MCWP 3-40

Marine Corps Logistics

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UNITED STATES MARINE CORPS

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FOREWORD

Marine Corps Warfighting Publication (MCWP) 3-40, *Marine Corps Logistics*, provides commanders and logisticians with a broad perspective on the Marine Corps' logistics missions and objectives. It addresses the Marine Corps' core logistics capabilities at the strategic, operational, and tactical levels of warfare. This publication describes how activities at each level interact with and support activities at other levels, ensuring that effective logistics support exists down to the tactical commander. This publication is primarily intended to introduce the Marine Corps logistics and support structure, depicting an overview of the processes used to plan and execute logistics support.

This publication supersedes MCWP 4-1, *Logistics Operations*, dated 15 April 1999, erratum dated 2 May 2016, and change 1 dated 4 April 2018.

Reviewed and approved this date.

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CHAPTER 1.
MARINE CORPS LOGISTICS OVERVIEW

"I believe logistics, as a warfighting function, is the pacing function. Not one of, it's actually THE. We can have the best force, postured perfectly, with this magnificent JADC2 [joint all domain command and control] on top of it…If they're able to contest and really choke us off logistically, they'll take us to our knees. We can't let that happen."

—General David H. Berger

Logistics, defined as, "planning and executing the movement and support of forces" (*DoD Dictionary of Military and Associated Terms*; hereafter called the *DoD Dictionary*), is a fundamental element of Marine air-ground task force (MAGTF) expeditionary operations. The Marine Corps provides self-contained, self-sustained expeditionary forces designed to independently accomplish missions. These forces are task-organized to meet a wide range of missions and have the logistic capabilities to initiate and sustain operations and reconstitute forces for follow-on missions.

As a warfighting function, logistics should not be viewed independently but as part of an interdependent whole. Continuous integration of all warfighting functions provides focus and unity of effort essential to achieving warfighting success. This publication considers logistics support from the perspectives of supported (e.g., ground combat element [GCE]) and supporting (e.g., logistics combat element [LCE]) organizations. Effective logistics emphasizes detailed planning and closely integrating logistic capabilities and capacities throughout the entire force.

Another common application of logistics is called combat service support (CSS). Combat service support is defined as, "the essential capabilities, functions, activities, and tasks necessary to sustain operating forces in theater at all levels of warfare" (*DoD Dictionary*). Thus, CSS includes, but is not limited to the following: supply, maintenance, deployment and distribution, general engineering, health services, and other services required by command element, aviation units, and ground combat forces to permit those units to accomplish their missions.

LEVELS OF WARFARE

Military operations require specific logistics support that is based on levels of warfare (i.e., strategic, operational, or tactical). The strategic level of warfare determines national or multinational (alliance or coalition) strategic security objectives and guidance, then develops and uses national resources to achieve those objectives. Campaigns and major operations are planned,

conducted, and sustained to achieve strategic objectives within theaters or other operational areas at the operational level of warfare. At the tactical level of warfare, battles and engagements are planned and executed to achieve military objectives assigned to tactical units or task forces.

FUNDAMENTALS

Based on United States Code (USC) Title 10, *Armed Forces*, and joint doctrine, the Marine Corps has made logistics self-sufficiency an essential element of MAGTF expeditionary military operational capabilities. This means the Marine Corps' logistics mission is to support the Fleet Marine Forces (FMF) and any sized MAGTF in accomplishing its mission. This goal requires that—

- A MAGTF's personnel, equipment, and supplies be readily transportable by land, air, and sea.
- A MAGTF is task-organized to logistically support itself with accompanying supplies for specific timeframes without a developed infrastructure ashore.
- A MAGTF's logistic capabilities and accompanying supplies enable it, depending on size, to self-sustain its operations for up to 60 days while external resupply channels are organized and established.
- A MAGTF maintains battlespace flexibility, organizational adaptability, and the ability to react to changing operational situations.
- A MAGTF has the capability to leverage the joint logistics enterprise (JLEnt).
- A MAGTF's inherent self-sustainment and capabilities allow it to deploy, reconstitute, and withdraw from a completed operation and redeploy for follow-on missions.

Logistics Continuum

Strategic, operational, and tactical logistics parallel and complement the levels of warfare (see Figure 1-1). (Although not depicted in Figure 1-1, there are exceptions where strategic logistic sources could provide sustainment or assets directly to the tactical level requester.) Strategic logistics supports organizing, training, and equipping forces needed to further national interests. Operational logistics links tactical requirements and strategic capabilities to accomplish operational goals and objectives. Tactical logistics includes organic unit capabilities and CSS activities required to support military operations.

Effective tactical logistics support results from properly employing logistic capabilities within the MAGTF concept of operations (CONOPS) and scheme of maneuver. Commanders and logisticians should carefully integrate logistic considerations into operations planning and execution. Tactical logistic capabilities are a primary element of a self-sufficient MAGTF, which is externally supported through logistic activity at the strategic and operational levels. Figure 1-1 depicts the continuum of logistic support through the lineal levels of warfare.

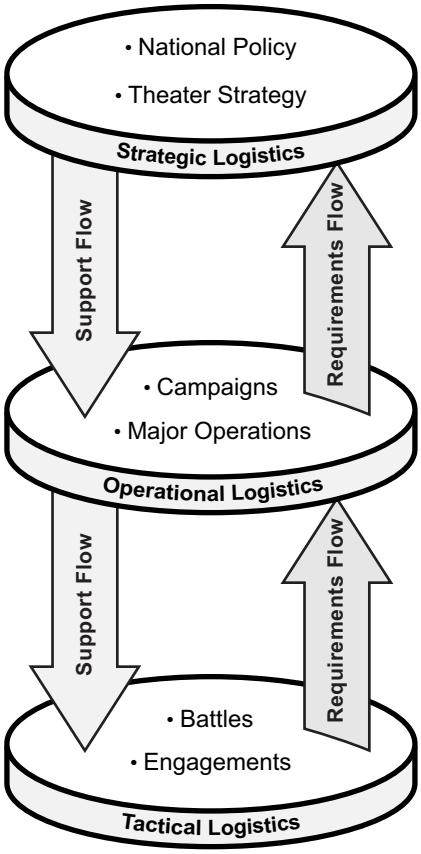

Figure 1-1. Logistics Continuum.

Principles of Logistics

There are seven principles of logistic support that apply to all three levels of logistics that are essential to ensuring operational success. These principles provide guidance for planning, organizing, managing, executing, and assessing logistic support. The following elements are discussed as they apply to logistics planning. They require coordination to increase logistics' effectiveness and are not standalone characteristics.

Responsiveness. Responsiveness is providing the right support in the right place at the right time. Among the logistic principles, responsiveness is the keystone. All other principles are irrelevant if logistics does not support the commander's CONOPS.

Simplicity. Simplicity is the elimination of needless complexity. It fosters efficiency in both planning and executing logistics operations. Standardized mission orders and procedures contribute to simplicity. Establishing priorities and pre-allocating supplies and services by the supported unit can simplify logistic support operations.

Flexibility. Flexibility is the ability to adapt logistics' structure and procedures to changing situations, missions, and concepts of operation. Logistics plans and operations must be flexible to achieve both responsiveness and economy. A commander must retain command and control (C2)

over subordinate organizations to maintain flexibility. Flexibility includes alternative planning, anticipation, reserve assets, redundancy, forward support of phased logistics, and centralized control with decentralized operations.

Economy. Economy is providing sufficient support at the least cost without impairing mission accomplishment or creating needless risk. At some level and to some degree, resources are always limited. The commander affects economy by prioritizing limited resources and allocating them sufficiently to achieve success without imbalance or inordinate excess.

Attainability. Attainability is the point at which the commander judges that sufficient supplies and support capabilities exist to initiate operations at an acceptable level of risk. The commander's logistics staff develops concept of logistics support (COLS); completes logistics estimate; and initiates resource identification based on the supported commander's requirements, priorities, and apportionment. An operation should not begin until minimum levels of essential support are on hand.

Sustainability. Sustainability is the ability to maintain necessary levels and duration of logistics support to achieve military objectives. Sustainability focuses the commander's attention on long-term objectives and capabilities of the force. Logisticians must not only attain minimum essential materiel levels to initiate operations (readiness), but also must maintain those levels for the duration to sustain operations.

Survivability. Survivability is an organization's ability to prevail despite adverse effects or potential threats. Logistic units and installations are high-value targets that must be guarded to avoid presenting the enemy an opportunity to target a critical vulnerability. The logistics staff must consider how the physical environment affects logistical capabilities. Survivability can dictate dispersion and decentralization at the expense of economy. Allocating reserves, developing alternative sources, and phasing logistics support can all contribute to survivability.

Logistics Responsibilities

Both USC, Title 10, and Department of Defense Directive (DoDD) 5100.01, *Functions of the Department of Defense and Its Major Components*, describe statutory requirements for each Military Department (MILDEP) to provide logistics support to assigned forces. Title 10 and DoDD 5100.01 describe basic authority to perform command functions, which include organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction to subordinate commands and forces necessary to carry out missions assigned to the command. This authority includes all aspects of military operations, joint training, and logistics. The Services are responsible for preparing Service force employment, recruiting, organizing, supplying, equipping (including those assigned aspects of research and development), training, servicing, mobilizing, demobilizing, administering, and maintaining ready forces. These logistical capabilities are achieved through defense planning guidance as part of the larger planning, programming, budgeting, and execution process.

Department of Defense Executive Agent. Executive agent (EA) is, "a term used to indicate a delegation of authority by the Secretary of Defense or Deputy Secretary of Defense to a subordinate to act on behalf of the Secretary of Defense" (*DoD Dictionary*). The EA can be assigned specific responsibilities, functions, and authorities to provide defined levels of support

for operational missions, administration, or other designated activities. A DoD EA's authority is designated per DoDD 5101.1, *DoD Executive Agent*, and takes precedence over authority of other DoD components performing related or collateral joint or multicomponent support responsibilities and functions. Designation as EA, in and of itself, confers no authority. The exact nature and scope of authority delegated must be stated in the document designating an EA. An EA might be limited to providing only administration and support or coordinating common functions or be delegated authority, direction, and control over specified resources for specified purposes. For further guidance, refer to DoDD 5101.01 and Joint Publication (JP) 4-0, *Joint Logistics*.

Marine Corps Logistics Functions and Authority. Marine Corps logistics support function is retained and exercised by Marine Corps forces in accordance with Service policies. When assigned, the Marine Corps component command has operational command over the MAGTF and must ensure it operates within guidelines of the combatant commander (CCDR).

Marine Corps Component Commands with Assigned Forces. Per DoDD 5100.01, the Marine Corps component commander with assigned forces (i.e., Marine Forces Command and Marine Forces Pacific) is responsible for preparing, submitting, and justifying budgets to Headquarters, United States Marine Corps (HQMC). The Marine Corps is responsible for providing logistics support to all Marine Corps forces assigned to joint commands.

Marine Corps Component Commands with Allocated Forces. Marine Corps component commands are under the authority, direction, and control of the combatant command with allocated forces categorized into geographic (i.e., Marine Forces Pacific; Marine Forces Central Command; Marine Forces European Command; Marine Forces Southern Command; Marine Forces Northern Command; Marine Forces Africa Command; and Marine Forces Korea) and functional (i.e. Marine Liaison Office Strategic Command; Marine Forces Special Operations Command; Marine Forces Cyber Command; and Marine Forces Space Command) components.

Marine Corps component command gives direction over all aspects of military operations, training, and logistics. Marine Corps logistics is specific to areas of activities that support operations and field maintenance. This includes organizational and intermediate-level repair; subsistence and individual equipment requirements; petroleum, oils, and lubricants (POL); and other consumables. These component forces are responsible for carrying out the CCDR's orders and coordinating with their staff in support of mission objectives. For more information on Marine Corps component commands, see Marine Corps Reference Publication (MCRP) 1-10.1, *Organization of the United States Marine Corps*.

Lead Service. The CCDR assigns lead Service common-user logistics (CUL) responsibilities through contingency planning process to achieve efficiencies and eliminate redundancies. The CCDR assigns lead Service responsibilities to the dominant user or most capable Service for a particular common supply item or service. These assignments mirror functional capabilities, with aerospace and aviation functions typically falling under the US Air Force and maritime functions falling under the US Navy.

In many cases, the lead Service for CUL functions within a joint or multinational force is the US Army. As required, the Army proponent provides Army support to other Services (also called ASOS), by providing CUL and carries out DoD-specified Service EA and combatant command

support agent responsibilities in an area of responsibility (AOR). (For further information, refer to Field Manual 3-94, *Armies, Corps, and Division Operations*.) The Army's theater sustainment command (TSC) provides support to other Services. The TSC assists the Army Service component command's (ASCC's) G-4 planners in identifying all lead Service support requirements (to include joint, multinational, and interagency requirements) so that scarce resources can be distributed throughout the force. For further information, refer to Army Techniques Publication (ATP) 4-93, *Theater Sustainment Operations*. Transportation component command synchronizes support responsibilities falling to other Army theater-level commands with applicable portions of the distribution plan.

Per JP 4-0, lead Service support functions include, but are not limited to, the following:

- Supply management for Classes I, II, III, and IV.
- Production, packaging, storage, and distribution of bulk water.
- Receipt, storage, and issue of Class VIII items in theater.
- Common-user land transportation and movement control.
- Rotary-wing and tiltrotor aircraft and vehicular medical evacuation.
- Transportation engineering for highway movements.
- Facility construction and repair.
- Financial management support.
- Legal support.
- Explosive ordnance disposal (EOD) support.
- Airdrop equipment and systems.
- Billeting, medical, and food service support for transient personnel during other-than-unit moves.
- Environmental management, to include handling hazardous materials.
- Mortuary affairs support.
- Postal operations support.
- Casualty liaison.
- Retrograde.
- Joint reception, staging, onward movement, and integration (JRSOI).

Acquisition and Cross-Servicing Agreements. Department of Defense policy states that Service components are authorized to acquire and provide logistics support, supplies, and services directly from/to eligible countries and international organizations. Acquisition and cross-servicing agreements provide two distinct legal authorities: acquisition-only authority and cross-servicing agreement. Each CCDR may acquire logistics support, supplies, and services under acquisition-only authority in appropriate cases. The Secretary of Defense (SecDef) is authorized to enter into cross-servicing agreements for reciprocal provision of logistics support, supplies, and services with military forces or international organizations. Such reciprocal provision may be provided for governments of North Atlantic Treaty Organization (NATO) countries, NATO subsidiary bodies, United Nations, any other regional international organization of which the

United States is a member, or governments of designated non-NATO countries. Additionally, the CCDRs may negotiate and conclude cross-servicing agreements as a lead agent when authorized by Chairman of the Joint Chiefs of Staff (CJCS). This authority may be delegated to a CCDR sub-element. For further guidance refer to Chairman of the Joint Chiefs of Staff Instruction 2120.01D, *Acquisition and Cross-Servicing Agreements*.

Inter-Service Support Agreements. Department of Defense Instruction 4000.19, *Support Agreements*, governs formal long-term or operationally support agreements between Services, DoD, and non-DoD agencies. These agreements are typically developed at Service secretariat and governmental agency director level. document funding and reimbursement procedures is one example of standards of support between supplying and receiving Services or agencies. Although binding, Service-level, inter-Service, and intragovernmental agreements do not suggest DoD-level EA responsibilities.

Base Operating Support-Integrator. The base operating support-integrator (also called BOS-I) ensures unity of effort by coordinating logistics and engineer support when multiple Service components share a common base. This includes, but is not limited to, master planning, collecting and prioritizing construction requirements, seeking funding support, and force protection. A CCDR may designate a single Service as base operating support-integrator for the base. When the base has a joint-use airfield, the CCDR also designates a senior airfield authority responsible for airfield operations. When the base operating support-integrator and senior airfield authority are designated to different nations or Services, close coordination of logistics and base support is essential. Refer to JP 4-04, *Contingency Basing*, for more details related to base operating support-integrator duties and responsibilities.

Senior Airfield Authority. The senior airfield authority is an individual designated by the joint force commander (JFC) to be responsible for controlling, operating, and maintaining an airfield, to include runways, associated taxiways, parking ramps, land, and facilities whose proximity directly affects airfield operations.

Single Port Manager. The DoD uses a single-port management approach for most aerial port and seaport operations. United States Transportation Command (USTRANSCOM) has the mission to provide worldwide common-user aerial port and seaport terminal management and can provide terminal services by host-nation agreement or contract. Thus, USTRANSCOM, through Air Mobility Command (AMC) and the Military Surface Deployment and Distribution Command (SDDC), manages most common-use aerial ports and seaports for the CCDR. In areas not serviced by a permanent USTRANSCOM presence, USTRANSCOM deploys an augmentation force to manage terminals in concert with a designated port commander. Typically, land terminals are managed and operated by the major using Service under the single port manager method. For more information, refer to JP 4-18, *Joint Terminal and Joint Logistics Over-the-Shore Operations*.

Defense Support to Civil Authorities. Federal military forces, DoD personnel, and National Guard forces (when SecDef, in coordination with governors of affected states, elects and requests to use those forces in USC Title 32, *National Guard*, status) can fulfill a civil authority's request for defense support to civil authorities actions including (but not limited to) mutual or automatic aid (also known as reciprocal fire protection agreements); DoD fire and emergency services programs; special event support; US Army Corps of Engineers activities as the DoD Coordinating

and Primary Agency for Emergency Support Function 3 (Public Works and Engineering) of the National Response Framework; and support to civilian law enforcement agencies. For more information, refer to DoDD 3025.18, *Defense Support of Civil Authorities (DSCA)*.

Interagency, International, and Nongovernmental Organizations. Interagency coordination occurs between agencies within the United States Government (USG) to achieve an objective. Similarly, in the context of DoD involvement, "international organization, and nongovernmental organization (NGO) coordination" refers to coordination among DoD elements, international organizations, and NGOs to achieve an objective. Integrating US political and military objectives and subsequently translating these objectives into actions continues to be essential for success at all operational levels. Military operations must be coordinated with activities of other agencies of the USG, international organizations, NGOs, regional organizations, operations of foreign forces, and activities of various host-nation agencies. The JFC can use other organization's capabilities, while the CCDR supports these capabilities and resolves conflicting activities among agencies. Interagency coordination forges the vital link between military and diplomatic, informational, and economic instruments of power of the USG. Successful interagency, international organization, and NGO coordination enables the government to build international support, conserve resources, and conduct operations that efficiently achieve shared international goals. For further guidance, refer to JP 3-08, *Interorganizational Cooperation*.

Levels of Logistics

Military operations require logistics support based on the level of warfare. For this reason, the three levels of logistics parallel the levels of warfare.

Strategic. Strategic logistics capabilities are generated based on guidance from the DoD and logistics requirements identified by the Services. The combatant command plans and oversees logistics from a theater perspective. Joint staff and CCDRs generate and oversee the movement of forces and materiel into theater and areas of operation (AOs).

Operational. Operational logistics is the art of applying the military resources available to operating forces to achieve national military objectives in a theater, AO, or to facilitate the accomplishment of assigned missions in a military region, theater, or campaign. Although the Marine Corps is not typically designated as EA, or lead for, theater level operational logistics it still bears elements of operational logistics responsibilities. The Marine Corps component commander can be augmented with or can task LCE elements to direct, plan, synchronize, and integrate logistic unit operations of logistics units at the operational level to accomplish the mission. While operational logistics is inherently joint and combined, capabilities of the Marine Corps logistics element complement those of joint and combined forces and require effective and seamless interaction to best support the Marine Corps and the combined and joint command.

Tactical. The MAGTF commander plans and executes tactical logistics while coordinating with higher headquarters (HHQ) for operational logistics support to sustain operations. Subordinate element commanders within the MAGTF are responsible for efficiently employing organic logistics capabilities, while the LCE commander is responsible for executing CSS operations in support of the entire MAGTF. All MAGTF elements execute tactical logistics to some degree by employing organic capabilities. Initial sources of logistic support available to any unit is its own

organic capabilities, which are further defined in the unit tables of organization and equipment. The LCE possesses capabilities beyond those found in other MAGTF elements and provides additional logistics support other elements require.

Unified Action

Unified action has its foundation in national strategy, which is governed by the Constitution, Federal law, USG policy, international law, and national interests. Unified action is a comprehensive approach that synchronizes and coordinates integration of military operations (when appropriate) and unity of effort amongst NGOs and other government agencies. The unified logistics continuum depicts a progressive movement toward multinational deployment of coalition forces. For more information, see JP 3-0, *Joint Campaigns and Operations*.

EXPEDITIONARY LOGISTICS

An expedition is a military operation conducted by an armed force to accomplish a specific objective in a foreign country. Missions of military expeditions can vary widely, limited by range of political objectives that can require use of military force. Expeditionary logistics is the capability to rapidly develop the responsive and agile architecture necessary to support the forces and sustain operations in a foreign country or austere environment.

The Deputy Commandant (DC) for Installations and Logistics (I&L) defines expeditionary logistics as, "the capability to rapidly develop the responsive and agile architecture necessary to support the FMF and sustain operations in a foreign country or austere environment. Expeditionary logistics extends operational reach where operational requirements may dictate the dispersal of forces across a large geographic area." Logistic movement and maintenance of forces is a central consideration of expeditionary operations. Marine Corps forces are designed to conduct expeditionary operations in littorals and require logistic augmentation when involved in sustainment operations ashore or inland.

According to Marine Corps Doctrinal Publication (MCDP) 3, *Expeditionary Operations*, events occur in the following sequence:

1. Predeployment actions.
2. Deployment.
3. Entry.
4. Enabling actions
5. Decisive actions.
6. Redeployment.

This sequence provides commanders a framework for considering expeditionary power projection such as predeployment and deployment actions whose essential functions routinely overlap. The methods for conducting expeditionary operations are created, in part, through application of strategic and operational logistic capabilities in the administrative and operational chains of command by HQMC, the supporting establishment, and participating FMF or MATGTF senior

commanders. Organizations executing expeditionary operations and their mission sets are supported with operational and tactical logistics functions exercised by the participating MAGTF, MAGTF commanders, and their subordinates as they leverage the JLEnt and other available resources.

Philosophy, Culture, and Capabilities

Logistics considerations should not only be categorized by an operation's scope and scale, as even the smallest MAGTF and FMF elements may be required to leverage operational and strategic resources.

Because expeditionary logistics spans the levels of warfare, it is not necessarily a capability in and of itself; rather, it is the ability to integrate resources from multiple sources to support a MAGTF scheme of maneuver. Expeditionary logistics represents both the art and science of logistics, requiring careful synchronization of internal and external resources that provide the right assets, in the right place, and at the right time.

Thoroughly understanding and applying expeditionary logistics during planning will enable the MAGTF to develop more aggressive options to project power over greater distances and with smaller units than have traditionally been planned for in the past. Expeditionary logistics requires a single, seamless, comprehensive approach that synchronizes capabilities across domains to provide responsive logistics support to the MAGTF and FMF.

Naval Logistics Integration. Naval Logistics Integration (NLI) is a naval Service (i.e., Navy, Marine Corps, and Coast Guard) effort to establish an integrated logistics capability that can operate seamlessly, whether afloat or ashore. Naval logistics is detailed in a series of doctrine publications, while NLI is codified in naval Service policy, doctrine, concepts, and strategy. Naval Logistics Integration moves beyond interoperability and seeks an integration of logistic processes to optimize support for naval expeditionary force operations. For more information, refer to Secretary of the Navy Instruction (SECNAVINST) 4000.37C, *Naval Logistics Integration*; Marine Corps Tactical Publication (MCTP) 13-10K, *Naval Logistics*; and NAVMC [Navy/Marine Corps Departmental Publication] 4000.4B, *Naval Logistics Integration (NLI) Playbook*.

MAGTF Logistics Integration. The MLI's mission is to exploit opportunities for standardizing logistics across the MAGTF to enhance its deployment, employment, and sustainment. The MLI's goal is to optimize readiness. This initiative is a Marine Corps Service-level effort to integrate its ground and aviation logistic processes. Where feasible, this integration will enhance MAGTF deployment, employment, and sustainment. Additionally, MLI seeks to find solutions to expeditionary logistic challenges by leveraging best practices across the MAGTF. These best practices include improving logistics responsiveness, increasing productivity through combined efforts, reducing workloads, improving sustained combat support readiness, and recapitalizing funding. The Service's governing agency is the MLI Group, which is coordinated between DC, I&L and DC for Aviation, and is empowered to develop specific approaches and solutions to logistic challenges faced by the MAGTF in austere, expeditionary operational environments.

Although NLI and MLI are Service-level initiatives, their intent is to optimize sustainment of FMF in austere expeditionary environments. All MAGTF logisticians should be thoroughly familiar with approved NLI and MLI tactics, techniques, and procedures. These are typically covered during a unit's predeployment training period.

The Science and the Art of Logistics

Logistics requires a balance between art and science. Logistics is an art, demonstrated through logistics planning that balances efficiency and effectiveness while providing the commander with the maximum amount of capability and flexibility possible. As a science, logistics involves calculating requirements; accounting for and managing vast equipment inventories; and developing detailed force generation, regeneration, and movement plans. For example, fuel, water, and ammunition requirements can be calculated with varying degrees of predictive accuracy. However, Marines best serve unit needs by anticipating how enemy actions affect consumption rates. Marines must consider the potential loss or degradation of logistics capabilities and make an attempt to mitigate them with contingency plans that leverage the entire Service, naval, and JLEnt.

CHAPTER 2.
STRATEGIC LOGISTICS

Strategic logistics supports organizing, training, and equipping Service forces carrying out national interests. Strategic logistics links the national economic base (e.g., people, resources, and industry) to military operations. A combination of strategic resources (e.g., national sustainment base) and distribution processes (e.g., US military deployment components) represents the totality of US capabilities. These capabilities include those of the DoD; Services; other government agencies, as necessary or appropriate; and support of the private sector. Strategic logistics capabilities are generated based on guidance from the DoD and logistic requirements identified by the FMF. Lead times to coordinate and plan strategic logistics vary. For example, equipment development and fielding typically spans a decade or more but, under certain circumstances, (i.e., urgent universal needs statement) could rapidly develop and field capabilities on short notice.

Headquarters, United States Marine Corps and the supporting establishment conduct and plan Marine Corps strategic logistics support—excluding aviation-peculiar support. Aviation-peculiar support is planned and coordinated by the Chief of Naval Operations (CNO), Navy shore establishment, and Navy Reserve. Headquarters, United States Marine Corps coordinates with FMF, Marine Corps Reserve, joint staff, and supporting CCDR to establish and affect strategic logistics. At the strategic level, the Marine Corps—

- Procures weapons and equipment (except aircraft and Class V[A]).
- Recruits, trains, and assembles forces.
- Establishes facilities, bases, and stations to house and maintain forces and stockpile resources.
- Mobilizes forces.
- Oversees and coordinates employment of strategic transportation assets.
- Regenerates and reconstitutes forces.
- Provides command and control to manage the flow of resources from strategic to tactical level.
- Acquires resources while forging strategic alliances.
- Coordinates industrial base activity.
- Deploys and maintains forward-presence forces.
- Determines enterprise requirements.
- Plans for and acquires or registers war reserve materiel for strategic investment.
- Determines requirements for prepositioning of resources—afloat and ashore.
- Determines support requirements at global and regional levels.
- Identifies reserve force mobilization and demobilization requirements and resources.
- Integrates human resources, medical, services, financial management, materiel, and distribution management information systems.
- Provides home base support services.

ORGANIZATION

Because of logistics' inherent complexity, it requires sustained, flexible, and systematic cooperation of numerous people. Effective cooperation is achieved by deliberate, well-considered, and custom-tailored organizations. An important part of strategic logistics is force planning that can be logistically supported to meet its mission.

Details of a logistics organization can vary greatly. Factors such as geography, national economies involved, enemy action, organization and warfighting philosophy of forces being moved and maintained, and the dynamics of war serve an important role in determining which logistics organization can provide effective support. Because of the numerous factors in an operation, it is possible for multiple organizations to be involved in logistics activities.

Characteristics of Logistics Organizations

A common denominator in all viable logistics organizations is the combination of a shared vision and initiative. The shared vision, promulgated by means of a common organizational culture and expressed views of leaders, allows various parts of a logistics organization to set objectives, establish standards, and measure the usefulness of their work. Initiative makes it possible for all parts of the logistics organization to resolve problems in a timely and effective manner.

Military forces are constantly evolving, changing their size, composition, organization, and capabilities, (e.g., Marine littoral regiment (MLR), littoral logistics battalion, and littoral antiair battalion) in response to the environment in which they operate and adversarial capabilities. Because logistics organizations must evolve, move, and maintain supported forces beyond their organic capability, they must remain flexible and adaptive. A healthy logistics organization responds to change and functions within a complex system of the military force it supports.

The most important factor of an organization's structure is the flexibility and foresight to organize in a way that successfully supports all elements of the MAGTF or FMF. Extreme regularity is a sign that stagnation has set in, and the system is probably not adapting to changing circumstances. An adaptive logistics organization will thus be a work in progress with some elements in a relatively stable condition and others in a state of flux. In crises, when circumstances are rapidly changing and swift adaptation is required, logistics organizations are likely to function in nonstandard ways. Periods in which a system operates in a regular and orderly fashion will alternate with dynamic periods in which it is constantly changing and adapting to the situation.

Joint Logistics Enterprise at the Strategic Level

It is important for Marines to understand how to incorporate and integrate support from JLEnt interfaces into the overall COLS. The JLEnt is a cooperative coalition comprising key global logistics providers within and beyond the DoD. Key DoD organizations in the JLEnt include the Services' logistics elements, USTRANSCOM, Defense Logistics Agency (DLA), the Joint Staff J-4 [Logistics Directorate], the combatant commands' J-4s, and the office of the Under Secretary of Defense for Acquisition and Sustainment (also called USD[A&S]). The JLEnt also includes USG departments and agencies, NGOs, commercial partners, and can include multinational partners and international organizations. The JLEnt is interconnected among global logistics providers, supporting and supported organizations and units, and other entities. Knowing the

roles, responsibilities, relationships, and authorities of JLEnt partners is essential to planning, executing, controlling, and assessing logistics activities and operations. By collaborating, JLEnt partners ensure the coordinated employment and sharing of capabilities and resources. Global logistics providers manage end-to-end processes that provide capabilities to the supported CCDR to fulfill requirements. Commands that link to strategic and joint interfaces will enable US forces to maintain combat power as well as enable operational reach, freedom of action, and prolonged endurance. Effective interfaces among the national strategic, operational, and tactical levels of warfare are essential in providing responsive support throughout the theater.

CAPABILITIES

Strategic logistics encompasses the Nation's ability to raise, deploy, and sustain FMF in the execution of the national military strategy. It is at this level that weapons and equipment are designed and purchased, enterprise inventory is managed, and permanent bases are developed and maintained. Strategic logistics involves managing airlift and sealift for strategic mobility and sustaining forces in distant theaters of operations. When long-term military operations are undertaken, strategic logistics requires extensive interaction with the US industrial base to ensure timely support of the military effort.

Logistics investment made at the strategic level determines the type and extent of operational force support of personnel and supportability of weapons and equipment. Logistics is primarily a Service responsibility, but it often requires external support. The Marine Corps logistics system is designed to meet the demands of naval expeditionary operations and the peculiar needs of high-tempo, fluid, and decisive operations required by the Marine Corps' warfighting philosophy. Therefore, Marine Corps logistics must provide unique capabilities that make FMF rapidly deployable, self-reliant, and initially self-sustaining.

Marine Corps logistics must build logistics capabilities where no capabilities currently exist and provide the self-sufficiency required to execute naval expeditionary operations. It must create and deliver all supplies and services required to sustain military forces. Logistics must function in austere environments without reliance on permanent bases or developed infrastructure. The Marine Corps logistics system must be naval in character, capable of operating with equal agility on land, or at sea. Additionally, it must exploit advantages inherent in naval operations through seabasing of logistics and maritime prepositioning. At the same time, it must be able to freely and rapidly transfer resources from ship-to-shore, ensuring continuous support of forces ashore. Though Marine Corps' logistic capability must be largely self-sufficient, it must possess infrastructure and interoperability to use national, theater, or host-nation logistic resources when conducting extended operations afloat and ashore.

Logistics must be tailored to conditions under which a military force operates. To provide forces necessary for expeditionary warfare, the Marine Corps must possess certain core logistic capabilities. These core capabilities span across three levels of logistics. To generate, deploy, and sustain expeditionary forces, the Marine Corps must have strategic logistic capabilities, which enable it to procure weapons and equipment, mobilize forces, prepare and stage units for deployment, regenerate forces, and effectively manage the flow of resources from the strategic to

tactical level. Marine Corps strategic core logistic capabilities exist within the supporting establishment and consist of the Marine Corps Systems Command (MARCORSYSCOM); the Program Executive Officer, Land Systems for acquisition, bases and stations to support force mobilization; and Marine Corps Logistics Command (MARCORLOGCOM) to support depot-level maintenance, inventory management for Marine Corps unique equipment, and Service-specific supply items.

COMMAND RELATIONSHIPS

Logistics must effectively use limited assets to generate and sustain combat power. Command and control of logistics helps ensure effective employment of resources in the face of competing demands raised by forces engaged in operations. Logistics command and control enables Marines to monitor unfolding events, make sound and timely decisions regarding resource allocations, quickly implement decisions, and to generate and maintain tempo.

At the strategic level, the Marine Corps must effectively and efficiently disseminate information and directives to and from HQMC. Principal agents for disseminating logistics information are DC, I&L and DC for Aviation. These agents ensure effective flow of information and directives that enable the Marine Corps to manage materiel readiness, replenishment, mobilization, and deployment support. Logisticians at HQMC work closely with—

- Higher commands (e.g., Joint Chiefs of Staff [JCS], DoD, Department of State).
- Adjacent commands (e.g., Headquarters U.S. Air Force; Headquarters, Department of the Army; Chief of Naval Operations).
- Supported commands (e.g., FMF, supporting establishment, components).

RESPONSIBILITIES

Clearly articulating responsibilities is the first step in fully synchronized and coordinated logistics support at the strategic level. The following sections explains the key roles and responsibilities of designated positions.

Secretary of Defense

The SecDef is the principal civilian advisor to the President on defense matters and serves as DoD chief executive officer. The SecDef office most concerned with logistics matters is the Under Secretary of Defense for Acquisition and Sustainment.

Chairman of the Joint Chiefs of Staff

The CJCS is the principal military adviser to the President and national security staff, which consists of the National Security Council, Homeland Security Council, and SecDef. The JCS prepares joint logistics and mobility plans to support strategic and contingency plans and recommends assignment of logistics and mobility responsibilities to the Armed Forces. Additionally, the JCS advises SecDef on critical deficiencies.

Military Departments

The MILDEPs exercise authority to conduct all affairs pertaining to their strategic logistics. These authorities include recruiting, organizing, supplying, equipping, training, servicing, mobilizing, demobilizing, administering, and maintaining forces; repairing military equipment; and constructing, outfitting, and repairing building structures. Repairing building structures includes management, acquisition, and disposal of real property and natural resources.

Industrial Base

The industrial base includes domestic industry, particularly the defense industry, but to some degree foreign industry as well. The MILDEPs' objectives for materiel and equipment sustainability are to maintain war reserve stocks of critical equipment in sufficient quantities to fulfill estimated sustainability requirements until industrial base output can be expanded to meet expected consumption rates. (See JP 4-05, *Joint Mobilization Planning*, for more information.) The Marine Corps depends on MARCORLOGCOM, other Services, and private industry for materiel production. The US industrial base has a significant effect on the conduct of war due to long lead times required for buildup. Active factories and production lines have some capability to surge. In addition, repair part manufacturers might be able to surge production of items that sustain deployed weapon systems and active end-item production lines that obtain urgent critical parts and subsystems. In support of this effort, US policy requires using commercial materiel when possible.

Combatant Commanders

Combatant commands have a broad continuing mission under a single commander. These combatant commands support a unified action that synchronizes, coordinates, and integrates military operations with activities of international organizations and NGOs to achieve unity of effort. For additional information, refer to JP 3-0 and JP 1-0, *Joint Personnel Support*.

United States Transportation Command

Serving as global distribution coordinator, USTRANSCOM is responsible for establishing processes to plan, apportion, allocate, route, schedule, validate priorities, track movements, and redirect forces and supplies per supported commander's intent. These responsibilities are outlined in the unified command plan, on behalf of and in coordination with the joint deployment and distribution enterprise (JDDE) community of interest.

Joint Task Force-Port Opening. Joint task force-port opening (JTF-PO) supports USTRANSCOM's mission of providing end-to-end synchronized cargo, passenger movement, and common-user terminal management. To facilitate JRSOI and theater distribution, JTF-PO is designed to be employed in advance of deploying forces for sustainment and humanitarian relief.

Commander, United States Transportation Command. The Commander, USTRANSCOM is the force provider for joint enabling capabilities. Through the Joint Enabling Capabilities Command, the commander, USTRANSCOM provides mission-tailored packages. These packages can support short-notice, limited duration deployments, which assist CCDRs in establishing, organizing, and operating within a joint forces headquarters. When requested, the Joint Enabling Capabilities Command's joint planning support element provides a flexible employment package

composed of experienced logistician personnel. These logisticians plan and execute a full range of joint military operations. Joint planning support element logisticians also maintain expertise in integrating, coordinating, and implementing joint logistics operations and planning.

Department of Defense Agencies

The DoD relies on the Services, DLA, and non-DoD government agencies such as the General Services Administration (GSA) to manage national-level logistics. National-level logistics can be described as wholesale-level support of the US industrial base. Elements of wholesale-level support include developing and procuring new materiel systems, managing and improving the logistics' infrastructure' and rebuilding, modifying, and retiring old materiel systems. Department of Defense agencies provide an essential interface with the industrial base through the acquisitioning of military resources, such as storage, movement, and distribution of materiel. Maintenance operations and disposition of materiel, construction, disposition of facilities, and acquisition of furnishings are some of the functions discussed in the following subparagraphs.

Defense Logistics Agency. The DLA manages, integrates, and synchronizes suppliers and supply chains to support the Armed Forces, US allies, and multinational partners. As a statutory combat support agency, DLA provides logistics advice and assistance to the Office of the Secretary of Defense, the CJCS, JCS, the CCDRs, MILDEPs, DoD components, and interagency partners.

Defense Contract Management Agency. The Defense Contract Management Agency is the combat support agency responsible for ensuring major DoD acquisition programs are delivered on time and within budget. The Defense Contract Management Agency's major role and responsibility in contingency operations is to provide contingency contract administration services for external and theater support contracts. The Defense Contract Management Agency is also responsible for weapon systems' support contracts placed in performance within the AO contingent on theater support by procuring contracting officers.

Defense Security Cooperation Agency. The Defense Security Cooperation Agency arranges DoD-funded and space available transportation for NGOs delivering humanitarian goods to countries. Coordinating foreign disaster relief missions is done in concert with DLA. The goal of these humanitarian relief missions is to procure, manage, and arrange delivery of daily rations and materiel in support of US policy objectives.

Defense Finance and Accounting Service. The Defense Finance and Accounting Service (DFAS) is responsible for finance and accounting policies, procedures, standards, and accounting operation systems that support CCDRs and the Services. As an agency supporting the Office of the Under Secretary of Defense, Comptroller and principal advisor to the SecDef, DFAS is responsible for budgetary and fiscal matters. As such, it is the responsibility of the DFAS to coordinate and collaborate with all civilian defense agencies, the Military Services, and combatant commands.

Defense Health Agency. The Defense Health Agency (DHA) is the Nation's medical combat support agency, providing or augmenting medical capabilities to the combatant commands, military Services, federal agencies, allies, and partners around the world. As one of the Defense Department's combat support agencies, the DHA works to provide capabilities that combat forces do not possess or that they possess in insufficient quantity. In cooperation with the Joint Staff Surgeon and MILDEP medical organizations, the DHA leads the DoD integrated system of

readiness and health through a global health care network of military and civilian medical professionals, including more than 400 military hospitals and clinics around the world, to improve and sustain operational medical force readiness and medical readiness of the Armed Forces.

Department of State

The Department of State is the lead agency for coordinating and distributing Class X items that support nonmilitary programs. These programs include economic and agricultural development, civic action, and various relief and education programs. Additionally, the United States Agency for International Development is the government agency responsible for administering civilian foreign aid. For additional information, refer to JP 4-0.

Multinational Operations Responsibilities

Multinational and interorganizational operations provide joint logistics that are bound together by a web of global supply chain logistics infrastructures. These relationships are critical to joint logistics success and span the range of military operations, organizational domains, and information environments. Leveraging multinational logistic capabilities increases the CCDR's freedom of action pertaining to multinational logistics. Many multinational challenges can be resolved or mitigated by having a thorough understanding of multinational partners' capabilities and procedures prior to operations. Integrating and synchronizing logistics in a multinational environment requires multinational information sharing; developing interoperable logistic capabilities; and associated doctrine and tactics, techniques, and procedures that facilitate integration of appropriate logistic processes. Careful consideration should be given to the broad range of multinational logistics support infrastructures.

Coalitions. A coalition is an ad hoc arrangement between two or more nations for common action. Coalitions typically form as a rapid response to unforeseen crises. They are for limited purposes and for a limited length of time. Many coalitions are formed under the United Nations. The Armies Coalition Interoperability Program is an organization of five allied armies (American, British, Canadian, Australian, and New Zealand [ABCANZ] Armies' Program) that work together to pursue common objectives. Although not technically an alliance, these nations have served together in ad hoc coalitions on numerous occasions. As a product-focused organization, the ABCANZ Armies' Program conducts deliberate analyses of interoperability gaps and develops products required by its member armies to close or mitigate those gaps in accordance with top-down direction. The ABCANZ Armies' Program also addresses current tactical and interoperability issues within the context of joint full-spectrum operations and develops handbooks to facilitate interoperability of coalition forces.

Alliances. An alliance is a formal relationship that results from an agreement between two or more nations. The long-term objectives of such agreements seek to further common interests. Participants establish broad objectives that strive to field compatible military systems, follow common procedures, and develop contingency plans regarding potential threats. As forces of these nations plan and train together, they develop mutual trust and respect. An alliance can use an integrated staff instead of merely augmenting the staff of one nation's organization with other representatives. Each primary staff officer could be of a different nationality and represented by the deputy commander of other lead nations. An integrated staff demonstrates the burden sharing and commitment of partner nations. In most recent operations, the United States has operated within the NATO alliance. The United States also agreed to various NATO standardization

agreements and NATO military committee decisions that enhance interoperability. For more information regarding overarching logistics doctrine and NATO land force operations, refer to Allied Joint Publication-4(B), *Allied Joint Doctrine for Logistics*.

Nongovernmental and International Organizations. Integration and coordination among military forces, government agencies, NGOs, and international organizations differs from the coordination requirements of a purely military operation. Although operating procedures vary from one organization to another, international organizations have similar needs to their DoD counterparts. Necessities, such as distribution, materials handling equipment, shelter, water, and power needs in a contingency environment, are similar to needs that must be addressed early in any operation. While NGOs and international organizations possess unique skills and capabilities that assist in providing warfighters a more robust logistic environment, some government departments and agencies have policies not in concert with those of DoD. Ultimately, NGOs and international organizations will need to collaborate and elicit cooperation in the absence of a formal command structure necessary to accomplish the mission.

FUNCTIONS

Strategic logistics enables sustained operations in support of end-to-end processes that drive efficiencies. These efficiencies encompass organizing, training, and equipping military forces across Services, government agencies, and commercial organizations. The following subparagraphs discuss responsibilities of HQMC staff to provide administrative management, policy generation, and operational guidance in support of Service forces for the Commandant of the Marine Corps (CMC).

Installations and Logistics Department

The CMC delegates authority for designated matters of Marine Corps logistics policy and management to DC, I&L. This authority includes liaison and coordination of logistics action among HQMC staff principals, Marine Corps commanders, and other Services, joint staff, and DoD agencies. Divisions within I&L, along with their associated functions and two-letter office codes, include the following:

- Logistics Division (LP). Responsible for formulating Marine Corps logistics plans, policies, and concepts; exercising staff supervision over joint and Marine Corps logistics matters, logistics manpower matters, logistics analysis, mobility, lift requirements, sustainability productivity, material readiness, logistics information systems, security assistance, and fiscal matters for appropriate division sponsored programs; and coordinating logistics aspects of prepositioning programs. The Logistics Division branches and their three-letter office codes include: Logistics Plans and Operations Branch (LPO), Logistics Sustainment Branch (LPS), Logistics Distribution Branch (LPD), Engineer and EOD Branch (LPE), Logistics Information Technology Branch (LPI), Logistics Policy Reserve Branch (LPR), and Logistics Vision and Strategy Branch (LPV). Among the Logistics Division's responsibilities are Enterprise Ground Equipment Management; maintenance, supply and distribution policy

development and review; logistics information technology portfolio management; LCE organization; NLI; MLI; logistics science and technology initiatives; and logistics planning in support of current and contingency operations.

- Contracts Division (LB). Provides regulatory expertise, policy, and value-added oversight to Marine Corps Field Contracting System so that they can fully support Marines. Contracts Division branches and their three-letter office codes include: Oversight and Assistance Branch (LBO), Policy Branch (LBP), and Enterprise Initiatives and Programs Branch (LBE).
- Small Business Programs (LK). Provides training, advice, guidance, and innovative strategies ensuring quality solutions for Navy and Marine Corps acquisition teams and to maximize opportunities for small businesses.

Commands within I&L include the following:

- Marine Corps Installations Command. Serves as the single authority for all Marine Corps installations matters, exercises command and control of regional installation commands, establishes policy, exercises oversight, and prioritizes resources to optimize installation support to the FMF, tenant commands, Marines, and family members. It exercises command and control of Marine Corps installations via regional commanders to provide oversight, direction, and coordination of installation services and to optimize support to the FMF, tenants, and activities. All bases and stations within the Service, both inside and outside the continental United States, are critical for sustainment and forward positioning of resources for requirements throughout the competition continuum.
- MARCORLOGCOM. Provides globally responsive ground equipment inventory control and integrated operational logistics capabilities to maximize Marine Corps materiel readiness and sustainment. Chapter 3 further defines its role at the operational level.

Aviation Department

The CMC delegates authority regarding Marine Corps aviation-specific logistics policy and management to DC for Aviation. This authority includes liaison and coordination of logistic actions for HQMC principals, Marine Corps commanders, other Services, joint staff, and DoD agencies. Specific functions of the aviation logistics support branch within the aviation department include—

- Coordinating aviation logistics and ground support requirements relative to maritime and ashore prepositioning.
- Assisting CNO and other support agencies in distributing aeronautical and related materiel to ensure adequate outfitting of Marine Corps aviation units.
- Developing logistics plans and programs for aviation units representing the development of naval aviation maintenance and supply policies and procedures.
- Representing Marine Corps aviation plans in the development and execution of maintenance and integrated logistics support for aeronautical weapon systems, related equipment subsystems, and ordnance.
- Determining priority of aviation ground support equipment during planning, programming, budgeting, and execution processes.

- Sponsoring procurement of aviation-peculiar, Marine Corps funded, ground support equipment.
- Developing and monitoring plans and programs pertaining to aviation ordnance.
- Integrating MAGTF and naval logistics.
- Coordinating logistics support needs for aerial armament and armament-handling equipment.
- Supervising aviation explosive safety program and conventional aviation ammunitions.
- Supervising aspects of the Navy's targets and range program and its associated instrumentation.
- Functioning as occupational field specialists in the military occupational specialties related to aviation maintenance, avionics, ordnance, supply, airfield services, and weather services.
- Analyzing aircraft readiness data and making recommendations on appropriate actions.
- Assisting in planning, developing, and programming the aviation portion of military construction and facilities project programs.
- Identifying, monitoring, and resolving aviation installation, encroachment, air installation compatible use zone, and airfield and facility criteria issues.
- Reviewing activity master plans, site evaluation reports, advance base functional components, aviation war reserve materiel plans, and range and target airspace management requirements.
- Assisting CNOs and other support agencies in planning, programming, and fielding of automated data processing software in support of Marine aviation logistics.
- Providing program direction for Marine aviation logistics support program (MALSP) within approved aviation plan requirements.
- Coordinating with CNOs, Naval Air Systems Command, and subordinate Department of the Navy activities in matters pertaining to MALSP policy and requirements.

CHAPTER 3.
OPERATIONAL LOGISTICS

Operational military actions are joint by nature. The Marine Corps component commander is responsible for building and preserving the MAGTF's combat power. The Marine Corps builds responsive logistic structure by leveraging theater capabilities, tying into other Services' systems, and capitalizing on the multifaceted JLEnt for its logistics needs.

ORGANIZATION

Joint forces are established at three levels: unified combatant commands, subordinate unified commands, and joint task forces (JTFs).

Unified Combatant Command

Combatant commands are established by the President of the United States through the SecDef with advice and assistance of the CJCS. Commanders of unified combatant commands establish subordinate unified commands when so authorized by SecDef through the CJCS. Additionally, the CCDR can establish forces on a functional basis or over a given geographical area. See Figure 3-1 for a depiction of unified combatant command organizational options.

Combatant Commander Roles and Responsibilities. A CCDR is responsible for developing and producing joint plans and orders. During peacetime, the CCDR acts to deter war through military engagement and security cooperation activities. When required, the CCDR executes other missions but during warfighting, the CCDR plans and conducts campaigns and major operations to accomplish assigned missions. The CCDR's responsibilities include the following:

- In response to crises, planning and conducting military operations can involve command security and protecting the United States and its territories. The joint strategic capabilities plan tasks CCDRs with preparing joint contingency plans, including the commander's estimates, base plans, concept plans, and operation plans (OPLANs).
- Maintaining preparedness of the command.
- Carrying out assigned missions and task responsibilities.
- Assigning tasks to, and directing coordination among, the supporting CCDRs and subordinate commands to ensure unity of effort in accomplishing assigned missions.
- Communicating directly with Service chiefs, CJCS, SecDef, and subordinate elements pertaining to strategic preparations, joint operations, and logistics support.

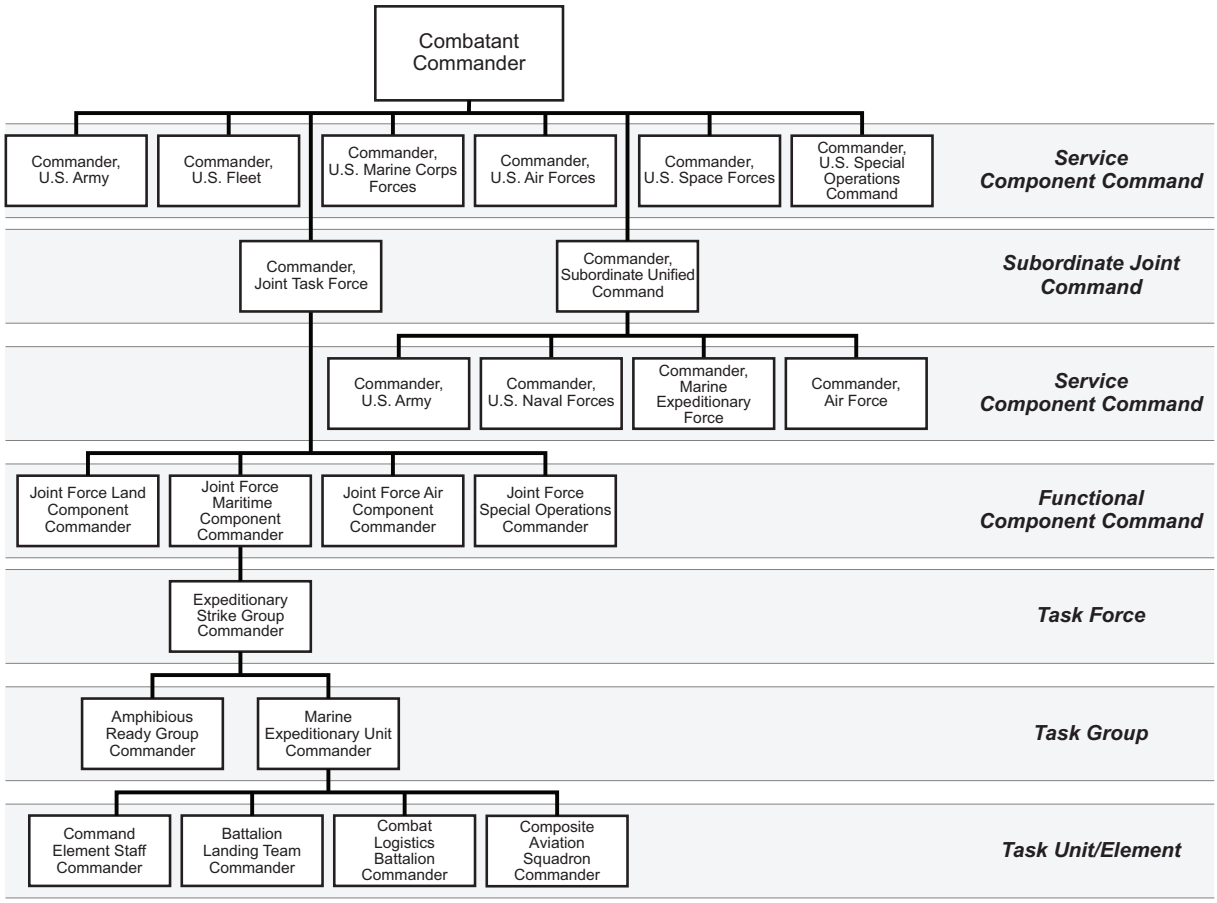

Figure 3-1. Unified Combatant Command Organization.

Combatant Commands with Logistics Authority. Combatant command (command authority) over assigned forces is a vested authority and cannot be delegated or transferred. This authority includes directive authority for logistics and gives the CCDR authority to organize logistic resources within theater according to operational needs. A CCDR can choose to assign specific CUL functions, to include both planning and execution, to a lead Service. These assignments can be for single or multiple common functions of logistics and can be based on phases or locations within the theater of operations. The CCDR lead Service assignments are typically aligned with office of the SecDef-level EA designations, but this might not always be the case. For example, in circumstances when one Service is the predominant provider of forces or owner of the preponderance of logistic capability, it may be appropriate to designate that Service as the lead Service for CUL. It is rare for one Service organization to have all the capabilities required to support an operation; therefore, the CCDR may augment the lead Service logistics organization with capabilities from another component's logistic organizations as appropriate. A CCDR can establish logistic boards, centers, cells, or other organizations to assess the constantly changing operational environment. These organizations' roles, responsibilities, locations, and relationships are defined in planning or execution documents. These organizations provide advice and recommendations to the CCDR concerning prioritization, allocation, or procedural changes. See MCTP 3-40C, *Operational-Level Logistics*, for further detail.

Functional Combatant Command. Functional combatant commands are based solely on military functions without respect to a specific geographic region. These commands are suitable for coordinating continued strategic operations in unified transportation combatant commands and special operations. A JFC who is established on a functional basis is assigned a functional responsibility by the establishing authority. Title of the functional responsibility and its delineation are prescribed in the establishing directive and generally indicates a mission focus.

Subordinate Unified Commands

Subordinate unified commands conduct operations on a continuing basis in accordance with the criteria authorized by SecDef, through the CJCS, and commanders of unified combatant commands. A subordinate unified command can be established on a geographical area (e.g., United States Forces, Korea) or functional basis (e.g., Marine Forces Cyber Command). The commanders of components or Service forces of subordinate unified commands have responsibilities and missions similar to those for component commanders within a unified combatant command.

Joint Task Forces

The authority establishing a JTF designates the commander, assigns the mission, designates forces, and delegates command authorities. A JTF can be established by SecDef, a CCDR, existing JTF commander, or subordinate unified commander. A JTF can be established on a geographical area or functional basis when the mission has a specific, limited objective, and does not require an overall centralized control of logistics. The mission assigned to a JTF requires execution of responsibilities involving a joint force on a significant scale and close integration of effort. This might require coordination within a subordinate area or local defense of a subordinate area. An establishing authority dissolves a JTF when the purpose for which it was created has been achieved or when it is no longer required. The JFC defines authority, command relationships, and responsibilities of the Services and functional component commanders.

Components. The JFCs have the authority to establish functional component commands to control military operations. Joint force commanders can establish a functional component command to integrate planning, reduce their span of control, and significantly improve combat efficiency. Efficiency improvements can be accomplished through information flow, unity of effort, weapon systems management, component interaction, and control over the scheme of maneuver. Functional component commanders have authority over forces and military capabilities made available to them as delegated by the establishing JFC. Functional component commands can be established to perform operational missions that may be of short or extended duration. Any JFC can elect to centralize selected functions within the joint force, but should strive to avoid reducing versatility, responsiveness, and initiative of subordinate forces. It is important to note, functional component commanders are component commanders of a joint force and do not constitute a JFC. The JFC establishing a functional component command has authority to designate its commander. The Service component commander will be designated as functional component commander. A JFC considers the mission, nature, and duration of operational and C2 force capabilities when selecting a commander.

As a joint force, the CCDRs are assigned Service component commands, which fulfill the Services' support functions. These Service component commanders are responsible for making proper employment, task organization, and command relationship recommendations. Other Service components include Army, Navy, Air Force, and Space Force. Under USC, Title 10, the

Service is responsible for providing support and sustainment to the FMF and CUL for Marine Corps special operations forces. Hence, Marine Corps component commanders always exercise administrative control (ADCON) of assigned and allocated forces regardless of command relationships imposed by the CCDR. The Marine Corps' distinctive construct makes leveraging sustainment support in theater a particularly important task. The Marine Corps component commander must coordinate with the CCDR staff and other Service components to leverage strategic land, sea, and air transportation assets.

Supporting Establishment

The Service has a support infrastructure that helps sustain the FMF, enabling their mobility and deployability. This is often referred to as the supporting establishment.

Marine Corps Logistics Command. Headquartered in Albany, Georgia, MARCORLOGCOM provides globally responsive ground equipment inventory control and integrated operational logistic capabilities to maximize Marine Corps materiel readiness and sustainment. Additionally, it provides strategic prepositioning capability in support of the FMF and other supported units. This is done to maximize readiness, sustainability, and support total life-cycle management. It comprises three subordinate commands and a headquarters element, which are all assigned the following list of MARCOLOGCOM's mission-essential tasks:

- Enterprise Depot-Level Maintenance. Provides worldwide organic depot-level maintenance support for rebuild, repairs, engineering solutions, manufacturing, and technical services to maximize the readiness and sustainability of ground combat and combat support systems.
- Prepositioning and War Reserve. Provides prepositioning programs and operational logistic support to Marine Corps and DoD forces to enable them to rapidly and successfully conduct operations and quickly recover from assigned missions across the range of expeditionary operations. Additionally, MARCORLOGCOM manages the Marine Corps war reserve materiel requirement program, which represents the Marine Corps requirement for weapon systems, equipment, and supplies to sustain forces in combat based on MAGTF requirements. The War Reserve System is an automated system that supports war reserve material and ensures that materiel assets are available to the FMF to sustain combat operations until the DoD materiel distribution system can provide support on a sustained basis.
- Storage. Provides storage, stock readiness, and maintenance management of Marine Corps ground equipment and associated collateral materiel held in assigned MARCORLOGCOM's inventory to ensure globally responsive materiel support to the total force.
- Ground Equipment Inventory Management. Supports acquisition, life-cycle sustainment planning, maintenance planning and execution, and operational sustainment of Marine Corps weapon systems and equipment. Controls the Marine Corps' principal end item inventory management and rotation.
- Distribution. Manages distribution with an emphasis on intertheater movement from point of origin to destination.
- Weapon System Life-Cycle Support. In concert with the FMF and MARCORSYSCOM, supports the acquisition process, distribution, maintenance, storage, and disposition of weapon systems used by the Service.

Commands subordinate to MARCORLOGCOM are Blount Island Command, Marine Depot Maintenance Command (MDMC), and Marine Force Storage Command. Additionally, MARCORLOGCOM (Forward) is a non-standing command that may be directed to stand-up as explained in the following subparagraphs.

Blount Island Command. Located on Marine Corps Support Facility, Blount Island in Jacksonville, Florida, Blount Island Command executes life-cycle management and rotation of equipment and supplies in support of the maritime prepositioning force (MPF) and Marine Corps Prepositioning Program–Norway (MCPP-N).

Marine Depot Maintenance Command. The MDMC provides depot-level maintenance to the Marine Corps, other Services, and supported organizations. These efforts include rebuilding, repairing, engineering, manufacturing, and providing technical services used to maximize readiness and sustainability of ground weapon systems. The MDMC operates two production plants located in Albany, Georgia, and Barstow, California. It provides maintenance support of remain-behind equipment, corrosion rehabilitation facilities, and administrative storage programs. If requested by the Marine expeditionary force (MEF) or Marine Corps Reserve, the MDMC can provide intermediate maintenance and administer technical support of ground weapon systems.

Marine Force Storage Command. Marine Force Storage Command provides storage, stock readiness, and maintenance management of Marine Corps ground equipment and associated collateral materiel held in assigned MARCORLOGCOM's inventory to ensure globally responsive materiel support to the total force. In addition to providing storage to the Marine Corps, this command provides distribution capabilities for deploying forces.

Marine Corps Logistics Command (Forward). When requested by the Marine Corps component commander and directed by CMC, MARCORLOGCOM (Forward) deploys to provide operational sustainment, maintenance, supply distribution, and prepositioning support to the FMF, other Services, and supported organizations. It is important to note that this is not a standing command but is sourced from MARCORLOGCOM organic capabilities.

Marine Corps Systems Command. Marine Corps Systems Command equips and sustains the FMF with a full range of expeditionary and crisis response capabilities. Ground weapons, ammunition, and information technology system programs are among its responsibilities. Program managers for MARCORSYSCOM develop overall sustainment and product support plans across weapon and equipment life cycles. Consequently, the ability to deploy a MARCORSYSCOM (Forward) element and provide appropriate in-theater support is retained through MARCORSYSCOM.

Program Executive Officer, Land Systems. Program Executive Officer, Land Systems has an integral relationship with MARCORSYSCOM, leveraging infrastructure competencies and technical authority while reporting directly to the Assistant Secretary of the Navy for Research, Development, and Acquisition.

Marine Corps Installations Command. Marine Corps Installations Command exercises command and control of Marine Corps installations via regional commander oversight. This command provides coordination of installation services needed to optimize support of FMF, tenants, and activities.

CAPABILITIES

In addition to knowing what logistics agencies and organizations exist and how they support the Marine Corps, all well-rounded logisticians should know how to access their specific capabilities when needed.

Marine Corps Component Logistics

The goal of Marine Corps component logistics is to provide logistics and personnel services necessary to set conditions and sustain campaigns and theater operations. The purpose of sustainment in joint operations is to provide the Marine Corps component, of the JFC, with the means to enable freedom of action, increase endurance, and extend operational reach. Effective sustainment determines the depth to which a joint force can conduct decisive operations. These operations allow the JFC to seize, retain, and exploit initiatives. This includes obtaining sustainment support from other Services, host-nation support (HNS), the US Army's Logistics Civil Augmentation Program (LOGCAP), DoD, and civilian support activities.

Component Logistics Element. The mission of a component logistics element (CLE) is to execute component logistic operations through the process of monitoring, coordinating, and advocating strategic and theater support. This support enables rapid build-up, sustainment, reconstitution, redeployment, and retrograde of Marine Corps combat power. The following characteristics define an effective and efficient Marine Corps CLE:

- Expeditionary in Nature. The Marine Corps is organized to rapidly deploy and conduct operations in an expeditionary environment. An expeditionary mindset is characterized by constant preparation for immediate operation in austere environments, arriving with the necessary organization and equipment to accomplish the mission.
- Agile and Responsive. In any theater, the ability of a force to maintain operational tempo is critical to success at all levels of warfare. The CLE must be able to anticipate future requirements to coordinate with Service and theater organizations to set conditions to sustain MAGTF readiness and enable its operational reach.
- Adaptable and Flexible. A hallmark of any effective logistics organization is the capacity to adjust quickly to changing conditions and adapt to changing demands of the MAGTF commander. The roles, responsibilities, and command relationships of the CLE must be clearly communicated to all stakeholders.
- Interoperability. The Marine Corps CLE can integrate with joint and combined capabilities within a given theater. This integration requires seamless interaction with HQMC, MARCORLOGCOM, and MARCORSYSCOM to best support the FMF. As the CCDR establishes logistic boards, centers, cells, or other organizations to assess the constantly changing operational environment, the Marine Corps CLE will integrate with these, as required. Some commonly instituted boards (e.g., joint requirements review board [JRRB]), centers (e.g., joint deployment and distribution operations center [JDDOC]), cells, and other organizations are listed in MCTP 3-40C.

Component Logistics Element Organizational Options. The CLE's organization changes over time to meet requirements of a Marine Corps component command G-4. To enable MAGTF mission execution, the CLE must remain focused on coordinating theater logistic support while assisting the FMF. This requirement is complex, requiring multiple levels of logistic support within a JTF staff, Service components, functional support CCDRs, combat support agencies, host nation, and coalition partners. The CLE can also assist in planning and coordination of JTFs, TSCs, and Service interagency organizations. The following describes three options for CLE organization:

- Marine Corps Component Command G-4 Augmentation. A reinforced Marine Corps component command G-4 is the simplest option for most component commanders. This involves prior battle staff training and execution. Providing the required depth to a Marine Corps component command G-4 requires augmenting with additional liaison officers, subject matter experts, and action officers who will support increased operational depth and tempo. Such personnel can also be used to enhance operational logistics capabilities within strategic locations of the G-4 component.
- Deputy Commanding General (Support). A logistics general officer is designated as the deputy commanding general (support) to the component commander, providing parity with other Service logistics leaders in theater. The organization can also include a general staff, small core of specialized staff officers, liaison officers, and designated operational subordinates. Coordination and direction of day-to-day operational logistic tasks are the primary responsibility of this organization. Deputy commanding general (support) can work in conjunction with the Marine Corps component G-4 or integrate the Marine Corps component G4 staff within the deputy commanding general (support) staff organization.
- Component Logistics Element Command. Potentially the largest and most complex organizational option is the creating a separate CLE command. This entails the creation of a command organization built around a logistics general officer, the general officer's staff, numerous liaison officers, and designated subordinate operational logistics organizations. This option allows Marines to coordinate, direct, and/or execute multiple disparate lines of operation, functions, and tasks beyond staff coordination. The conditions, which assist the combatant command-level Marine Corps component command, in deciding to stand-up a Marine logistic command and its composition and capabilities is influenced by the mission and decided by the component commander. Additionally, the command and staff roles and responsibilities are further refined in MCTP 3-40C, Appendix A.

Command Relationships. The CLE has a supporting relationship with the LCE of the MAGTF. A CLE's actions enable and enhance the LCE's logistic support to the MAGTF. Both have their own separate chains of command, which are essential for effective and efficient logistics support to the FMF. The CLE and subordinate organizations can be structured with the following command relationships:

- The CLE and its designated subordinate operational logistic elements can be operational control (OPCON) to the Marine Corps component command with a reporting requirement to the combined or joint command (through the component G-4).
- Subordinate operational logistic elements (e.g., MARCORLOGCOM [Forward]) can be OPCON to the CLE or OPCON to the Marine Corps component command with a supporting relationship to the CLE.
- When aligned under functional components, the CLE command can be under tactical control (TACON) of the functional component commander or another component command acting as a combined or joint task force.

United States Army

The Army is the lead Service for CUL functions within a joint or multinational force. The ASCC's G-4 identifies all lead Service support requirements, including joint, multinational, and interagency. The TSC disseminates applicable portions of the distribution plan, synchronizing support responsibilities to distribute scarce resources.

Army Materiel Command. The Army Materiel Command is the Army's strategic and operational provider of materiel readiness. It provides technology, acquisition support, materiel development, logistics power projection, and sustainment to the Army and joint forces across the range of military operations. The Army Materiel Command maintains the Army's prepositioned stocks, both on land and afloat, and serves as the DoD EA for chemical weapons and conventional ammunition. Two of the 10 major subordinate commands include SDDC and Army Sustainment Command, which facilitate operational logistics for the joint force. Additionally, Army Materiel Command operates a network of Army field support brigades, logistics support elements, and brigade logistic support teams—all of which identify and resolve equipment and maintenance problems as far forward as possible and address materiel readiness issues for combatant commands.

Military Surface Deployment and Distribution Command. The SDDC is the ASCC of USTRANSCOM. It manages continental United States (CONUS) surface transportation and provides common-use ocean terminal services and traffic management services to deploy, sustain, and redeploy US forces globally. As seaport manager, SDDC serves as a single-port manager between DoD shippers and commercial carrier industry.

Army Sustainment Command. Army Sustainment Command provides materiel readiness visibility and management, including property accountability and source of repair work-loading. Additionally, it maintains the LOGCAP, which is a program that uses contractors in wartime to support global contingencies for DoD missions. Typically, the program delivers a wide range of support services to deployed forces worldwide. These services include dining facilities, laundry, and lodging. Essential to its mission is the maintenance and management of combat equipment and supplies. These resources are used worldwide and are strategically located both at sea and ashore. For more information on LOGCAP, see JP 4-10, *Operational Contract Support*.

Theater Sustainment Command. The TSC's mission is to plan, prepare, rapidly deploy, and execute operational logistics provisions and support within an assigned theater. The TSC provides a centralized, logistics C2 structure for theater Army, support Services, and DoD agencies. Its function includes planning, controlling, and synchronizing sustainment and deployment capabilities for the ASCC and JFC. Simultaneously, TSC supports deployment, movement, sustainment, redeployment, reconstitution, and retrograde of joint forces. As senior logistics headquarters for ASCC, TSC can be designated by the CCDR as a joint functional command for logistics.

When designated as a joint functional command, the CCDR must specify control and tasking authorities bestowed on the TSC as well as the command relationships it will have with other Service component commands. This action ensures TSC executes its mission using modular forces and other modular sustainment formations. In support of mission, enemy, terrain and weather, troops and support available—time available (METT-T), TSC can extend its operational reach by deploying multiple expeditionary sustainment commands and brigades into specified AOs.

These areas can include a joint operations area (JOA) that provides responsive support to joint forces. Expeditionary sustainment commands can serve as a forward headquarters for the TSC and provide command and control for theater opening, distribution, and sustainment. These units can be on an area basis within and between specified AOs and JOAs. In providing interim tactical logistics support to deploying Army elements, the execution of lead Service CUL support requirements is accomplished. For further guidance, refer to ATP 4-93, and ATP 4-98, *Army Field Support Brigade*.

Joint Reception, Staging, Onward Movement, and Integration. As the last phase of deployment, JRSOI provides the joint force to the CCDR. This includes transitioning arriving personnel with equipment and materiel needed to sustain operational force requirements. As a component assigned to the ASCC, each JRSOI provides a critical link between deployment and employing joint forces. Composed of essential processes required for planning rapid integration of these deploying forces, the JRSOI is focused on quickly contributing to mission capabilities coordinated by CCDR, USTRANSCOM, and other Services. For more information, refer to JP 3-35, J*oint Deployment and Redeployment Operations*.

Army Watercraft. The SDDC's transportation brigades possess watercraft that support theater opening and JRSOI of the Army. Army watercraft falls into two categories: lighterage and floating utility craft. Lighterage is further classified as an amphibious conventional displacement landing craft and modular causeway powered ferry system. Deploying these assets is notionally sequenced to arrive immediately after an MPF offload and amphibious assault. For further guidance, refer to ATP 4-15, *Army Watercraft Operations*.

United States Navy

A strong naval component is essential in supporting national policy and military strategy, as it provides an effective deterrence contingency while conducting operations at sea or from the sea. Additionally, the naval component facilitates the sustainment of the FMF while operating together.

The method of command and control the Navy uses is the composite warfare construct. It provides guidance and missions to Navy tactical forces that allows composite warfare organizations to decentralize execution at the tactical level of warfare. According to Navy Warfare Publication (NWP) 3-56, *Composite Warfare: Maritime Operations at the Tactical Level of War*, "the establishment of a composite warfare organization provides the commander flexibility in implementation and allows subordinates the freedom to act without delay. Composite warfare organization also includes considerations for maritime commanders tasked to operate as part of a joint force, in either a supported or supporting role."

Naval Amphibious Force. Naval amphibious forces are flexible, self-sustainable, and mobile. These characteristics are all linked to logistics interoperability and facilitate an expeditionary force that is forward-based and responsive. Some examples of the expeditionary force would be the MLR or a Marine expeditionary unit (MEU).

Naval Logistics Integration. The NLI's overall goal and objective is to achieve an integrated naval logistic capability across the Department of the Navy and the US Coast Guard. This is achieved by focusing on strategic initiatives that improve naval expeditionary warfare capabilities. By

integrating Service logistics and leveraging the Navy's global supply chain, seamless operations afloat and ashore are maintained in a joint warfighting environment. Although NLI is a maturing initiative, it enables the Marine Corps to use the following naval support services:

- Stocking Marine Corps common repair parts on combat logistics force shipping.
- Sourcing and expediting high priority material through the Priority Material Office.
- Shipping repairables through the electronic retrograde management system.
- Tracking shipments through the advanced traceability and control system.
- Obtaining supply and distribution support from each of the regionally aligned fleet logistics centers and Military Sealift Command teams aligned to commander, task forces AORs.
- Naval ordering systems for replenishment of supplies.
- Routing cargo.
- Obtaining in-port contract support.
- Acquiring opportune lift.

For further guidance, refer to SECNAVINST 4000.37C, *Naval Logistics Integration*.

Navy Expeditionary Combat Command. The Navy Expeditionary Combat Command (NECC) serves as a single functional command for the Navy's expeditionary force and a central source of readiness for equipping naval forces. Typically, the NECC is a scalable force spanning the full range of military operations, from military engagement, security cooperation, and deterrence to major operations and campaigns. The NECC is a command element and force provider for integrated maritime expeditionary missions. Additionally, the NECC is a core expeditionary force, providing waterborne and ashore antiterrorism force protection, theater security cooperation, and humanitarian relief contingencies.

Naval Construction Force. The naval construction force's (NCF's) primary mission is to conduct general engineering operations for distributed maritime operation lethality and maritime sustainment. The NCF provides multi-disciplined, general engineering units to the Fleet, MEF, and JTF commanders. The NCF units are capable of tactical command and control, construction, improvement, maintenance and repair and recovery of airfields, ports, and other logistic operation centers, expeditionary and advanced naval bases, expeditionary medical facilities, and associated infrastructure; geospatial engineering reconnaissance; battle damage repair; contingency base maintenance support; and specialized construction (including underwater construction operations). The NCF can perform defense support to civil authorities, humanitarian aid and disaster relief operations, and humanitarian and civic assistance as required by HHQ tasking. For a detailed description of the organization, capabilities, and method of employment for NCF units, see Marine Corps Warfighting Publication (MCWP) 3-34, *Engineering Operations*, and MCTP 3-34D, *Seabee Operations in the Marine Air-Ground Task Force*.

Naval Construction Group. Naval construction group provides airfield, seaport, and base support services to fleet operating forces and shore activities. It offers a unique combination of mission capabilities to the Navy and DoD.

Naval Construction Regiment. The naval construction regiment (NCR) is a permanently structured independent headquarters. The term NCR refers only to the NCR headquarters and does not include assigned subordinate units. As an independent unit, the NCR usually functions as a command element of a naval construction element with multiple engineer units assigned. The NCR does not have dedicated direct-labor assets; these reside in its subordinate units. For guidance, refer to MCTP 3-34D.

Naval Mobile Construction Battalion. A naval mobile construction battalion is the primary unit of action for conducting NECC engineer and construction operations. Its personnel and equipment are a modular task organization of air, ground, and sea assets. Naval mobile construction battalions can deploy as part of an amphibious task force, MPF operation, MAGTF, or contingency force. Direct labor assets are approximately 70 percent of the total basic allowance. These assets are quickly task-organized, rapidly deployed, and assigned to construction and contingency operations as directed by the supported commander.

Construction Battalion Maintenance Unit. A construction battalion maintenance unit (CBMU) is a shore duty unit that deploys only for major combat operations, severe natural disasters, and homeland defense and security missions. The CBMU does not deploy its subordinate companies independently. Rather, it deploys in whole or in part as a task-organized engineer support detachment. Providing limited general engineering and base maintenance support capabilities, the CBMU can function as an integral part of a naval construction element or independent detachment of supported units.

Underwater Construction Team. An underwater construction team is a specialized unit that provides construction diving detachments. These detachments are equipped and trained for self-sufficiency in underwater construction and respond to construction, inspection, inshore fleet repair, and deep ocean systems' emergencies within 48 hours.

Explosive Ordnance Disposal. The Navy's EOD and mobile diving and salvage units clear harbors of navigation hazards. This enables safe port operations for joint forces. Additionally, EOD engages in underwater search and recovery operations, performs limited underwater repairs, and performs counter improvised explosive device operations. Most Navy EOD specialists are trained to handle chemical, biological, and radiological threats as well as conventional threats by neutralizing amphibious obstacles (i.e., underwater mines) and explosive hazards.

Navy Expeditionary Logistic Support Group. A navy expeditionary logistics support group delivers expeditionary logistics in support of the CCDR, naval component commander, and NECC. It executes OPLANs, exercises, and contingencies as a critical element of MPF offloads, which provide Navy cargo-handling in support of expeditionary operations.

Maritime Expeditionary Security Force. Maritime expeditionary security force conducts security operations worldwide in support of the CCDR. In conjunction with joint high-speed vessels, the maritime expeditionary security force facilitates theater security cooperation initiatives and provides off-shore critical infrastructure protection. In this capacity, the maritime expeditionary security force provides security against waterborne and ground threats. In support of existing and evolving missions in major combat operations, units are task-organized adaptive security force packages designed to meet operational requirements of the joint force maritime component

command, Navy component command, maritime security operations, maritime homeland security, and homeland defense. For further guidance, refer to NWP 3-10, *Navy Expeditionary Combat Command Forces*.

United States Air Force

Air Force civil engineers conduct general and geospatial engineering activities to enable Air Force tactical and strategic airlift aircraft to operate wherever they are needed. Air Force civil engineers develop expeditionary airfields, conduct airfield damage repair, and perform operations and maintenance of airbases at contingency locations worldwide. For details regarding the organization, capabilities, and method of employment for Air Force civil engineer units, see JP 3-34, *Joint Engineer Operations*, or Air Force Doctrine Publication 3-34, *Engineer Operations*.

Prime Base Engineer Emergency Force. The prime base engineer emergency force units provide expeditionary engineering and emergency services. Expeditionary engineering involves general and geospatial engineering activities in an expeditionary environment to shelter and sustain forces. Some activities include establishing expeditionary bases, modifying terrain, modifying and repairing existing infrastructure, constructing force protection structures, and implementing environmental protection measures. Hence, these units can be formed as expeditionary civil engineer organizations that sustain bases as they transition from short-term bases with initial standards of construction to more enduring bases with temporary or permanent infrastructures. These capabilities focus on managing property, facilities, and infrastructures on joint and enduring bases in the CCDR AOR while providing safety protections, security, and sustainability for personnel and mission critical assets. For further guidance, reference Air Force Instruction 10-210, *Prime Base Engineer Emergency Force (BEEF) Program*.

Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer. A rapid engineer deployable heavy operational repair squadron engineer (RED HORSE) unit possesses weapons, vehicle maintenance equipment, food service supplies, and medical equipment. Unit capabilities include water-well drilling, explosive demolition, quarry operations, concrete and asphalt batch plant operations, materiel testing, large expedient facility erection, and concrete and asphalt paving. Additionally, RED HORSE units construct specialized structures, such as aircraft shelters, dome shelters, clam shells, and expanded shelters. Hence, a RED HORSE unit is a theater asset that directly supports requirements of the respective Air Force component commander.

Therefore, a RED HORSE unit is most suitable to augment the aviation combat element's (ACE's) Marine wing support squadron (MWSS). (See JP 3-34 for additional details regarding employment of Air Force civil engineer units). A RED HORSE unit provides heavy infrastructure repair capability and construction support when requirements exceed normal base civil engineer capabilities and where joint engineer support is not readily available. For further guidance, refer to Air Force Doctrine Publication 3-34.

United States Coast Guard

The Coast Guard can assign a redeployment assistance and inspection detachment to the Army transportation command that supports the CCDR and JFC. The redeployment assistance and inspection detachment assist in inspecting containers arriving and departing the AOR. This function ensures distribution owners have certified seaworthy containers available for use by inspecting, certifying, and approving hazardous materiel in theater and CONUS.

United States Transportation Command

As the joint distribution process owner, USTRANSCOM directs and supervises distribution execution of the Defense Transportation System, and develops and implements distribution process improvements. A functional combatant command with specific assigned responsibilities, USTRANSCOM provides common-user and commercial air, land, and sea transportation. Terminal management and aerial refueling to support global deployment, employment, sustainment, and redeployment of US forces are also central to its responsibilities. Uniquely, USTRANSCOM serves as the joint force mobility provider. It identifies and recommends global joint sourcing solutions to the CJCS in coordination with other Services. It also coordinates DoD distribution systems, providing interoperability and synchronization of sourcing decisions in coordination with CCDRs. In this regard, USTRANSCOM develops and implements distribution process improvements that enhance the defense logistics and global supply chain management system.

Additionally, USTRANSCOM supports other distribution enablers, such as JTF-PO, and activates with approval of the SecDef, Civil Reserve Air Fleet, Maritime Administration Ready Reserve Force (MARAD RRF), and Voluntary Intermodal Sealift Agreement. Approval by the SecDef gives USTRANSCOM authority to procure commercial transportation services for combatant commands during deployment, sustainment, and redeployment phases of a joint operation.

Deployment and Distribution Operations Center. The Deployment and Distribution Operations Center (DDOC) is a single coordination and synchronization element of movement control in support of the USTRANSCOM commander. This synchronization is accomplished across a multifaceted distribution platform. A DDOC builds distribution plans inside the CCDRs decision cycle with assistance of the transportation component command and JDDE partners.

Patient Movement Requirements Center. The Patient Movements Requirement Center is a joint activity reporting directly to USTRANSCOM. It provides medical regulating services, patient in-transit visibility, and evacuation requirements for intertheater patient movement. The Patient Movements Requirement Center has authority to regulate military patients during peacetime and contingency operations for overseas and CONUS operations. This center coordinates with supporting resource providers to identify available assets and transports personnel in execution of mission efforts. For more information, reference JP 4-02, *Joint Health Services*.

Civil Reserve Air Fleet. The Civil Reserve Air Fleet is composed of commercial aircraft committed to support transportation of military forces and materiel worldwide. When the need for airlift exceeds capability of military aircraft, the Civil Reserve Air Fleet aircraft supports USTRANSCOM emergency airlift requirements.

Maritime Administration Ready Reserve Force. The MARAD RRF is a fleet of ships maintained in a reduced operating status by the Maritime Administration of the Department of Transportation for use during war contingencies. These MARAD RRF ships carry combat surge and follow-on cargo. These ships come under the authority of MSC, and are crewed by civilian mariners employed by a maritime administration contractor.

Voluntary Intermodal Sealift Agreement. The Voluntary Intermodal Sealift Agreement provides the DoD with time-phased access to US-flagged commercial dry cargo vessels and intermodal systems and infrastructures. Depending on contingency severity, the program is activated in three stages of increasing commitment levels.

United States Transportation Command Components. Three Service component commands allow USTRANSCOM to execute its mission: Army's SDDC, Navy's MSC, and Air Force's AMC. In support of unity of effort initiatives throughout the JDDE, USTRANSCOM coordinates and synchronizes efforts of the CCDRs. However, these efforts do not usurp the supported CCDR's USC Title 10 responsibilities, which require coordination of movement requirements, priorities, and required delivery dates pertaining to deployment and distribution operations.

Military Surface Deployment and Distribution Command. The Army's SDDC manages CONUS surface transportation by providing common-use ocean terminal and traffic management services to US forces globally. The SDDC is the seaport manager under a single port manager concept for common-user seaports of embarkation and seaports of debarkation (SPODs). Additionally, the SDDC coordinates worldwide force movement to seaports, prepares ports for ships and cargo, and supervises loading operations while managing CONUS freight movements by surface and air carriers. The Army's SDDC operates the defense freight railway interchange fleet. This fleet includes special use railcars and administers highway use of railroads in support of National Defense Program guidelines. Also, it monitors status of the transportation infrastructure system, including ports, inland waterways, pipelines, and air facilities.

The JTF-PO (SPOD) is a joint capability provided by USTRANSCOM that is designed to rapidly establish and initiate SPOD operations. Its design and capabilities are similar to those of the JTF-PO (aerial port of debarkation [APOD]) in that it establishes distribution nodes and facilitates port throughput within theater operations. By providing an effective interface within theater, JTF-PO (SPOD) enables and facilitates an effective interface within JDDOC and SPOD operations. These operations bridge distribution and onward movement gaps between strategic and operational levels while enabling SPOD-coordinated handoffs.

Military Sealift Command. The Navy's MSC provides common-user and exclusive use sealift transportation services to deploy, sustain, and redeploy US forces globally. The MSC provides lift from the sea with a fleet of USG-owned and chartered US flagged ships that include fast sealift ships and afloat prepositioning ships. There are three classes of support ships within MSC's Combat Logistics Fleet:

- Dry cargo and ammunition ships (T-AKE).
- Fleet replenishment oiler (referred to as T-AO).
- Fast combat support ship (referred to as T-AOE).

For more information, refer to JP 4-01, *The Defense Transportation System*.

Air Mobility Command. The AMC provides common-user airlift, air refueling, and strategic air evacuation transportation services to deploy, sustain, and redeploy US forces globally. Hence, the AMC is a designated single aerial port manager and operator of common user APODs. Additionally, the AMC aircraft fleet primarily comprises military airlift aircraft. The Civil Reserve Air Fleet is also an additive force available for long-range airlift in times of national emergencies.

Similar to JTF-PO (SPOD), the JTF-PO (APOD) is a joint capability provided by USTRANSCOM. This capability is designed to rapidly establish and initially operate an APOD, distribution node, and facilitate port throughput within a theater of operations. The JTF-PO (APOD) is not a standing task force, but a jointly trained, ready set of forces constituted as a JTF at the time of need. Army elements of a JTF-PO (APOD) will typically include a rapid port opening transportation detachment, movement control teams, cargo transfer units, and transportation truck units. In this regard, the JTF-PO (APOD) facilitates JRSOI and theater distribution by providing effective interface within the deployment and distribution operations center and initial APOD theater operations.

Defense Logistics Agency

The DLA provides the Services, and other Federal agencies with full-spectrum logistics, acquisition, and technical services. Agency sources provide nearly all the consumable items US forces need to operate to include food, fuel, energy, uniforms, medical supplies, and construction materiel. It supplies nearly 90 percent of the military's spare parts, manages reutilization of military equipment, and provides catalogs and other logistic information products. It also offers document automation and production services to a host of military and Federal agencies.

As DoD EA, the DLA serves as manager for four supply chains: Class I (subsistence), Class IV (construction and barrier materiel), Class III (bulk petroleum), and Class VIII (medical materiel). Additionally, DLA manages nine diverse supply chains, grouped into four categories: troop support, land and maritime, aviation, and DLA energy. Troop support manages supply Classes I, II, IV, VII, VIII, and Class IX relating to construction equipment. Land and maritime manages supply Class IX relating to major end items and maritime assets. Aviation manages aviation Class IX, and DLA energy manages Class III. The DLA has a global presence and operates regional commands in United States Central Command, United States Indo-Pacific Command, United States European Command, and United States Africa Command and has liaison officers attached to the remaining CCDR staffs and joint staff to assist with operational planning, exercises, and current operations. Their support teams provide logistics products and services to warfighters worldwide in support of military operations. The DLA also provides disposal services through their disposition service.

General Services Administration

The GSA's mission is to deliver the best value in real estate, acquisition, and technology services to the USG. Hence, GSA delivers products, services, and policies to its Federal customers through the Federal acquisition service, public buildings service, 12 staff offices, Independent Office of the Inspector General, and civilian board of contract appeals. They interact directly with customers through 11 regional offices and their central office in Washington, D.C. The GSA's acquisition solutions supply federal purchasers with cost-effective, high-quality products and services from commercial vendors. Additionally, GSA provides workplaces for Federal employees and oversees the preservation of historic Federal properties. Also, GSA oversees the business of the USG and its policies covering travel, property, and management practices that promote efficient government operations.

Joint Logistics Enterprise

The JLEnt is a culmination of all available resources that could provide sustainment and support to the CCDR and JFCs. It is a collective community of logistic stakeholders that generate or fulfill logistics requirements of the joint force. Recognizing that planning and executing the movement and sustainment of forces is inherently global and interconnected, the JLEnt philosophy embodies the collaborative, shared actions necessary to succeed. Many of these capabilities are accessed through an assortment of collaborative agreements, contracts, policies, legislation, or treaties to meet JFC requirements.

COMMAND RELATIONSHIPS

Command relationships related to operational logistics are described in the following subparagraphs.

Combatant Command (Command Authority)

Combatant command (command authority) is the "nontransferable command authority, which cannot be delegated, of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces; assigning tasks; designating objectives; and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command" (*DoD Dictionary*). Combatant command (command authority) is exercised by the CCDR through the commanders of subordinate organizations, typically JFCs, Service commanders, and/or functional component commanders.

Operational Control

Operational control, which can be delegated from combatant command to a lesser authority, is "the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission" (*DoD Dictionary*). Operational control should be delegated to and exercised by the commanders of subordinate organizations; typically, this authority is exercised through subordinate JFCs, Service commanders, or functional component commanders. Therefore, OPCON provides commanders the authority to organize and employ commands and forces as necessary to accomplish assigned missions. It does not include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training.

Tactical Control

Tactical control is, "the authority over forces that is limited to detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned" (*DoD Dictionary*).

Administrative Control

Administrative control is, "direction or exercise of authority over subordinate or other organizations in respect to administration and support" (*DoD Dictionary*).

Supporting and Supported Relationships

The JFC can establish support relationships between component commanders to facilitate operations. Support relationships afford an effective means to prioritize and ensure unity of effort for various operations. Component commanders should establish liaison with other component commanders to facilitate a support relationship and to coordinate planning and execution of pertinent operations. Support relationships can change across phases of an operation as directed by the establishing authority.

FUNCTIONS

In the Marine Corps, operational logistics orients on force development, closure, sustainment, and redeployment. These are core elements of the art and science of using Service, joint, and theater strategic and operational enablers to support and sustain tactical FMF. To be successful at this level, the Marine Corps component command operational planner must understand Service, joint, host nation, and theater logistic capabilities and know when and how to request that support in parity with other Services. Each Marine Corps component command is responsible for designing, planning, coordinating, and executing operational logistics for its particular geographic area. The Marine Corps component commander is therefore required to devise appropriate operational logistics support and coordinate with those Marine Corps organizations that support applicable joint and theater enablers to execute the CCDR's OPLANs and contingency plans.

Force Development and Closure

Force development includes USC Title 10 responsibility to staff, train, and equip forces that originates with the CMC, as Service chief, and flows through the component commander. The component commander represents the CMC to the CCDR and advocates for Marine Corps functions on the CCDR staff. Force development includes identifying, validating, and tailoring the forces provided by the Marine Corps to meet requirements of the CCDR. Force development integrate joint capabilities to augment the Marine Corps in force packaging.

Force closure is a joint term defined as, "The point in time when a supported commander determines that sufficient personnel and equipment resources are in the assigned operational area to carry out assigned tasks" (*DoD Dictionary*). The Marine Corps Prepositioning Program enables the Marine Corps to rapidly respond to regional contingencies with strategically positioned equipment and supplies afloat or ashore within the Global Positioning Network (GPN). This program enables rapid force closure of a MAGTF as it conducts reception, staging, onward movement, and integration (RSOI). With CCDR's responsibility of JRSOI, the Marine Corps component command coordinates with the CCDR's staff on setting conditions to ensure support of theater logistic enablers at ports and airfields, intratheater movement, and supply support. For more information, reference JP 3-35.

Maritime Prepositioning Force. An MPF is a strategic power projection capability that consists of ships organized into maritime prepositioning ships squadrons (MPSRONs). The MPF ships have unique abilities to supply rolling stock, tracked vehicles, ammunition, supplies, bulk fuel, and water. Currently, the MPF program has two container and roll-on/roll-off ships (T-AK), three large, medium-speed roll-on/roll-off ships (LMSRs or T-AKRs), and two T-AKEs. An MPF is

tailored to support the rapid force composition of a Marine expeditionary brigade (MEB), either as one MPSRON or as two smaller MPSRONs, with three ships positioned at Diego Garcia and four ships positioned at either Guam or Saipan. While all seven ships, when aggregated from two locations, support MEB-sized force employment, the ships home ported at Diego Garcia will provide a crisis response force package (CRFP), spread-loaded across three ships consisting of a T-AKR, T-AK, and a T-AKE. The CRFP is designed to support a balanced MAGTF with a reinforced infantry battalion as the main effort for regional and global theater crisis response. Currently, the MPF is being re-tailored to support beyond a MEB and CRFP force packages. The MPSRONs support expeditionary advanced base and advanced naval base operations.

The MPF and amphibious operations are separate and complementary capabilities; one is not a substitute for the other. The MPF is an operational warfighting capability that should not be confused with joint logistics over-the-shore, strategic sealift, or a floating warehouse.

Ashore-Based Prepositioning. The MCPP-N was established in 1981 under a bilateral memorandum of understanding with the Norwegian government. This program permits prepositioning and maintenance of Marine Corps equipment and supplies in underground storage facilities in Norway. As such, the MCPP-N is a HQMC-sponsored and bilaterally-managed program with the host nation of Norway. The MCPP-N has represented a strong political and military partnership between the United States and Norway for more than four decades. The MCPP-N is a capabilities-based equipment set that supports operations through the mid-intensity conflict level range of military operations and provides augmentation for employment of up to a MEB-sized force. Previously, HQMC has approved the use of equipment and supplies for exercises or operations outside Norway. The MCPP-N's out-of-area policy allows units to request assets from HQMC via appropriate chain of command and national command relationships.

The GPN modernizes the Marine Corps' legacy prepositioning programs into an integrated afloat/ashore capability enabling day-to-day campaigning, rapid response to crisis and contingency, and deterrence, to include support of stand-in forces operating from expeditionary advanced bases. Used on a routine basis by forces as they campaign during competition, the GPN enables constant forward presence of elements of the stand-in force as they campaign and accelerates force closure during conflict by reducing the deploying forces' fly-in echelon requirements while minimizing demand for strategic and intra-theater lift. Beyond force closure, the GPN enables forces operating from expeditionary advanced bases to persist across the competition continuum by providing sustainment support via globally positioned supplies until theater distribution networks open and materiel begins to flow via the JLEnt.

Aviation Logistic Support Ship. There are currently two aviation logistics support ships (also referred to as T-AVBs), with one located on the West Coast and the other on the East Coast. They are maintained in reduced operating status-five capability (i.e., requires five days for reactivation). These aviation logistics support ships provide dedicated sealift for movement of supplies and equipment of a Marine aviation logistics squadron (MALS), and they provide an aviation-focused, intermediate maintenance activity aboard ship. This intermediate maintenance activity is task-organized to repair aircraft parts and equipment for MAGTF aircraft.

Expeditionary Fast Transport. The expeditionary fast transport (referred to as T-EPF) ship is a government-owned, MSC-operated, noncombatant auxiliary ship that provides the MAGTF with high-speed, high-capacity sealift by transporting personnel, equipment, and supplies over intratheater distances with access to littoral offload points. To complement the expeditionary fast transport ship, MSC has delivered a high-speed transport vessel that is assigned to the FMF within United States Indo-Pacific Command.

Reception, Staging, Onward Movement, and Integration. The final phase in the force deployment effort is RSOI, a critical link between deployment and employment of forces. The intention of RSOI is to transition arriving personnel, weapon systems, and equipment into organized units ready to execute operations. Additionally, RSOI involves both operational and tactical logistics organizations. All RSOI activities must be controlled and coordinated in a manner that, first, synchronizes the flow of forces to prevent or reduce bottlenecks at transportation nodes and, second, delivers the right mix of capabilities over time to achieve a rapid buildup of combat power. The scope of RSOI activities and support required during this phase of force deployment depends on the size and capabilities of the deployed force, as well as the type of environment the force is entering. For example, a MEU can conduct forcible entry and establish a point of entry for follow-on forces. Once the MEU establishes a secure area, the LCE can conduct limited RSOI to move supplies and equipment ashore. Conversely, deploying a MEF to an austere area would require significant external support to conduct RSOI to rapidly buildup combat power a MEF provides. In this case, the gaining force commander must plan and conduct RSOI activities as part of force deployment. Even if the Marine Corps is conducting a single-Service operation, the Marine Corps component commander of the AOR where the operation is taking place must coordinate with the host nation, other Service components, and the CCDR.

Sustainment

Sustainment is defined as, "the provision of logistics and personnel services required to maintain and prolong operations until successful mission accomplishment" (*DoD Dictionary*). Sustainment includes, but is not limited to, the following eight areas:

- Provision of logistics services.
- Personnel support.
- Integrated supply support.
- Distribution.
- Maintenance.
- Engineering.
- Health service support.
- Operational contract support.

Sustainment is accomplished through integration of national and global resources, as well as strategic, Service-level, joint, and theater assets. It ensures the FMF are physically available and properly equipped at the right place and time to support the CCDR's operations. Successful sustainment enables freedom of action by increasing quantity and quality of options available to the CCDR. Operational sustainment heavily relies on distribution, management and coordination of storage and transportation of materiel, and information in coordinated distribution lanes.

Marine Corps Logistics Command, serving as distribution process manager for the Marine Corps, coordinates equipment closure from strategic source of supply to point of delivery in theater. The Marine Corps component commander coordinates from point of delivery in theater to tactical logistics elements. Key elements of distribution are planning, shipping, receiving, tracking, and reporting of materiel and information. For more information, reference Marine Corps Order 4470.1B, *United States Marine Corps (USMC) Marine Air-Ground Task Force (MAGTF) Deployment and Distribution Policy (MDDP)*.

Another element of operational sustainment is maintenance. Maintenance is the management of materiel maintenance; repair involving overhauls, upgrades, rebuilds, testing, inspection; and necessary reclamation. Reclamation consists of weapon systems, end equipment items, parts, component assemblies, and sub-assemblies. Additionally, maintenance includes selected software maintenance, installations, upgrades, installation of parts, component modifications, and intermediate organizational technical assistance.

Redeployment and Retrograde

Redeployment is defined as, "the transfer or rotation of forces and materiel to support another commander's operational requirements, or to return personnel, equipment, and materiel to the home and/or demobilization stations for reintegration and/or out-processing" (*DoD Dictionary*). Retrograde is defined as, "the process for the movement of non-unit equipment and materiel from a forward location to a reset (replenishment, repair, or recapitalization) program or to another directed area of operations to replenish unit stocks, or to satisfy stock requirements" (*DoD Dictionary*). Redeployment planning is the responsibility of the losing supported force commander unless redeployment is to a new operational area. In that case, redeployment planning is the responsibility of the gaining supported commander. In the Marine Corps, both the losing and gaining supported commanders receive redeployment planning and coordination support from the appropriate Marine Corps component commander. The supported Marine Corps component command receives, validates, and prioritizes redeployment requirements of the FMF and acts as their advocate with joint enablers that execute redeployment activities. Unless delegated by Marine Corps component commander, the supported Marine Corps units are precluded from coordinating directly with those joint enablers. This restriction allows the Marine Corps component command to leverage joint enablers while ensuring priorities of the CCDR are met as effectively as possible. For more information, reference JP 3-35.

Reconstitution

Reconstitution is defined as "actions taken to rapidly restore functionality to an acceptable level for a particular mission, operation, or contingency after sever degradation" (*DoD Dictionary*). It can also be defined as "those actions, including regeneration and reorganization, commanders plan and complement to restore units to a desired level of combat effectiveness commensurate with mission requirements and available resources" (*DoD Dictionary*). See JP 3-02. A*mphibious Operations*, for more information.

CHAPTER 4.
TACTICAL LOGISTICS

Tactical logistics uses the planning process and products to identify key factors in each functional area to ensure thorough and effective capabilities are where they need to be to meet the mission requirements. Planning for tactical logistics is concurrent with the larger planning process that prepares the MAGTF for operations. The following basic considerations govern planning of tactical logistics:

- Logistics planning is concurrent with operations planning.
- Combat and combat support units exploit their organic logistic capabilities before requesting assistance from CSS sources.
- Logistics provides necessary resources from the last-known holder directly to the using unit.
- The logistics system is responsive, effective, survivable, and efficient.

ORGANIZATION AND CAPABILITIES

Logistical self-sufficiency is a primary consideration when planning expeditionary operations because a MAGTF is organized to conduct operations in austere environments. Tactical logistics are initially provided by MAGTF commanders and their subordinates. This expeditionary or temporary capability will eventually leverage operational support or will be withdrawn if the mission is accomplished. These missions can include—

- Defeating an enemy in combat.
- Countering an act of aggression.
- Performing counterdrug operations.
- Protecting US citizens.
- Performing noncombatant evacuation.
- Conducting peacekeeping operations.
- Providing foreign humanitarian assistance.
- Providing security cooperation.

Numbered fleet commanders (e.g., Fifth Fleet, Sixth Fleet) have operational logistic responsibilities within a CCDR's geographic boundaries. Fleet operational forces are typically organized into task forces under the command of a task force commander. Commander of logistics forces executes tactical logistics based on numbered fleet policy, guidance, and direction. The logistics task force commander exercises OPCON of assigned combat logistics forces and is responsible for coordinating replenishment of forces at sea.

A MEF is the largest Marine Corps force employed at the tactical level. The LCE that supports a MEF is the Marine logistics group (MLG). The MLG is the principal and largest LCE. An MLG is organized to provide multifunctional direct support and functional general support to combat, combat support, and CSS units. The MLG has an organic standing and experienced C2 capability, as well as an operations and planning capability. It can be rapidly and seamlessly task-organized and deployed to meet MEF mission requirements. While the Marine Corps does not possess a standing capability to execute operational logistics, a Marine Corps component command may be augmented or can task elements of an LCE to perform limited operational logistics functions. Integration with strategic logistics support is coordinated through the operational Marine Corps component command, which can be supported by MARCORLOGCOM. As a Service logistics solutions provider, MARCORLOGCOM integrates strategic supply, war reserve materiel, maintenance, distribution, and prepositioning resources to satisfy tactical logistics requirements. For more information, refer to MCTP 13-10K.

PHASES OF ACTION

Expeditionary operations involve six broad phases of action, each of which has strategic, operational, and tactical considerations.

Predeployment Actions

All military expeditions begin with predeployment actions. The commander must plan a deployment organization to ensure that forces arrive in the objective area in a logical sequence, at the right time, with the correct equipment, and with enough sustainment capability to support the CONOPS.

Deployment

Deployment is the movement of forces to an AOR. Deployment is initially a function of strategic mobility. Operational movement in theater completes deployment as forces are concentrated for tactical employment. During deployment, MAGTF commanders marshal, stage, embark, and deploy their commands. Although deployment is a strategic and operational concern, tactical CSS units (e.g., MLG) will be required to assist the deployment process.

Entry

Entry is the introduction of forces onto foreign soil. Typically, entry is accomplished by sea or air, although forces can be introduced by ground movement from an expeditionary base in an adjacent country. Logistic capabilities are used in the entry phase to develop entry points (e.g., an airfield or port, an assailable coastline, a drop zone, an accessible frontier).

Enabling Actions

Enabling actions are preparatory actions taken by the expeditionary force to facilitate eventual accomplishment of the mission. Enabling actions can include seizing a port, airfield, or other lodgment for the introduction of follow-on forces and establishing necessary logistic and support capabilities. In case of disaster or disruption, enabling actions can involve initially restoring order and stability. In open conflict, enabling actions may involve delaying an enemy advance, attacking certain enemy capabilities, or capturing key terrain that is necessary for the conduct of decisive actions.

Decisive Actions

Decisive actions are intended to create conditions that will accomplish the mission. In disasters, decisive actions can include relief operations. In disruptions, they often include peacemaking and peacekeeping until local government control can be reestablished. In conflict, they usually involve military defeat of the enemy. Logistic organizations provide support across the spectrum of decisive actions.

Redeployment

All expeditionary operations involve a redeployment of the expeditionary force or a transition to a permanent presence of some sort. Redeployment is not the same as a tactical withdrawal of the expeditionary forces from the scene. Redeployment requires withdrawing a force in a way that allows that force to maintain the desired situation while preserving their combat capabilities. For example, when reloading MPF or MEU ships Marines must ensure they restore the ships sustainment capabilities as either force could be instantly ordered to undertake another expeditionary operation.

For more information about expeditionary operations, see MCDP 3.

COMMAND RELATIONSHIPS

Command and Control

Command and control for tactical logistics is focused on monitoring, directing, and executing logistic operations in support of tactical operations. Through effective tactical logistics command and control, commanders recognize, predict, and prioritize critical logistic requirements and direct appropriate logistic and CSS response. Tactical logisticians establish and maintain communications links to higher, adjacent, supporting, and supported commands to ensure MAGTF elements can pass logistic information. In this way, C2 processes assist commanders in dealing with the influences on war discussed in the following paragraphs.

Uncertainty. Commanders seek to clearly identify support requirements for tactical logistics and CSS operations. Absolute certainty will never be achieved in the dynamic situation's characteristic of war. Commanders reduce uncertainty by employing a fully integrated planning process, prioritizing requirements, ensuring redundancy and flexibility in their plans, and maintaining situational awareness.

Time. There is rarely enough time available to complete all desired planning and preparation for logistics operations, particularly at the tactical level. Therefore, the assessment, planning, and execution cycle must be used to function effectively in the time available. This decision cycle is facilitated by a continuous exchange of information among all command echelons, functional activities, and exchange of liaison officers. As Figure 4-1 illustrates, the assessment, planning, and execution process can be modified, because of time constraints, under the assessment process by omitting the planning phase. For more information see MCRP 5-10.1, *Multi-Service Tactics, Techniques, and Procedures for Operation Assessment*.

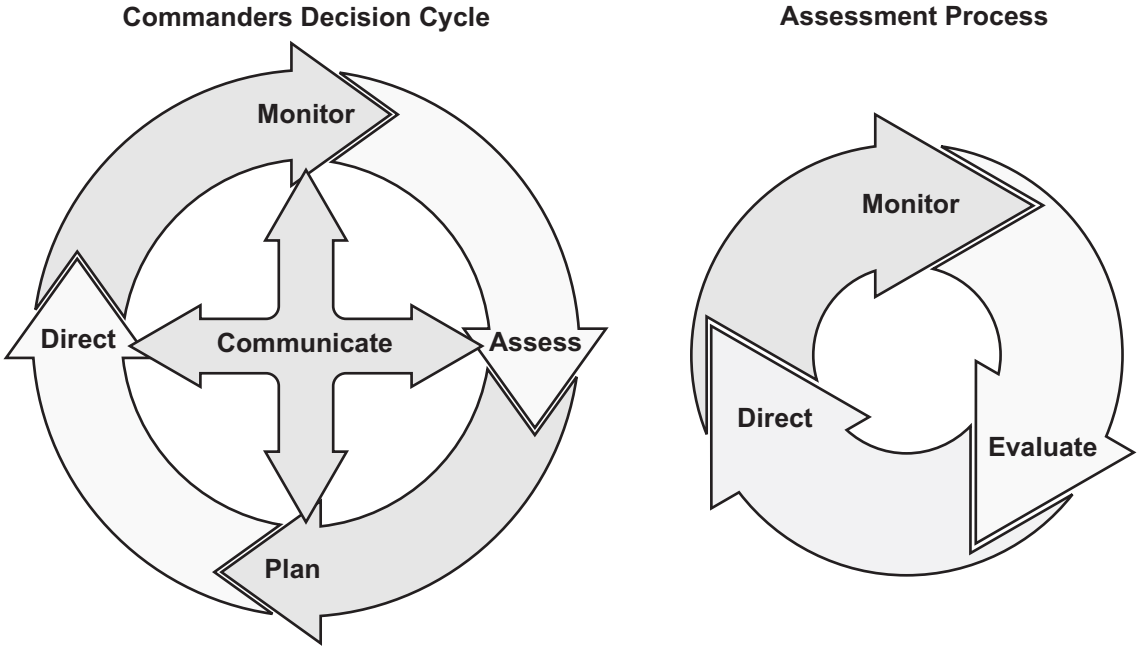

Figure 4-1. Assessment, Planning, and Execution Process.

Tempo. Tempo is a constant, uninterrupted operational rhythm. An effectively managed tempo can leave insufficient time for the enemy to react. To assist in maintaining a command's operational tempo, logisticians must anticipate support required and balance this with other battlespace activities. For example, attacks should not be interrupted or delayed because units need resupply or because LCE convoys are using critical main supply routes. To maximize operational tempo, logisticians must fully participate in the operation's planning process, stay updated on the status of battlespace activities, and prepare to conduct support operations.

Establishing Command and Control

A MAGTF commander exercises command and control over MAGTF logistics and evaluates logistic requirements based on subordinate organizations' capabilities, mission, and CONOPS. Based on this logistic evaluation, the MAGTF commander provides guidance to subordinate commanders. Typically, guidance addresses three primary areas: requirements, priorities, and allocations. All subordinate commanders employ organic logistic resources to support their respective elements and then identify requirements beyond their organic capabilities to the LCE.

An LCE commander assigns support missions to subordinate elements based on the tactical situation, supported unit's needs, and LCE capabilities. Subsequently, the LCE commander coordinates mission assignments with the MAGTF commander and supported unit commanders (see Figure 4-2).

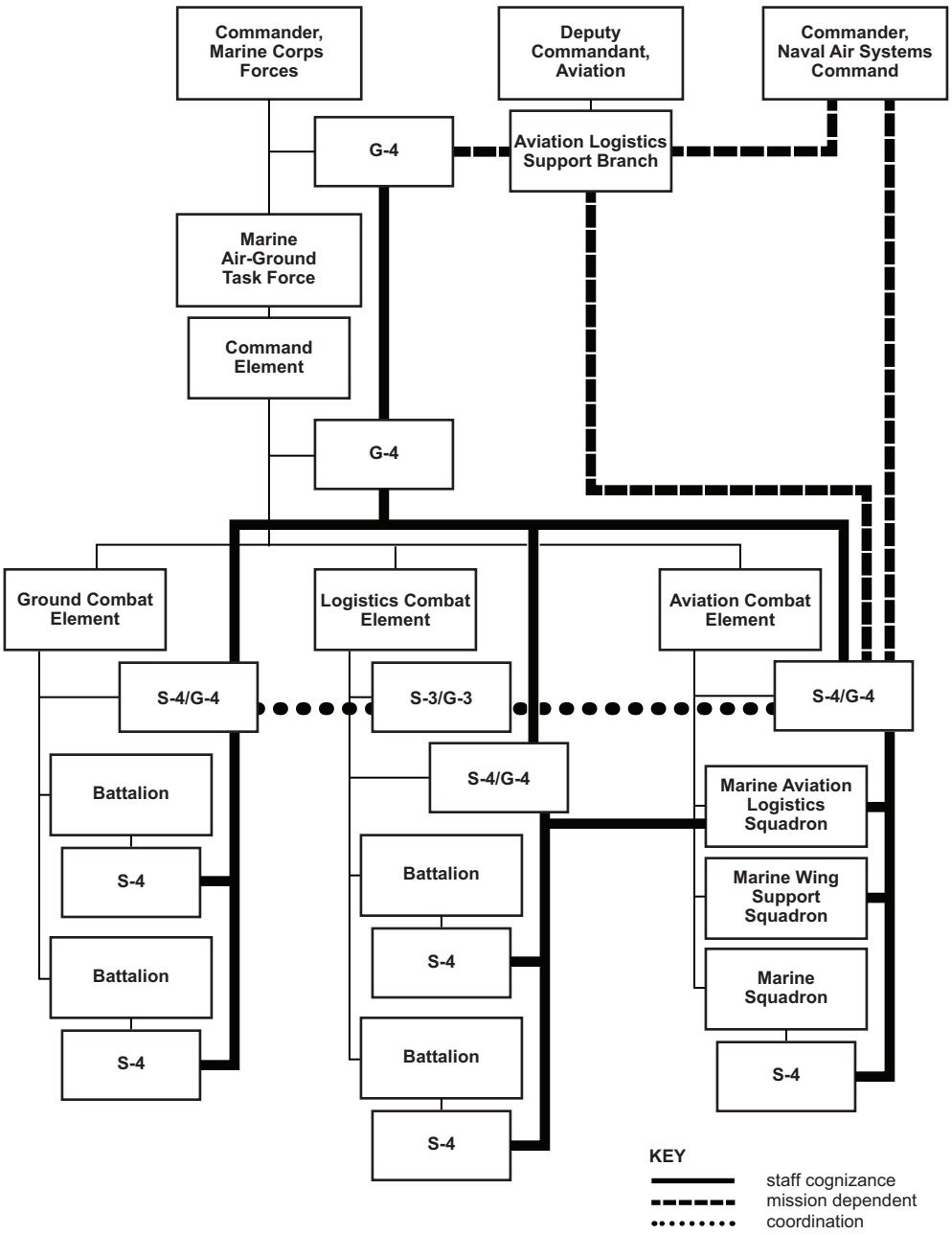

Figure 4-2. Staff Cognizance of Tactical Logistics.

Command and Support Relationships

A clear understanding of each commander's role is necessary in the command support relationship. The establishing commander, typically a MAGTF commander, defines supporting-to-supported relationships, degree of authority the supported commander has, and overall priorities. In general, the supported commander identifies support requirements in terms of priority, location, timing, and duration. The supporting commander determines forces, methods, and procedures to be employed in providing support. If the supporting commander, subject to

existing capabilities and other assigned tasks, cannot fulfill the supported commander's requirements, then the establishing commander is responsible for determining a solution (i.e., a change in overall priorities or allocation of resources).

Command Relationships. Command relationships define higher and subordinate relationships between unit commanders. By specifying a chain of command, command relationships unify effort and enable commanders to use subordinate forces with maximum flexibility. Command relationships identify the degree of control for a gaining commander. The type of command relationship often relates to expected longevity of the relationship between headquarters involved and quickly identifies the degree of support that the gaining and losing commanders provide. Command relationships at the tactical level include:

- Organic. Assigned to and forming an essential part of military organization. The Marine Corps establishes command relationships through organizational documents such as table of organization and equipment or through means of the Force Structure Review Group. An example of this is the littoral logistics battalion being organic to the MLR.
- Attached. Bound temporarily to a command other than its organic command. When attached, the unit is under command of the unit to which it is attached. Unless otherwise stated, this encompasses all command responsibilities. Once the mission or function is completed, the attached unit returns to its parent unit.
- ADCON. In addition to the definition in Chapter 3, ADCON includes administration and support authority over subordinates, including organization of Service forces, control of resources and equipment, personnel management, unit logistics, individual unit training, readiness, mobilization, demobilization, and disciple.
- Direct Liaison Authorized (also called DIRLAUTH). Authority granted by a commander to a subordinate to directly consult or coordinate an action with a command or agency within or outside of the granting command.

These command relationships are established within the Marine Corps (see Table 4-1). When operating or participating in a joint environment, joint command relationships will be established by the commander of the joint forces, as referenced in Chapter 3. For further information regarding joint command relationships, refer to JP 3-0.

Table 4-1. Command Relationship Matrix.

	Inherent Responsibilities							
Relationship Type	**Has a command relationship with—**	**Task-organized by—**	**Unless modified, ADCON goes through—**	**Assigned position or AO by—**	**Provide liaison to—**	**Establish or maintain communication with—**	**Priorities established by—**	**Can impose on gaining command or support relationship of—**
Organic	All forces organized with the HQ	Organic HQ	HHQ specified in organizing document	Organic HQ	N/A	N/A	Organic HQ	Attached OPCON TACON GS GS-R R DS
Assigned	Combatant command	Gaining HQ	Gaining HQ	OPCON chain of command	As required by OPCON	As required by OPCON	ASCC or Service assigned HQ	As required by OPCON HQ
Attached	Gaining unit	Gaining unit	Gaining HQ	Gaining unit	As required by OPCON	As required by OPCON	Gaining unit	As required by OPCON
OPCON	Gaining unit	Parent unit and gaining unit; gaining unit may pass OPCON to lower HQ	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	OPCON TACON GS GS-R R DS
TACON	Gaining unit	Parent unit	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	OPCON TACON GS GS-R R DS

LEGEND
DS direct support **GS** general support **GS-R** general support-reinforcing **HQ** headquarters **N/A** not applicable **R** reinforcing

Support Relationships. Support relationships include direct support, general support, reinforcing, and general support-reinforcing, as outlined in Table 4-2. Support relationships are not command authorities and are more specific than joint support relationships. Commanders establish support relationships when subordination of one unit to another is inappropriate. Commanders assign a support relationship when one of the following occurs:

- Support is more effective if a commander, with requisite technical and tactical expertise, controls the supporting unit rather than the supported commander. Additionally, it is best if the echelon of the supporting unit is the same as or higher than that of the supported unit. For example, the supporting unit might be a regiment, and the supported unit might be a battalion. It would be inappropriate for a regiment to be subordinated to a battalion; hence, the echelon uses a support relationship.
- Often a supporting unit simultaneously supports several units. A requirement to set support priorities and allocate resources to supported units exists. Assigning support relationships is one aspect of command.
- Support relationships allow supporting commanders to employ their units' capabilities and achieve results required by supported commanders. Support relationships are proceeded from an exclusive supported and supporting relationship between two units—as in direct

support—to a broad level of support extended to all units under control of the HHQ—as in general support. Support relationships do not alter ADCON. Commanders specify and change support relationships through task organization.

Direct support. Direct support is a support relationship requiring a unit to support another specific unit and authorizing it to directly answer to the supported unit's request for assistance (joint doctrine considers direct support as a mission rather than a support relationship). A unit assigned to directly support another unit retains its command relationship with its parent unit but is positioned by and has priorities of support established by the supported unit. A direct support mission requires a supporting unit to furnish close and continuous support to a single supported unit.

General support. General support is that support which is given to the supported unit as a whole and not to any particular subdivision thereof. Units assigned a general support relationship are positioned and have priorities established by their parent unit. The parent commander retains complete authority over and responsibility for the operation of the supporting unit (e.g., a general support LCE unit supports the MAGTF under direction of the LCE commander).

Reinforcing. Reinforcing is a support relationship requiring a unit or force to support another supporting unit. Only units that have similar capabilities can be given a reinforcing mission. A unit assigned a reinforcing-support relationship retains its command relationship with its parent unit but is positioned by the reinforced unit. Priorities of support are established by the reinforced unit and then the parent unit.

General Support-Reinforcing. General support-reinforcing is a support relationship assigned to a unit to support the force as a whole and to reinforce another similar-type unit. A unit assigned a general support-reinforcing support relationship is positioned and has priorities established by its parent unit and secondly by the reinforced unit.

Table 4-2. Support Relationship Matrix.

	Inherent Responsibilities							
Relationship	**Have command relationship with—**	**Task organized by—**	**Receives sustainment from—**	**Assigned position or AO by—**	**Provide liaison to—**	**Establish and maintain communications with—**	**Have priorities established by—**	**Can impose gaining unit further command or support relationships by—**
DS	Parent unit	Parent unit	Parent unit	Supported unit	Supported unit	Supported unit	Supported unit	See note
R	Parent unit	Parent unit	Parent unit	Reinforced unit	Reinforced unit	Reinforced unit; parent unit	Reinforced unit; then parent unit	Not applicable
GS-R	Parent unit	Parent unit	Parent unit	Parent unit	Reinforced unit and as required by parent unit	Reinforced unit and as required by parent unit	Parent unit; then reinforced unit	Not applicable
GS	Parent unit	Parent unit	Parent unit	Parent unit	As required by parent unit	As required by parent unit	Parent unit	Not applicable

NOTE
Commanders of units receiving direct support may direct a support relationship between their subordinate units and elements of the supporting unit after coordination with the supporting unit commander.

LEGEND
DS direct support **GS-R** general support-reinforcing
GS general support **R** reinforcing

Logistics Combat Element Command Relationships

The LCE units provide support to other elements of the MAGTF, via either a general support or direct support relationship. Regardless of direct support or general support relationship, the LCE unit, while responsive to needs of the supported unit, remains under command of its parent organization. An LCE commander retains control over subordinate units, which enhances centralized command and control and decentralized execution. Although this is a typical method, it is not the only method. Both permanent and task-organized LCE units can be attached to other organizations. A MAGTF commander can direct the LCE commander to attach subordinate units to GCE or ACE units.

Mission Assignments

A primary method for maintaining command and control over logistics units is to assign formal missions, particularly when LCE units function in a support relationship. The formal mission structure helps by standardizing responsibilities associated with each mission and allows the commander to tailor logistics to the tactical situation.

FUNCTIONS

The COLS and CSS estimate are broad statements of essential logistic and CSS tasks involved in supporting MAGTF operations. The estimates give an overall picture of CSS operations and addresses solutions to shortfalls cited in the CSS estimate. In addition, it is the foundation for subsequent development of detailed logistics and CSS plans and orders by the MAGTF elements. A MAGTF commander's concept for logistics is contained in the MAGTF operation order (OPORD) and Annex D (Logistics). The concept for logistics provides guidance for subordinate MAGTF elements and information required for coordination with logistics support agencies external to the MAGTF. The MAGTF G-4/S-4 prepares Annex D (Logistics) with input provided by internal staff and input from the LCE G-3/S-3. Subordinate G-4s/S-4s conduct detailed planning to accomplish logistic and CSS tasks promulgated in the OPORD. Marine Corps tactical logistics is categorized in six functional areas: supply, maintenance, transportation, general engineering, health service support (HSS), and services (see Table 4-3). The classes of supply are identified by description and subclass (see Table 4-4).

Table 4-3. Functions and Subfunctions of Tactical Logistics.

Supply	Maintenance	Transportation	
• Determination of Requirements • Requisition Authority • Procurement • Storage • Distribution • Salvage • Disposal • Waste Management	• Inspection and classification • Servicing and Repair • Modification • Rebuilding and Overhaul • Reclamation • Recovery and Evacuation	• Embarkation • Landing Support • Port and Terminal Operations • Motor Transport • Aerial Delivery	• Freight and Passenger Transportation • Materials Handling Equipment • Movement Control
General Engineering	**Health Service Support**	**Services**	
• Engineer reconnaissance • Construction (horizontal/vertical) • Facilities maintenance • Demolition • Explosive hazard/obstacle removal • Receive, store, and dispense bulk fuel • Water production and storage • Power generation and distribution • Hygiene services (laundry/shower)	• Casualty management • Force health protection and prevention • Medical logistics • Medical command and control • Medical stability operations	• Command: ♦ Personnel administration ♦ Religious ministries support ♦ Financial management ♦ Communications ♦ Billeting ♦ Food service and subsistence support ♦ Band ♦ Morale, welfare, and recreation	• CSS: ♦ Disbursing ♦ Civil affairs ♦ Postal ♦ Marine Corps Exchange services ♦ Legal services ♦ Mortuary Affairs: personnel retrieval & processing ♦ Operational contracting support

Table 4-4. Classes of Supply.

Class	Description	Subclass	
I	Subsistence, which includes rations and gratuitous health and welfare items.	A: Nonperishable, dehydrated subsistence that requires organized dining facilities C: Combat rations (e.g., meals, ready to eat) that require no organized dining facility used in combat and in-flight environments and gratuitous health and welfare items	R: Refrigerated subsistence S: Non-refrigerated subsistence (unless other subclasses) W: Water
II	Clothing, individual equipment, tools, administrative supplies; which include tentage, organizational tool sets and tool kits, hand tools, maps, administrative and housekeeping supplies, and small arms.	A: Air B: Ground support materiel E: General supplies F: Clothing and textiles G: Electronics M: Weapons	T: Industrial supplies (e.g., bearings, block and tackle, cable, chain, wire, rope, screws, bolts, studs, steel rods, plates, and bars)
III	POLs, which include petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, bulk chemical products, coolants, de-icing and antifreeze compounds, and the components and additives of such products, and coal.	A: Air W: Ground (surface) P: Packaged POL	
IV	Construction materials, which includes construction materiel, installed equipment, and all fortification or barrier materiel.	A: Construction B: Barrier materials	
V	Ammunition of all types, which includes chemical, biological, radiological, and special weapons; bombs; explosives; mines; fuses; detonators; pyrotechnics; missiles; rockets; propellants; and other associated items.	A: Air W: Ground	
VI	Personal demand items and nonmilitary sales items.	A: Personal demand items not packaged as ration supplement sundry packs M: Personal and official letters and packaged mail.	P: Ration supplement sundry packs
VII	Major end items, which includes the final combination of end products assembled and configured in their intended form and ready for use (e.g., launchers, tanks, mobile machine shops, vehicles).	A: Air B: Ground support materiel (includes power generators, firefighting, and mapping equipment) D: Administrative and general-purpose vehicles (commercial vehicles used in administrative motor pools) G: Electronics J: Tanks, racks, adapters, and pylons (Air Force only)	K: Tactical and special purpose vehicles (includes trucks, truck tractors, trailers, semi-trailers, etc.) L: Missiles M: Weapons N: Special weapons X: Aircraft engines
VIII	Medical materiel, which includes supplies to support HSS, force health protection, and medical-unique repair parts.	A: Medical materiel (including repair parts special to medical items) B: Blood and blood products	
IX	Repair parts, which include components and kits, assemblies, and subassemblies (reparable and non-reparable) required for maintenance support of all equipment.	A: Air B: Ground support materiel; power generators; firefighting, and mapping equipment D: Administrative and general-purpose vehicles (commercial vehicles used in administrative motor pools) G: Electronics K: Tactical and special-purpose vehicles (including trucks, truck-tractors, trailers, semitrailers, etc.)	L: Missiles M: Weapons N: Special weapons X: Aircraft engines
X	Nonmilitary programs: which includes materiel to support nonmilitary/civic action programs (e.g., agriculture, economic development, HA/DR) that is not included in Classes I-IX.	None	

Supply

Supply involves the requisition authority, distribution, care of supplies while in storage, and salvage of supplies, including determination of kind and quantity of supplies. It includes managing the disposal of unserviceable items. Logisticians typically calculate requirements for each class and subclass of supply. For additional guidance governing the principles of concepts of supply, as well as the organization, integration, planning, and execution of MAGTF expeditionary supply support, see MCTP 3-40H, *MAGTF Supply Operations*.

Maintenance

Maintenance involves those actions taken to keep materiel in serviceable condition (i.e., preventive maintenance) and actions required to return materiel to serviceable condition (i.e., corrective maintenance). Maintenance tasks are grouped by levels of support that determine assignment of maintenance responsibilities. Tactical maintenance levels are described in the following subparagraphs as they apply to ground equipment. Information about tactical maintenance levels for aviation equipment is found in Table 4-5. For additional information, refer to MCTP 3-40E, *Maintenance Operations*.

Table 4-5. Levels of Aviation Equipment Maintenance Activities.

Levels of Maintenance	Maintenance Activities
Organizational	Tactical and training squadrons and Marine Corps air stations with aircraft assigned.
Intermediate	MALS.
Depot	Naval aviation depots and contract maintenance depot activities. Each MALS has limited depot-level capability.

Field-Level Maintenance. Field maintenance is performed by crew, operators, and maintainers within Marine Corps organizations and activities or by approved commercial or contract sources. A unit can perform any field maintenance tasks for which it is staffed, trained, and equipped.

Maintenance tasks performed within the field levels of maintenance are categorized as organizational and intermediate:

- Organizational. Authorized at, performed by, and responsibility of the using unit. Consists of cleaning, servicing, inspecting, lubricating, adjusting, and minor repair.
- Intermediate. Performed by designated agencies in support of the using unit or, for certain items of equipment, by specially authorized using units. Includes repair of secondary reparable, subassemblies, assemblies, and major end items for return to lower levels or to supply channels.

Depot-Level Maintenance. Depot-level maintenance actions are "maintenance actions taken on materiel or software and involve inspection, repair, overhaul, or modification or reclamation (as necessary) of weapons systems, equipment end items, parts, components, assemblies, and subassemblies that are beyond field maintenance capabilities" (*Marine Corps Supplement to the DoD Dictionary of Military and Associated Terms*, hereafter referred to as the *USMC Dictionary*). Depot maintenance is an essential part of supporting and extending equipment total life-cycle management but can be leveraged to contribute to field maintenance efforts by providing overflow, on-site maintenance services, and technical assistance as appropriate to maintain enterprise materiel availability.

Transportation

Transportation is moving from one location to another using railways, highways, waterways, pipelines, oceans, and airways. Throughput is the amount of cargo and personnel passed through the transportation systems. The most important aspect of a transportation system is movement control. Effective movement control reduces waste, inefficiencies, and loss of combat power, which can create increased risk to the force. Movement control is planning, routing, scheduling, and controlling of personnel and cargo movements over lines of communication. It also consists of validating and prioritizing movement requirements, allocating resources, coordinating and deconflicting movements, and force tracking of personnel and cargo during movement. Movement control balances requirements against capabilities and assigns resources based on the commander's priorities. For more information on transportation operations, refer to MCTP 3-40F, *Distribution and Transportation Operations*.

General Engineering

General engineering is a function of CSS, while combat engineering is considered a combat support function. A MAGTF might receive additional augmentation from the NCF based on METT-T, tactical logistics, and size or scope of general engineering efforts. The NCF can range in size and capability from an NCR with a single or multiple naval mobile construction battalions or naval construction battalions, to task organized NCF detachments or task units. Engineer support battalion (also referred to as ESB) assets at the tactical level can be used to reinforce or augment combat engineer battalion or MWSS with engineering-specific capabilities for mobility, countermobility, or survivability tasks. These assets are typically used in general support of the MAGTF for a wide range of tasks, which often involve detailed planning preparation and higher standards of design construction. For more information, refer to MCTP 3-40D, *General Engineering*, and MCTP 3-34D.

Health Service Support

Health service support refers to those activities and organizations that minimize effects that wounds, injuries, and disease have on unit effectiveness, readiness, and morale. Their mission is accomplished by an aggressive and proactive preventative medicine program that safeguards personnel against potential health risks and by establishing an HSS system that provides appropriate care from point of injury or illness to the appropriate level of care. For more information on HSS organizations, functions, and capabilities, refer to MCTP 3-40A, *Health Service Support Operations.*

Services

The Marine Corps subdivides the services functional area into two components: command support and CSS.

Command support is the commander's responsibility. Just as commanders are legally liable for public funds their organization expends, they are equally responsible for the health, welfare, and morale of personnel in the command. Services identified as command support are inherent in any organization that resides within the headquarters element of each unit of the MAGTF. These services include personnel administration; religious ministry; billeting; financial management; food service support; and morale, welfare, and recreation.

Combat service support is primarily provided by the LCE within a MAGTF. During MAGTF operations, an LCE must be able to provide logistic support services to mobile and stationary organizations. The LCE provides services including operational contract support, postal, legal, personnel retrieval and management and processing, field exchange, hygiene, and waste management. A MWSS provides limited-service support to address ACE requirements. Some support services might be provided by other organizations (e.g., a personnel retrieval and processing company provides mortuary affairs services).

CHAPTER 5.
LOGISTICS CONSIDERATIONS IN PLANNING

The previous three chapters describe the different levels of logistics, planning process, and products required for a successful operation. However, planners must consider the many nuances associated with planning logistics that need to be considered to make the science and art produce the right support.

LOGISTICS PLANNING

The old saying, "the right thing, in the right place, at the right time" describes the foundational goal for all successful logistics. Proper planning establishes the tools, methods, and timelines required to attain that goal. There are many factors involved such as integration of planning, operational reach, tempo, limitations, expenditure, consumption, austerity, and many other key considerations as discussed below. Careful consideration of these additional factors will help ensure the planning anticipates all foreseeable circumstances.

Logistic Integration in Planning

Logistic planning is inherent in operations planning both internal to an organization and external to a command. Operations cannot be successfully conducted without adequate logistics support, which cannot be effective if it is planned without detailed coordination with operational planners. Therefore, the LCE, as an organic component of a MAGTF, is integral to the development of MAGTF plans and operations. Logistic planning must be concurrent and anticipatory based on mission and commander's intent. Because staffs are generally organized by functional groups, command oversight is necessary to ensure that essential functional integration occurs to produce one plan. For example, a MEF conducting expeditionary operations must integrate planning not only among its major supported commands, but also with theater and combatant command assets to enable and sustain operations.

Operational Reach and Tempo

The focus of logistic support is from CONUS into theater and forward, and from higher levels of support to lower levels. A system of continuous replenishment can take the form of either automatic (push) or requisitioning (pull) replenishment. Commanders and planners must devise a balance of push and pull replenishment that efficiently and effectively supports an operation. The replenishment system must effectively use available transportation to maximize throughput and minimize expenditure of resources in the logistic continuum.

Logistics Limitations

Logistic resources are often limiting factors on operational reach and tempo. Therefore, planning must account for these considerations. At the strategic level, these limitations include a lack of funds, materiel, industrial facilities, or skilled labor. Long lead times for mobilization and deployment can also affect strategic concentration of forces and supplies within a theater. At the operational and tactical levels, common limitations involve—

- Throughput limitations because of seaport and airfield capabilities and capacities.
- Timely accounting and receipt of munitions, equipment, and critical repair parts.
- Lack of available command, control, communications, computers, and intelligence in the logistics continuum.

Expenditure and Consumption

Supported commanders submit requirements based on anticipated consumption or usage within their commands. The supporting commanders estimate requirements based on anticipated expenditures, which represents the sum of consumption, replenishment quantities, safety stocks, pilferage, waste, and loss. Commanders, operators, and logisticians must understand the difference between consumption and expenditure to enhance both responsiveness and economy in logistic support operations. While supported commanders must strive to identify consumption rates accurately, the supporting commanders must constantly strive to refine expenditure rates. Usage factors require careful, constant re-evaluation to ensure that they are based on current data, planning factors, and forecasts.

Echelonment

Echelonment is the preplanned provisioning or positioning of resources to ensure uninterrupted logistic support. Echelonment can cause variation in the level of support capabilities available in a given location at a specified time. It must be considered when developing task-organized elements to accomplish specific functions. Echelonment planning considers phasing of logistic support in both time and location to maximize effectiveness of logistics operations. If properly used, echelonment contributes to responsiveness, economy, and flexibility of logistic support operations and to survivability and sustainability of the MAGTF.

Logistic Reserves

While adequacy of logistics to sustain operations governs the rate at which a campaign can proceed, the presence of a reserve capability might determine whether opportunities are exploited or missed. Just as strategic and operational reserves are necessary to exploit tactical or operational success, or to respond to new contingencies, it is also necessary to coordinate and establish reserves of logistic resources that can be committed, only by the Marine Corps component commander, at the operational and tactical levels. Logistic reserves are established for possible consumption by supported forces, but their intent is not to cover expenditures in the supporting force's pipeline. Building a logistic reserve should not take priority over satisfying imminent or immediate support requirements.

Redundancy

Redundancy is a force multiplier that allows commanders the ability to sustain combat power. However, because of ever-changing operations, capabilities must be resilient and multipurpose to thrive in an austere environment, far from repair and replenishment points, intermediate staging bases, combat service support areas, or other support nodes.

Conservation

Conservation avoids waste and is one component of economy. Because of limited supplies and services, commanders must continuously practice and enforce conservation. Commanders enforce conservation to improve overall flexibility by making the conserved resources available elsewhere or at a later time. Means of conservation might include recycling of materiel, properly reusing salvage, and rebuilding of spares when authorized.

Austerity

Austerity avoids excess and is another component of economy. Austerity entails providing just enough materiel or services to accomplish the mission. The logistics planner's objective is to provide for consumers' needs, rather than their wants. Austerity does not eliminate a commodity or service, but it will reduce it to absolute essentials. Commanders should encourage austerity, even in times of plenty. Alternating between wasteful overabundance and inadequate support jeopardize mission accomplishment.

Throughput

Throughput is a measurement of capacity in a distribution system. It provides a measure of materiel or passengers passing through a processing point within a specified period (usually 24 hours). The distribution system is a thoroughfare through which personnel, supplies, and services flow from supporting command to supported command. Flow cannot begin until requirements are identified and supplies and services procured. Until the flow of materiel begins, a MAGTF relies on its organic sustainment. As procurement actions are accomplished, goods and services begin to flow, and eventually the flow reaches a state that matches expenditures. Maintenance of throughput is affected by lead time and control. From the supported force's perspective, lead time is the period between requesting and receiving supplies or services identified as support requirements.

On occasion, flow of a throughput system is interrupted and lead times must be gauged to anticipate ensuing delays. Accompanying supplies and services must be adequately accounted for and timing of requisitions anticipated so that capabilities overlap or at least cover requirements throughout the lead time. Control of throughput process is the single most demanding task for supporting forces. Supporting forces must be able to adjust the flow of supplies and services to expedite critical supplies and services as necessary. Control measures must allow for accumulation of lower priority supplies and services at holding points or their diversion to forces that have higher priorities. The supported commanders and their staffs integrate requirements and capabilities during planning and participate in controlling the flow of supplies and services support during execution.

Planning Elements

The following elements must be addressed in each phase and stage of logistics planning:

- Mission. The MAGTF mission is paramount. Missions of subordinate elements must complement a MAGTF mission and can dictate additional parameters for tactical logistics planning.
- Concept of Operations. Logistics personnel should fully understand the supported commander's CONOPS. This is vital if they are to anticipate requirements of the supported organizations. Anticipation is key to the principles of responsiveness and flexibility.
- Forces. Available forces and OPLANs dictate logistic requirements. Availability of support from other Services or host nations influences logistics and CSS. Similarly, enemy capabilities influence logistic and CSS in a given situation.
- Theater Characteristics. Theater characteristics include distance between objective area and sources of supply. Additionally, turnaround time for airlift and sealift assets. Local populations and environmental conditions (e.g., facilities, road nets, weather, terrain) also affect support operations.
- Intensity of Operations. Expected intensity of operations is a key planning factor for quantifying logistic and CSS requirements.
- Timing and Duration. Anticipated timing and duration of operations influence planning and preparation, as time available to complete plans or to procure and stage equipment and supplies might be limited.

Planning Techniques

Upon receipt of the mission, a MAGTF staff reviews existing OPLANs, standing operating procedures, and joint and Marine Corps lessons learned for related information. Staff members compare plans and standing operating procedures to assigned mission and to available information at each stage of the planning process. Operational planning often begins with a nucleus staff. During the initial phase, a MAGTF should place particular emphasis on the following techniques:

- Flexible Approach. Planning is a continuous process that requires a flexible approach. Initial estimates are based on assumptions and minimal data. Commanders and staffs must continually evaluate previous decisions and guidance. New information can confirm or invalidate previous assumptions or data.
- Timely Effort. Logistic planning must begin as early as possible at all levels of command. Identifying requirements, capabilities, and special considerations early accelerates coordination, timely guidance, and essential decisions. As the CONOPS becomes more specific, subordinate elements can begin preparation of more detailed logistics plans.
- Coordinated Planning. To accomplish a MAGTF mission, every aspect of the operational concept requires coordination among the GCE, ACE, and LCE. To achieve this, every element has certain responsibilities for logistics planning. This mutual dependence requires concurrent, parallel, and detailed staff planning between and among all elements. Simultaneously, a MAGTF headquarters must coordinate with higher, adjacent, and

supporting commands and, possibly, with participating joint and combined staffs. This coordination is essential for integrating MAGTF logistics and CSS operations with those of other organizations.

- Concurrent and Parallel Development. Based on both initial and revised guidance, the MAGTF and its elements develop their plans in a concurrent and parallel manner. Integrated planning shortens the planning cycle, enables early identification of potential problems, and improves anticipation of requirements. With proper coordination, concurrent efforts can prevent difficulties that might occur if planning is sequential or isolated. Logistics planning must parallel operational planning. Likewise, the MAGTF CONOPS cannot be developed without planners fully considering the supporting COLS and CSS.

Deployment Planning Considerations

There are three tactical logistics support scenarios to consider when planning for deployment. Under any of the following scenarios, a tactical logistics planner must consider MAGTF requirements in all six CSS functions and their subfunctions:

- A MAGTF can deploy to an area with an established logistic support base. This can be HNS, inter-Service support, or a combination of the two. The logistics planner must plan for reliance on, or expansion of, the existing support base. In addition, a planner must consider an effective alternative to that support if it stops.
- The MAGTF can deploy to an area without an established logistic support base. In this scenario, a logistics planner must rely on organic resources to support a MAGTF.
- A MAGTF can use seabasing; which is deployment, assembly, command, projection, reconstitution, sustainment, and re-employment of joint power from the sea without reliance on land bases within the operational area.

Coordinating Support

Effective logistic planning requires coordination between supported force and supporting organizations. Both supported and supporting organizations make planning and subsequent support operations more efficient through careful calculation of requirements over specified periods of time while coordinating to reconcile potential shortages or excesses. Ground-common and aviation-peculiar logistic support must be provided in the right quantity, at the right time, and in the right place. Providing too much materiel or too robust a service at one location can disrupt the supported unit's operations or deprive other supported units of what they need when they need it. Effective planning can minimize occurrence of shortages or excesses.

Supported organizations must—

- Calculate requirements as precisely as possible.
- Factor organic, attached, or direct support cargo and personnel transportation capacity into the requirements calculation.
- Prioritize requirements.
- Integrate requirements with expected schedule and duration of the operation.
- Verify critical materiel or services allocations made by higher authority when determining requirements for tactical missions.

Supporting organizations must—

- Review the supported organization's requirements as they are developed.
- Coordinate with supported organization to refine requirements based on supported organization's competing requirements.
- Procure materiel.
- Internally task-organize to provide support efficiently.
- Plan support distribution by anticipating demand.
- Provide support required.

Intelligence Support

Intelligence information is essential for planning tactical logistics operations. Logistic intelligence is specific intelligence information that assists logistics organizations in accomplishing their assigned missions. It focuses on infrastructure in the area of interest and on how weather, enemy, and terrain would affect tactical logistic operations. Logistic intelligence is a product of a MAGTF's intelligence cycle and intelligence preparation of the battlespace functions. The physical network analysis (PNA)—which is part of the intelligence preparation of the battlespace and critical to the commander's estimate of supportability—produces several products that are typically of interest to logisticians:

- Lines of communication and route studies.
- Port and harbor studies.
- Airfield studies.
- Drop zone and landing zone studies.
- Bridge and inland waterway studies.
- Key facilities and targets overlays.
- Specialized weather and terrain studies.
- Modified combined obstacle overlay.
- Available resources:
  - Natural (e.g., lumber, water, construction materials, food).
  - Man-made (e.g., construction equipment, rail networks, power grids, sewer systems, sanitary dumps, enemy logistics capabilities).
- Medical threats to the health of the force.
- Enemy capabilities.

Host-Nation Support

When feasible, MAGTF planners should use available HNS within the theater of operations. Host-nation support can augment MAGTF capabilities preserving a MAGTF's accompanying supplies, which can increase the length of time those supplies can support an operation. However, HNS is not a substitute for essential MAGTF organic tactical logistics and CSS capabilities. Bilateral (between United States and a single country) and multilateral (among members of a coalition, such as NATO) HNS agreements can be an integral part of sustainment planning. Typically, HNS agreements are prepared at the operational level through a JTF or CCDR. Implementing existing agreements or preparing new agreements must be coordinated between a

MAGTF command element and appropriate higher authority in the US chain of command. Plans should include, but not be limited to, use of facilities, supplies, utilities, captured materiel, and civilian labor.

MARINE CORPS PLANNING PROCESS

The Marine Corps Planning Process (MCPP) is a process that FMF commanders and their staffs use to provide input to the joint planning process and to plan force organization and employment. Applicable across the range of military operations, the MCPP is designed for use at any echelon of command. It complements joint contingency and crisis action planning procedures outlined in the Joint Operation Planning and Execution System (JOPES) and provides Marine Corps commanders with a tool for preparing plans and orders. Logisticians participate in all steps of the MCPP alongside representatives of other warfighting functions' staff sections, subject matter experts, and command representatives. For more information, refer to MCTP 3-30A, *Command and Staff Action*.

The MCPP establishes procedures for analyzing a mission, developing and analyzing courses of action (COAs) against the threat, comparing friendly COAs against commander's criteria and each other, selecting a COA, and preparing an OPORD for execution. The MCPP is organized into six logical steps (see Figure 5-1). Additionally, it provides commanders and their staffs with a means to organize their planning activities and transmit a plan to subordinates and subordinate commands. Through this process, all levels of command begin their planning effort with a common understanding of the mission and commander's guidance. Interactions among various planning steps allow a concurrent, coordinated effort that maintains flexibility, efficiently uses time available and facilitates continuous information sharing.

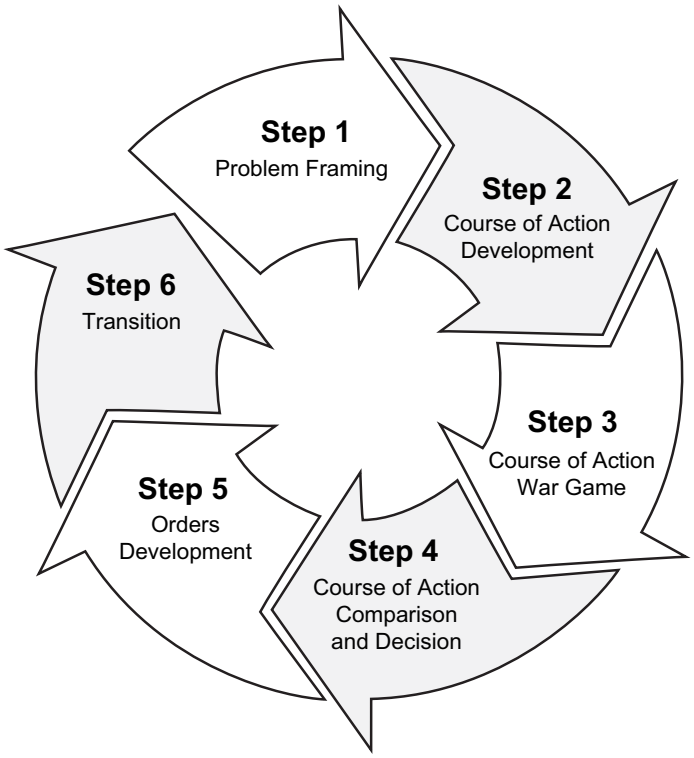

Figure 5-1. The Marine Corps Planning Process.

Logisticians might perceive the MCPP as not being logistics focused or as a process used only by MAGTF staffs, as most formal learning centers teach the MCPP with maneuver-centered scenarios that only require logistic estimates to support maneuver COAs. This perception misunderstands the relationship between logistics and maneuver. Logistics does not simply dictate operational reach as operations can rewrite what is logistically possible. For this reason, even "maneuver-centric" iterations of the MCPP have much to offer logisticians because the course of action war game and comparison provide a feedback loop for the decision-making process. Learning the MCPP through a maneuver perspective can result in logisticians with a active focus on logistics estimates, support procedures, and how CSS can be a pacing function.

The primary reference for the MCPP is the MCWP 5-10, *Marine Corps Planning Process*. See Table 5-1 for a detailed list of the MCPP considerations.

Table 5-1. Marine Corps Planning Process Considerations.

Step	Considerations	
Problem Framing	• Commander's Orientation. • Logistics Preparation of the Operational Environment Review and Refinement. • Physical Network Analysis. • Develop Assumptions. • Requests for Information. • Determine Limitations. • Staff Actions.	• Determining Resource Shortfalls and External Support Requirements. • Commander's Critical Information Requirements. • Priority Intelligence Requirements. • Logistics Staff Estimate. • Problem Framing Brief.
COA Development	• Concept of Logistics Support. • Planning Support Tools. • Decision Support Template.	• Synchronization Matrix. • COA Brief. • Results of COA Development.
COA War Game	• Role of the Logistics Planner and AC/S G-4. • Role of the Red Cell.	
COA Comparison and Decision	• Logistics Planner's Inputs to COA Comparison. • Outputs of COA comparison. • Introduction to COA Decision.	• Concept of Logistics Support. • Input to the Warning Order/Planning Order. • Continuing Actions
Orders Development	• Annex D (Logistics). • Orders Reconciliation. • Basic Order.	• Annexes. • Orders Crosswalk.
Transition	• Inputs to Transition. • The Logistician's Role during Transition. • JLEnt Considerations.	
LEGEND **AC/S** assistant chief of staff		

The following paragraphs are intended to provide logisticians additional tools to apply to their unique situation and to shape their planning efforts across the six steps of the MCPP.

Problem Framing

Problem framing is essential to the MCPP as no amount of planning can solve a problem that is insufficiently understood. However, planners must recognize that they will never completely understand a complex problem and the planning process itself will continue to mature to reveal new aspects of that problem. Planners should begin this step with the goal of understanding the

commander's operational approach, the mission's purpose, and the tasks they must accomplish for the mission. Additionally, they should continue to work towards gaining a better understanding of the operational environment. Problem framing should not solely focus on days of supply, consumption rates, and materiel estimates—often documented in the logistics staff estimate—though they are critical aspects, planners must also consider external influences and inherent risks.

The logistics staff estimate, which provides facts, assumptions, equipment lists, readiness status, or quantities of material and supplies helps generate a shared understanding for the commander and staff regarding how logistics, as a warfighting function, will support COA development and mission execution. Supportability estimates are provided by subordinate commanders to assist the higher-level commander with COA selection. These estimates should indicate the subordinate unit's ability to support each COA and identify the risks associated in supporting each COA.

Problem framing includes the logistics preparation of the operating environment with a focus on infrastructure, physical environment, and terrain. This is accomplished by conducting a PNA to conceptualize the distribution network capabilities and limitations. A PNA is created from both open-source information as well as information provided by intelligence personnel. Conducting a thorough PNA during problem framing is critical because it serves as the foundation for developing a COLS during COA development. The logistics planner should use the data and information from the PNA to begin developing a list of facts, assumptions, and requests for information.

Center of gravity analysis is a method used to focus the commander and staff on what is most important—during a particular time or event—among all the variables and factors that can influence the conduct of operations. Logisticians should not only provide friendly center of gravity input but provide center of gravity analysis and recommendations related to enemy force's logistics capabilities. This concept necessitates holistically viewing the enemy. During this analysis, the input of logistics personnel is critical in helping intelligence and operations personnel analyze enemy logistics to identify logistical vulnerabilities.

Course of Action Development

The COA development step of the MCPP generates options for conducting war games and follow-on comparison that satisfy the mission, intent, and guidance of the commander. During COA development, planners use the commander's intent and guidance as well as the results from the preceding problem framing to develop COAs. Additionally, during COA development, the logistics planner's primary tasks include:

- Developing a COLS for each friendly COA under consideration.
- Determining ways to shape and outline known constraints and restraints for each COA.
- Contributing to the creation of planning support tools such as the running estimate, decision support template, decision support matrix, and synchronization matrix.
- Assisting the staff in determining potential opportunities to exploit the vulnerabilities of enemy sustainment.

Logistics planners develop a COLS for every COA to plan the integration and synchronization of each COA's activities. The COLS allocates logistic resources and provides the necessary functional details to allow commanders to conduct COA war games. However, each of the COLS can be very similar because of the limited ways in which the logistics is employed. Once a commander selects a COA (after the COA war game and COA comparison and decision steps of the MCPP), the staff refines the COLS associated with that COA into the concept of logistics operations that will appear in Annex D (Logistics). This occurs during the orders development step of the MCPP.

Regardless of the number of COAs developed, logistics planners consider multiple CSS nodes and methods of distribution to sustain the force and they should identify all organic CSS assets, host nation capabilities, and physical infrastructure that are available for use. This process enables a logistics planner to forecast where and when the logistics system can extend to support the maneuver force, and it provides options for potential COLS branches and sequels.

Course of Action War Game

Conducting war games challenges logistics planners because logistics, as a warfighting function, typically entails maneuver against supported unit consumption vice an enemy formation. Therefore, creativity and critical thinking are required to stress developed COAs. Challenges, such as environmental factors, degraded road networks, interrupted supply nodes, and unplanned GCE movements, can provide commanders more realistic perspectives of their COAs than just enemy activities.

As the operational planning team and staff transition to the orders development step of the MCPP, the logistics planner continues to refine the logistic staff estimate and COLS.

Course of Action Comparison and Decision

Commanders, with the assistance of their principal staff, collect and consider all required information to make an informed decision based on COA comparison. Based on the revised logistic staff estimate, the war game results, and the logistics planner's input, the G-4/S-4 advises the commander of which COA the logistic community can best support. As part of this recommendation, the G-4/S-4 discusses each COA's advantages, disadvantages, risks, and shortfalls as it relates to logistic support.

After the commander's decision, the logistics planner refines the COLS. The updated COLS should outline the logistic operation's purpose and summarize the means and agencies that can provide the six functions of logistics. The COLS becomes the concept of logistics operations within Annex D (Logistics) once orders development begins. Similarly, the overall CONOPS is developed, along with its supporting concepts (e.g., intelligence, fires, and logistics), and it forms the basis for the OPORD. With an approved CONOPS, the warning order is created to issue to subordinate commands to facilitate their planning.

Orders Development

A written order is essential to clearly communicate critical information and provide a common understanding of the unit's problem and goals. The staff should not only focus on proper formatting but putting critical thought into what must be articulated to properly execute the order. Higher headquarters information must not be regurgitated without purpose, and key points

developed during the planning process must be concisely and clearly written to be relevant for operations. A common problem for the LCE is that MCWP 5-10, or any other reference, does not direct how LCEs write Annex C (Operations) or Annex D (Logistics); this is dependent on a commander's preference and the situation. Often in an LCE, Annex C is written as Logistics Operations and Annex D as Internal Logistics, but there are other methods that can be used. One key point is to ensure a discussion takes place between the commander and staff about how operational logistics are written within the order and that decision is communicated to HHQ, supported, and adjacent units. A well-written order can be understood and applied by an officer or staff noncommissioned officer who has not exposed to the planning process.

The G-4/S-4 designates the G-4/S-4 staff members and SMEs from the logistics units to write specific appendices to Annex D (Logistics) as well as Annexes P (Host-Nation Support) and Q (Health Services), if used. See Table 5-2 for a list of Annex D (Logistics) appendices.

Table 5-2. Annex D Appendices.

Number	Title
1	Petroleum, Oils, and Lubricants (POL) Supply
2	Mortuary Affairs
3	Sustainability Analysis
4	Mobility and Transportation
5	Civil Engineering Support Plan
6	Non-Nuclear Ammunition
7	Supply Number
8	Services
9	Health Services
10	Aviation Logistics Support (usually provided in the aviation combat element plan or order)
11	External Support (JLEnt)
11	Maintenance
13	General Engineering
14	Operational Contract Support

Transition

Transition is the final step of the MCPP and can involve a wide range of briefs, drills, and rehearsals necessary to ensure a successful shift from planning to execution. Initially, the written order is initially well-understood only by the small group that wrote it. Transition enables the far larger group of executors (current operations staff, subordinate unit commanders and staff, combat operations center members, etc.) to comprehensively understand the plan. For the logistician, transition is one of the best opportunities to explain how logistics supports the plan for all commanders, staffs, and subordinate units. At a minimum, transition involves a transition brief.

RAPID RESPONSE PLANNING PROCESS

A time constrained version of the MCPP is the rapid response planning process (also referred to as R2P2). This version was developed to enable a MEU to plan and begin execution of certain tasks within a 6-hour period. This process is advantageous to circumstances that require expeditionary planning and is therefore not tied to just MEU operations. For more information on this process, see MCWP 5-10.

JOINT, MULTINATIONAL, INTERAGENCY, AND INTERORGANIZATIONAL LOGISTICS CONSIDERATIONS

All MAGTF planners must be familiar with JOPES because the Marine Corps continues to operate in a joint or combined environment. Thus, JOPES is how DoD plans for and conducts joint military operations. As described in JOPES, there are two primary methods of planning joint or combined operations: contingency and crisis action planning (see CJCSM 3122.03, *Joint Operation Planning and Execution System*, [Volume II, Planning Formats] for more information). The distinction between these methods is important because it reflects significant differences in the amount of time available for MAGTF planning. Contingency planning (also referred to as deliberate planning) is typically conducted in peacetime and is accomplished in prescribed cycles that complement other DoD planning cycles. This process requires a significantly longer time for completion than crisis action planning. Crisis action planning is time-sensitive planning that involves emergencies with possible national security implications.

Joint

Joint, multinational, interagency, and interorganizational operational arrangements regarding joint logistics are bound together by a web of relationships among global providers. These relationships are critical to joint logistics success because logistic capabilities, resources, and processes are vested in a myriad of organizations. These organizations interact across multiple physical domains and information environment, which spans the range of military operations throughout the competition continuum.

The term joint connotes activities, operations, and organizations in which elements of two or more MILDEPs operate under a single joint commander. An exception to this rule is a Navy/Marine Corps operation, which is not a joint operation.

A drawback of a purely joint staff structure is the tendency, particularly in large staffs, for information and knowledge to become centralized within directorates. This challenge can be overcome through staff integration by means of boards, centers, cells, and working groups and operational planning teams. For more information, refer to JP 3-33, *Joint Force Headquarters*.

Joint Logistics Operations Center. A joint logistics operations center can be established at the discretion of the CCDR or joint subordinate commands and operated by a logistics staff. At the CCDR or subordinate level, a joint logistics operations center is tailored to the mission or operation. The joint logistics operations center coordinates and synchronizes planning and

logistics operations for such functions as engineering, contracting, materiel readiness, mortuary affairs, HNS, and other services. It must closely coordinate with the CCDR's JDDOC concerning transportation and distribution of supplies. For effective coordination, the center uses logistics command, control, communications, computers, and intelligence systems.

Joint Deployment and Distribution Operations Center. A JDDOC is a joint capability solution designed to synchronize and optimize intratheater and theater deployment, distribution, and sustainment operations within a CCDR's AOR. The JDDOC is an integrated operations and global operations center (movement control organization) that acts in consonance with the CCDR's overall requirements and priorities. On behalf of the CCDR, the JDDOC can direct common-user and intratheater distribution operations. A JDDOC is a standing operations center, typically under direction of the CCDR's J-4, but it can be placed under other command or staff organizations. It may move to a forward-deployed location or be collocated with a subordinate logistics command, unit, or task force. Regardless of location, a JDDOC retains its direct organizational relationship to the CCDR and does not become a subordinate activity of the host organization to which it might be attached. A JDDOC relies on liaison and collaboration to achieve reach-back to access national support capabilities. For additional information, see JP 3-35.

Combatant Commander Logistics Procurement Support Board. A CCDR can establish a logistics procurement support board to ensure that contracting and other related logistic efforts are properly coordinated across the entire AOR. This board is typically chaired by a CCDR J-4 representative and includes representatives from each Service component command, DoD combat support agencies, as well as USG departments and agencies or organizations concerned with contracting matters. The board's primary purpose is to establish AOR-wide contracting and contractor management policies and procedures; determine theater support contracting organizational structure; coordinate with other international organizations, NGOs, and HNS on contracting issues and actions; and coordinate with DoD and MILDEPs on potential loss of contract support and risk management.

Joint Requirements Review Board. A JRRB approves and prioritizes CCDR- or JFC-designated joint logistics and high-value, and high-visibility requirements. The JRRB determines the proper source of support for those requirements and is typically chaired by subordinate JFC (either subunified command- or JTF-level), deputy commander, or J-3. A JRRB coordinates and controls the generation of requirements and prioritization of joint logistics supplies and services that are needed to support the operational mission. The JRRB typically consists of representatives from Service component logistics staffs, special operations forces component staff, DLA, Defense Contract Management Agency, joint staff engineer, J-6, joint staff comptroller, staff judge advocate, and other JFC staff members as directed. Additionally, the JRRB should include representatives from the joint contracting support board (JCSB) that have designated theater support and external support contracting organizations. Theater support and external support contracting member's main role in the JRRB process is to inform other members about which contracting mechanisms are readily available for their particular acquisition, to include limits of the local vendor base for each type of support.

Joint Contracting Support Board. Depending on level of warfare, the CCDR can establish a JCSB to advise the JRRB as well as to coordinate and deconflict contracting actions between and within JOAs. A JCSB reviews contract support requirements forwarded by the JRRB and makes

recommendations on which specific contracting organizations or contract venues are best suited to fulfill requirements. The JCSB is chaired by a senior contracting officer or on location principal assistant responsible for contracting. A JCSB consists of representatives from Services, theater, and external support contracting organizations; Defense Contract Management Agency; DLA; and special operations forces component contracting representatives. Through JCSB, the contracting community ensures a coordinated contracting support effort across the entire operational area. The JCSB's goal is to maximize the JOA's contracting capabilities while minimizing competition for limited vendor capabilities.

Joint Civil-Military Engineering Board. A CCDR or subordinate JFC can establish a joint civil-military engineering board to assist in managing civil-military construction and engineer projects and resources. This temporary board is chaired by the CCDR or designated representative, such as the CCDR J-4, CCDR engineer, subordinate joint force engineer, or civil affairs officer. The joint force engineer will provide a secretariat and manage administrative details of the board. Key members on the board include the J-3 future plans officer, J-4 engineer, civil affairs officer, staff judge advocate, and comptroller. Other personnel from the staff, components, or DoD agencies or activities in support of the CCDR can also participate.

Joint Environmental Management Board. A CCDR or subordinate JFC can establish a joint environmental management board to assist in managing environmental requirements. This is a temporary board that is chaired by the CCDR or subordinate joint force engineer, with members from the joint force staff, components, and any other required special activities (e.g., legal, medical, civil affairs). The board establishes policies, procedures, priorities, and overall direction for environmental management requirements in a JOA. The joint environmental management board will coordinate its activities with the CCDR or with subordinate joint force engineering staff.

Joint Facilities Utilization Board. A JFC can establish a joint facilities utilization board to assist in managing Service component use of real estate and existing facilities. The joint facilities utilization board is a joint board that evaluates and reconciles component requests for real estate, use of existing facilities, inter-Service support, and construction to ensure compliance with joint civil-military engineering board priorities. This temporary board is created by the CCDR or subordinate joint force engineer, with members from the joint force staff, components, and any other required special activities (e.g., legal, force protection, comptroller, contracting, civil affairs). If a JFC decides that all engineer-related decisions will be made at the joint civil-military engineering board, then the joint facilities utilization board functions as a working group to forward recommendations for decision to the joint civil-military engineering board. It serves as the primary coordination body within a JTF for approving construction projects. For more information, refer to JP 3-34.

Logistics Coordination Board. A logistics coordination board is a group formed by the JFC to accomplish broad logistics oversight functions that can include, but are not limited to, coordinating logistics information, providing logistics guidance, and reviewing logistics policies and priorities. The board typically consists of representatives from the joint force staff, all components, and, if required, component subordinate units.

Theater-Joint Transportation Board. A theater-joint transportation board can be established by a CCDR to coordinate with the CJCS joint transportation board and at the theater level of operations to rapidly change transportation resource allocation to adjust to changing circumstances or immediately react to emergency or unanticipated situations. Procedures for establishing the theater-joint transportation board are developed during peacetime to facilitate rapid standup and execution under emergency or wartime conditions. The board's role is to resolve contentious transportation issues within the command at the operational level.

Joint Movement Center. A joint movement center (JMC) can be established at a subordinate, unified, or JTF level to coordinate employment of all transportation methods (including those provided by allies or host nations) to support the CONOPS. This coordination is accomplished through established theater and JTF transportation policies within assigned operational area that is consistent with relative urgency of need, port and terminal capabilities, transportation asset availability, and priorities set by a JFC. The JTF JMC will work closely with the JDDOC. For more information, refer to JP 4-01.

United States Transportation Command Patient Movement Requirements Center. The United States Transportation Command patient movement requirements center (TPMRC) manages validation and regulation of intratheater patient movement. The TPMRC is responsible for theater-wide patient movement (e.g., medical regulating, aeromedical evacuation scheduling) and coordinates with theater medical treatment facilities to allocate proper treatment assets required to support its role. A TPMRC communicates this transport-to-bed plan to the theater Service transportation component or other agencies responsible for executing the mission. The TPMRC coordinates with the global patient movement requirements center for intertheater patient movement.

Joint Patient Movement Requirements Center. The joint patient movement requirements center is typically under the OPCON of a JTF commander. This center maintains coordinating relationships, is typically collocated with the JTF JMC, and communicates movement requirements to the transportation component responsible for executing the mission. Joint patient movement requirements center coordinates closely with the TPMRC and global patient movement requirements center for movement into theater-controlled beds outside the JOA.

Joint Blood Program Office. The joint blood program office is under the staff supervision of a combatant command surgeon. This office is responsible for joint blood program management in the theater of operations. A joint blood program office advises the combatant command surgeon on all matters pertaining to theater blood management activities. It evaluates blood product depots, transshipment centers, and supply units to ensure that personnel, equipment, and resource requirements are addressed in the CCDR's OPLANs. For more information, refer to JP 4-02.

Joint Petroleum Office. The joint petroleum office, established by the CCDR, works in conjunction with its Service components, via subarea petroleum offices (SAPOs), and DLA Energy to plan, coordinate, and oversee all phases of bulk petroleum support for US forces employed or planned for possible employment in an AOR. Typically, joint petroleum offices have a mix of Service representatives.

Subarea Petroleum Office. When tactical operations warrant extensive management of wholesale bulk petroleum in a JOA, a CCDR's joint petroleum office can establish a SAPO and augment it with staff that can be provided by Service components. A SAPO's primary function is to discharge the staff petroleum logistics responsibilities of the JTF. Through SAPO, a JTF commander establishes policies, procedures, priorities, and oversight to optimize critical POL support for the JTF. The SAPO is responsible for POL planning and execution within the JOA. This level of planning focuses on support for each Service component. Its products are the inland petroleum distribution plan and base support plans. The SAPO conforms to the administrative and technical procedures established by the CCDR and DLA Energy. For more information, refer to JP 4-03, J*oint Bulk Petroleum and Water Doctrine*, and MCRP 3-40B.5, *Petroleum Operations*.

Joint Mortuary Affairs Office. A CCDR typically establishes and operates a joint mortuary affairs office that has responsibility for maintaining data on burial and recovery status of all deceased and missing personnel. The joint mortuary affairs officer coordinates programs for search, recovery, identification, burial, or concurrent return of human remains. Additionally, this officer supervises the establishment and maintenance of temporary cemeteries and serves as the clearing point for graves registration information. At the CCDR's discretion, a JTF commander can direct that a joint mortuary affairs office be established in the JOA. A JTF joint mortuary affairs office is formed and organized to plan and execute all mortuary affairs programs. The JTF J-4 has staff supervision responsibility for the joint mortuary affairs office. For more information, refer to MCRP 3-40G.3, *Multi-Service Tactics, Techniques and Procedures for Mortuary Affairs in Theaters of Operations*.

Explosive Hazards Coordination Cell. The JFC can establish an explosive hazards coordination cell to predict, track, distribute information on, and mitigate explosive hazards within the theater that affect force application, focused logistics, protection, and awareness of the operational environment. A cell provides technical advice on explosive hazard mitigation, including development of tactics, techniques, and procedures, and provides training updates to field units. For more information, refer to JP 3-34.

Operational Contract Support Integration Cell. The operational contract support integration cell is a dedicated cell at the federal, JTF, or component level composed of logistics planners and acquisition and contracting subject matter experts. The cell's primary responsibility is to integrate all aspects of planning for nonorganic (i.e., commercially sourced) supplies and services and associated employment of contractor capability to provide support to the force. The cell is a link between the command staff, requiring units, budget and finance availability, and contracting experts that standardize the contracts for all Services. In some instances, a link between HNS and the operational contract support integration cell is established to successfully meet the commander's intent for contracted support.

Multinational

Multinational logistics is a challenge; however, leveraging multinational logistic capabilities increases a CCDR's freedom of action. Additionally, many multinational challenges can be resolved or mitigated by having a thorough understanding of capabilities and procedures of multinational partners before operations begin. Integrating and synchronizing logistics in a multinational environment requires sharing information; developing interoperable logistic

concepts and doctrine; and clearly identifying and integrating appropriate logistic processes, organizations, and C2 options. Logisticians should consider using a broad range of multinational logistics support structures.

Interagency

Interagency pertains to USG agencies and departments, including the DoD. Interagency coordination forges the vital link among US military and other instruments of national power, including diplomatic, informational, and economic instruments of the USG. In operations involving interagency partners where a commander might not control all elements, the commander seeks cooperation and builds consensus to achieve unity of effort. Integrating US political and military objectives and subsequently translating those objectives into actions is essential to success at all levels of operations.

Interorganizational

Integration and coordination among military forces, other USG and foreign government departments and agencies, NGOs, and international organizations are more challenging than that required of a purely military operation. For example, with multiple agencies, there will various operational procedures. However, their similar needs (e.g., distribution, materials handling equipment, shelter, water, power) in a contingency environment requires different agencies closely coordinate early in the operation to ensure availability of resources. Ultimately, some government departments and agencies, NGOs, and international organizations might have policies not in consonance with DoD policies. In absence of a formal command structure, a joint logistician will need to collaborate and elicit cooperation to accomplish the mission. Often, NGOs and international organizations possess unique skills and capabilities that can assist in providing a joint warfighter more robust logistics. Successful interagency, international organization, and NGO coordination enables the USG to build international support, conserve resources, and conduct operations that efficiently achieve shared international goals.

LOGISTIC PLANNING CONSIDERATIONS

The objective of operational logistics planning is to match Marine Corps deployment and sustainment activities and joint logistics systems with requirements of the FMF assigned to a particular campaign or operation. Operational planners and functional specialists determine the most effective means to logistically enable a mission assigned to the FMF.

For the Marine Corps, the essence of operational logistics is an ability to identify and incorporate all relevant logistic enablers that can support and sustain an FMF when engaged in a campaign or operation into a cohesive plan. See Chapter 3 for more information about the diversity of enablers that reside in the JLEnt, coalition forces, and other CCDRs. An operational logistics planner should refer to referenced orders, instructions, and publications for detailed information about these enablers and their processes and procedures.

Logistic planning focuses on satisfying logistic requirements generated by the supported force. It addresses estimation of materiel and functional support requirements as well as organization and employment of organic and supporting tactical logistics organizations. Materiel and functional support requirements are calculated based on established combat planning factors, experience, assigned missions and tasks, and operational factors (e.g., time available, weather, enemy).

Supply

Ground-based commanders should optimize the basic load for all supplies, including Class IX. A unit's basic load should not exceed the commander's anticipated requirements, even if a unit can carry additional quantities. In aviation units, the squadron maintenance staff should ensure that their pre-expended bins have been replenished by the supporting MALS. Aviation staffs must coordinate with supporting MALS, MWSS, and Marine aircraft group headquarters for aviation-peculiar logistics support enroute and within theater.

Maintenance

Each MAGTF element should maximize use of organic maintenance contact teams and LCE maintenance support teams. Repair and return of equipment, as far forward as possible, speeds return of equipment to the user. This practice also reduces the burden on both transportation and control capabilities.

Transportation

Transportation requires close management because it is the most limited and limiting logistic capability in a MAGTF. Improper management of transportation assets can degrade combat operations. Supplies should be moved only as needed. As such, MAGTF transportation boards should be established that properly manage these resources to meet MAGTF priorities; and they should include representation from external agencies or JLEnt that provide support.

External Support

Planners should make maximum use of HNS and inter-Service support available within the theater of operations. Plans should include, but not be limited to, use of facilities, supplies, utilities, captured materiel, and civilian labor. An LCE commander should keep the number of CSS installations to a minimum and ensure dispersion of installations and capabilities.

Forward Support

The farther forward a CSS unit is, the less responsibility it should have for routine support tasks. A CSS unit should be responsible only for those supplies and services that are critical to combat operations.

Air Support

In planning for sustained operations, a MAGTF should expect to receive critical items primarily by air. However, this does not preclude thorough planning for surface lift, so MAGTFs should plan for assault support to mitigate distribution stoppage of ground-based lines of communication.

Alternate Supply Routes

Transportation planning at every echelon should include developing alternate supply routes. Use of a single supply route increases chances that enemy action could severely disrupt or prevent movement. Movement control planning and execution at every level will ensure a network of supply routes are available for routing, tracking, and providing security for movements across a

MAGTF battlespace. Main and alternative supply routes, checkpoints, and traffic control points should be established and coordinated between battlespace owners and the MAGTF movement control center.

Security

An LCE commander is inherently responsible for their organization's security. While continuing to provide support, the LCE commander must employ both active and passive measures to defend against attempts to disrupt support operations. The use of tactical resupply unmanned aircraft systems (also referred to as TRUASs) and small unmanned aircraft systems (also referred to as SUASs) can help mitigate this issue.

FUNCTIONAL AREA PLANNING CONSIDERATIONS

Each CSS element has its own specialized planning considerations. Subject matter experts should be included in the planning process for further integration and considerations of their respective functional areas.

Supply

Compromises that are acceptable in peacetime to improve economy and enhance accountability of supply items might not be appropriate in a combat situation. For example, storing a commodity in a single site might be appropriate in peacetime, but centralization in wartime might increase response time and reduce survivability. Therefore, the LCE commander might establish multiple combat service support areas. Their capacities and locations vary based on the tactical situation, CONOPS, and scheme of maneuver.

Supply Cycle. A supply cycle is a process that involves requisition authority, use, and replenishment of supply items. The cycle period for each supply item varies based on criticality code, usage rate, storage and transport capacity, and procurement lead time. The shorter a cycle period is the more intensive management and transportation efforts become. Conversely, items with longer cycles require forward planning and more storage area to accommodate an expanded size of the stockage objective. Additionally, multiple sources of supply should be identified for the creation of a supply web and to create redundancy under a contested environment.

Phases of Supply Support. Both LCE and ACE perform tactical supply that directly affects sustainability of the MAGTF. Tactical supply extends from receipt of finished supplies through issue for use or consumption by the user. The LCE and ACE control all supply processes through forecasting, requisitioning, receiving, storing, stock controlling, shipping, disposition, identifying, and accounting procedures established in directives. Ideally, procedures used in peacetime are the same as those used in wartime. However, combat requirements often necessitate rapid processing of requests submitted by unusual methods, multiple sources, and diversified distribution means.

Maintenance

Maintenance procedures should be the same in peacetime and combat; however, peacetime or garrison maintenance procedures and techniques might not work effectively in combat or field conditions. Maintenance support for Marine Corps aviation has been developed under MALSP for all conditions. Logisticians must consider the following factors when planning maintenance systems and procedures:

- Maintenance activities must operate in harsh conditions during tactical operations.
- Limited resources might require around-the-clock work schedules.
- Contamination in the battlespace might further complicate and delay repair of equipment.
- Units must minimize time required to repair combat essential items. To minimize repair time, units should—
  - Perform only mission-essential maintenance during combat. Units must recover, evacuate, and repair equipment as far forward as possible. This reduces transportation requirements and increases equipment availability.
  - Evacuate inoperable equipment only if they cannot repair it forward or if repairs will take excessive time. A MAGTF must have a well-defined and understood recovery and evacuation process. In combat, recovery and evacuation may be the most difficult maintenance function; however, this can also be the most important function to sustaining a MAGTF's combat power.
  - Make critical repair parts available as far forward as practical. Combat can require positioning critical parts at the using-unit level or dictate greater reliance on selective interchange.

Transportation

Throughput planning is a combination of transportation planning and movement control. It involves determining throughput requirements: what, where, when, and how personnel and materiel must move to sustain the force. The transportation and movement control planning process is the same regardless of mode, distance, or locale. An operational commander provides requirements and establishes priorities based on the CONOPS. Transportation planners sequence movement requirements as follows:

- Determine desired arrival time at destination.
- Select the mode of transportation.
- Determine load and pickup points, intermediate and transfer points (as required), and offload and drop points.
- Apply time-distance factors.
- Reconcile conflicting requirements for limited transportation assets (including materials handling equipment) and support facilities.
- Test the movement plan via route reconnaissance or advanced party for feasibility.

Planning Considerations. Transportation planners are guided by the following fundamentals, principles, and methods of routing and scheduling movements:

- Transportation planners and battlespace owners should coordinate to select movement control measures including supply routes, checkpoints, and traffic control points.
- A MAGTF movement control center must develop route reporting requirements and processes using appropriate route classification.
- Transportation planners should establish a transportation or movement control board or working group.
- The MAGTF transportation planners must coordinate to develop and publish a ground transportation order.

Planning Elements. The main elements of the transportation process are as follows:

- Requirements List. A requirements list identifies what personnel, supplies, and equipment a planner must move. Planners integrate data from all sources, sequencing it by required delivery date and by priority within the required delivery date. It is further sorted by destination and compiled into a single time-phased listing.
- Lift Mode. The selected lift mode identifies what transportation means will move personnel or cargo between point of origin and destination.
- Routing. Routing moves from load and pickup points to intermediate and transfer locations to offload and drop points.
- Timing. Timely arrival of personnel, supplies, and equipment at intended destinations is the goal of transportation planning. A key to transportation scheduling is flexibility. Timing the beginning and end of each leg of a movement increases flexibility. Basic limitations to timeliness include—
  - Required delivery date at the destination.
  - Time when personnel, supplies, and equipment are available for movement from their points of origin.
  - Time and/or distance factors.
  - Throughput capacities of support facilities.
  - Capacity and security of staging bases and supply depots.
  - Special requirements caused by terrain, climate, and environment.

Planning Process. A transportation planner follows five steps when planning for transportation. These five steps are described in the following paragraphs.

Step One: Determining Requirements. Transportation planners must—

- Determine each requirement for personnel, equipment, or supplies generates a corresponding requirement for transportation.
- Express initial requirements in terms of tonnage and square footage, number of personnel, and distance. A planner estimates requirements based on supplies needed to support a MAGTF and average distances traveled during each phase of an operation.

Step Two: Determining Resources. Planners must consider—

- Type of transportation units available.
- Characteristics and capabilities of each mode of transportation.
- Capabilities of available civilian transportation. (This estimate is based on a survey of facilities, inspection of equipment, and agreements negotiated with civilian transportation operators.)
- Availability of indigenous labor or prisoners of war to supplement personnel resources consistent with international law.
- Capabilities of available host nation transportation, both civilian and military.

Step Three: Balancing Requirements and Resources. The balancing process determines whether transportation capabilities are adequate to support an operation. It establishes a workload for each transportation mode. This step is the most time-consuming portion of the transportation planning process. Planning must include more than just gross quantities of cargo and transportation resources. It must include planning for command and control and for transportation unit support.

Step Four: Determining Critical Points. After completing a preliminary plan, planners have enough information to analyze the transportation system. Then a planner can identify critical points where bottlenecks can delay throughput. Bottlenecks can occur because of shortfalls in personnel, equipment, or facilities. A planner should identify critical time periods. Developing and analyzing alternative schedules, modes, or routes can alleviate bottlenecks and increase flexibility.

Step Five: Coordinating. Complete coordination with all stakeholders is mandatory for integrated transportation support. Original guidance is seldom valid throughout the planning process. Constant coordination is necessary since transportation plans often change as commander's concepts, requirements, priorities, and allocations change.

General Engineering

The MAGTF engineer assigns and integrates construction tasks and priorities for both Marine Corps and NCF elements assigned to a MAGTF. The NCF assists the MAGTF engineer in planning and coordinating construction requirements to best use the NCF's unique capabilities. Continuous liaison is vital during planning, deployment, and execution phases of MAGTF operations. For more information, refer to MCTP 3-34D and MCTP 3-40D. Engineer-support planning areas discussed in the following subparagraphs require special consideration.

Heavy Equipment. Most construction equipment is heavy and slow moving. Although construction equipment can negotiate rough terrain, it is incapable of self-deployment and must be transported to and from project sites by other LCE unit line-haul assets.

Transportation. Engineer units do not have enough transportation assets to move themselves. Augmentation is necessary when moving a large volume of equipment rapidly or over extended distances.

Construction Material. Most general engineering projects require a large quantity of construction materials. Time, manpower, equipment, and fuel required to assemble and use these supplies are often significant. Careful planning minimizes multiple handling during movement of these items to the construction site. Movement directly from source of supply to job site is optimal.

Supply and Maintenance Support. General engineer projects are reliant upon dedicated, responsive supply and maintenance support. To sustain operational readiness, critical low-density equipment such as excavators, graders, and compactors require constant maintenance and expensive parts. Supplies necessary to sustain projects can include POL, construction materials, non-potable water, military explosives, and bulk materials (e.g., sand, gravel). Quality and quantity of supplies required is contingent upon scope and scale of each project, as well as construction standards specified in theater-specific guidance. For more information, refer to JP 3-34 and MCWP 3-34.

Utilities Support. Establishing and operating a bulk water production and storage site requires a large area containing relatively level terrain located adjacent to a raw water source. Similarly, laundry and field shower siting must consider access to water and terrain with slope that is favorable for gray water drainage. Planning for installation of power generators and distribution networks also requires consideration of real estate factors. Base camp planners designate an area or areas to centralize power generation systems and bulk fuel. Power distribution lines are installed above or below ground. Site selection should consider noise produced by power generator equipment, as well as safety of personnel living or working in areas containing power distribution lines. Additional details related to water support can be found in MCRP 3-40D.14, *Water Support Operations*.

Bulk Fuel Support. Establishing or relocating a bulk fuel farm requires a significant area of generally level terrain. A large area permits tactical dispersion of storage bags, pumps, and hoses and enables construction of earthen berms that serve to mitigate catastrophic destruction from either enemy weapons or mishap. Berms provide redundant containment for any potential fuel spills. Engineer equipment is necessary for site improvement and berm construction. This equipment is necessary during a bulk fuel farm closure or relocation. Once established, tactical refueler trucks assist in distribution to organizations unable to draw fuel from the bulk fuel farm. Additional details related to petroleum operations can be found in MCRP 3-40B.5.

Health Service Support

Equipment for some MAGTF medical units requires external transportation, fuel, and utilities support to be fully operational. Although HSS staffs conduct medical planning within a MAGTF, logistics planners should ensure—

- Complementary equipment and associated consumables kits, as listed on the authorized medical and dental allowance lists, are in sufficient quantities to support the force.
- Narcotics handling and security procedures are established.
- Medical regulating channels and procedures for moving and tracking casualties between and within levels of care are established.
- A mix of dedicated and opportune lift for casualty evacuation is decided based on the CONOPS, casualty estimates, and METT-T.

- Role I-III treatment facilities are identified.
- Medical evacuation policies are established.
- Preventive medicine requirements and preventive medicine technicians for insect control and redeployment agriculture inspections are identified.
- Mass casualty procedures are established.
- Primary and secondary casualty receiving and treatment ships are identified for amphibious operations.
- Force health protection and special medical treatment requirements for the AO (e.g., immunizations, antivenin, blood products, anti-malarial medication) are identified.
- Plans for medical waste disposal and management are developed.
- Casualty estimates are developed with administrative and HSS representatives to ensure medical capabilities and medical logistics are adequately accounted for during planning and execution of MAGTF operations.

Additional guidance for medical services can be found in Chairman of the Joint Chiefs of Staff Manual 3122.05, *Operating Procedures for Joint Operation Planning and Execution System*; MCTP 3-40; and the entire 3-40A publication series.

Services

Planning considerations for services vary for each function and operational situation. The following subparagraphs describe factors that are common to all.

Responsibility. Units are responsible for executing command services' functions consistent with organic capabilities specified in their table of organization mission statement. Equipping and staffing of detachments should be consistent with this specification. Higher-echelon organizations are responsible for augmenting or reinforcing subordinate unit capabilities. An LCE provides CSS functions to the MAGTF elements, per direction of the MAGTF commander.

Chain of Command. Combat service support services' functions are typically implemented in operational chains of command. In contrast, most command services' functions typically operate in administrative chains of command in garrison and can continue to do so even after deployment. Commanders must consider problems that deployments might pose for continuing administrative support when preparing plans for command services' functions. When appropriate, specific guidance should be issued for shifting command services' functions to the operational chain of command and processing these functions via staff cognizance of the MAGTF command element.

Explosive Ordnance Disposal Support. Although not a doctrinal subfunction of logistics, EOD has a company located within each active duty engineer support battalion of an MLG. An EOD section is also within each MWSS of the Marine aircraft wing. Most EOD information in an OPORD is contained in Appendix 12 (Explosive Ordnance Disposal) of Annex C (Operations), which is drafted by the MAGTF EOD staff officer. Input focuses on the full spectrum of EOD operations during air, land, and maritime operations. Considerations include integration of EOD personnel in support of specific types of activities (e.g., dismounted, mounted, rapid-response, special operations, airfield support).

Marine Corps EOD has evolved into a force that is fully capable of supporting ground combat units conducting distributed operations while both mounted and dismounted. All MAGTF elements must ensure close coordination with EOD personnel for detection of improvised explosive devices, unexploded explosive ordnance, and weapons of mass destruction to minimize risk within the MAGTF AO and collateral damage to surrounding populace and infrastructure. In addition to supporting freedom of maneuver and protection of critical infrastructure, EOD forces provide enabling capabilities that support intelligence collection and exploitation.

All EOD support requirements during irregular operations and transition activities are often significantly higher than during traditional combat operations. Historically, demand for EOD support increasaed exponentially during phase 4 operations and required considerable logistic coordination and equipment availability. Additional information regarding EOD can be found within MCTP 10-10D, *MAGTF Explosive Ordnance Disposal*, and MCRP 10-10D.1, *Multi-Service Tactics, Techniques and Procedures for Explosive Ordnance*.

GLOSSARY

Section I. Abbreviations and Acronyms

ABCANZ	American, British, Canadian, Australian, and New Zealand Armies' Program
ACE	Aviation combat element
ADCON	administrative control
AMC	Air Mobility Command
AO	area of operations
APOD	aerial port of debarkation
ASCC	Army Service component command
ATP	Army techniques publication
C2	command and control
CBMU	construction battalion maintenance unit
CCDR	combatant commander
CJCS	Chairman of the Joint Chiefs of Staff
CLE	component logistics element
CMC	Commandant of the Marine Corps
CNO	Chief of Naval Operations
COA	course of action
COLS	concept of logistics support
CONOPS	concept of operations
CONUS	continental United States
CRFP	crisis response force package
CSS	combat service support
CUL	common-user logistics
DC	deputy commandant
DFAS	Defense Finance and Accounting Service
DHA	Defense Health Agency

DLA	Defense Logistics Agency
DoD	Department of Defense
DoDD	Department of Defense directive
EA	executive agent
EOD	explosive ordnance disposal
FM	FFleet Marine Forces
G-3	assistant chief of staff, operations and training/operations and training staff section
G-4	assistant chief of staff, logistics/logistics staff section
GCE	ground combat element
GPN	Global Positioning Network
GSA	General Services Administration
HHQ	higher headquarters
HNS	host-nation support
HQMC	Headquarters, United States Marine Corps
HSS	health service support
I&L	Installations and Logistics (HQMC)
J-3	operations directorate of a joint staff
J-4	logistics directorate of a joint staff
J-6	communications, computers, and cyberspace directorate of a joint staff
JCS	Joint Chiefs of Staff
JCSB	joint contracting support board
JDDE	joint deployment and distribution enterprise
JDDOC	joint deployment and distribution operations center
JFC	joint force commander
JLEnt	joint logistics enterprise
JMC	joint movement center

JOA	joint operations area
JOPES	Joint Operation Planning and Execution System
JP	joint publication
JRRB	joint requirements review board
JRSOI	joint reception, staging, onward movement, and integration
JTF	joint task force
JTF-PO	joint task force-port opening
LCE	logistics combat element
LOGCAP	Logistics Civil Augmentation Program (Army)
MAGTF	Marine air-ground task force
MALS	Marine aviation logistics squadron
MALSP	Marine aviation logistics support program
MARAD RRF	Maritime Administration Ready Reserve Force
MARCORLOGCOM	Marine Corps Logistics Command
MARCORSYSCOM	Marine Corps Systems Command
MCDP	Marine Corps doctrinal publication
MCPP	Marine Corps Planning Process
MCPP-N	Marine Corps Prepositioning Program-Norway
MCRP	Marine Corps reference publication
MCTP	Marine Corps tactical publication
MCWP	Marine Corps warfighting publication
MDMC	Marine Depot Maintenance Command
MEB	Marine expeditionary brigade
MEF	Marine expeditionary force
METT-T	mission, enemy, terrain and weather, troops and support available-time available
MEU	Marine expeditionary unit
MILDEP	Military Department
MLG	Marine logistics group
MLI	MAGTF Logistics Integration
MLR	Marine littoral regiment
MPF	maritime prepositioning force

MPSRON	maritime prepositioning ships squadron
MSC	Military Sealift Command
MWSS	Marine wing support squadron
NATO	North Atlantic Treaty Organization
NCF	naval construction force
NCR	naval construction regiment
NECC	Navy Expeditionary Combat Command
NGO	nongovernmental organization
NLI	Naval Logistics Integration
NWP	Navy warfare publication
OPCON	operational control
OPLAN	operation plan
OPORD	operation order
OPT	operational planning team
PNA	physical network analysis
POL	petroleum, oils, lubricants
RED HORSE	rapid engineer deployable heavy operational repair squadron engineer
RSOI	reception, staging, onward movement, and integration
R2P2	rapid response planning process
S-3	operations and training officer/office
S-4	logistics officer/office
SAPO	subarea petroleum office
SDDC	Military Surface Deployment and Distribution Command
SecDef	Secretary of Defense
SECNAVINST	Secretary of the Navy instruction
SPOD	seaport of debarkation

T-AK	container and roll-on/roll-off ship
T-AKE	dry cargo and ammunition ship
T-AKR	large, medium-speed, roll-on/roll-off ship (MSC)
TACON	tactical control
TPMRC	United States Transportation Command patient movement requirements center
TSC	theater sustainment command (Army)
US	United States
USC	United States Code
USG	United States Government
USTRANSCOM	United States Transportation Command

Section II. Terms and Definitions

allocation

Distribution of limited forces and resources for employment among competing requirements. (DoD Dictionary. Part 1 of a 2-part definition.)

area of responsibility

The geographical area associated with a combatant command within which the combatant commander has authority to plan and conduct operations. Also called AOR. (DoD Dictionary)

basic load

The quantity of supplies required to be on hand within, and which can be moved by a unit or formation, expressed according to the wartime organization of a unit or formation and maintained at prescribed levels. (DoD Dictionary)

campaign

A series of related operations aimed at achieving strategic and operational objectives within a given time and space. (DoD Dictionary)

casualty

Any person who is lost to the organization by having been declared dead, duty status-whereabouts unknown, excused absence – whereabouts unknown, missing, ill, or injured. (DoD Dictionary)

casualty evacuation

(See DoD Dictionary for core definition. Marine Corps amplification follows.) Movement of sick, wounded, or injured that begins at point of injury or onset of disease and includes movement both to and between medical treatment facilities. (Note: All units have an evacuation capability. Any vehicle may be used to evacuate casualties. If a medical vehicle is not used it should be replaced with one at the first opportunity. Similarly, aeromedical evacuation should replace surface evacuation at the first opportunity.) Also called **CASEVAC.** (USMC Dictionary)

combatant commander

A commander of one of the unified or specified combatant commands established by the President. Also called **CCDR**. (DoD Dictionary)

combat power

The total means of destructive and disruptive force that a military unit/formation can apply against the enemy at a given time. (DoD Dictionary)

combat service support

The essential capabilities, functions, activities, and tasks necessary to sustain operating forces in theater at all levels of warfare. Also called **CSS**. (DoD Dictionary)

combat service support area

(See DoD Dictionary for core definition. Marine Corps amplification follows.) The primary combat service support installation established to support Marine air-ground task force operations ashore. Normally located near a beach, port, and/or an airfield, it usually contains the command post of the logistics combat element commander and supports other combat service support installations. Also called **CSSA**. (USMC Dictionary)

command and control

(See DoD Dictionary for core definition. Marine Corps amplification follows.) A means by which a commander recognizes what needs to be done and sees to it that appropriate actions are taken. Command and control is one of seven warfighting functions. Also called **C2**. (USMC Dictionary)

common-user logistics
Materiel or service support shared with or provided by two or more Services, Department of Defense agencies, or multinational partners to another Service, Department of Defense agency, non-Department of Defense agency, and/or multinational partner in an operation. Also called **CUL**. (DoD Dictionary)

concept of logistic support
A verbal or graphic statement, in a broad outline, of how a commander intends to support and integrate with a concept of operations in an operation or campaign. Also called **COLS**. (This term and definition are approved for use and will be included in the next edition of the USMC Dictionary)

concept of operations
A verbal or graphic statement that clearly and concisely expresses what the commander intends to accomplish and how it will be done using available resources. Also called **CONOPS**. (DoD Dictionary)

contingency plan
A branch of a campaign plan that is planned based on hypothetical situations for designated threats, catastrophic events, and contingent missions outside of crisis conditions. (DoD Dictionary)

contracting
Purchasing, renting, leasing, or otherwise obtaining supplies or services from nonfederal sources. Contracting includes description (but not determination) of supplies and services required, selection and solicitation of sources, preparation and award of contracts, and all phases of contract administration. It does not include making grants or cooperative agreements. (Federal Acquisition Regulation)

contracting officer
A Service member or Department of Defense civilian with the legal authority to enter into, administer, modify, and/or terminate contracts. (DoD Dictionary)

control
Authority that may be less than full command exercised by a commander over part of the activities of subordinate or other organizations. (DoD Dictionary. Part 1 of a 4-part definition.)

coordination
The action necessary to ensure adequately integrated relationships between separate organizations located in the same area. Coordination may include such matters as fire support, emergency defense measures, area intelligence, and other situations in which coordination is considered necessary. (USMC Dictionary)

cross-servicing
A subset of common-user logistics in which a function is performed by one Service in support of another Service and for which reimbursement is required from the Service receiving support. See also common-user logistics. (DoD Dictionary)

depot-level maintenance
Maintenance actions taken on materiel or software involving inspection, repair, overhaul, or modification or reclamation (as necessary) of weapons systems, equipment end items, parts, components, assemblies, and subassemblies that are beyond field-level maintenance capabilities. (USMC Dictionary)

directive authority for logistics
Combatant commander authority to issue directives to subordinate commanders to ensure effective execution of approved operation plans, optimize use or reallocation of available resources, and prevent or eliminate redundant facilities and/or overlapping functions among Service component commands. Also called **DAFL**. (DoD Dictionary)

distribution
An operational process of synchronizing all elements of the logistic system to deliver the “right things” to the “right place” at the “right time” to support a geographic combatant commander. (This term and definition are approved for use and will be included in the next edition of the USMC Dictionary)

distribution system

That complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control flow of military materiel between point of receipt into the military system and point of issue to using activities and units. (DoD Dictionary)

embarkation

Process of putting personnel and/or vehicles and their associated stores and equipment into ships and/or aircraft. (DoD Dictionary)

evacuation

2. Withdrawal from a threatened area. 3. A controlled process of collecting, classifying, and shipping unserviceable or abandoned materiel, United States or foreign, to appropriate reclamation, maintenance, technical intelligence, or disposal facilities. (DoD Dictionary. Parts 2 and 3 of a 4-part definition.)

expeditionary airfield

A prefabricated and fully portable airfield. The effort and assets (e.g., materiel, engineer support, operational guidance, security) required for installation/operation of an expeditionary airfield can require participation/ support of all elements of the Marine air-ground task force. Also called **EAF**. (USMC Dictionary)

explosive ordnance

All munitions and improvised or clandestine explosive devices, containing explosives, propellants, nuclear fission or fusion materials, and biological and chemical agents. (DoD Dictionary)

explosive ordnance disposal

The process to detect, locate, access, diagnose, render safe/neutralize, recover, exploit, and dispose of explosive or improvised explosive threats. Also called **EOD**. (DoD Dictionary)

Fleet Marine Forces

(See DOD Dictionary, Fleet Marine Force, for core definition. Marine Corps amplification follows.) Those combined arms forces and the integral supporting elements thereof whose primary missions are to participate in combat and other operations as lawfully assigned. These forces may be task-organized as Marine air-ground task forces or as a Service component under a combatant command and include the Marine Corps Reserve, Marine Corps security forces at Navy shore activities, Marine Corps integral supporting elements, and Marine Corps combat forces not otherwise assigned. Also called **FMF**. (USMC Dictionary)

logistics

(See DOD Dictionary for core definition. Marine Corps amplification follows.) 1. The science of planning and executing the movement and support of forces. 2. All activities required to move and sustain military forces. Logistics is one of the seven warfighting functions. (USMC Dictionary)

logistics combat element

The core element of a Marine air-ground task force (MAGTF) that is task-organized to provide combat service support necessary to accomplish a MAGTF's mission. A logistics combat element varies in size from a small detachment to one or more Marine logistics groups. It provides supply, maintenance, transportation, general engineering, health services, and a variety of other services to the MAGTF. In a joint or multinational environment, it may also contain other Service or multinational forces assigned or attached to the MAGTF. A logistics combat element itself is not a formal command. Also called **LCE**. See also Marine air-ground task force. (USMC Dictionary)

Marine air-ground task force

Marine Corps' principal organization for all missions across the range of military operations, composed of forces task-organized under a single commander capable of responding rapidly to a contingency anywhere in the world. Types of forces in a Marine air-ground task force (MAGTF) are functionally grouped into four core elements: a command element, an aviation combat element, a ground combat element, and a logistics combat element. These four core elements are categories of forces, not formal commands. The basic structure of a MAGTF never varies, though number, size, and type of Marine Corps units comprising each of its four elements will always be mission dependent. The flexibility of this organizational structure allows for one or more

subordinate MAGTFs to be assigned. In a joint or multinational environment, other Service or multinational forces may be assigned or attached. Also called **MAGTF**. See also logistics combat element; Marine expeditionary brigade; Marine expeditionary force (Forward); Marine expeditionary unit. (USMC Dictionary)

Marine Corps forces

An amalgamation of personnel, materiel, and support elements that comprises the Marine Corps. These forces (formally identified as Fleet Marine Forces in Title 10) include Regular Marine Corps, Fleet Marine Corps Reserve, and Marine Corps Reserve. See also FMF; supporting establishment. (USMC Dictionary)

Marine expeditionary brigade

A Marine air-ground task force that is constructed around an infantry regiment reinforced, a composite Marine aircraft group, and a combat logistics regiment. The Marine expeditionary brigade (MEB), commanded by general officer, is task-organized to meet requirements of a specific situation. It can function as part of a joint task force, as lead echelon of the Marine expeditionary force, or alone. It varies in size and composition and is larger than a Marine expeditionary unit but smaller than a Marine expeditionary force. MEB is capable of conducting missions across the range of military operations. In a joint or multinational environment, it may also contain other Service or multinational forces assigned or attached to -the Marine air-ground task force. Also called **MEB**. (USMC Dictionary)

Marine expeditionary force

The largest Marine air-ground task force and Marine Corps' principal warfighting organization, particularly for larger crises or contingencies. It is task-organized around a permanent command element and normally contains one or more Marine divisions, Marine aircraft wings, and Marine logistics groups. A Marine expeditionary force is capable of missions across a range of military operations, including amphibious assault and sustained operations ashore in any environment. It can operate from a sea base, a land base, or both. In a joint or multinational environment, it may also contain other Service or multinational forces assigned or attached to the Marine air-ground task force. Also called **MEF**. (USMC Dictionary)

Marine expeditionary unit

A Marine air-ground task force that is constructed around an infantry battalion reinforced, a composite squadron reinforced, and a task-organized logistics combat element. It normally fulfills Marine Corps' forward sea-based deployment requirements. Marine expeditionary unit provides an immediate reaction capability for crisis response and is capable of limited combat operations. In a joint or multinational environment, it may contain other Service or multinational forces assigned or attached to a Marine air-ground task force. Also called **MEU**. (USMC Dictionary)

Marine logistics group

The logistics combat element of a Marine expeditionary force (MEF). It is a permanently organized command tasked with providing combat service support beyond organic capabilities of supported units of the MEF. Marine logistics group is normally structured with direct and general support units, which are organized to support a MEF possessing one Marine division and one Marine aircraft wing. It may also provide smaller task-organized logistics combat elements to support Marine air-ground task forces smaller than a MEF. Also called **MLG**. (USMC Dictionary)

mobility

A quality or capability of military forces which permits them to move from place to place while retaining the ability to fulfill their primary mission. (DoD Dictionary)

mortuary affairs

Provides search for, recovery, identification, preparation, and disposition of human remains of persons for whom the Services are responsible. Also called **MA**. (DoD Dictionary)

objective

1. A clearly defined, decisive, and attainable goal toward which an operation is directed. 2. The specific goal of the action taken which is essential to a commander's plan. (DoD Dictionary)

operation

1. A sequence of tactical actions with a common purpose or unifying theme. 2. A military action or carrying out of a military mission. (DoD Dictionary)

operational level of warfare

The level of warfare in which campaigns and operations are planned, conducted, and sustained to achieve operational objectives to support achievement of strategic objectives. See also strategic level of warfare; tactical level of warfare. (DoD Dictionary)

operation order

A directive issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation. Also called **OPORD**. (DoD Dictionary)

operation plan

A complete and detailed plan containing a full description of the concept of operations, all annexes applicable to a plan, and a time-phased force and deployment list. Also called **OPLAN**. (DoD Dictionary)

overhaul

The restoration of an item to a completely serviceable condition as prescribed by maintenance serviceability standards. See also rebuild; repair. (USMC Dictionary)

port

A place at which ships may discharge or receive their cargoes. It includes any port accessible to ships on the seacoast, navigable rivers, or inland waterways. The term “ports” should not be used in conjunction with air facilities which are designated as aerial ports, airports, etc. (NTRP 1-02)

procurement

The process of obtaining personnel, services, supplies, and equipment. (NTRP 1-02)

rear area

That area extending forward from a command’s rear boundary to the rear area assigned to a command’s subordinate units. This area is primarily provided for performance of combat service support functions. (USMC Dictionary)

rebuild

The restoration of item to a standard as near as possible to its original condition in appearance, performance, and life expectancy. See also overhaul; repair. (USMC Dictionary)

recovery

Actions taken to extricate damaged or disabled equipment for return to friendly control or repair at another location. (DoD Dictionary. Part 3 of a 3-part definition.)

repair

The restoration of an item to serviceable condition through correction of a specific failure or unserviceable condition. See also overhaul; rebuild. (USMC Dictionary)

repair and replenishment point

A combat service support installation, normally in forward areas near a supported unit, established to support a mechanized or other rapidly moving force. It may be either a prearranged point or a hastily selected point to rearm, refuel, or provide repair services to a supported force. Also called **RRP**. (USMC Dictionary)

resupply

Act of replenishing stocks in order to maintain required levels of supply. (DoD Dictionary)

security

Measures taken by a military unit, activity, or installation to protect itself against all acts designed to, or which may, impair its effectiveness. (DoD Dictionary. Part 1 of a 3-part definition.)

selective interchange
The controlled removal and replacement of a serviceable repair part or component from one item to satisfy a deficiency in another item. (USMC Dictionary)

strategic level of warfare
The level of warfare at which a nation determines national or multinational guidance, develops strategic objectives, then develops and commits national resources to achieve those objectives. See also operational level of warfare; tactical level of warfare. (DoD Dictionary)

subordinate command
A lower-echelon command consisting of a commander and all those individuals, units, detachments, organizations, or installations that have been placed under the command by the establishing authority. (DoD Dictionary)

supply
The procurement, distribution, maintenance while in storage, and salvage of supplies, including the determination of kind and quantity of supplies. (DoD Dictionary)

support
1. The action of a force that aids, protects, complements, or sustains another force in accordance with a directive requiring such action. 2. A unit that helps another unit in battle. 3. An element of a command that assists, protects, or supplies other forces in combat. (DoD Dictionary)

supporting establishment
Those personnel, bases, and activities that support the Fleet Marine Forces. See also Marine Corps forces; FMF. (USMC Dictionary)

survivability
(See DoD Dictionary for core definition. Marine Corps amplification follows.) The degree to which a system is able to avoid or withstand a man-made hostile environment without suffering an abortive impairment of its ability to accomplish its designated mission. (USMC Dictionary)

sustainment
Provision of logistics and personnel services required to maintain and prolong operations until successful mission accomplishment. (DoD Dictionary)

tactical level of warfare
The level of warfare at which forces plan and execute battles and engagements to achieve military objectives. See also operational level of warfare; strategic level of warfare. (DoD Dictionary)

task force
A component of a fleet organized by the commander of a task fleet or higher authority for accomplishment of a specific task or tasks. Also called **TF**. (DoD Dictionary)

throughput
(See DoD Dictionary for core definition. Marine Corps amplification follows.) In logistics, flow of sustainability assets in support of military operations, at all levels of warfare, from point of origin to point of use. It involves movement of personnel and materiel over lines of communications using established pipelines and distribution systems. (Upon promulgation of this publication, this modified definition is approved for use and will be incorporated in the next edition of USMC Dictionary)

unified command
A command with a broad continuing mission under a single commander, composed of significant assigned components of two or more Military Departments that is established and so designed by the President, through the Secretary of Defense with the advice and assistance of the Chairman of the Joint Chiefs of Staff. Also called unified combatant command. (DoD Dictionary)

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