commands and military departments within DOD. Within DA, the Deputy Chief of Staff for Personnel has overall responsibility for the Mortuary Affairs Program and manages peacetime operations. The Deputy Chief of Staff for Logistics is responsible for field operations during time of war. The US Army Training and Doctrine Command develops the standardized training and doctrine for the military services. The unified commander develops implementation plans based on the joint staff policy and doctrine. At the unified command level, a joint mortuary affairs office provides the commander with guidance, coordination capability, and the staff supervision for all mortuary affairs.

All commanders are responsible for the search, recovery, tentative identification, care, and evacuation of remains to the nearest collection point or mortuary. Each division has a small mortuary affairs element (two to three personnel) organic to the DISCOM. They

train division personnel to perform initial search, recovery, identification, and evacuation of human remains and personal effects. During hostilities, the mortuary affairs personnel organic to the division operate collection points. This procedure continues until the division receives additional mortuary affairs personnel or a mortuary affairs unit. A mortuary affairs unit assigned to the corps support command supports nondivisional units on an area basis. This unit operates collection points throughout the corps, division, and brigade areas. These points receive remains from the maneuver units, assist and conduct search and recovery operations, and arrange for the evacuation of remains to a mortuary or temporary burial site.

Mortuary affairs units operate theater collection points, evacuation points, and personal effects depots. Mortuary affairs personnel initially process remains in theater. Then they arrange to evacuate remains and personal effects, usually by air, to a CONUS point of entry mortuary. CONUS port of entry mortuaries provide a positive identification of the remains and prepare them for release in accordance with the desires of the next of kin. Recent wars and MOOTW have shown this policy is quite effective.

When directed by the unified commander, mortuary affairs units establish cemeteries and provide for temporary interment of remains. Mortuary affairs units may also operate in-theater mortuaries, but they require personnel and equipment augmentation or host nation support for identification of remains and embalming.

To further our national policy of returning all US service personnel who die in any theater of operation to the next of kin, new decontamination procedures are under development. Plans call for the establishment of a task organized mortuary affairs decontamination collection point. Personnel set up and operate a point near areas that have a large number of contaminated remains. For other cases, collection point teams may decontaminate remains. FM 10-63 and JP 4-06 have more information on decontamination of remains and mortuary affairs in general.

AIRDROP

Support of airdrop equipment and systems includes parachute packing, air item maintenance, and rigging supplies and equipment. The airdrop function supports both airborne insertions and airdrop/airland resupply. Airborne insertions involve the delivery of an airborne fighting force, along with its supplies and equipment, to an objective area by parachute. FM 100-27 covers airborne insertions in detail. Airdrop resupply operations apply to all Army forces. The airdrop function supports the movement of personnel, equipment, and supplies. It is a vital link in the distribution system; it provides the capability of supplying the force even when land LOCs have been disrupted. It adds flexibility to the distribution system.

AMC manages most airdrop equipment and systems (ADES) at the national strategic level. It includes the NICP and national maintenance point for ADES. At the operational level, there are two types of airdrop support units. A heavy airdrop supply company provides reinforcing support to corps level airdrop supply companies. In addition, an airdrop equipment repair and supply company provides supply and maintenance support to airdrop supply companies in the corps (other than the airborne corps) and at echelons above corps.

A light airdrop supply company provides airdrop/airland resupply support to the corps. In addition, it provides personnel parachute support to units such as long range surveillance units. If the corps cannot support an airdrop request, it passes the request to the airdrop supply company at EAC. Most of the supplies used for rigging by the airdrop supply company come directly from the strategic level, bypassing the airdrop equipment repair and supply company at EAC. The EAC ADES repair and supply company provides ADES maintenance support for the corps light airdrop supply company. The airborne corps has an organic airdrop capability. If it cannot meet the airdrop resupply requirement, it forwards the requirement to the supporting airdrop unit at EAC.

Airdrop resupply support must be flexible. Certain contingencies may require airdrop resupply support from the beginning of hostilities. However, the requisite airdrop support structure is not likely to be in place due to deployment priorities. In such cases, the operational level commander should consider having a portion of the supporting airdrop supply company deploy to the DOD depot responsible for supply support to the contingency area. If forces require airdrop resupply prior to the deployment of the airdrop support units to the theater, the units may rig supplies for airdrop at the DOD depot. Supplies are then flown directly to the airdrop location. This would require adaptation of the request procedures outlined in FM 100-27.

LAUNDRY, SHOWER, AND CLOTHING AND LIGHT TEXTILE REPAIR

Clean, serviceable clothing and showers are essential for hygiene and morale purposes. During peacetime, shower, laundry, and clothing repair are normally provided through fixed facilities or field expedient methods for short duration exercises. During war and MOOTW, they are provided as far forward as the brigade area. The goal is to provide soldiers with one shower and up to 15 pounds of laundered clothing each week. Soldiers receive their own clothing from a tactical laundry within 24 hours. Responsibilities at the strategic level are basically those involving provisioning. Clothing replacement, a Class II function, is covered in Annex A.

Forces receive support from a combination of units, HNS, and contractor. In rear areas, HNS and contractors may provide much of this support. LOGCAP offers considerable capability during the early deployment stages. A laundry and renovation company may provide GS laundry capability. The capability to repair medium- and heavy-weight textiles is in selected maintenance units. These elements repair canvas and fabrics used on vehicles and items such as seat covers, tarpaulins, cargo covers, and swim barriers.

A field service company provides direct support at the tactical level. The company has the modular capability of sending small teams as far forward as desired by the supported commander. The unit provides one shower for each soldier each week. However, other sources can help to reach the goal of two showers for each soldier each week. Other sources could include field expediency methods, small unit shower equipment, HNS, or contract services. The field service company has equipment to provide mass delousing operations under the direction and supervision of medical personnel.

The laundry and shower function does not include laundry decontamination support. Detailed troop decontamination of chemical and biological agents does not require showers. Radiation decontamination, however, may require showers. If soldiers use chemical defense equipment against fallout, they do not need showers. If they do not, then contamination lodges in soldiers' hair and on skin. Then only showers can remove the contamination. Planners must ensure control of the runoff from these showers since it is contaminated. FM 3-5 has decontamination procedures. The new chemical protective clothing keeps its protective qualities after laundering. Once exposed to contamination, it must be disposed of under theater policies.

FORCE PROVIDER

The Army's Force Provider is a modular system, principally designed to provide the front-line soldier with a brief respite from the rigors of a combat environment. Each module will provide life support for up to 550 soldiers. It will include environmentally controlled billeting; modern latrines, showers and kitchens; MWR facilities; and complete laundry support. Additionally, the module infrastructure will incorporate a complete

water distribution/disposal system and power grid. Modules can be complexed to provide contiguous support to a brigade-sized force. The cadre for operating the Force Provider will consist of Force Provider companies. However, they require augmentation to effectively operate the system. Force Provider will also have potential for use as a staging area during deployment/redeployment, a reconstitution site, and an intermediate staging base. It is also ideally suited for supporting MOOTW, particularly disaster assistance and humanitarian aid operations.

ANNEX **G**

Supporting Close, Deep, and Rear Operations

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SUPPORTING CLOSE OPERATIONS G-1
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Tactical and operational CSS involves support to the three elements of the battle--close, deep, and rear. Just as the commander is responsible for conducting operations throughout the depth of his area of responsibility, the CSS commander is responsible for supporting the battle in those three areas. While principles remain the same in supporting the various forms of maneuver, CSS personnel use different techniques in each. Complicating the support mission is the possibility of simultaneous operations. In addition to simultaneous operations within a campaign, forces may conduct more than one campaign at the same time within a theater. CSS personnel must be prepared to support a wide range of synchronized operations and shift support operations to meet the needs of current and future operations.

SUPPORTING CLOSE OPERATIONS

OFFENSE

A commander may launch an offensive operation at any time and with minimum advance warning. Therefore, support planners continuously keep informed of operation plans. They anticipate offensive operations even while supporting other types of operations. Similarly, they keep the combat operations planner apprised of the CSS situation to ensure plans are supportable. The G1, G4, and G5 are the principal links between operations planners and CSS operators. The objective of CSS in support of offensive operations is to maintain the momentum by supporting as far forward as possible.

To prepare for an attack, CSS elements ensure that all support equipment is ready and that supplies are best located for support. They also ensure that enough transportation is available to support the tactical and support plans. Commanders ensure that all support elements understand their responsibilities.

The fundamental principle of supply support in the offense is responsiveness to the user. Supply is typically more difficult in the offense than in the defense because of the ever-changing locations of units and their support areas. The concept of forward support becomes even more important and increasingly difficult. Likewise, CSS planners must coordinate preparations with deception plans to avoid giving away the element of surprise.

Man

As advancing combat formations extend control of the battle area, manning elements meet the increased challenge of reconciling and reporting command and

control strength information, reporting casualty information, and sending replacements.

Arm

Ammunition expenditure is typically less in offensive operations than in heavy defensive combat. However, responsive support for offensive operations is critical. It is also more difficult due to the lengthening of supply lines and the need for user resupply vehicles to stay close to firing elements. In preparing for the attack, planners consider the following:

- Placing ammunition close to the user.
- Preparing ammunition supply points and ammunition transfer points to rapidly move forward as the attack advances.
- Stockpiling artillery ammunition at designated firing positions.
- Moving ammunition forward with advancing elements to ensure that basic loads can be replenished quickly.
- Fully arming weapon systems before the attack.

Fuel

Offensive operations use large quantities of fuel. As a result, logisticians prepare for the attack by building up stocks in forward sites--while avoiding signaling intentions to the enemy. They also ensure that fuel supply elements can move forward as the attack develops. Managers intensely control bulk transporter assets throughout the theater. This is particularly true if the attack is highly successful and results in exploitation or pursuit.

Fix

Planners ensure maintenance operations support momentum and massing at critical points. Maintenance personnel maximize momentum by fixing at the point of malfunction or damage. They enhance momentum by keeping the maximum number of weapon systems operable and mobile. Therefore, repair and recovery personnel perform their mission in the forward area.

There is an increased demand on unit and DS maintenance resources. Unit mechanics accompany or follow the most forward attacking elements. DS maintenance elements in the form of maintenance support teams (MSTs) may also operate with the spearhead of the attack Plans include recovery and evacuation of systems and components which repairers cannot quickly fix on the spot. Maintained use battle damage assessment and repair to rapidly return disabled equipment to the commander by expeditiously fixing essential equipment.

MSTs and other elements need the right people (skills and numbers), equipment (transportation, tools, TMDE, and communications), and supplies (components, assemblies, and repair parts). As discussed in Annex C, highly trained mechanics make hasty, but informed, decisions as to--

- What they can fix on the spot.
- What they should evacuate.
- What is not repairable and they should use for cannibalization.
- What they should abandon after making it useless to the enemy, if operational necessity and damage require it.

If repairers cannot fix equipment on the spot, they arrange to evacuate it or leave it for following units to repair. MSTs report the location of items left in the field to their parent maintenance control element. That element coordinates recovery and evacuation.

Move

Movement requirements heavily tax transportation resources. There may be a wide dispersion of units and lengthening lines of communication. There may also be an increased requirement for personnel replacements and some classes of supply, for example, fuel and weapon systems. These factors demand close coordination and planning for the use of transportation assets. Resources which may be secure in the more stable environment of defense may not be reliable in the offense.

The mobility of offensive operations requires reliance on motor and air transport. When considering the air transport mode, the planner also considers airdrop. Movement control personnel set priorities in

accordance with the CINC's or joint force commander's priorities to ensure that transportation assets meet the most critical needs.

Sustain Soldiers and Their Systems

The forward movement of maneuver units may decrease or temporarily curtail PSS elements' ability to support the force. PSS elements provide support on a direct or unit basis.

Offensive operations also increase the burden on medical resources. Planners can expect the deliberate attack particularly, to result in high casualty rates. Therefore, medical treatment and evacuation resources may be extended to their limits. Corps hospitals move forward in preparation for offensive operations to provide maximum treatment and holding facilities. When organic medical resources are insufficient, evacuation may require use of nonmedical transportation assets.

During the offense, medical facilities usually move forward by echelon. Forward locations are operational before personnel close rear locations. Also, medical facilities maintain close communications with personnel elements to verify and report casualty information.

The main CSS effort in the offense is to provide only the most critically needed support to the attacking force. Therefore, most field service support functions play a minorrole. Commanders suspend some until the situation stabilizes. Mortuary affairs is a major exception. It continues and may intensify. Mortuary affairs units maintain close communications with personnel elements to verify and report casualty information. They also aid in the identification of remains. Airdrop may also be in greater demand.

While Classes III and V are the most important supplies in the offense, planners consider all classes. For example, while the need for barrier and fortification material decreases, the requirement for obstacle breaching and bridging material may increase. Weapons system requirements may also be higher since weapon systems exposure to fire during offensive operations is greater.

DEFENSE

Supply activity is greatest in the preparation stage. Stockpiles should be far forward and at successive defensive positions. While many supplies--especially munitions and barrier material--must be far forward, they must also be as mobile as possible. This allows continuous support as combat power shifts in response to enemy attacks.

Facilities should be far enough in the rear to be out of the flow of battle and relatively secure. However, they should not be so far back that they make the support effort less effective. CSS units locate, where possible, out of the reach of potential penetrations in protected and concealed locations. They have access to good road nets and make maximum use of built-up areas. Dispersion is consistent with support requirements, control, and local security. Commanders emphasize passive security measures. CSS elements routinely operate at night.

Man

Maneuver forces may have to rapidly displace while simultaneously carrying current command and control strength management data to the rear. Linking replacement activities and equipment issue points requires close coordination among medical, supply, transportation, maintenance, and personnel managers. This is especially critical for soldiers returning to duty from hospitals who may need uniforms, personal equipment, and weapons. Further discussion of system replacements is in Annex E.

Arm

Logisticians position ammunition supply and transfer points to facilitate rapid and responsive support. Using units may stockpile Class V supplies in excess of their basic loads. Class V supplies may also be placed at successive defensive positions. This provides easy access and lessens transportation problems during the withdrawal to those positions. The defense

usually requires a greater volume of Class V supply than does the offense. Class IV and V supply requirements, especially for mines and barrier materials, are heaviest during the preparation for defense.

Fuel

The form of defensive operation influences fuel requirements. An area defense typically requires less fuel than an offensive operation. Mobile defenses, on the other hand, generally involve greater fuel consumption than the more static-oriented area defense. However, in either case, forward stockpiles of fuel may be appropriate.

Fix

The primary thrust of the maintenance effort in the defense is to maximize the number of weapon systems ready. Once the defensive battle begins, the thrust is to fix the maximum number of inoperable systems and return them to the battle in the least time. This requires forward support at, or as near as possible to, the intended area of operation of the systems. Maintenance teams locate well forward. Likewise, critical components are placed forward to overcome the effects of combat wear and damage. Planners also consider augmenting the maintenance support to covering force elements when they return to the main battle area. Such support may allow them to return more rapidly to fighting condition.

Move

Transportation resources are most critical in the preparation stage of the defense. Stockpiling supplies requires extensive transportation. So does shifting personnel, weapon systems, and supplies laterally or in depth to meet the probable points of enemy attack.

Sustain Soldiers and Their Systems

The depth and dispersion of the defense may create significant time and distance problems in PSS. Enemy action and the initial direction of maneuver may complicate forward area acquisition of information. Increased work load among exposed PSS elements reduces their support capability.

The task of front-line medical units is to stabilize the wounded, sort them, and evacuate patients. Priorities for evacuation depend on the location of the probable enemy main effort. Clearing facilities locate away from points of possible penetrations. Peak loads may require additional helicopter evacuation capability.

The field service functions of laundry and shower operate routinely where the tactical situation permits. Such facilities locate out of the way of tactical units. Mortuary affairs units evacuate the dead quickly. Feeding of A- and B-rations tends to increase, and airdrop may be critical for cut-off units.

EAD transportation assets move Class IV and V barrier supplies as close to the barrier sites as possible. Materiel managers take action to increase the flow of these materials as soon as they know of the intention to defend.

RETROGRADE

A retrograde operation is rarely an end in itself. Normally retrograde operations culminate in the establishment of the defense in a new area. The retrograde is usually a phased operation. When planning support for a retrograde, the CSS staff officer plans support for three phases.

While planning for the actual retrograde, support elements continue to support the current operation. Next, CSS elements continue to support the retrograde delaying forces and the forces out of contact moving to the rear. Finally, the CSS elements support units at the new position as they arrive. The CSS staff officer plans for support of the old defense and the transition to and conduct of new operations.

Multiple missions, the movement of large forces, and time and space phasing all require effective centralized control. Within the support area this control first involves detailed planning and then precise management of plan execution. The support staff and distribution managers supervise priority shills. Units and materiel must move in strict compliance with established schedules. Medical support--allocation of

hospitals and evacuation policy--is tied closely to the retrograde plans to ensure preservation of support capabilities for succeeding operations.

Supporting elements maintain communications with supported units. CSS personnel are continuously aware of the changing situation and the requirements of the supported elements. The personal involvement and' 'on-the-scene" appraisal of the situation by CSS leaders is just as important to mission accomplishment as the personal involvement of combat leaders and staff.

Supply efforts during the retrograde concentrate on the most critical supplies: Classes III, V, and IX. The key to providing responsive supply support is to project force supply requirements throughout the operation and to distribute these forecasted supplies. The system pushes forward only critical supplies.

Distribution managers also divert supplies entering the area to the new positions. To minimize the movement of supplies that must move from the forward areas to the new rear supply areas, managers may use a technique of "drying up" the forward supply points. They arrange to move supplies to forward points until the forward stocks consist only of requirements for delaying forces. When they achieve this level, they divert supplies to the rear areas.

Arm and Fuel

Planners consider having limited, mobile supply forward to support the covering force. However, this puts a strain on limited transportation resources. They may arrange to position fuel forward on fuel trucks or rail tank cars to avoid last minute evacuation of empty fuel bladders. If sufficient tractor trailers are not available for mobile Class V supply points, they place ammunition throughout the delaying or covering force area so that forces can fall back on a continuous supply.

Fix

Continuous maintenance support throughout the retrograde operation is essential to keep the maximum number of weapon systems operational. Maintenance planners concentrate on providing essential support forward while moving the bulk of the maintenance units to the rear. They organize teams to provide support to essential weapon systems in the forward areas. Maintenance efforts concentrate on the "quick fix" items using assemblies brought forward to facilitate the rapid turnaround of weapon systems. Battle damage assessment and repair and fixing equipment take priority. Maintained maximize use of controlled exchange and cannibalization.

Move

Retrograde operations severely strain the transportation system. Assets move essential supplies, materiel, and personnel rearward. They also support elements which are not fully mobile with organic vehicles. It is therefore essential that movement control personnel maximize use of all available transportation assets--watercraft, railroads, air assets, and trucks. They program all movements throughout the entire retrograde to eliminate unnecessary surge periods. They ensure units adhere to set priorities. Highway movements are regulated (transportation function) and then controlled (provost marshal fuction) to avoid highway congestion. Planners carefully design traffic circulation, identify evacuation routes, and publish movement schedules.

Sustain Soldiers and Their Systems

While hospitals move, they temporarily lose their bed capacity. Thus, during the retrograde period there may not be enough beds. If temporary facilities (civilian facilities) are not available, additional patients are evacuated to COMMZ or CONUS hospitals. Medical managers may have to request nonmedical transportation to move less severely wounded personnel. They take advantage of HNS transportation when possible.

Commanders identify essential field services. Personnel and facilities to perform other services evacuate early and set up in the new area. Commanders may also use those resources to support a deception operation or aid other units in movement. Field feeding relies on operational rations.

SUPPORTING DEEP OPERATIONS

Commanders execute deep operations in two ways--deep fires and deep maneuver. Support to the former is similar to that described above in the close operations discussion. Deep maneuver demands especially detailed planning because of its great risks. There are two ways to support deep maneuver. The force can carry with it all the resources needed throughout the mission, or it can be supported over a line of communications. Both methods have strengths and weaknesses. In each case, early in the planning, CSS personnel describe for the commander the assets available, their likely usage and replenishment prospects, and likely consequences for the supported force. Such information assists the commander in assessing the risks involved.

PLANNING AND EXECUTION

Deep operations involve a high degree of risk. However, commanders may have to take the risk; often the advantages obtained by successful deep operations far outweigh the risks. The CSS commander, in concert with the tactical commander, devises the best support plan possible and executes it to the best ability of his command. Since deep operations are risky and so dependent on the factors of METT-T, support personnel take bold, innovative approaches. They identify risks and convey them to the commander in terms that are meaningful to him. They reduce risks to the minimum by careful planning and bold execution.

SELF-SUSTAINMENT

The situation determines whether deep operations forces can sustain themselves. Planners analyze the depth and duration of the operation, the size and organization of the force, the enemy situation, and the weather and terrain.

The division is generally the smallest force which can conduct deep operations. The division can sustain itself for only a few days without external support. It can carry little other than its basic load. Therefore, the depth and duration of the operation determine if it can sustain itself While the force may be able to forage for some supplies (principally fuel and water), in most cases planners cannot rely on foraging to sustain the force.

A technique to enhance self-sustainment capabilities is the attachment of a support task force to the maneuver force. It is feasible, for example, to task-organize a CSS force comprised of corps assets to accompany a division force on a deep operation. While this technique enhances support, it may slow down the maneuver force. The support force does not have the cross-country mobility or the survivability of the combat force.

SUSTAINMENT OVER A LINE OF COMMUNICATIONS

Either surface or air LOCs may sustain a force conducting a deep operation. Both offer advantages and disadvantages. The preferred option depends on the situation. These same considerations may apply to providing support to an isolated friendly force.

A surface LOC can handle large tonnages of supplies and equipment to specific destinations. It is also less subject to the vagaries of weather than air LOCs. However, the LOC extends far beyond the forward line of own troops into territory that is subject to enemy influence and control. Therefore, it requires either temporary or continuous security. Providing such security ties up scarce combat and combat support resources. Sustainment over a surface LOC can be enhanced by staging supplies near the forward line of own troops. Supply vehicles directly supporting the force have shorter distances to traverse. However, the staging element is at risk. It usually requires combat elements to protect it.

Sustainment over an air LOC has the advantage of being fast and responsive. However, it also requires either temporary or continuous security. This implies a requirement for temporary or continuing air superiority or, at least, parity. These conditions require closer interservice cooperation because much of the airlift

capability is Air Force. The operation requires priority for use of tactical aircraft providing security and for CSS aircraft carrying cargo. Army aircraft is used intensively, but Army assets have less tonnage capability than Air Force airlift. Air LOC sustainment involves air-landing, airdrop, or a combination of the two. Air-landing requires secure landing fields. Airdrop for such an operation requires large quantities of airdrop and ground support equipment. Army airlift is more flexible. It requires no airfields, involves less rigging equipment, and gives faster response to emergency requirements.

SUPPORTING REAR OPERATIONS

Forces conduct rear operations in the rear area of all echelons to ensure freedom of action in close and deep operations. The functions of rear operations are:

- Security.
- Sustainment.
- Movement.
- Terrain management.

The goal is to provide security of rear area facilities, installations, and forces to ensure unimpeded operations in the rear area. Without that security and freedom of action in the rear, the CSS system cannot support the force conducting close and deep operations.

Doctrine for rear operations focuses on avoidance, dispersion, self-defense, and mutual defense. Control and coordination of rear operations concentrates on three areas: the division rear, corps rear, and COMMZ. The rear command posts at division and corps control rear operations in those areas. Normally area support groups from a major command are responsible in the COMMZ. Rear operations centers (ROCs) at the theater and corps levels plan, coordinate, and direct rear operations with the assistance of rear area operations centers (RAOCs).

The rear operations officer needs tasking authority within the entire area. Depending on the factors of METT-T, the rear operations officer may need, for example, to task MP and engineer forces operating in the area to provide assistance. Coordination and clear lines of authority are crucial to rear operations success. ROCs, in conjunction with the RAOCs, analyze the IPB and threat analysis to determine the placement of units in bases and base clusters as well as their positions during follow-on movements. Terrain management is the key to knowing the status of friendly operations in the rear area.

CSS organizations are normally the units least capable of self-defense. They are also often the targets of enemy action. Time and effort used to defend themselves and to support the total rear operations effort degrade their ability to perform their primary mission. However, all units must be able to defend against Level I activities (sniper or terrorist activities). They should be able to impede Level II attacks until assistance arrives. Assistance may come from an MP unit as a response force or a combat unit located in the rear acting as a tactical combat force (TCF). No CSS unit can sustain a defense against a determined Level II or III attack, but it should attempt to protect itself until the TCF arrives to repel the enemy attack.

ANNEX H

Digitization Impact on CSS

CONTENTS PAGE

IMPLICATIONS FOR SUPPORT H-1
CSS TO DIGITIZED SYSTEMS H-2
STAGES OF DIGITIZATION H-2

Digitization of the battlefield is the insertion of digital technologies across all levels and within both combat and support organizations. It depends on the integration of numerous elements including computer processing, advanced software, displays, sensors, communications, and position/navigation components. The advantages of digitization include enhanced command and control (including C2 of CSS units) resulting from a common picture of the battlefield, improved situational awareness, better compatibility across battlefield operating systems, and shorter decision cycles.

IMPLICATIONS FOR SUPPORT

The CSS commander will have the command and control advantages of near real-time knowledge of location and status of friendly forces. Also, improved awareness of enemy elements will enhance his capability to ensure the survivability of CSS elements. However, beyond the C2 and security advantages, digitization leads to actual enhancements to the CSS process. Some benefits result from the increased speed and volume of data available as the system moves from analog to digital systems. However, CSS improvements from digitization can go beyond those obvious advantages. The most significant benefits accrue from the vertical and horizontal technological integration of digitized systems.

Vertical integration involves the passing of digital data through echelons. Digitized data will enter the system at the lowest level possible, down to the individual weapon system whenever feasible. Vertical integration of fully digitized systems will eliminate the requirement for manual processing and for re-entry of data at different levels as information moves from supported elements to CSS elements and through the various echelons of support. This process will provide CSS planners and operators more detailed, accurate, and up-to-date information on the status and requirements of supported forces. With this information they will be better able to anticipate and meet the needs of the force. Enhanced anticipation and control improves the capability of CSS personnel to push support to forces based on projected needs. This capability is especially critical in early stages of operations before the theater base is fully established.

Horizontal integration involves the use of various technologies to integrate digital data among combat, combat support, and combat service support elements. There are several interrelated aspects of such integration for CSS personnel. First, they will have the same picture of the battlefield as the combat and combat support leaders. This common picture, gained through such techniques as electronically transmitted orders and graphical overlays, will enable them to better and more quickly accomplish what they always strive for-the integration of operations and support plans, as discussed in Chapter 1. The tactical commander will

have better knowledge of the CSS situation and its implications for mission accomplishment.

Another aspect of horizontal technological integration for CSS personnel consists of integration of information among CSS personnel at a given level. Digitizing the CSS system cannot be confined to digitizing each of the functional analog processes of the current system and refining their uses. It must seek to develop new, fully integrated digital systems. As mentioned in Chapter 2, work is progressing on the development of a single integrated CSS Standard Army Management Information System (STAMIS). Current stand-alone functional systems will eventually be blended into a single seamless automated system. The integrated functions will ultimately include not only supply, transportation, and maintenance, but also medical, personnel, and finance support. Integration of these functions will provide a near real-time comprehensive view of the CSS situation not only to CSS elements, but also, through the Army Battle Control System (ABCS), to all commanders. This integrated system along with the application of automatic identification technology (such as radio frequency identification) and communications both within the theater and between the theater and the sustaining base will enable the achievement of total asset and in-transit visibility as discussed in Chapter 2.

CSS TO DIGITIZED SYSTEMS

In addition to the enhanced capabilities that digitization provides to the CSS system, the digitized system itself will eventually require some changes in CSS. For example, manning may be affected in that skill requirements may be different. In fact, for certain functions (for example, development of resource requirements and report preparation) automated capabilities may replace activities currently performed by soldiers. Also, the various hardware and software components of the digitized systems will require changes to maintenance requirements.

STAGES OF DIGITIZATION

Planners must take into account intermediate stages in the development and fielding of digitized systems. Not all elements of a force supported by a CSS unit may be at the same stage of digitization. This will be especially true if the supported force is joint, multinational, and/or interagency. Therefore, CSS planners must develop plans to receive status reports and requirements from fully digitized forces as well as from elements with lesser capabilities. similarly, CSS activities at a given echelon and across the various levels may beat different stages of digitization. They will need to ensure plans to pass data address the various types of systems. Soldiers will need to maintain proficiency in operating and maintaining older systems as well as gaining expertise on digitized systems. This will require additional training.

Glossary

AAFES Army and Air Force Exchange Service
ABCS Army Battle Command System
ACR armored cavalry regiment
ACS assistant chief of staff
ADES airdrop equipment and systems
AG adjutant general
ALOC air lines of communication
AMC United States Army Materiel Command, Air Mobility Command
AMCO aircraft maintenance company
ammo ammunition
AO area of operations
APOD aerial port of debarkation
APOE aerial port of embarkation
AR Army regulation
ARC American Red Cross
ARFOR Army forces
ARSOF Army special operations forces
ASB aviation support battalion
ASCC Army service component command
ASG area support group
ASL authorized stockage list
ASMB area support medical battalion
ASMC area support medical company
ASMRO Armed Services Medical Regulating Office
ASOTSE Army special operations theater support element
ASP ammunition supply point
ATM advanced trauma management
ATP ammunition transfer point
AVIM aviation intermediate maintenance
AVUM aviation unit maintenance
BCC battlefield circulation control
BDAR battle damage assessment and repair
bde brigade
bn battalion
BSA brigade support area
C3 command, control, and communications
CA civil affairs
CHE container-handling equipment
CHS combat health support
CINC commander-in-chief
CJMAO Central Joint Mortuary Affairs Office
CMMC corps materiel management center
CMO civil-military operations
COCOM combatant command
CofS chief of staff
COMMZ communications zone
CONUS continental United States
COSCOM corps support command
CRC CONUS replacement center
CS combat support
CSB corps support battalion
CSC combat stress control
CSG corps support group
CSH combat support hospital
CSS combat service support
CSSCS Combat Service Support Control System
CUCV commercial utility cargo vehicle
DA Department of the Army
DCG deputy commanding general
DFAS Defense Finance and Accounting Service
DISCOM division support command
DLA Defense Logistics Agency
DMI Depot Maintenance Interservicing
DOD Department of Defense

DS direct support
DSA division support area
DSOR Depot Source of Repair
DVA Department of Veterans Administration
EAC echelons above corps
EAD echelons above division
engr engineer
EPW enemy prisoner of war
FAA Foreign Assistance Act
FH field hospital
fin finance
FM field manual, frequency modulated
FRA forward repair activities
FSB forward support battalion
FST forward surgical team
fwd forward
G1 Assistant Chief of Staff, G1 (Personnel)
G3 Assistant Chief of Staff, G3 (Operations and Plans)
G4 Assistant Chief of Staff G4 (Logistics)
G5 Assistant Chief of Staff, G5 (Civil Affairs)
G6 Assistant Chief of Staff, G6 (Information Management Officer)
GH general hospital
gp group
GS general support
GSA General Services Administration
HCP health and comfort package
HEMTT heavy expanded mobility tactical truck
HETS heavy equipment transporter system
HMMWV high mobility, multipurpose wheeled vehicle
HNS host nation support
HQ headquarter
HQDA Headquarters, Department of the Army
indiv individual(s)
ITO installation transportation office
J2 intelligence directorate at a joint headquarters
J4 logistics directorate at a joint headquarters
JFC joint force commander
JMC joint movement center
JMPA Joint Military Postal Agency
JMRO joint medical regulating office
JOPES Joint Operations Planning and Execution System
JP joint publication
JTF joint task force
LOC lines of communication
LOGCAP Logistics Civil Augmentation Program
LOGPAC logistics package
LOTS logistics-over-the-shore
LPB logistics preparation of the battlefield
LPT logistics preparation of the theater
LSE logistics support element
LSV logistics support vessel
MACOM major command
MASH mobile army surgical hospital
MCA movement control agency
MCC movement control center
med medical
MEDCOM medical command
MEDLOG medical logistics
METT-T mission, enemy, troops, terrain and weather, and time available
mgt management
MHE materials-handling equipment
MI military intelligence
MMC materiel management center
MOOTW military operations other than war
MP military police
MPSA Military Postal Service Agency
MRE meal, ready-to-eat

MRO medical regulating office
MSB main support battalion
MSC Military Sealift Command
MSR main supply route
MST maintenance support team
MTF medical treatment facility
MTMC Military Traffic Management Command
MWR morale, welfare, and recreation
NATO North Atlantic Treaty Organization
NBC nuclear, biological, chemical
NGO nongovernmental organization
NICP national inventory control point
OCONUS outside continental United States
OPCON operational control
org organization
PA public affairs
PAC personnel and administration center
PAO public affairs officer
PASR personnel accounting and strength reporting
pers personnel
PERSCOM personnel command
PLL prescribed load list
PMC personnel management center
PMCS preventive maintenance checks and services
POD point of debarkation
POE point of embarkation
POL petroleum, oils, and lubricants
prep preparation
PSB personnel services battalion
PSS personnel service support
pub publication
PVO private volunteer organization
RAOC rear area operations center
RD replacement directorate
req'd required
ROC rear operations center
RTD return to duty
S1 Adjutant (US Army)
S3 Operations and Training Officer (US Army)
S4 Supply Officer (US Army)
SJA staff judge advocate
SLOC sea lines of communication
SOF special operations forces
SOSB special operations support battalion
SPO security, plans, and operations
SPOD seaport of debarkation
Spt support
sqdn squadron
SRA specialized repair activity
SSA supply support activity
SSF single stock fund
STAMIS Standard Army Management Information System
svcs services
TCF tactical combat force
TDA table of distribution and allowances
TFE tactical field exchange
TFEO tactical field exchange officer
TMDE test, measurement, and diagnostic equipment
TMMMC theater medical materiel management center
tms teams
TOE table of organization and equipment
TPFDD time-phased force and deployment data
trans transportation
trmt treatment
UGR unitized group ration
UMT unit ministry team
UN United Nations

UNHCR United Nations High Commission on Refugees

US United States

USAF United States Air Force

USAMMA United States Army Medical Materiel Agency

USPS United State Postal Service

USTA United States Total Army

USTRANSCOM United States Transportation Command

WSM weapon system manager

WSRO weapon system replacement operations

XO executive officer

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