*Field Manual 100-11

Headquarters
Department of the Army
Washington, DC, 15 January 1995

FORCE INTEGRATION

TABLE OF CONTENTS

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

* This publication supersedes FM 100-11, 29 September 1988

PREFACE

The Army performs the functions of organizing, equipping, and training forces to execute its role of conducting prompt and sustained combat operations on land to accomplish missions assigned by a joint force commander. The Army's capstone warfighting doctrine, contained in Field Manual (FM) 100-5 focuses on the role and missions of a force projection army. How the Army accomplishes the organize, equip and train functions preliminary to and concurrent with mission accomplishment is the subject of this manual.

The US Army changes doctrine, training, organizations, and materiel to improve force capability and remain a dominant land force. Management of change is required to ensure that capability increases are achieved with minimum adverse effect on readiness during the transition phase to new doctrine, new organizations, and new materiel. FM 100-11 describes the systematic management of change for the Total Army as a full-dimensional, force projection army in all potential environments. It applies to all echelons from Headquarters Department of the Army to division and installation levels.

This capstone manual links Army roles and missions to the functions essential to fielding forces that will respond quickly and decisively to all commitments in consonance with national goals and objectives. It recognizes that Army component commands will operate as part of joint and combined forces and must be structured, manned, equipped, trained, sustained, deployed, stationed, funded, and ready to achieve decisive victory.

The proponent of this manual is the Office of the Deputy Chief of Staff for Operations and Plans, Headquarters, Department of the Army. Send comments and recommendations on Department of the Army Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commandant, Army Force Management School, Fort Belvoir, Virginia 22060-5923.

INTRODUCTION

The Army's ability to manage change directly affects mission accomplishment in war and operations other than war. Force integration is the doctrine that describes how the Army systematically introduces, incorporates, and sustains new doctrine, new organizations, and new materiel. Thus, the doctrine contained in FM 100-11 supports the statutory functions to organize, equip, and train for prompt and sustained land combat.

The first effort to document the doctrine of management of change in 1988 was a result of the "bow wave" of modernization that saw new doctrine (AirLand Battle), new organizations (Division 86 and Army of Excellence), and 400+ new materiel systems (notably the Abrams tanks, Bradley fighting vehicles, Blackhawk helicopters, Patriot air defense systems, multiple launch rocket system, and multiple subscriber equipment) enter the active and reserve components. The 1988 version of FM 100-11 documented the complexity of the force integration mission and the volatile nature of the systems that supported it.

The 1994 doctrine describes the current functional systems that structure, man, equip, train, sustain, deploy, station, and fund Army organizations. The effective management of organizations is the common denominator of all functions with a focus on measurable output; in war, the attainment of operational objectives, and in peace, the attainment of readiness objectives. This doctrine prescribes the structure, tasks, and philosophy to manage change effectively.

This manual is primarily directed toward managers of change who determine force and alternative means of resourcing requirements, allocate resources, and assess resource utilization. It is of equal value to the executors of change; the commanders and leaders who must understand how the Army organizes, trains, and equips forces as well as to understand how the Army fights. The ability to fight wars presupposes the ability to manage the functions that build and sustain combat power; this doctrine serves both purposes.

Chapter 1
How the Army Works

Section I: Introduction

The successful integration of new doctrine, organizations, and equipment into the Army requires the synchronization of functional systems and multiple levels of command. Managing the interrelated functions that build a more capable force is necessary to conduct combat operations. While the functional systems are linked in building a combat-ready force, the processes and systems that support them are not. Command, management, and leadership are required to provide that linkage.

The historical foundations of the Army highlight the intangibles that must be retained as the Army evolves into the 21st century. This evolutionary process is based upon the Army's enduring values and core competencies and guided by its leaders' vision of the future Army. Understanding the Army Functional Life Cycle Model (AFLCM) is critical to the Army's future leaders. The AFLCM is a closed-loop depiction of how the Army accomplishes its statutory functions to conduct prompt and sustained combat on land. This chapter reviews where the Army fits into the national defense environment by discussing the chain of command. It provides an overview of the planning process to reveal how Army requirements are determined. The execution of programs to meet these requirements is addressed by reviewing the programming process. This chapter concludes with a discussion of interrelationships and mechanisms that allow the Army to provide forces that are properly organized, trained, and equipped to the Commanders-in-Chief (CINCs) of unified commands to accomplish operational missions.

Section II: The Army's Roles and Missions

THE ARMY'S CONSTITUTIONAL ROLE

The Constitution of the United States says that "we the people...provide for the common defense," that the Congress raises the Army, and that the president shall be the commander-in-chief. The Congress, by statute, has provided for a Secretary of Defense, Secretary of the Army, Chief of Staff of the Army, and Army missions. The mission of the United States Army is to protect and defend the Constitution of the United States of America. The Army does this by deterring and, when deterrence fails, by achieving quick, decisive victory -- on and off the battlefield -- anywhere in the world and under virtually any conditions as part of a joint team.

THE ARMY'S TITLE 10 FUNCTIONS

The Army executes the will of the Congress by performing its functions of recruiting, organizing, supplying, equipping, training, servicing, mobilizing, demobilizing, administering, maintaining, repairing military equipment and acquisition and maintenance of real property for Army forces in accordance with Title 10 (Armed Forces) of the United States Code (Section 3062), which states:

> *"It is the intent of Congress to provide an Army that is capable, in conjunction with the other Armed Forces, of preserving the peace and security... of the United States...supporting the national policies...implementing the national objectives...and overcoming any nations responsible for aggressive acts that imperil the peace and security of the United States. [The Army] shall be organized, trained, and equipped primarily for prompt and sustained combat incident to operations on land... [and] is responsible for the preparation of land forces necessary for the effective prosecution of war except as otherwise assigned and, in accordance with integrated joint mobilization plans for the expansion of the peacetime components of the Army to meet the needs of war"*

THE ARMY'S SOCIETAL ROLE

A distinction is made between the Army as an institution and the Army as an organization. Both roles are critical in maintaining a strategic force capable of decisive victory.

The Army as an Institution

The "institution" of the Army is its essence, traditions, history, and lineage. It includes leader development, doctrine, training, professionalism, integrity, and the Army's tradition of responsibility to the nation. The Army's enduring values flow from the American ideals embodied in the Constitution and Declaration of Independence. They guide the actions of soldiers as individuals and groups. Throughout American military history, these values have provided a firm foundation for military leaders and soldiers. They provide all soldiers with principles of conduct and standards of behavior that exemplify those ideals and values to which Americans subscribe. These values include-

- Courage, both physical and moral.
- Integrity.
- Candor.
- Competence.
- Commitment.
- Loyalty to the ideals of the nation, to one's unit, and to one's fellow soldiers.
- Personal responsibility.
- Fair treatment for all regardless of race, gender, religion, or national origin.
- Selfless service.

The Army as an Organization

The "organization" is the Army at any point in time. It includes units and soldiers in all components, civilians, family members, the defense industry, capabilities, and structure. The "organization" is highly visible at home and abroad. It serves the nation's peacetime interests and is ready to fight when called upon.

Core Competencies

Core organizational competencies, as depicted in Figure 1-1 are the quintessential constants that give the Army the competitive edge over potential adversaries. They are adaptable to changing situations and, in combination, have a synergistic effect on mission accomplishment. They are critical for successful mission execution and apply across all military operations. These competencies ensure the Army is-

- Trained, with the ability to fight as part of a joint or combined force.
- Versatile, with the ability to respond across the continuum of military operations.
- Deployable, with the ability to project combat power rapidly from the continental United States (CONUS) to any location where US national interests are threatened.
- Expansible, with the ability to respond constitute new forces in response to a deterioration in the international order or emergence of a major threat to US interests.
- Capable of decisive victory, with the ability to win quickly with minimum casualties.

The Six Imperatives

The Army's six imperatives support these core competencies and are the foundation for future success. When properly resourced and balanced, they coalesce in a trained and ready force. These imperatives include-

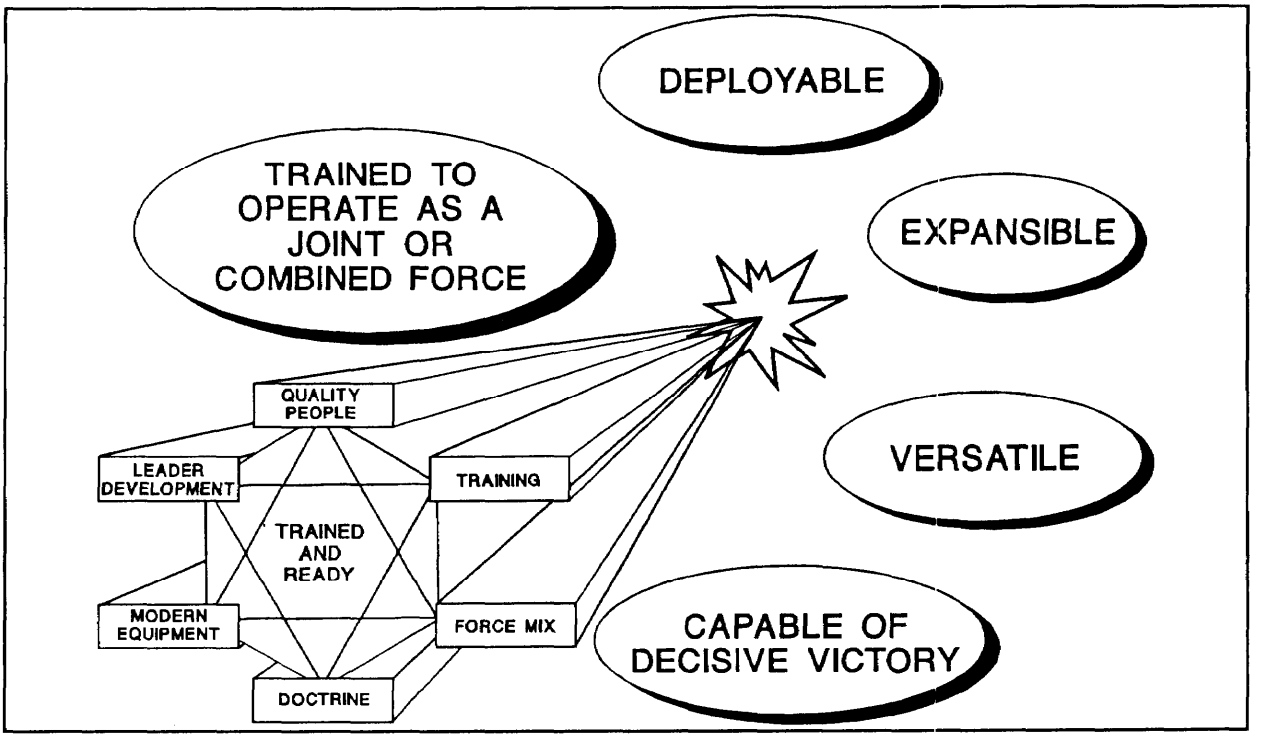


Figure 1-1
Core Competencies

- Quality soldiers, trained, motivated, and challenged.

- Competent leaders, clear in their vision of the future, with fully developed combat skills.

- Challenging training, focused on realistic scenarios and oriented toward joint, combined, and coalition operations and contingency missions.

- Modern equipment that provides soldiers with the greatest available lethality and best technology.

- Force mix of Army civilians, reserve, and active forces that preserves essential warfighting capabilities in rapidly deployable units. The correct force mix also allows time for mobilization and training of follow-on and reconstituted units.

- Effective doctrine that accommodates joint, combined, and coalition maneuver-oriented, high tempo, and high technology warfare.

Coalescence of the Army as Institution and Organization

To understand the essence of the Army, a relationship must be maintained between the "institutiona" Army, with its enduring values, and the "organizational" Army, the strategic force capable of decisive victory (see Figure 1-2, Maintaining the Balance). Institutional changes occur slowly through deliberate evolution and are indistinguishable to the public at large. The "organization" changes to meet requirements presented by national and international realities. In maintaining the balance between capabilities and requirements in the "organization," the "institution" must not lose its enduring values. They are the foundation during periods of change

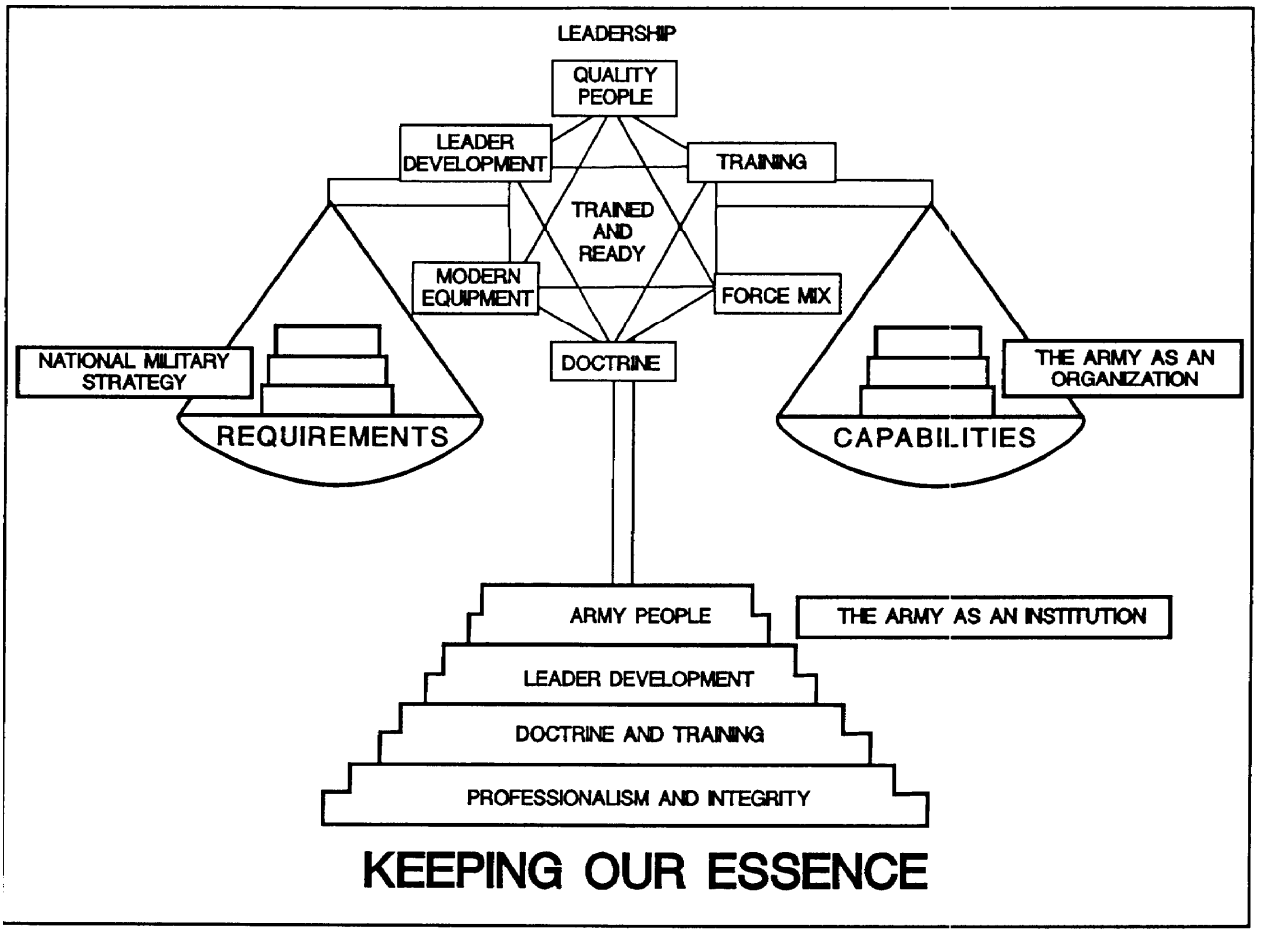


Figure 1-2
Maintaining the Balance

and uncertainty. The challenge is to manage change, increase capability, maintain stability, and foster innovation.

THE ARMY VISION

Essential to any organization's success is a clear understanding of organizational goals: the vision. This is illustrated in Figure 1-3, Army Vision. Achievement of the Army's vision rests squarely on maintaining core competencies.

Section III: Command, Leadership, and Management at the National Level

NATIONAL COMMAND AUTHORITIES

The President and the Secretary of Defense are the National Command Authorities (NCA). The President, as commander-in-chief, is supported by the National Security Council (NSC) in the integration of domestic, foreign, and military policies on national security.

AMERICA's ARMY

A TOTAL FORCE

TRAINED AND READY TO FIGHT

SERVING THE NATION AT HOME AND ABROAD...

A STRATEGIC FORCE

CAPABLE OF DECISIVE VICTORY.

Figure 1-3
The Army Vision

THE DEPARTMENT OF DEFENSE

Department of Defense Elements

The Department of Defense (DOD) includes the Office of the Secretary of Defense (OSD), the Joint Chiefs of Staff (JCS), the military departments, and the military Services within those departments. It also includes the unified commands and other agencies established to meet specific requirements. OSD and the Joint Chiefs of Staff perform vital roles in the process of developing and implementing the national military strategy (NMS), defense resource management, and military operations. Perhaps the most authoritative statement of the national military policy is found in the Defense Planning Guidance (DPG). It is prepared biennially within OSD and is the link between planning and programming used by the Joint Chiefs of Staff and the military departments.

OSD establishes force planning guidance in six categories known as the OSD "six pillars of defense." They are in order of priority-

- Readiness. This is the ability of forces to deliver the outputs for which they were designed. This includes the ability to man, equip, and train in peacetime and to mobilize, deploy, and fight in wartime.
- Force Structure. This is the manpower and material resources of organizations tasked to perform missions in peace and war.
- Sustainability. This is the "staying power" of forces. It includes the ability to produce and deliver forces over prolonged periods.
- Science and Technology. This is the ability to insure our forces maintain a qualitative superiority in technology.
- Systems Acquisition. This is the ability to incorporate new technology after proven in its ability to be a combat multiplier.
- Infrastructure and Overhead. This is the ability to increase efficiency and redirect shrinking resources to our high quality forces by reducing infrastructure and overhead in all program areas.

The Planning, Programming, and Budgeting System

The Planning, Programming, and Budgeting System (PPBS) is a biennial process for deciding on current and future programs through three interrelated phases (planning, programming, and budgeting). Consistency must be maintained

with national security objectives, policies, and strategies. DOD uses the PPBS as its primary system for managing the departments' military functions. It facilitates budgeting in forces, systems, and programs rather than resource categories. It is used to determine force, system, and program costs and to compare alternatives in costs and benefits. In effect, it is the decision structure within which DOD determines its requirements and allocates constrained resources. The DOD PPBS is the primary formal strategic management system for building and maintaining the Future Year Defense Program (FYDP), the official record of major resource allocation decisions made by Secretary of Defense. PPBS progresses from the general (the articulation of the NMS) to the specific (the organizations, manpower, material, training, and support of the forces necessary to carry out that strategy). The FYDP is the summary of programs developed within the PPBS.

THE JOINT CHIEFS OF STAFF

The Joint Chiefs of Staff were formally established as the "principle advisors to the President and the Secretary of Defense" by the National Security Act of 1947. The Goldwater-Nichols DOD Reorganization Act of 1986 has further specified that the Chairman, Joint Chiefs of Staff (CJCS), is the principal military advisor to the President, NSC, and Secretary of Defense as distinct from the entire Joint Chiefs. (See Figure 1-4, Unified Command Structure.) Under the authority of the President and Secretary of Defense, the Joint Chiefs of Staff deal primarily with the planning for operational missions, objectives, and tasks by-

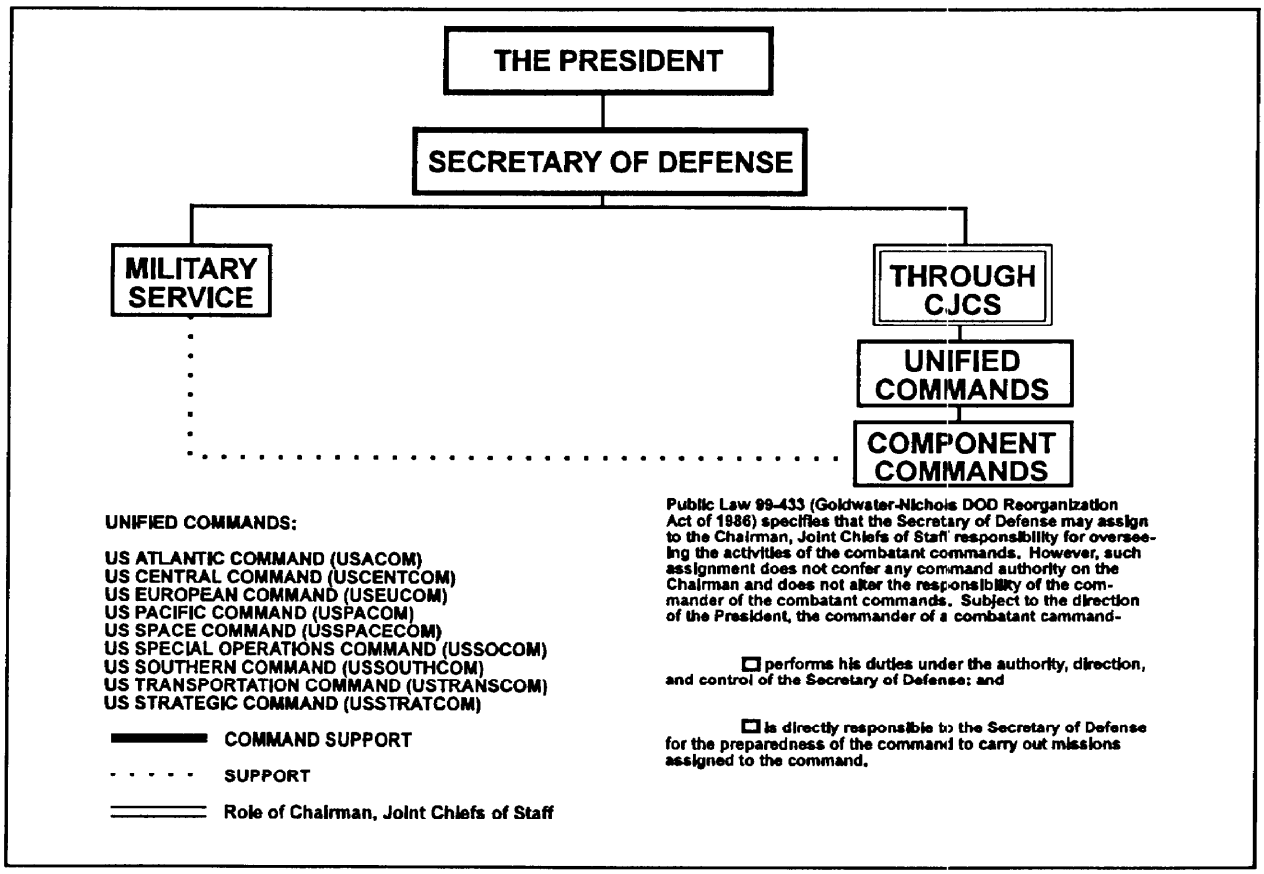


Figure 1-4
Unified Command Structure

- Preparing strategic plans and providing the conduit for civilian strategic direction of the Armed Forces, and

- Establishing unified combatant commands, as required, to conduct combat operations.

The Joint Strategic Planning System

The Joint Chiefs of Staff translate national security policy, resource planning guidance, and the CINCs' requirements into strategic guidance, force structuring objectives, and operational planning guidance. These actions are accomplished within the framework of the Joint Strategic Planning System (JSPS) as illustrated in Figure 1-5, JSPS. JSPS is the primary means by which the Chairman carries out his statutory responsibilities in advising the NCA. Joint strategic planning begins the process that creates the forces whose capabilities form the basis for theater operation plans (OPLANs).

As programs are developed and resources allocated, JSPS products and JSPS-related documents provide a means to evaluate capabilities and to assess the adequacy and risk associated with the programs and budgets of the military departments and defense agencies and, where appropriate, propose changes to those programs and budgets in conformity with

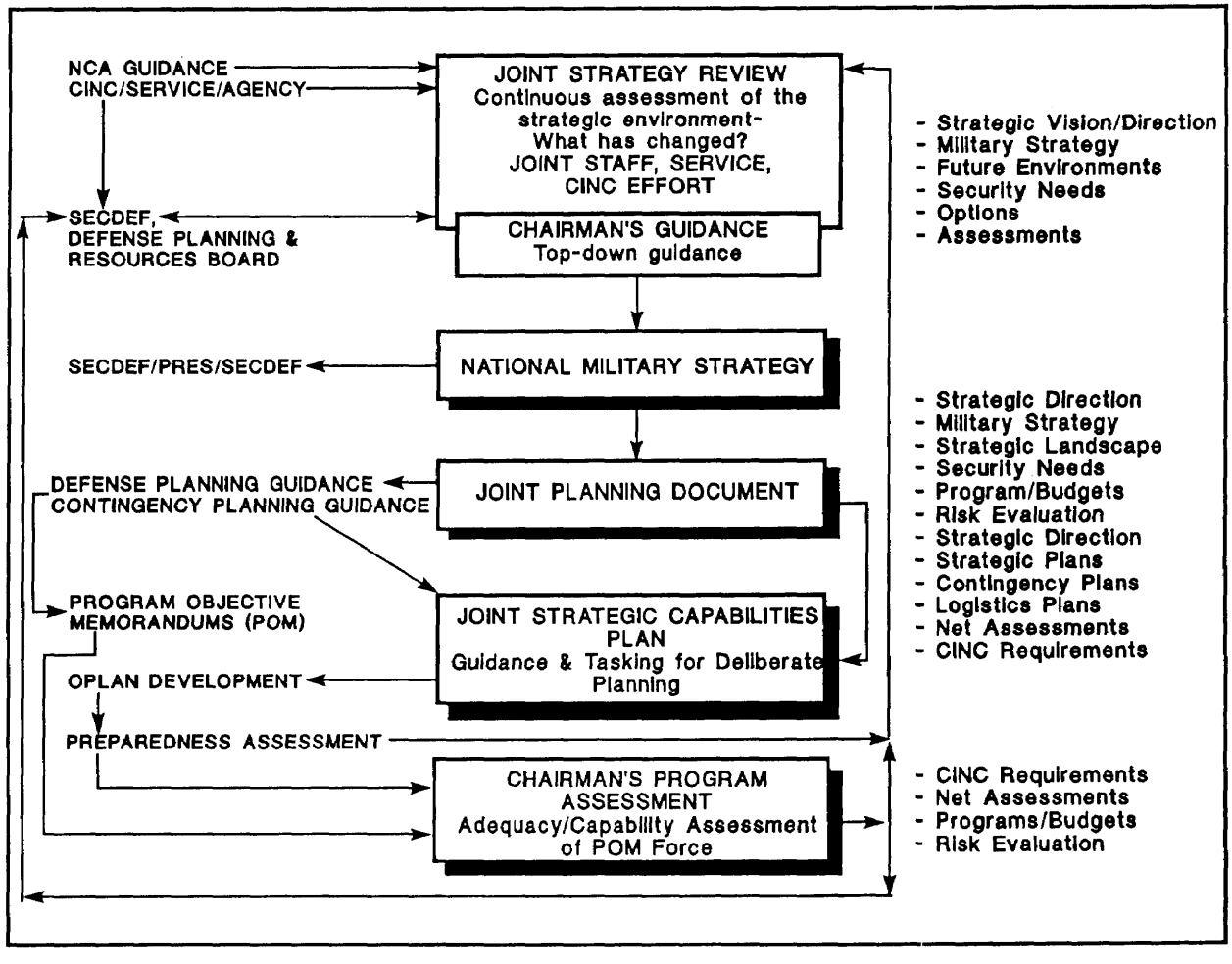


Figure 1-5
Joint Strategic Planning System

strategic priorities. As an integrated system, the JSPS consists of the Joint Strategy Review (JSR) process, four formal products, and JSPS related assessments.

The Joint Strategy Review

The JSR assesses the strategic environment for issues and factors that affect the NMS in the near- and far-term. It is a continuous process that gathers information; examines current, emerging, and future issues, threats, technologies, organizations, doctrinal concepts, force structure, and military missions; and reviews and assesses current strategy, forces, and national policy objectives. The JSR facilitates the integration of strategy, operational planning, and program assessment. As a minimum the JSR provides a methodology that gathers inputs from the CINCs, Services, and Joint Staff and considers trends, projections, issues, and situations that can affect national security planning. It produces three documents:

- JSR Issue Papers. These documents report changes in the strategic environment.

- JSR Annual Report. This report summarizes issues studied over the previous year and recommends changes to the NMS. It will include the recommended Chairman's Guidance (CG), offering courses of action regarding the NMS. When approved by the Chairman, it will provide guidance to the Joint Staff and information to the Secretary of Defense, the CINCs, and the JCS regarding the framework for building the NMS and for delineating priorities in the Joint Planning Document (JPD). The CG may also be promulgated anytime during the JSR process, not just as a result of the JSR Annual Report. Changes in the strategic environment may also occur anytime in the JSR process, leading the Chairman to issue recommendations to modify the existing strategy.

- Long-Range Vision Paper. This document examines plausible environments 20 years into the future. It recommends defense missions for those environments to determine future national security needs for the long term, and provides a means to study the implications of those future environments on the NMS, joint doctrine, force structure, and requirements.

The information conveyed by these JSR products is intended to provide the Chairman, Joint Chiefs of Staff with considered evidence and to make recommendations that will permit him to provide guidance regarding the NMS. The JSR thus serves as a bridge between initial assessments and views developed during the JSR process and the specific process that builds the NMS.

JSPS Products

The four JSPS products provide strategic and operational guidance to the combatant commanders of the Armed Forces.

National Military Strategy. The NMS provides the Chairman's advice to the President, the NSC, and the Secretary of Defense as to the force structure required to attain the national security objectives. The NMS is designed to assist the Secretary of Defense in the preparation of the DPG and to guide the development of the Joint Strategic Capabilities Plan (JSCP). Following The Secretary of Defense review, the NMS is forwarded to the President. The NMS also provides supporting documentation, through the DPG, to the Services for development of Program Objective Memoranda (POM).

Joint Planning Document. The JPD supports the NMS by providing concise programming priorities, requirements, or advice to the Secretary of Defense during preparation of the DPG. Published as seven stand-alone documents addressing specific functional areas, the JPD is coordinated with the Service Chiefs and CINCs and serve as a conduit for input to the DPG.

Joint Strategic Capabilities Plan. The JSCP represents a coherent framework for providing military advice to the NCA based on current capability assessments. It also supports and implements the NMS by providing guidance to the CINCs and the Chiefs of the Services to accomplish tasks and missions.

In addition, the JSCP follows NCA guidance forwarded in the Contingency Planning Guidance (CPG). The JSCP apportions major combat forces expected to be available during the planning period for active and reserve component forces under various conditions of mobilization. The CINCs then incorporate these forces into their theater plans. The JSCP is the principal vehicle by which the CINCs develop OPLANs, contingency plans, and concept summaries for global and regional contingencies.

Chairman's Program Assessment. The Chairman's Program Assessment (CPA) provides advice to the Secretary of Defense on how Service POMs conform to established priorities and assists the Secretary in decisions concerning the defense program subsequent to receipt of the POMs. The CPA also summarizes the views of the Chairman on the balance and capabilities of the POM force and the support levels required to attain US national security objectives. When appropriate, the CPA may contain alternative recommendations and proposals to improve conformance with strategic guidance or the priorities established for the requirements of the unified commands.

JSPS Related Assessments

JSPS-related assessments include:

The Joint Military Net Assessment. The Joint Military Net Assessment (JMNA) is submitted annually to the Secretary of Defense for submission to Congress in conjunction with the defense budget. The JMNA provides Congress an assessment of the defense capabilities and programs of the Armed Forces and our allies compared with capabilities of potential adversaries.

The Logistics Support Analysis. The Logistics Support Analysis (LSA) is completed during development or maintenance of the CINCs' OPLANs. The LSA is validated biennially to support planning and programming and represents the quantitative assessment of the CINCs' overall sustainment posture. The supported CINC will consider LSA results during risk assessments and Integrated Priority List (IPL) preparation, in conjunction with the Preparedness Evaluation System, the CINCs' Preparedness Assessment Report (PAR) and the CINCs' Critical Items List.

The Chairman's Preparedness Assessment Report. The PAR evaluates preparedness of the combatant commands to carry out assigned missions. It identifies critical deficiencies and strengths in force capabilities and logistics in terms of JSCP taskings and major warfare and functional areas.

The Chairman's Contingency Capablilites Assessment. The Contingency Capabilities Assessment assesses the effects of the critical deficiencies identified during the preparation and review of CONPLAN on national security objectives, policy, and strategic plans.

Other Key JSPS Documents

These include-

Defense Planning Guidance. The DPG furnishes programming and fiscal guidance to the military departments for development of POMs. It includes major planning issues and decisions, strategy and policy, the Secretary of Defense's program planning objectives, the Defense Planning Estimate, and the Illustrative Planning Scenarios. The DPG is a major link between the JSPS and PPBS.

Contingency Planning Guidance. The CPG provides written policy guidance for contingency planning. The CPG focuses the guidance provided in the NMS and DPG and directly impacts on the JSCP.

Overall, the JSPS is a flexible and interactive system intended to provide supporting military advice to the DOD PPBS. It also provides strategic guidance for use in the Joint Operations Planning and Execution System (JOPES). Through the JSPS, the Joint Chiefs of Staff review the national security environment and national security objectives; evaluate the threat; assesses current strategy and existing or

proposed programs and budgets; and propose military strategy, programs, and forces necessary to achieve national security objectives. It accomplishes this in a resource-limited environment, consistent with policies and priorities established by the President and the Secretary of Defense. The JSPS process permits the JCS and the CINCs to participate in the development of every JSPS document.

Joint Operation Planning and Execution System

The JOPES is the joint command and control system for conventional operation planning and execution. JOPES also includes theater-level nuclear and chemical plans and addresses mobilization, deployment, employment, and sustainment mission areas. It is the principal system for translating and implementing policy decisions of the NSC system (NSCS) and the JSPS into plans and orders for operations in support of national security policy. It also provides joint operational requirements for analysis in the PPBS for resource decisions that affect the NSCS and JSPS.

Section IV: The Army Environment

ARMY LEADERSHIP

The leadership of the Department of the Army (DA) is responsible for Army strategic planning and for assisting the development of joint strategic planning. The senior leadership nucleus includes the Secretary, the Chief of Staff, the Undersecretary, and the Vice Chief of Staff. The Army executes its statutory missions by raising, provisioning, sustaining, maintaining, and training Army forces. These forces are then provided to the commanders of the joint commands for military operations.

THE ARMY LONG RANGE PLANNING SYSTEM

The Army Long Range Planning System (ALRPS) starts the Army strategic planning process, building on the NMS. It determines force requirements and objectives and establishes guidance for the allocation of resources for the execution of Army roles and missions in support of national security and policy objectives. Strategic planning provides direct support to the DOD PPBS and JSPS and indirectly serves as a guide for the later development of Army programs and budgets.

THE ARMY PLANNING, PROGRAMMING, BUDGETING, AND EXECUTION SYSTEM

Army requirements descend not only from the statutory functions, but also from strategic and operational requirements derived from the planning element of DOD's PPBS. DOD planning translates into the planning phase of the corresponding Army planning, programming, budgeting, and execution system (PPBES).

The PPBES is the Army's primary strategic management system used to allocate and manage resources. Its objectives are to-

- Follow the NMS in sizing, structuring, and manning of Army forces.
- Obtain required forces, manpower, materiel, and dollars.
- Allocate forces, manpower, materiel, and dollars among competing demands according to Army resource allocation policies and priorities.
- Evaluate execution of the program and budget to achieve intended purposes and adjust resource requirements based on feedback.

The PPBES provides for a progression from national security objectives, policies, and strategies to the development of force structure and programs within resource constraints and as the basis for the six-year period of the FYDP (see Figure 1-6, Planning and Programming Connectivity). Finally, the PPBES leads to preparation, execution, and review of the budget.

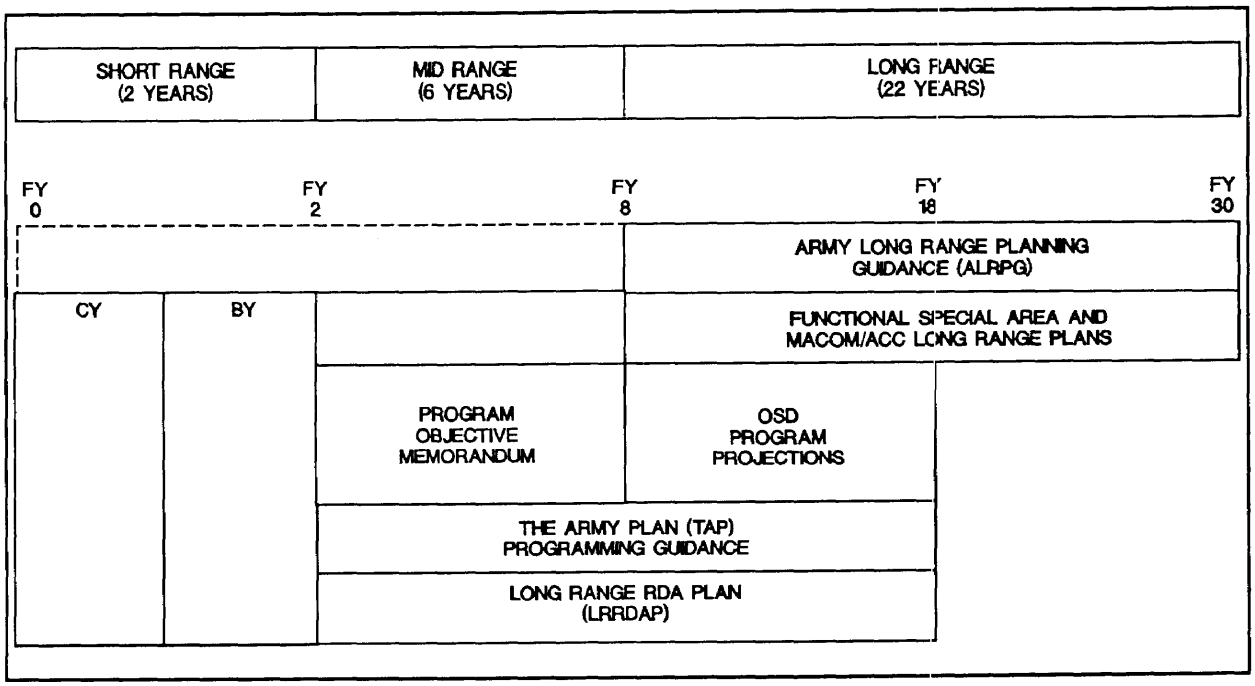


Figure 1-6
Planning and Programming Connectivity

THE ARMY MOBILIZATION AND OPERATIONS PLANNING AND EXECUTION SYSTEM

The Army Mobilization and Operations Planning and Execution System (AMOPES) provides the structure and process for Army participation in JOPES. It covers the full course of military action to include mobilization, deployment, sustainment, force expansion, redeployment, and demobilization. The goal of AMOPES is to ensure that the Army can support the combat operations of the combatant commanders. AMOPES provides the linkage between war planning under JOPES and mobilization planning as directed by DOD and the JCS. It prescribes the Army crisis action system for managing the execution of mobilization and operation plans.

THE ARMY MOBILIZATION PLAN

The Army Mobilization Plan (AMP) is a collection of mobilization plans of the major Army commands (MACOM). The purpose of Army mobilization planning is to provide the resources required to support various OPLANs. This includes mobilizing units, manpower, and materiel required for implementation of an OPLAN, as well as the resources required to sustain the operation. The Forces Command (FORSCOM) mobilization plan, with its associated mobilization planning and execution system (MPES), details the time-phased flow of mobilizing reserve component units from home station to their mobilization stations. The TRADOC training base expansion plan (TBEP) provides installations and training base augmentation units in the Army with guidance on training base expansion activities.

THE ARMY LONG RANGE PLANNING GUIDANCE

The Army Long Range Planning Guidance (ALRPG) creates a vision of the Army ten to 30 years in the future. The products of long-range planning guide the mid-term vision used in developing the force and setting program requirements. The ALRPG describes a framework for defining future requirements by examining national security objectives against a range of conditions over the 30-year period. The ALRPG examines political, military, economic, and technological events and derives implications for future missions and for achieving required capabilities. The ALRPG initiates the Enhanced Concept Based Requirements System (ECBRS) process that identifies and prioritizes needs and recommended solutions by translating leader vision into long-range plans.

THE ARMY PLAN

The Army Plan (TAP) documents policies and gives resource guidance. TAP concurrently documents force levels stabilized initially through force requirements planning and then refined through objective planning. This planning includes the total Army analysis (TAA) to develop a force for each program year to meet projected mission requirements within expected end strength and equipment levels, and considers unalterable earlier decisions. Force integration analysis (FIA) ensures that the force is affordable and executable in each program year.

TAP covers the POM period and contains Army missions from the DPG, JSPS planning products, ALRPG, and other guidance. This includes guidance from Headquarters, Department of the Army (HQDA) and input from MACOM and program executive officer (PEO) interaction. TAP also captures long-range objectives from the long-range plans of Army functional proponents. It links them to supporting mid-term objectives that, to be achieved, require resourcing during program development. TAP-

- Provides early direction to the programming, budgeting, and execution phases of the PPBES.

- Outlines the NMS and security policy for the Army.

- Summarizes the existing view of the current force, the POM force at the end of the sixth program year, and the projected force ten years and beyond.

- Introduces mid-range planning objectives derived from long-range plans into the POM development and prioritization process.

- Links programming guidance to mid-range planning objectives.

- States the Army's priorities within expected resource levels.

Section V: The Army Functional Life Cycle Model

MANAGEMENT OF CHANGE

Change is required because the Army must remain capable in an environment of technological advancements, internal management variances, and a world in turmoil. The management of change is an evolving process that must have focus and methodology to support the Army's vision, imperatives, core competencies, and enduring values.

THE ARMY FUNCTIONAL LIFE CYCLE MODEL

Each resource required by an organization is somewhere within a life cycle model from its development to its ultimate separation or expenditure. This is depicted in Figure 1-7, The Army Functional Life Cycle Model (AFLCM).

The norm of the AFLCM is constant change. The need exists to resource and manage this change. Any resource will always be in some functional stage, with all of these functions occurring concurrently in a never-ending process.

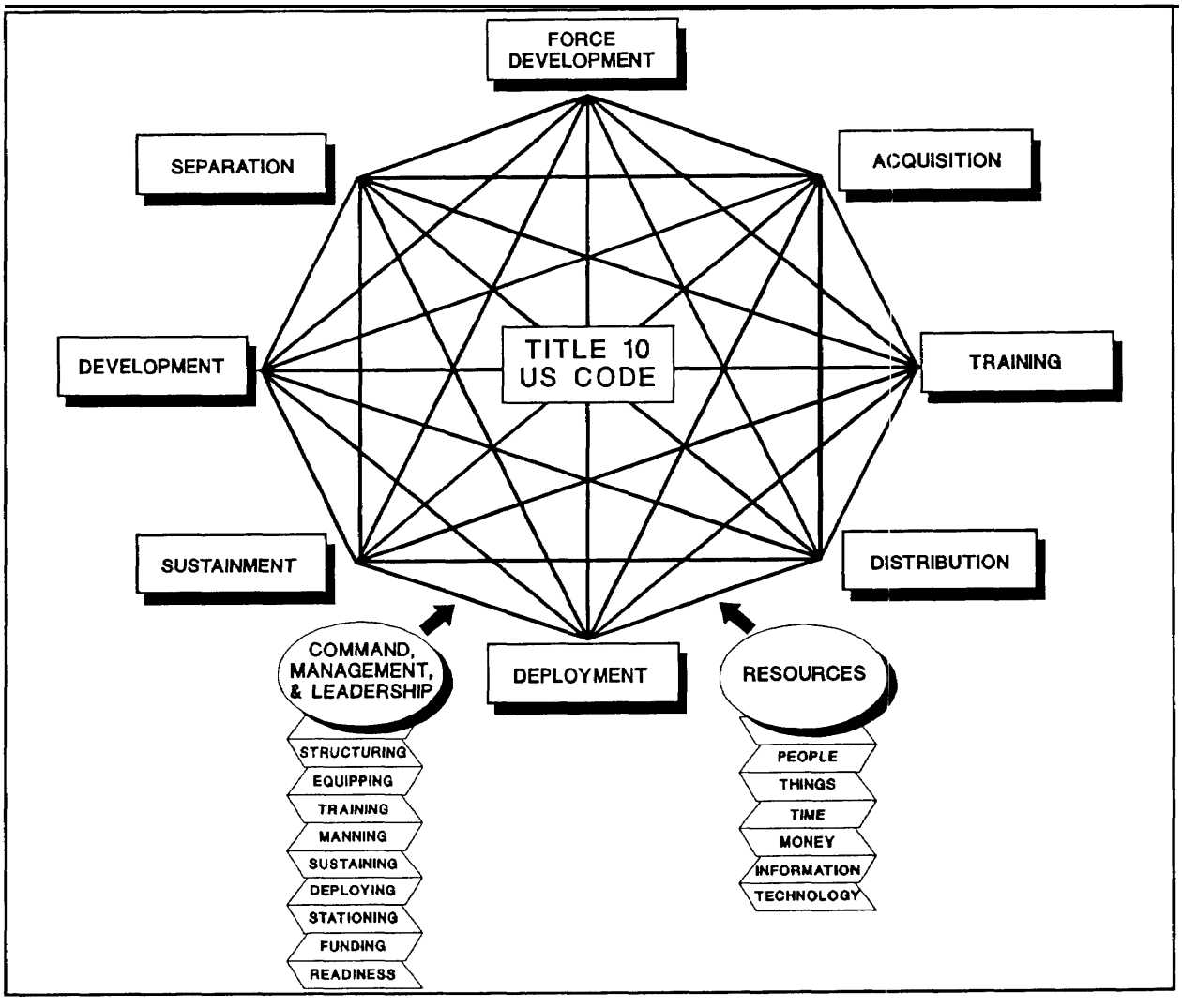


Figure 1-7
The Army Functional Life Cycle Model

The fundamental output of the AFLCM is combat-ready units progressing through-

- Force Development. Force development is the process of translating Army missions and functions into materiel and organizational requirements, time-phased programs, and structure within available resources. It is the initiating process of the AFLCM.

- Acquisition. Acquisition is an initial procurement activity that results in an asset being brought under military control. This activity includes research and development, test and evaluation, and military construction programs.

- Training. Training is the vehicle for orderly transition from a civilian to a military environment. In the AFLCM, this training establishes the entry-level skill baseline for all soldiers.

- Distribution. Distribution is the process of assigning or transferring people or materiel from the wholesale level to the user.

- Deployment. Deployment is the movement of organizations, people, and things in accordance with the worldwide commitments of the Army.

- Sustainment. Sustainment is the process of acquisition and use of resources to maintain and logistically support the Army.

- Development. Development is the process of constantly improving a soldier's skills and experience through progressive assignments, education, and training. Units are developed through collective training.

- Separation. Separation is the process of removing personnel and materiel from active service. People may separate from military service voluntarily or involuntarily due to reduction in force actions, mandatory retirement, or medical or disciplinary reasons. Materiel is separated through the Defense Reutilization and Marketing Office (DRMO) or through foreign military sales (FMS).

Essential to the functioning of the AFLCM model are the critical inputs of resources and leadership. Resources, including time, money, people, materiel, technology, and information are needed to energize the system. Command management, and leadership provide necessary control and direction.

Section VI: Operating Processes

The basis for all Army processes and systems is the development and sustainment of combat-ready units. Units, once activated, are sustained through personnel and materiel requisitions from the respective processes. Units become combat ready through collective training while sustaining individual training proficiency. The principal, contributing processes are the-

- Strategic and Operational Requirements Determination Process. The strategy, fiscal guidance, and OPLANs and CONPLANS flow from DOD into the Army resourcing process.

- Research, Development, and Acquisition (RDA) Process. The requirements for new materiel flow to the materiel developer, who executes the Life Cycle System Management Model (LCSMM), which provides materiel systems.

- Force Development Process. Requirements for new or changed organizations or new or improved materiel systems initiate the force development process.

- Resource Allocation and Distribution Process. The national strategy, fiscal guidance, and force structure guidance establish the requirement to distribute resources, in priority, to achieve the highest force readiness and to accept risk where rational.

- Battlefield Requirements Determination Process. The Enhanced Concept Based Requirements System (ECBRS) process identifies required capabilities and develops solutions in terms of DTLOMS as shown in Figure 1-8, Determination of Battlefield Requirements. Requirements for materiel systems are translated by the materiel developer in the RDA process and requirements for organizations by the combat developer in the force development process.

- Manpower Allocation and Distribution Process. Based on priorities and valid authorizations, personnel are acquired, trained, and distributed to units.

- Materiel Allocation and Distribution Process. Based on priorities and valid authorizations, materiel (acquired through the RDA process) is allocated and distributed to units.

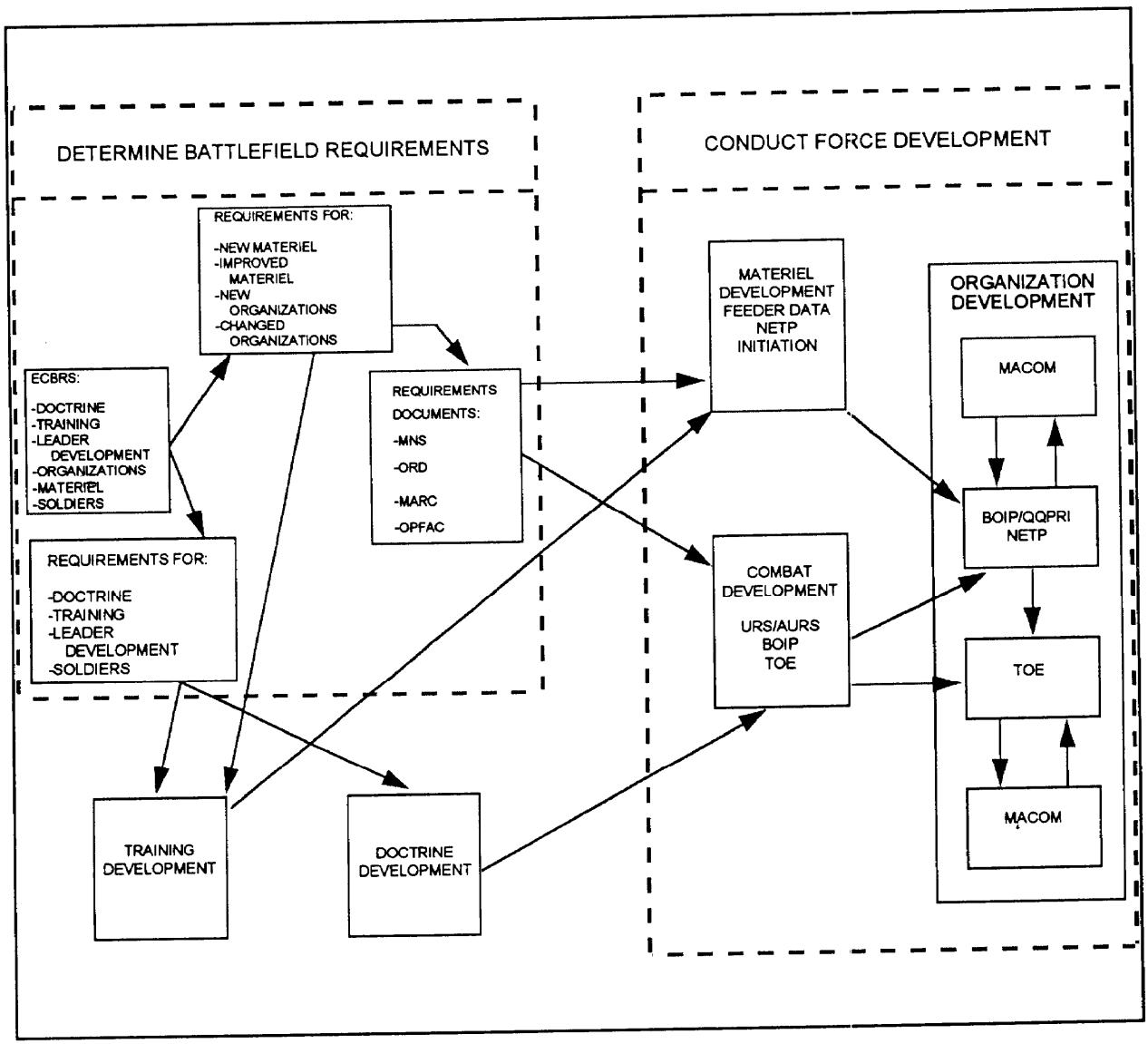


Figure 1-8
Determination of Battlefield Requirements

Section VII: Determining Future Requirements

This is an era of profound change. Declining resources for defense and increasingly demanding and complex military missions require fundamental changes in our military posture and the process by which we raise, train, equip, deploy, and sustain our forces. The Army must adapt to the Nation's emerging priorities, consume less of the national budget, and at the same time, increase capability and sustain the readiness of our forces.

While changing intellectually, physically, and culturally is difficult, this must occur if the Army is to serve the Nation in the 21st Century. At issue are how to transform the Army in a functional way while enhancing its effectiveness.

The primary processes which the Army will use to take charge of this "process of change" is the ECBRS enhanced by the Louisiana Maneuvers (LAM) and TRADOC's Battle Laboratory program.

ENHANCED CONCEPT BASED REQUIREMENTS SYSTEM

ECBRS is the process which identifies, prioritizes and integrates doctrine, training, leader development, organizations, and materiel required capabilities focused on the soldier (DTLOMS). It supports the Army's efforts to plan and program for the future by recommending a range of DTLOMS required capabilities to enable our force projection Army to win decisively with minimum casualties. It provides a responsive and relevant audit trail from the National Military Strategy (NMS) to identified required capabilities. ECBRS strives to retain balance among DTLOMS with emphasis on early and continuous integration of emerging technology, while maintaining focus on the soldier.

The objectives of ECBRS are to:

- Evolve the Army's vision of future battlefield functions and tasks to ensure land force dominance in support of joint operations.

- Identify and prioritize required capabilities to support the ClNC's Integrated Priority Lists (IPLs).

- Identify a range of required capabilities across the functional domains to maintain the edge on the future battlefield.

- Influence the PPBES process with products reflecting required capabilities consistent with the vision of the senior Army leadership.

- Maintain RDA program stability with focused efforts to meet the goal of providing soldiers with world-class equipment in the shortest time within resource constraints.

The process consists of cyclic events that support timely delivery of an integrated product to HQDA. These cyclic events or stages are planning guidance and concept formulation, identification of required capabilities through branch/proponent assessments, and prioritization and integration of required capabilities into an integrated product.

As identified in Figure 1-9, Enhanced Concept Based Requirements System, the process is initiated by a number of national and strategic planning documents to develop future concepts. These concepts which provide guidance and direction are prepared on a continuous basis. They provide projections of warfighting based on historical perspective, existing doctrine, current capabilities, future threat, technological forecasts and planning guidance. During the ECBRS process, concepts are refined and required capabilities are identified, prioritized, and integrated within and across all six functional DTLOMS domains.

The key to the ECBRS process is the rapid identification of those required capabilities that will provide the greatest potential enhancement for the Army. Force XXI, the Louisiana Maneuvers process and TRADOCs Battle Lab program provide the means to expeditiously examine critical issues and emerging technological capabilities. They facilitate the refinement of capability requirements within the ECBRS process. They serve as the mechanisms to grapple with abstract ideas, to experiment, and to pragmatically assess new technologies. They leverage horizontal integration and technology insertion to impact the Program Objective Memorandum (POM) more quickly.

FORCE XXI

In order to evolve in an effective, rapid and holistic manner, the Army has instituted the Force XXI process. Force XXI is structured as depicted in Figure 1-10, Force XXI Process.

The Force XXI process consists of three axes designed to ensure that the entire Army is structured to meet the challenges of the 21st Century. The main effort of Force XXI is the

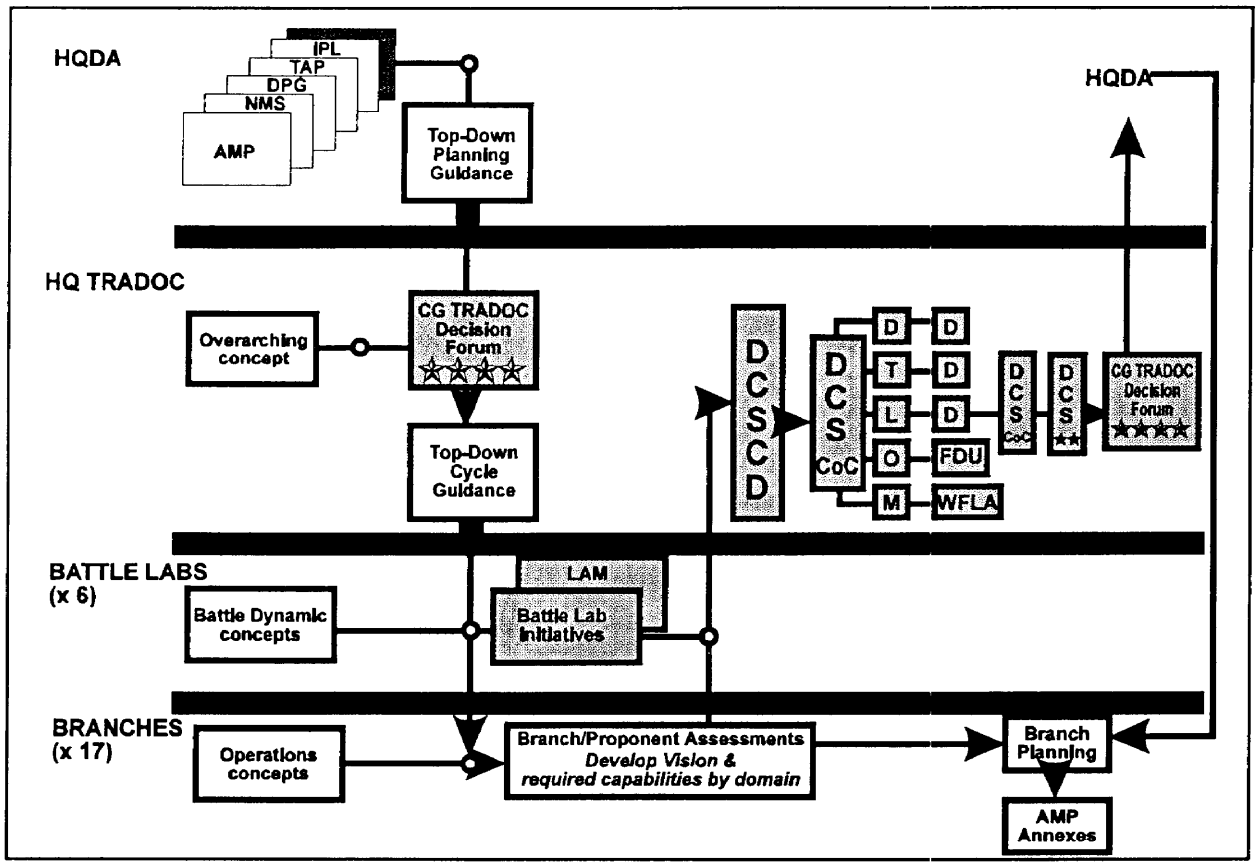


Figure 1-9
Enhanced Concept Based Requirements System

Joint Venture program, which is chaired by the CG, TRADOC and focuses on the redesign of the operational Army. Joint Venture partners are established by CSA directive and presently include the CINCs, FORSCOM, AMC, INSCOM, HSC, OPTEC, SSDC, ASOC, ISC, the ARSTAFF, and TRADOC, as well as numerous other commands as appropriate. Its mission is to develop and attain Force XXI fielding decisions by FY2000. A second supporting effort is the lnstitutional/TDA line of thrust which is tasked with examining the institutional and sustaining base of the Army to ensure it meets Force XXI requirements. This effort is conducted under the supervision of the VCSA. The third line of thrust is also in support of Joint Venture. It is the digital and technology effort placed under the direction of the Army Digitization Office. The components are explained in greater detail as follows:

- Joint Venture effort has two primary subcomponents--conceptual and experimental. The conceptual component includes the development of concepts as espoused in TRADOC PAM 525-5, the Army Battle Command System (ABCS) and an analytic component consisting of the Army's analytical agencies and activities. The experimental component consists of the Battle Labs which conduct the Advanced Warfighting Experiments (AWE), Battle Lab Warfighting Experiments (BLWE), Advanced Technology Demonstrations (ATD), and Concept Evaluation Programs (CEP), as described later.

- The Institutional/TDA effort will redesign the Institutional and TDA Army by FY2000 to effectively perform service Title 10

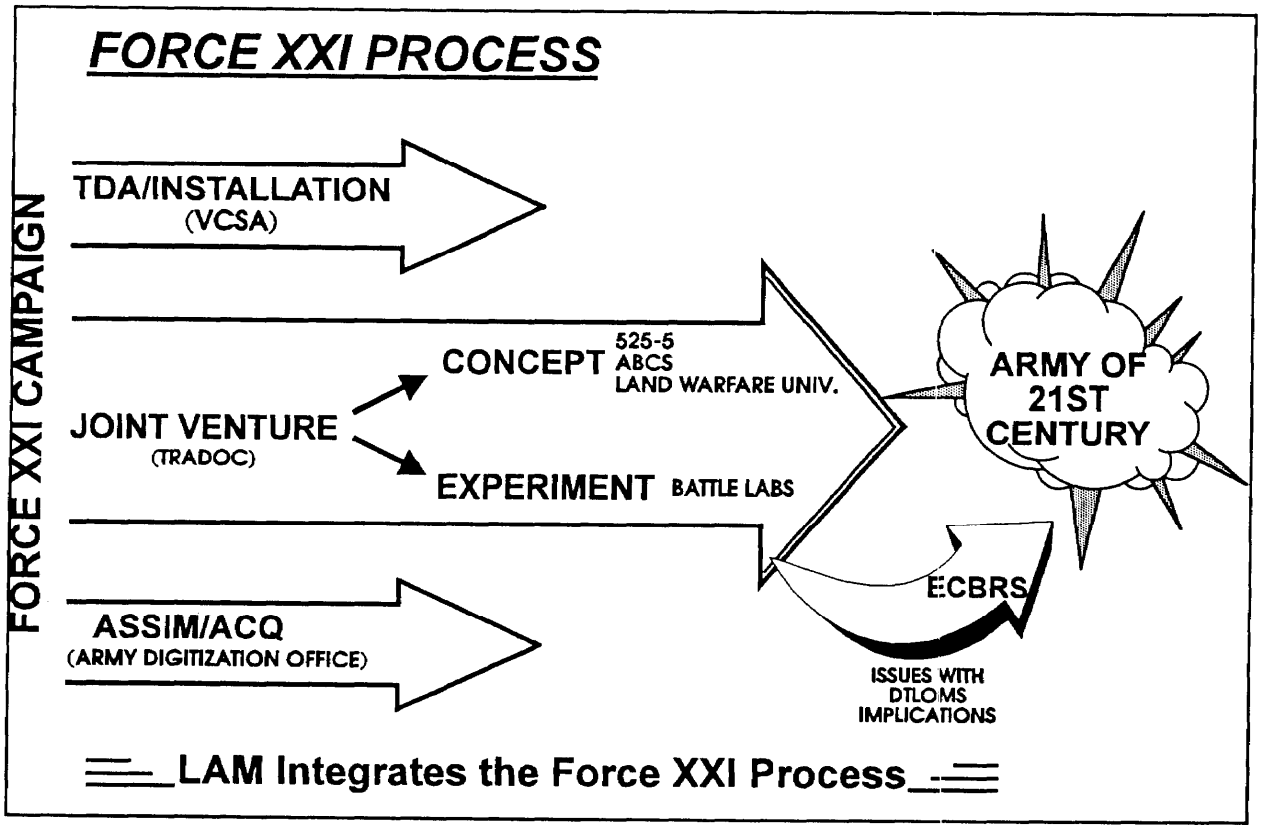


Figure 1-10
Force XXI Process

functions in support of redesigned Army warfighting organizations. This crosses the full spectrum of support activities and includes sustaining base activities, training organizations, and the development of power projection platforms. These efforts will occur along functional lines using the Functional Area Assessment (FAA) as the method of redesign.

- The digital and technology effort will ensure the research and development of appropriate technologies are acquired to enable those concepts and designs developed through Joint Venture.

The Louisiana Maneuvers Task Force (LAM TF) serves as the integrator for the Force XXI process. A LAM TF Director is assigned to each axis to ensure synchronization and horizontal integration of redesign and acquisition efforts.

LOUISIANA MANEUVERS

The purpose of the LAM process is to energize and focus the forces of change, while simultaneously keeping the Army combat ready. LAM is a process that allows the Army to exercise and examine its roles and missions, to develop and explore options, and to assess and direct progress. It is a mechanism to harness the disparate energies of creativity and centralizes the innovation process. It provides strategic agility in decision making to guide the Army's transformation to a more modern and capable, CONUS-based, force projection force. In the broadest sense, the LAM process accomplishes four things.

- Identifies the most critical issues requiring study.

- Establishes the basis for reaching consensus among the senior leadership.

- Provides a means for Title 10, United States Code, and warfighting issues to be studied under the direction of the Army's senior leadership.

- Creates strategic agility in decision making by accelerating feedback from analysis and study.

The Chief of Staff, U.S. Army (CSA) directs the LAM process which is depicted at Figure 1-11, Louisiana Maneuvers Organization. Other key entities include a General Officer Working Group (GOWG), and the Board of Directors (BoD). The GOWG is composed of Major Generals from the Army's Reserve Components, major Army commands, and the Army Staff. The BoD consists of the Army's four star generals (CINCs and MACOM commanders) and reports to the CSA, in his capacity as the Director. The LAM TF Director provides the CSA with a full time operator to coordinate and synchronize the ongoing efforts.

The LAM is a multi-staged process (Figure 1-12, Louisiana Maneuvers Process) designed to synthesize critical high level issues. This process begins with issue nominations derived from analysis of top down guidance, from the field or from previous Battle Lab experimentation. The GOWG then considers candidate issues. The GOWG has three options when considering

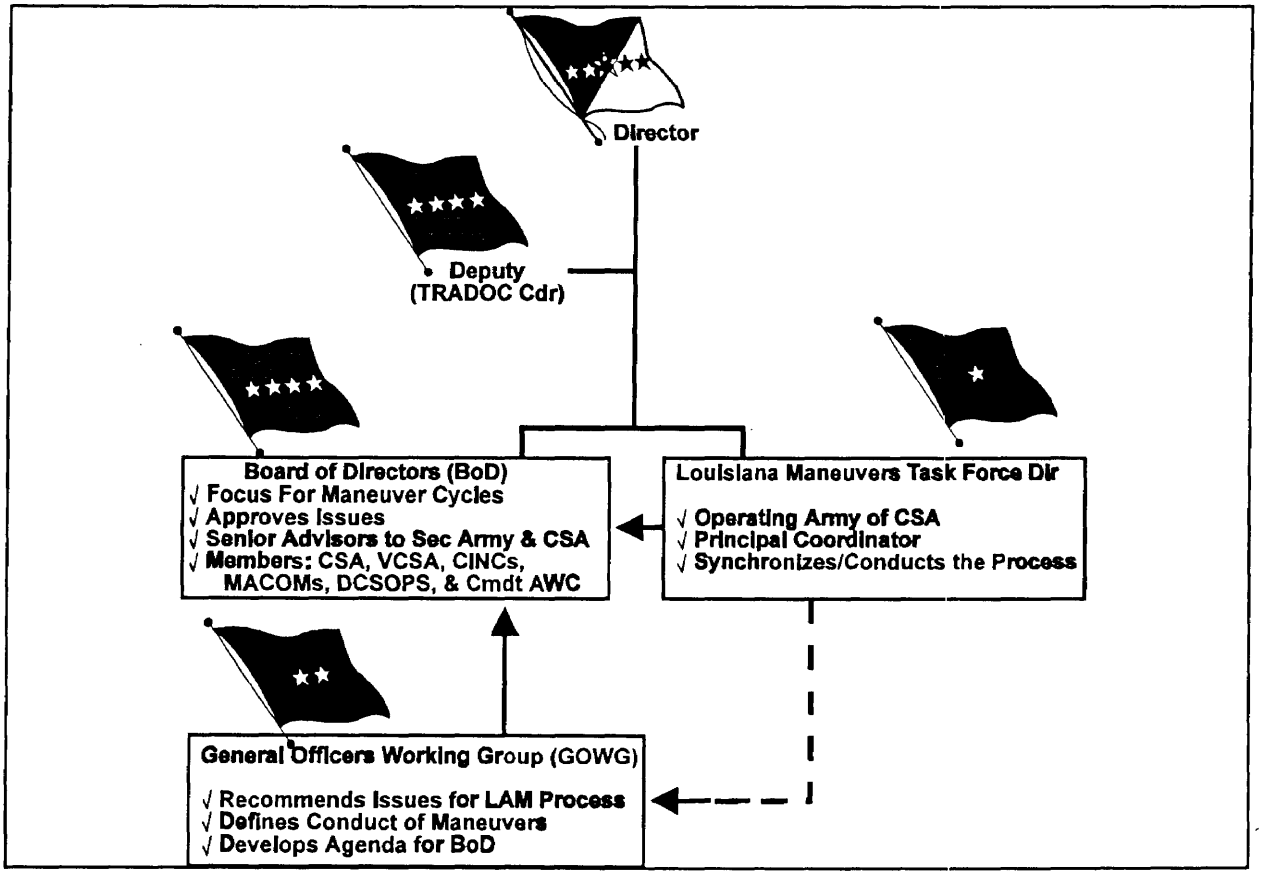


Figure 1-11
Louisiana Maneuvers Organization

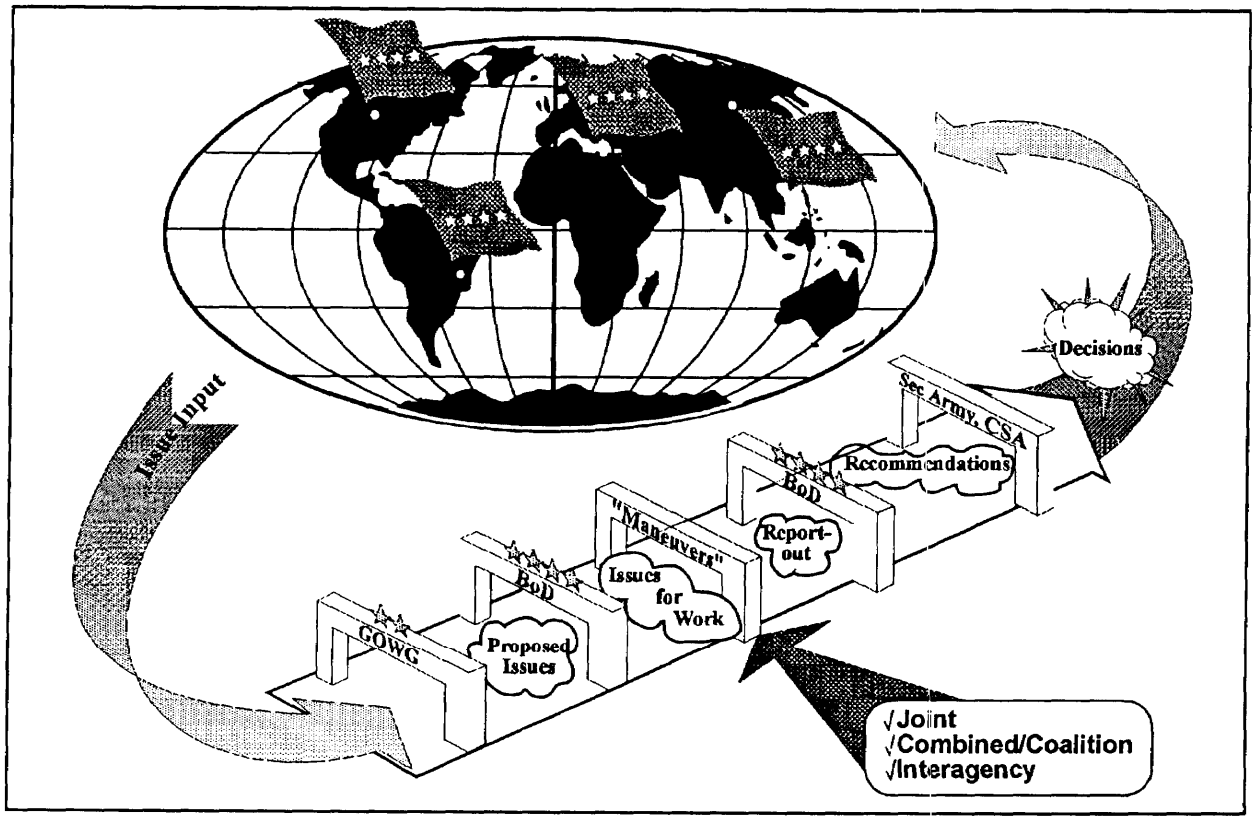


Figure 1-12
Louisiana Maneuvers Process

disposition of nominated issues: close the issue, archive the issue, or recommend that the issue undergo investigation in the LAM process. Of the hundreds of Title 10 and warfighting issues considered, only the most important are passed to the LAM BoD for deliberation.

The BoD considers nominated issues and selects those appropriate for further investigation. Individual board members assume proponency for selected issues to study within their commands. As proponents, individual board members supervise the study and evaluation of assigned issues through exercises such as ULCHI FOCUS LENS in Korea, FUERTES DEFENSAS in Central America, ATLANTIC RESOLVE in Europe, PRAIRIE WARRIOR at Fort Leavenworth, Kansas, and the Armywide General Headquarters Exercise. They also use existing simulations and resources such as the Battle Laboratories and Research Centers to examine, explore, observe, and learn. During the course of investigation, issue proponents are assisted by Army Staff sponsors who provide information on studies and projects related to the issue. Further, sponsors suggest programmatic savings and tradeoffs for each option brought to the BoD.

After investigation, issue proponents report back to the BoD with decision packages containing observations, lessons learned, and options. The BoD then offers its own advice and recommendations to the CSA and the Secretary of the Army for decisions on funding and priority. This streamlined process provides the Army's senior leadership strategic agility in decision making by building consensus around the most viable options and allows important decisions to

be made in a matter of months instead of years. It ensures a more confident look at resources and expenditures as prioritization and funding decisions are made on capabilities needed to execute the NMS.

BATTLE LABORATORY PROGRAM

A contingency-oriented, force projection Army must maintain a superior force. Battle Laboratories are a means to expeditiously identify, investigate, and develop improvements in doctrine, training, leader development, organization design, material, and soldier systems. By encouraging experimentation via simulation or prototypes, battle laboratories determine capability requirements in the functional domains of DTLOMS. The Battle Labs serve as a practical mechanism for working with new ideas and assessing new capabilities provided by changing threats, advanced technology, and evolving doctrine. They look for ways to increase lethality, survivability, and tempo of operations and horizontally integrate them across the entire combined arms and services team.

The frame of reference used by the Battle Labs for requirements definition are the battlefield dynamics. These battlefield dynamics codify the aspects of warfighting or military operations that appear to have the greatest potential for change. Mastery of these dynamics will prove crucial to success in future operations. These dynamics are early-entry force lethality and survivability, simultaneous attack in all three dimensions throughout the depth of the battlefield, domination of expanding battle space, battle command, and sustainment.

Each of the six Battle Labs focus on one of the battlefield dynamics. The Early Entry Lethality and Survivability Battle Lab (EELSBL) is at Fort Monroe; Depth and Simultaneous Attack Battle Lab (DSABL) is at Fort Sill; Mounted Battle Space Battle Lab (MBSBL) is at Fort Knox; Dismounted Battle Space Battle Lab (DBSBL) is at Fort Benning; Battle Command Battle Lab (BCBL) is split between Fort Leavenworth, where art of command issues are worked, Fort Gordon, where technical means and hardware issues are addressed, and Fort Huachuca, where issues concerning intelligence collection, dissemination, and electronic warfare are addressed; and Combat Service Support Battle Lab (CSSBL) is at Fort Lee. Their efforts focus on fixing major deficiencies or vulnerabilities identified during recent operational experiences, issues identified by the LAM BoD, or submitted from the field. These include developing enhanced capabilities to maintain our overmatching combat edge on the future battlefield, as well as operations other than war such as disaster relief and peacekeeping.

Battle Labs provide the central focus for all Army experimental work leading to capability requirements, as well as conducting independent experiments as approved by the CG, TRADOC. Insights, impacts, and recommendations for changes to DTLOMS are the primary products of Battle Lab experiments. Experiments demonstrating significant added value to warfighting capabilities may result in senior Army leadership decisions for rapid acquisition.

The Battle Lab program, as shown in Figure 1-13, provides an expeditious means for TRADOC to identify, validate, and process issues for investigation. Approved issues are considered in terms of the functional domains and battlefield dynamics, and are then channeled to the appropriate Battle Lab for analysis or experimentation.

Ideas and concepts for Battle Lab experiments may be derived from a number of sources including:

- Analysis of Strategic Defense Guidance.
- Top-down guidance from the CSA, CINCs, or CG, TRADOC (e.g. accepted proponency of a LAM issue).

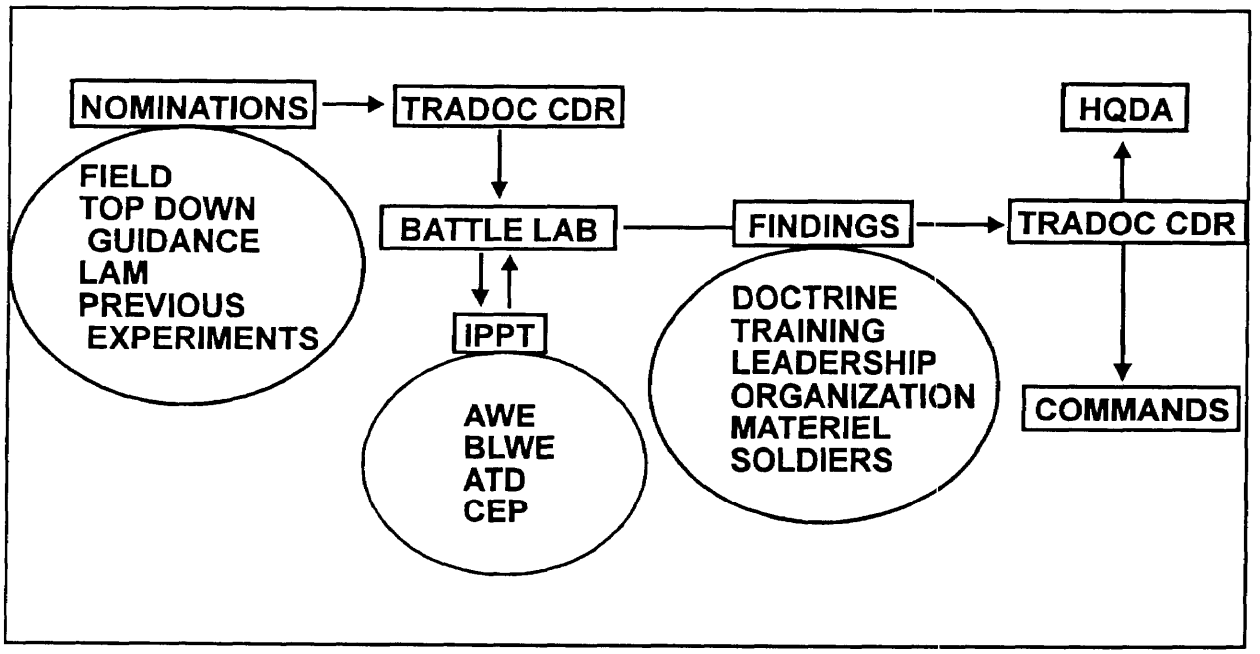


Figure 1-13
The Battle Lab Program

- Operational or training needs and technology opportunities identified from lessons learned during real world contingency operations, CINC exercises, or Combat Training Center rotations, as well as other exercises and analytical efforts.

- CINC IPL.

- Concepts and ideas from branch assessments or submitted by soldiers.

- Insights from other Battle Lab experiments.

Battle Labs use matrix management techniques to achieve horizontal integration. Battle Labs form task groups, referred to as Integrated Process and Product Teams (IPPT) to address specific issues. These teams are comprised of members from appropriate TRADOC service schools and centers, soldiers and/or units from FORSCOM specifically aligned with the Battle Lab, Army Materiel Command (AMC), industry and academia. The Battle Labs form task groups to conduct warfighting experiments, analysis, and other investigative activities.

The Battle Lab teams thus include field soldiers and units, combat and materiel developers (if a materiel oriented experiment), doctrine, leader and training developers, testers, cost accountants, acquisition experts, contracting specialists, and members of the science and technology community, including industry. Interaction by the entire community from inception through execution of experiments provides:

- Direct soldier feedback to design engineers.

- Determination of insights across DTLOMS.

- Opportunities for relatively inexpensive engineering design changes.

- Concurrency of effort and rapid acquisition of selected, high value successes, to include doctrinal and training products.

Battle Lab experiments are iterative and progressive in nature, and focused on a specific capability or technology opportunity. Various categories of experiments are:

- AWEs (see Figure 1-14, Advanced Warfighting Experiments) are critical efforts focused on a major increase to warfighting capability. They cross many or all of the TRADOC domains of DTLOMS. Moreover, they impact many, if not all, of the battlefield dynamics and battlefield operating systems.

- BLWEs may be either discrete, single events or progressive, iterative simulations with primary relevance to a single battlefield dynamic.

- ATDs validate the maturity of a technology within an operational environment.

- CEP is an innovative testing program that provides a quick reaction and simplified process to resolve DTLOMS issues.

All these activities begin with formal hypotheses and use a combination of constructive, virtual, and live simulations with field soldiers and units in tactically competitive environments, under a broad range of relevant scenarios. These activities generate insights that inform the Army senior leadership whether to invest in, discard, or continue to experiment with the ideas being investigated. After conducting appropriate investigations, Battle Lab task groups prepare formal reports for proposed required capability documents that are presented to CG, TRADOC for approval. Approved proposals are

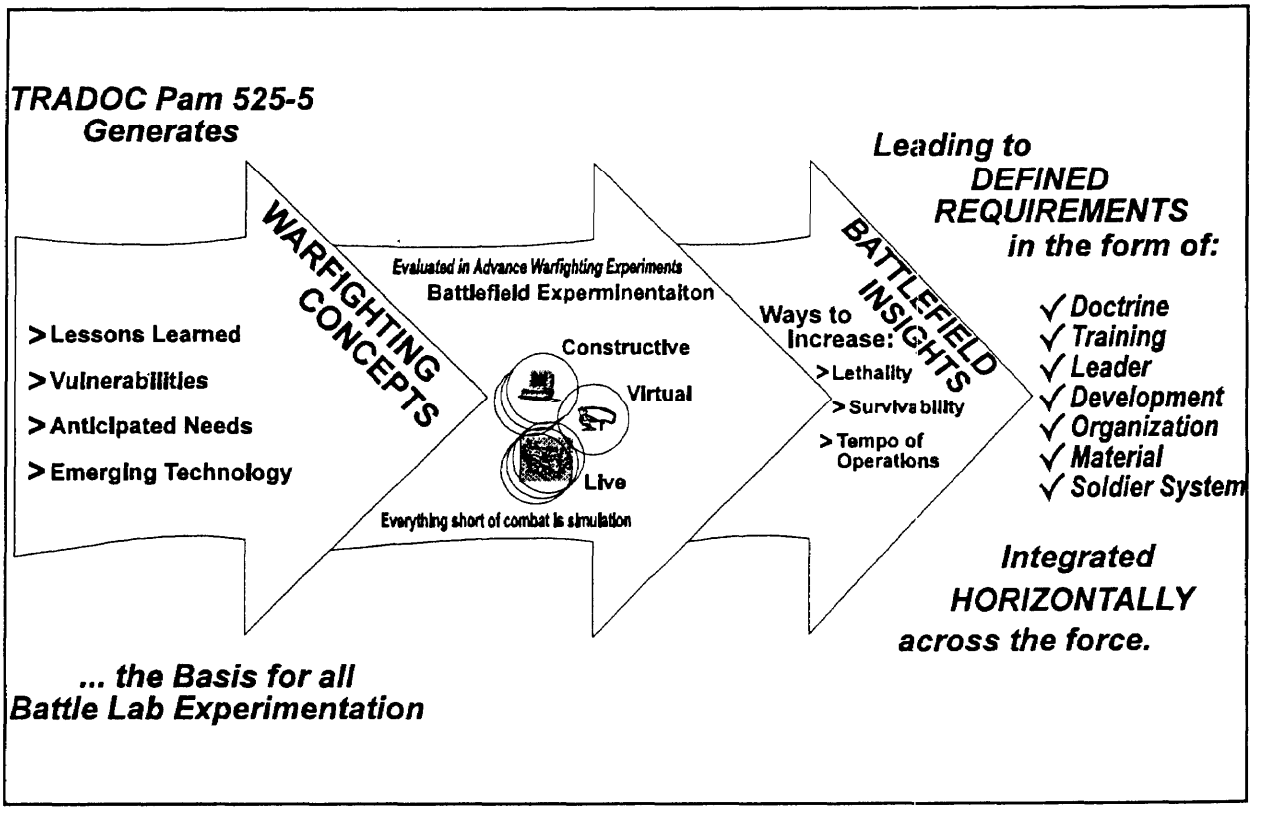


Figure 1-14
Advanced Warfighting Experiments

forwarded to appropriate TRADOC commandants to complete all documentation and other activity required to execute the element(s) of the proposal relating to their branch or specialty.

Summary

The Army operates within the national security structure as a strategic force. The nature of the Army's roles, functions; and missions implies that change will occur consistently and that management of change is vital to increase force capability in a coordinated manner. This produces and maintains combat-ready units to "maintain the edge" against any threat on any battlefield.

ECBRS is the Army's principle means of meeting the formidable challenge of transitioning to a force projection Army while, at the same time, changing the way we make changes. The LAM process and the Battle Lab program are the key to effecting ECBRS by providing expeditious processes by which to identify and develop required capabilities. By generating nonmaterial solutions to some requirements, demonstrating the utility of nondevelopmental technology insertions, and identifying technology that should be horizontally integrated across the force, LAM and the Battle Labs will ensure that our force projection Army exceeds the challenges of the next battlefield.

Chapter 3
Total Army Integration

Section I: Introduction

The reserve components of the Army consist of the Army National Guard (ARNG) and the United States Army Reserve (USAR). These reserve components (RC), together with the active component (AC) and the civilian workforce, comprise the Total Army. The ARNG is under the control of the governors of the states, the District of Columbia, the Territories of Guam and the Virgin Islands, and the Commonwealth of Puerto Rico in peacetime and may be federalized under the military departments during national emergencies. The USAR is structured under the Department of the Army.

The National Guard beyond its role as state militia also serves as a federal reserve for the nation. It provides support to the federal government and state executives and can be employed as a state or federally activated force to ensure domestic tranquility. In contrast, the USAR and the AC are limited, by law, as to how they can be employed in a domestic role.

Section II: Reserve Component Structure

RESERVE COMPONENT STATUTORY FOUNDATION

Title 10 of the US Code (USC) contains the laws governing the Armed Forces, to include the RC. The role of the RC, as stated in Section 262 is to provide trained units and qualified persons available for active duty in time of war, national emergency, or when national security requires. Specific provisions of the Code pertaining to the ARNG are contained in Title 32. Title 32 further states that ARNG units shall be ordered to federal active duty and retained as long as necessary whenever Congress determines they are needed.

Over the years, the role of the RC has been expanded from one of wartime augmentation to being an integral part of the force. Today's Army can meet no major contingency without the RC. The Total Army concept is a guiding principle.

RC COMPOSITION

The RC are comprised of three categories: the Ready Reserve, the Standby Reserve, and the Retired Reserve. The Ready Reserve is the largest category and contains the overwhelming majority of trained and ready military manpower that augments the Active Army in time of war or national emergency. Figure 3-1, Reserve Categories Composition, summarizes the categories of the Army Reserve.

The Ready Reserve

The Selected Reserve

As an element of the Ready Reserve, the Selected Reserve consist of the following-

- Army National Guard Units

  - ARNG personnel are part of the Selected Reserve or USAR Retired Reserve. ARNG Selected Reserve personnel include unit personnel, consisting of drilling soldiers, Title 32 AGR, ING, and Title 10 personnel.

  - Drilling soldiers are trained unit members who participate in unit training activities on a part-time basis. These soldiers are required to drill 24 days per year in IDT status and 15 days per year in AT status. The AT status is classified as active duty.

  - National Guard Title 32 AGR personnel are members of the Selected Reserve who are ordered to full-time National Guard duty for the purpose of organizing, administering, recruiting, instructing, or training National Guard units. All unit AGR soldiers must be assigned against an authorized mobilization position in the unit they support.

CATEGORY	RESERVE OF THE ARMY	STATUS
READY RESERVE	SELECTED RESERVE	Active
	INDIVIDUAL READY RESERVE	Active
	INACTIVE ARMY NATIONAL GUARD	Inactive
Standby Reserve	STANDBY RESERVE (USAR only)	Active/Inactive
Retired Reserve	RETIRED RESERVE (USAR only)	Retired

Figure 3-1
Reserve Categories Composition

- National Guard Title 10 AGR personnel are members of the Selected Reserve who are ordered to active duty under provisions of Title 10 USC, Section 235. Title 10 AGR officers can serve in designated positions worldwide.

• USAR Troop Program Unit (TPU). These consist of personnel assigned to USAR units in drill status who are required to drill 48 unit training assemblies (UTAs) per year and 14 days per year in annual training (AT) status. A UTA is an authorized and scheduled training assembly consisting of four hours. The AT status is classified as active duty.

• USAR Individual Mobilization Augmentation (IMA) Control Group. This group consists of personnel under the administrative jurisdiction of the Commander, Army Reserve Personnel Center (ARPERCEN), serving in specified duty positions as individual mobilization augmenters. At least 12 days per year of AT is required for these soldiers.

• Active Guard and Reserve (AGR) Control Group. This group consists of personnel on active duty for at least 180 days for the purpose of performing administrative and training duties on a full-time basis for TPUs. The major objective of the AGR program is to improve the readiness of RC units and soldiers through the use of RC soldiers on active duty.

The Individual Ready Reserve

The Individual Ready Reserve (IRR) consists of:

• The Annual Training Control Group. This group consists of non-unit Ready Reserve soldiers with a training obligation who may be assigned to USAR units by ARPERCEN and must take part in AT when so directed.

• The Reinforcement Control Group. This group consists of all other non-unit Ready Reserve soldiers not assigned to another control group. Both obligated and non-obligated officers

may be assigned to a USAR unit or an IMA position. Non-obligated officers who do not accept assignment may be removed from active status.

- Officer Active Duty Obligator Control Group. Personnel in this group are active duty officers, appointed in the USAR, who do not enter onto active duty at the time of their appointment.

- Dual Component Control Group. Personnel in this group are from the regular Army of the United States. They are enlisted soldiers or warrant officers who hold Army Reserve commissions.

Inactive Army National Guard

Inactive National Guard (ING) personnel are in an inactive status in the Selected Reserve, attached to a specific National Guard unit. They must muster once a year, but do not participate in training activities. ING soldiers are considered mobilization assets of the unit.

The Standby Reserve

The Standby Reserve consists of active and inactive Standby Reserve soldiers. Active Standby Reserve soldiers are not assigned to units but may take part in inactive duty training (IDT) without pay or travel allowances. Retirement points, promotion credit, or both may be earned. Inactive Standby Reserve soldiers are qualified for assignment and maintained on a standby list, but choose not to participate actively in training.

The Retired Reserve

The Retired Reserve consists of soldiers who have retired with 20 years of federal active service or who have been medically retired from the Army.

Section III: Reserve Component Management Structure

CONGRESS AND THE DEPARTMENT OF DEFENSE

As with the AC, the ARNG and USAR are affected by laws and policies of the Congress, OSD, and the Department of the Army. Strength authorizations and other matters concerning the ARNG and USAR are proposed by the Armed Services Committees of both Houses. The Defense Subcommittees of both the House and Senate Appropriations Committees prepare the appropriations acts that authorize funding.

Overall responsibility for the RC at OSD level is vested in the Office of the Assistant Secretary of Defense (Reserve Affairs) (ASD[RA]). Also at OSD level, the Reserve Forces Policy Board (RFPB), acting through the ASD(RA), is by statute the principal policy adviser to the Secretary of Defense on matters pertaining to the RC. The RFPB includes Guard and Reserve general officers, a civilian chairman, the Assistant Secretaries (Manpower and Reserve Affairs) of each Service, and one AC general or flag officer from each military department. A RC general officer is also designated to be the executive officer of the board. The Secretary of Defense is formally associated with the RC community through the RFPB. The RFPB is required by statute to prepare and submit an Annual Report to the President and Congress on the Status of the RC. That report normally reviews the progress made by DOD and the Services in improving the readiness of the RC. It includes areas where, in the Board's judgment, further improvements are required to make the reserve forces more effective members of the total force.

US ARMY RESERVE COMPONENT CONTROLS

Within the Department of the Army, overall responsibility for RC matters is vested in the Office of the Assistant Secretary of the Army (Manpower and Reserve Affairs) (ASA[M&RA]). The Reserve Component Coordination Council (RCCC) reviews progress on RC matters related

to readiness improvements, ascertains problem areas, issues and coordinates the tasking of issues to the Army staff, and reviews the progress of staff efforts. The Council is chaired by the Vice Chief of Staff of the Army (VCSA); membership includes selected general officers from the Army Staff, Chief of the National Guard Bureau and the Army Reserve, Director of the Army National Guard, the FORSCOM Chief of Staff, and the Deputy ASA(M&RA).

The Army Reserve Forces Policy Committee (ARFPC) reviews and comments to the Secretary of the Army and the Chief of Staff, Army, on major policy matters directly affecting the RC of the Army and the mobilization preparedness of the Army. Membership of the committee consists of five AC general officers on duty with the Army staff, five ARNG general officers, and five USAR general officers. There are also five alternate members appointed from the ARNG and the USAR. The Director of the Army Staff serves as adviser to the committee. The committee chairman is selected from among the RC members and serves a two-year term. Committee members are appointed by the Secretary of the Army.

US Army Reserve

The Army management structure for the USAR is shown in Figure 3-2. The mission of the USAR is to provide trained units and individuals to support Army mobilization plans. The office of the Chief, Army Reserve (OCAR) provides direction for USAR planning for the execution of this mission. The Chief, Army Reserve (CAR) is appointed by the President, with the advice and consent of the Senate, and holds the rank of major general in the Army Reserve and commands the US Army Reserve Command. Figure 3-3 shows the organization of the OCAR.

All USAR TPUs in the continental United States are commanded by the USAR Command (USARC). The Commanding General FORSCOM, through the USARC commander is responsible for organizing, equipping, stationing, training, and maintaining combat readiness of assigned units. The USARC Commander also functions as the FORSCOM Deputy Commanding General for Reserve Affairs and Chief of the Army Reserve.

The exceptions to this arrangement are units outside the continental US (OCONUS). In the Pacific, the Commanding General, US Army Pacific (USARPAC), commands all assigned USAR TPUs and assists in training Hawaii and Guam-based ARNG units. In Europe, the Commander in Chief CINCUSAREUR, commands all assigned USAR TPUs.

The continental US Army (CONUSA) mission is to provide operational control (OPCON) for training, operations, mobilization, and deployment (TOM-D) to major US Army Reserve Commands (MUSARC) within their geographical regions. The four CONUSAs command the Readiness Groups and Senior Army Advisory Groups.

USAR units are assigned to Army Reserve Commands (ARCOM) organized on a geographical basis, functional or "go to war" commands, Divisions (Institutional Training), and Divisions (Exercise). Engineer commands, theater army area support commands, corps support commands, and military police commands are examples of functional commands. An Army Reserve organization which reports directly to the USARC or OCONUS commander is designated a MUSARC.

USAR units are structured as combat support and combat service support units, institutional training divisions, and exercise divisions. Divisions (Institutional Training) have a mobilization mission of conducting basic training (BT), advanced individual training (AIT) and one station unit training (OSUT). Divisions (Exercise) have a mission of writing and conducting brigade, group, battalion, and lower unit Army training and evaluation programs (ARTEP), command post exercises (CPX), and field training exercises (FTX). Also included in the USAR structure are Maneuver Training Commands (MTCs) with a mission of writing and conducting battalion and lower unit Army training and evaluation programs (ARTEPs), CPXs, and FTXs; Army garrisons with a mobilization mission

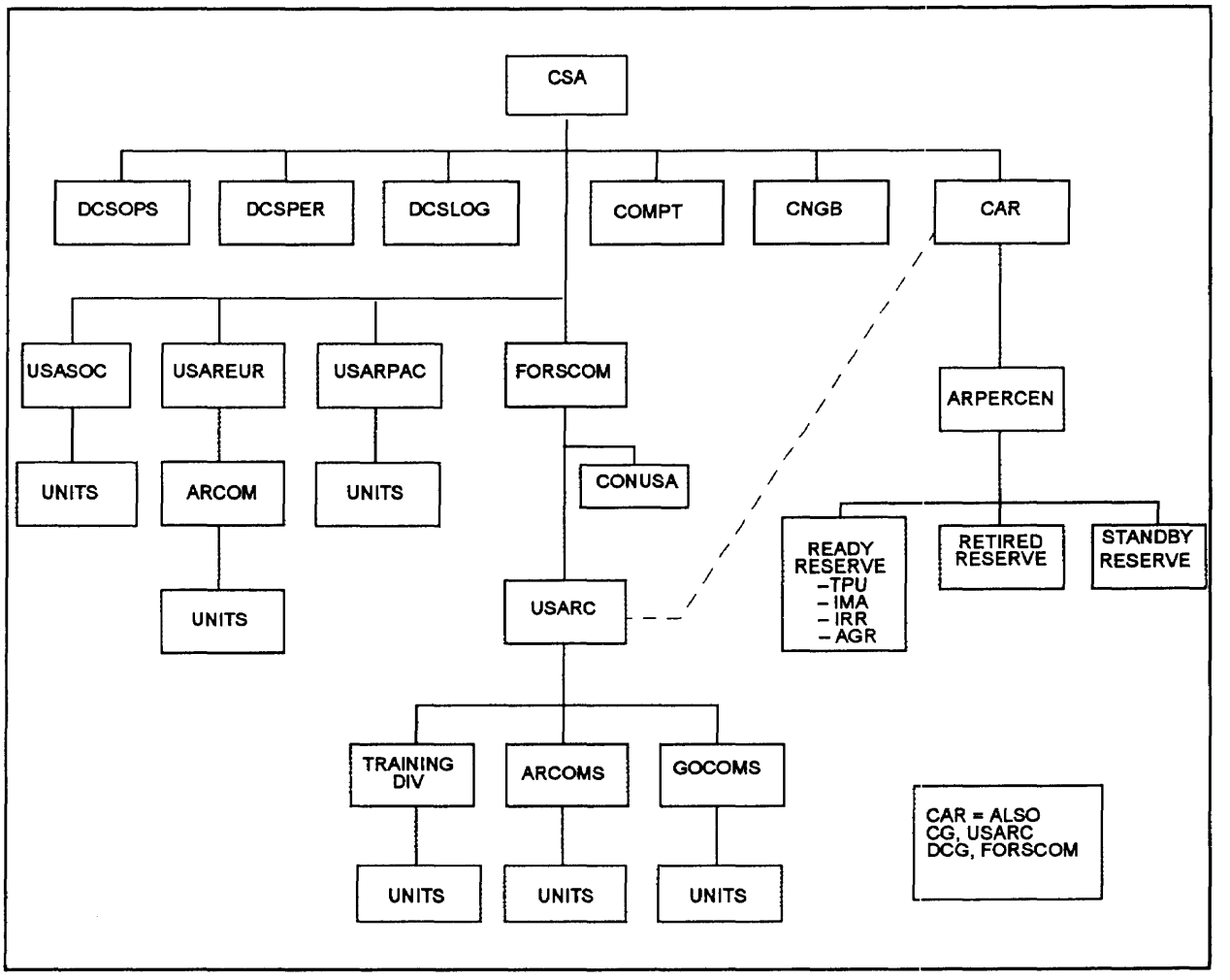


Figure 3-2
US Army Reserve Management Structure

of staffing a post; and US Army Reserve Force (USARF) schools that conduct enlisted military occupational specialty (MOS) courses, special courses, and US Army Command and General Staff College (USACGSC) courses for Active Army, National Guard, and USAR soldiers. Upon mobilization, personnel from these units augment the TRADOC school system, Army Training Centers, USAG, or other activities. Civil Affairs (CA) and Psychological Operations (PSYOPS) units perform their mission under the direction of Special Operations Command (SOCOM). In addition to the major USAR organizations, there are approximately 3,300 company or detachment-sized units.

All nonprior service male enlistees under the Reserve Enlistment Program of 1963 (REP-63) perform an initial period of active duty for training (ADT) for a minimum of 12 weeks. This includes BT and AIT under AC auspices. Nonprior service females are also required to complete BT and AIT. An alternative method of conducting this training is the "split-training" concept, whereby a RC member may do BT during one year and AIT the following year.

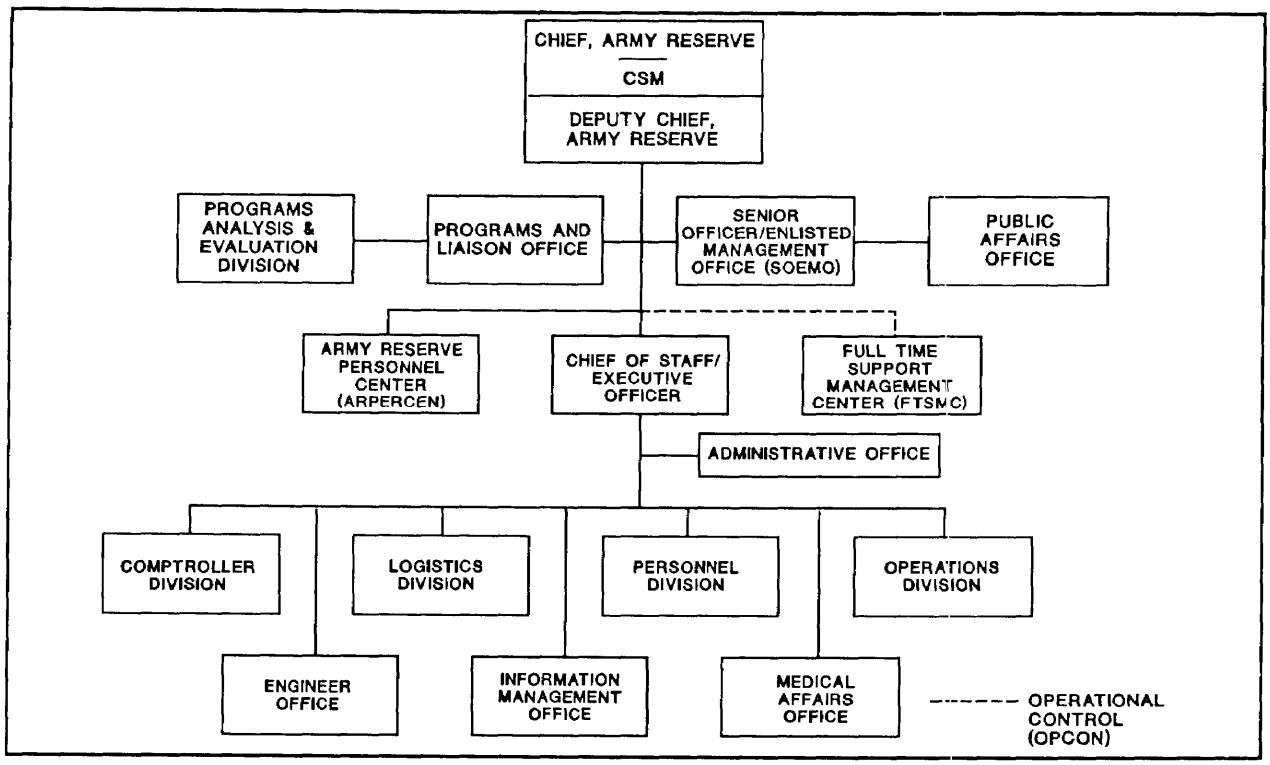


Figure 3-3
Office of the Chief, Army Reserve

Army National Guard

State Control

ARNG units are commanded by their respective state governors unless federalized by Presidential executive order. Governors exercise command, when under state control, through the adjutant general (TAG), whose authority as a state official is recognized by federal law. TAGs manage federal resources to build combat-ready units. Their management staffs include both state and federal employees. ARNG commanders lead their units in training during peacetime. A State Area Command (STARC) commands and controls ARNG units during premobilization through arrival at the mobilization station (Mob Sta) and performs movement control functions for all armed services and components during mobilization. STARCs provide family support functions for mobilized reserve soldiers.

Federal Control

At the federal level, the National Guard Bureau (NGB) is a joint bureau of the Departments of the Army and Air Force. It provides a peacetime channel of communications among the Departments of the Army, Air Force, and National Guard as established by Title 10 USC, Section 3040. It is both a staff and an operating agency.

The staff function of the NGB is to formulate and administer a program for the development and maintenance of National Guard units in accordance with Army and Air Force policies. As an operating agency, the NGB deals directly with the state governors and TAGs. Figure 3-4 depicts the National Guard Management Structure.

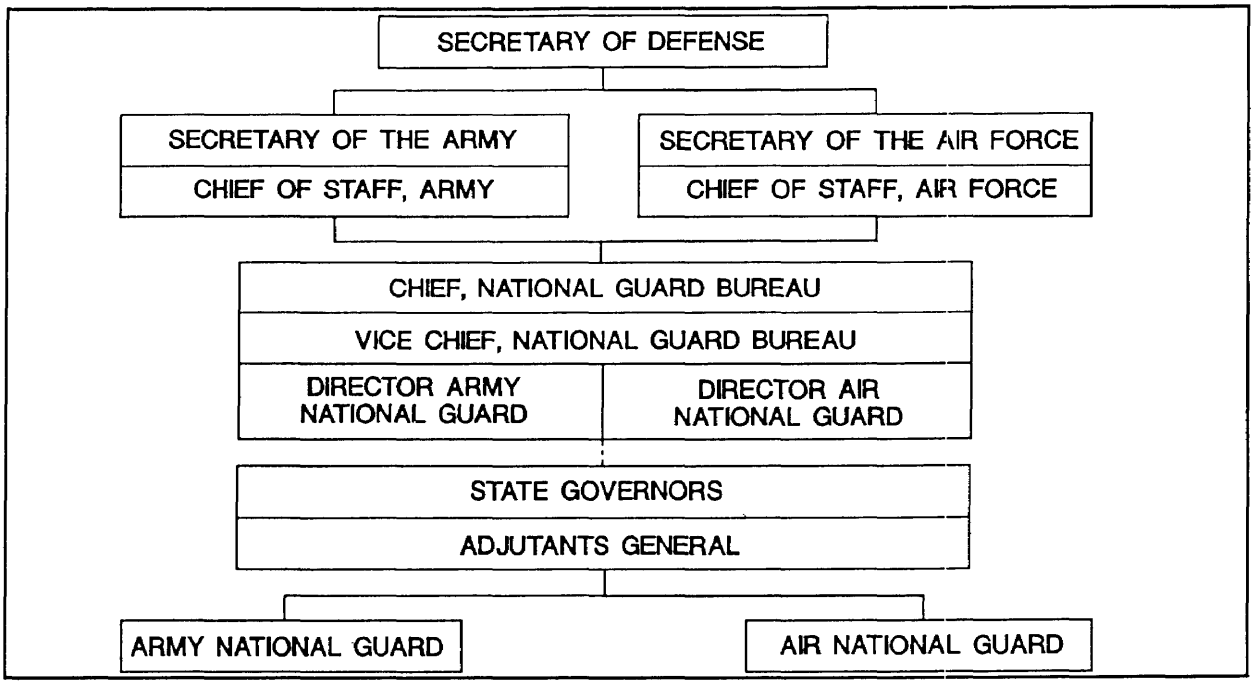


Figure 3-4
National Guard Management Structure

The Chief, NGB (CNGB), is a lieutenant general appointed for a four-year term by the President, with the advice and consent of the Senate, from a list of National Guard officers recommended by the state governors. He may succeed himself. He reports to the Secretaries of the Army and Air Force through the respective Chiefs of Staff and is their principal adviser on National Guard affairs. The CNGB has no command authority; cooperation is facilitated through control of funds, end strength, equipment, and force structure programs, and by authority to develop and publish regulations pertaining to the ARNG when not federally mobilized.

The CNGB is also the appropriations director of six appropriations by law: three ARNG and three Air National Guard appropriations (pay and allowance, operations and maintenance, and construction). He exercises administrative control through the Vice Chief, NGB (a major general of the opposite Service of the CNGB) to the Directors of the ARNG and Air Force National Guard.

The Director of the Army National Guard (DARNG) administers allocated resources to support ARNG force structure, personnel, facilities, training, and equipment, and to provide combat-ready units. In support of the federal mission, the DARNG also formulates the ARNG long-range plan, program, and budget for submission to the Army Staff. The DARNG organization is at Figure 3-5.

FEDERAL FUNDS AND PROPERTY SUPERVISION

The United States Property and Fiscal Officer (USPFO) is an officer of the Army or Air National Guard ordered to active duty under Title 10, USC. The USPFO receives and accounts for all federal funds and property and provides financial and logistical resources for the maintenance of federal property provided to the state. The USPFO furnishes advice and

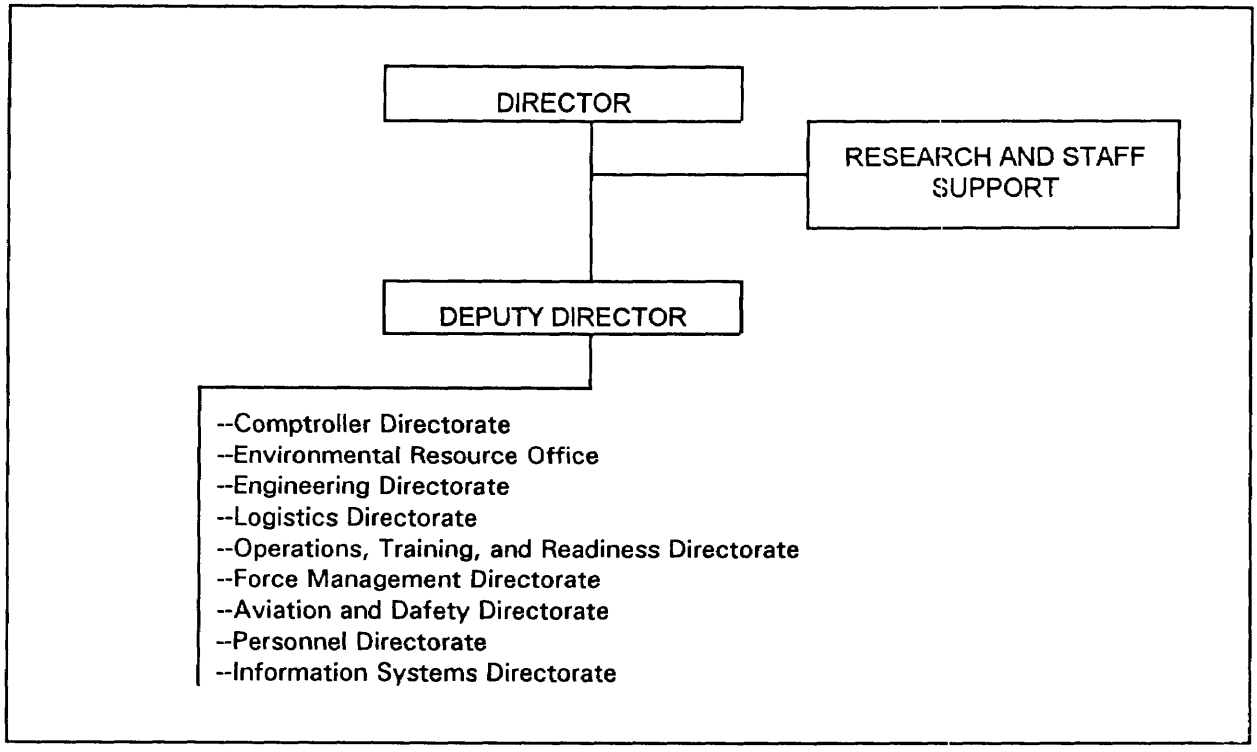


Figure 3-5
Office of the Director, Army National Guard

assistance to units within the state to ensure that federal property is used in accordance with applicable Department of the Army directives as implemented by the CNGB. The USPFO manages the federal logistics support system for the states and, upon mobilization of a supported unit, provides that support necessary for the transition of the mobilized entity to active duty status. The USPFO functions as a federal contracting officer and is responsible for federal procurement activities within the state. The USPFO also performs as the transportation officer responsible for mobilization planning and transportation of ARNG personnel, technicians, supplies, and equipment. Finally, the USPFO is the payroll certifying office responsible for certifying the accuracy of federal payrolls.

Section IV: Reserve Component Training and Equipment Program

RESERVE COMPONENT TRAINING PROGRAM

The training programs of the ARNG and the USAR are prescribed by the AC, both during IDT (commonly referred to as UTAs, multiple unit training assemblies (MUTAs), drills, or assembly periods), and during a two-week period generally known as AT. ARNG and USAR units train to the same standards as the AC. The training is conducted during both IDT and AT.

ARNG and USAR units, as elements of the Selected Reserve, are required to participate in a minimum of 48 drills and a two-week (14- to 15-day) AT period during the training year. The general trend is to consolidate these unit training assemblies during the year so that four UTAs are accomplished during a single weekend each month. This MUTA-4 configuration provides continuity for individual and crew training,

qualification and familiarization firing, field training, and refresher training.

AT consists of mission-essential training conducted at the training site, and includes collective and individual training.

The USAR Force School System conducts professional development and MOS training for officers and enlisted personnel of the AC and RC. Upon mobilization, USARF school personnel augment the TRADOC school system, Army Training Centers (ATCs), and other activities.

RESERVE COMPONENT EQUIPMENT PROGRAM

The policy of "first to fight, first resourced" is intended to ensure that units employed first will be adequately equipped. Under this policy, some RC units receive substantial amounts of modem equipment. New equipment is distributed from Army procurement and excess equipment, is redistributed in priority sequence. Later-deploying units, whether AC or RC, are provided the minimum essential equipment for training.

The National Guard and Reserve Equipment Appropriation is a special appropriation designated for the acquisition of equipment by the RCs to improve readiness. Also known as the Dedicated Procurement Program (DPP), these funds may be further fenced by Congress for the purchase of specific items of equipment. DPP funds complement the Service appropriations that primarily fund force modernization, thereby improving training and readiness in the RCs.

Section V: Reserve Component Assistance

Military and civilian positions for full-time support (FTS) personnel are authorized to provide assistance in organizing, administering, recruiting and retaining, instructing, and training RC organizations. They provide skills, stability, continuity, and a full-time availability that cannot be reasonably obtained by the use of part-time drilling reservists. Full-time personnel are authorized to support the development and maintenance of Selected Reserve units and individual readiness.

The four categories of FTS are-

- Active Component. These soldiers are assigned directly to USAR units and serve exactly as if they were assigned to AC units.

- Military Technicians. ARNG and USAR technicians provide full-time, day-today assistance and support and act as the representatives for their commanders during non-drill periods. Technicians ensure continuity in administration, supply, maintenance, and training, and their services are critical to mobilization preparedness. Both ARNG and USAR technicians are Federal Civil Service employees. The Army Reserve Technicians (ARTs) are governed by the provisions of the Civil Service System. ARNG technicians are governed by the same provisions except as modified by Public Law 90-486 (National Guard Technician Act of 1968); Title 32, USC, Section 709; and regulations prescribed by the NGB.

- Active Guard/Reserve. AGR soldiers serve on active duty in support of the RCs. Title 10, USC, personnel are available for worldwide assignment, whereas Title 32, USC, personnel must remain under control of the state.

- Federal Civil Service Personnel.

Summary

Over half of the Army's total deployable forces are in the ARNG and Army Reserve. The management of these forces is of paramount importance to the total force. The structure for RC management includes the Congress, DOD, HQDA, states, MACOMs, and units. Two key managing agencies at HQDA are the NGB and OCAR. At the MACOM level, states, FORSCOM, and its subordinate CONUS armies have a leading role in preparing RC forces for mobilization and deployment.

Chapter 4
The Force Integration Process

Section I: Introduction

Change is implicit in the functional life cycle model's depiction of how the Army accomplishes its statutory functions. It is the process of structuring, equipping, manning, training, sustaining, deploying, stationing, and funding organizations to produce a measurable output. In combat, that output consists of operational objectives achieved. In peacetime, the output is the attainment of readiness objectives.

Force integration is the management process that enables the introduction, incorporation, and sustainment of organizational, doctrinal, and materiel change. It considers the implications of change on organizations as they progress to a higher level of capability. Force modernization is the improvement of organizational capability through force integration.

The imperative for organizations to remain viable in an environment of change is to understand and manage change. This is the challenge of force integration. This chapter summarizes the force integration processes of-

- Management of change.
- Foundations of force integration.
- Force integration planning.

Section II: Management of Change

Management of change is a fundamental activity among people, organizations, or nations since relationships do not remain constant over time. The foundations of change that affect Army organizations can be external or internal to the force.

History shows that organizations must change with their environment to function successfully and support their continued existance. This evolution will vary with the external pace and magnitude of change, the functions affected, and the organizations involved. Managing change effectively demands an understanding of the environment, related processes, and primary influences.

GOALS

The Army manages and executes change through force integration to assure:

- Enhanced effectiveness in warfighting capability.
- Balanced capabilities to maintain all core competencies.
- Flexible processes to evolve the force in any direction, consistent with guidance and available resources.

These goals require that the management and execution of change be structured from a total system perspective. This perspective will:

- Incorporate consideration of all input factors.
- Develop alternatives.
- Provide processes that support decisionmaking.
- Assure integration of all solution elements.
- Provide output for execution and feedback.

FORCE MANAGEMENT PROCESSES

Force management is the process of determining force requirements and alternative means of resourcing requirements. It allocates resources and assesses their utilization to accomplish Army functions and missions. To

accomplish Army missions and functions within resource constraints, force management encompasses all processes associated with the progression from requirements determination through execution of time-phased programs and structures. It involves rank ordering of requirements and application of resources.

Force management includes several developmental processes (Figure 4-1, Force Management Developmental Processes).

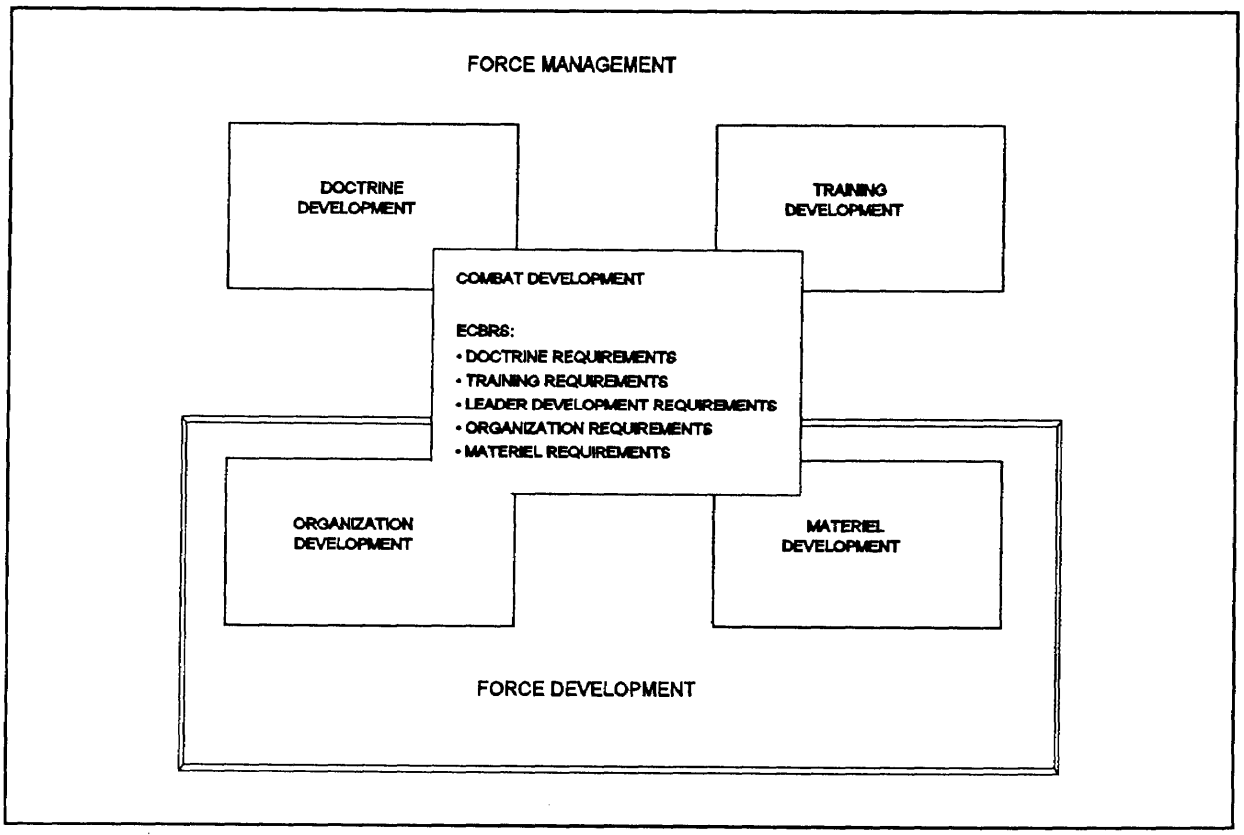


Figure 4-1
Force Management Developmental Processes

• Combat Development. This is the process of determining doctrinal, training (to include leader development), organizational, and material requirements and translating organizational requirements into unit models.

• Doctrine Development. This process translates doctrinal requirements into publications that prescribe doctrine, tactics, techniques, and procedures.

• Training Development. This process translates training and leader development requirements into programs, methods, or devices.

• Materiel Development. This process translates materiel requirements into executable acquisition programs within cost, schedule, and performance requirements.

• Organization Development. This process translates organization requirements into unit models.

The force development process translates materiel and organizational requirements into RDA programs and force structure.

Force management processes ensure the planning, development, integration, introduction, incorporation, and sustainment necessary to field the optimum force within imposed constraints. To be effective, managers of change from the Department of the Army to individual units must be familiar with all relevant Army functional areas and processes across the force.

FORCE MANAGEMENT TASKS

Fundamental force management tasks include-

• Doctrine Development. This activity guides development of operational concepts and doctrine across the operational continuum. Tasks associated with this activity include the following elements-

– Developing and preparing concept statements and doctrine in all mission areas.

– Monitoring Development of the long-range research, development, and acquisition plan (LRRDAP) and POM. This task examines consistency among approved doctrine, organization designs, and system development and acquisition.

– Aligning concept and doctrinal developments with assessments of emerging technological capabilities.

• Requirements Determination. This activity is designed to balance missions, required capabilities, threats, and identified vulnerabilities. Associated tasks include-

– Determining detailed Total Army requirements to achieve necessary operational capabilities. Included are requirements for structure, personnel, materiel, facilities, and training.

– Developing, coordinating, and executing combat development portions of the materiel acquisition process.

– Reviewing force planning and programming documents to ensure consistency of missions, requirements, and systems developments.

– Preparing, reviewing, validating, and approving materiel requirements and associated documentation.

– Selecting and approving supportable and executable materiel acquisition strategies.

– Aligning materiel capabilities with approved materiel requirements documents.

• Prioritization. These activities align mission requirements with projected resource constraints. Related tasks include establishing priorities for-

– Activating, converting, and reorganizing units.

Allocating personnel and equipment to Army organizations and activities.

– Funding Army investment, operations, and maintenance accounts.

• Authorization Allocation. These activities distribute projected resources to meet requirements in Army organizations and activities according to established priorities. Associated tasks include-

– Establishing policy and executing application of resources to Total Army requirements.

– Establishing personnel and equipment authorizations based on established priorities.

- Allocating personnel and equipment resources to units in integrated packages of defined capability increments.

- Assessing the operational and organizational impact of resource options.

- Maintaining planned, programmed, budgeted, current, and historical troop lists.

- Planning, programming, budgeting, directing, monitoring, and evaluating organizational capabilities.

- Preparing, justifying, maintaining, and defending organizational and materiel systems management decision packages (MDEP).

• Integration. Associated activities ensure availability and timeliness of the appropriate mix of resources (structure, personnel, equipment, funds, facilities). Integration tasks include-

- Managing functionally similar organizations to ensure capabilities, organization, personnel and equipment allowances, and funds to support battalions and separate companies throughout the unit life cycle. Organization integration is focused on user requirements.

- Managing major units to ensure internal consistency of organization integration actions and providing linkage between the resourcing and force programming systems.

- Managing materiel systems from development through retirement from the force. Systems integration is directed at ensuring materiel viability and sustainability from the user's perspective. This task ranges from defining operational requirements and operational test and evaluation (OT&E) to equipment fielding and sustainment.

- Conducting executability, affordability, and supportability assessments for structure, personnel, equipment, fiscal resources, facilities, training, sustainment, and deployability.

- Conducting FIA to determine affordability and supportability of forces generated during TAA.

- Developing total resource packages for systems and organizations over time.

- Developing and executing policies and procedures for force integration.

- Monitoring all force integration activities.

• Program Analysis. These activities provide analyses and evaluations of the spectrum of force integration program activities. Tasks include-

- Providing force integration proposals, rationale, and justification to support Army planning.

- Analyzing RDA programs, initiatives, and alternatives to assist in resource determinations.

- Conducting the necessary planning and analyses to ensure RDA programs support modernization and readiness objectives within resource constraints.

- Developing and executing policies and procedures for analytical support. This support includes materiel programs, force development analyses, and related force integration assessments.

• Operational Testing and Evaluations. These activities ensure organizations and equipment meet approved operational capabilities when fielded. This is achieved through the management and conduct of user testing. Force development, early user testing, and experimentation also support these activities. Related tasks include-

– Developing and executing policies and procedures for user testing and evaluation.

– Managing, scheduling, resourcing, coordinating, and executing user testing and evaluation programs.

Section III: Force Integration

SCOPE

The scope of force integration includes the functions of structuring, manning, equipping, training, sustaining, deploying, stationing, and funding the force during the introduction and incorporation of change. Finally, it includes the function of measuring force readiness during the sustainment of change. Force integration synchronizes these functional activities to produce combat-ready organizations.

MISSION

The mission of force integration is to improve warfighting capabilities with minimum adverse effect on readiness during the period of transition. Execution of the force integration mission includes-

- Placing doctrine, organizations, and equipment into the Army.
- Developing strategies for coordinating and integrating the functional and managerial systems that exist in the Army.
- Assessing the impact of decisions on organizations.

The force integration mission can also be seen from a functional, temporal, and organizational perspective (see Figure 4-2, Force Integration Environment):

- Functional. Force integration, from a functional perspective, incorporates each function and describes processes for planning and execution supportive of all the affected functions.
- Temporal. The force integration environment can also be considered from the perspective of time. This views force integration in the context of the PPBES with activities occurring in the near-term (current year and budget year), the mid-term (the program years), and the far-term (the extended planning period). Each of the functional inputs and products has timelines that must be aligned to ensure a successful force integration mission.
- Organizational. From the organizational perspective, synchronization of force integration functions and processes is accomplished at all command and agency echelons. Planning and programming of activities are designed to ensure that execution at the user organization can be accomplished in minimum time with minimum readiness degradation and will result in a maximum possible increase in capability.

These three force integration perspectives provide a holistic view of the environment. The activities, processes, products, decision support mechanisms, and databases associated with force integration occur within this environment. The complexity of functional execution and synchronization is apparent. Integration and synchronization of these functions requires-

- Mutually supportive planning and execution mechanisms.
- Centralized planning and decentralized execution.
- Comprehensive and flexible decision support processes.

FORCE INTEGRATION COMPONENTS

Force integration encompasses processes, decision support mechanisms, and products to manage change by-

- Assessing requirements for changes in capability.

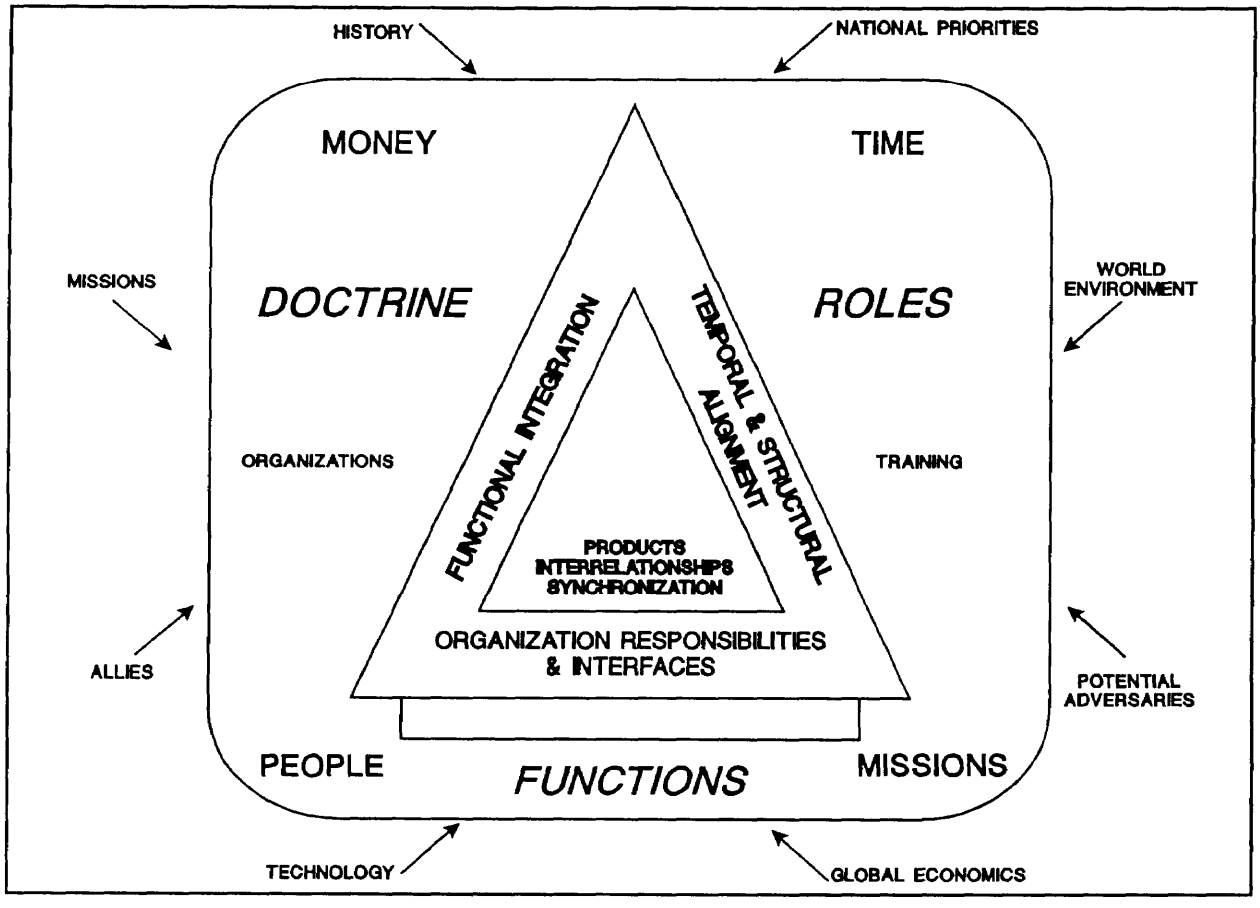


Figure 4-2
Force Integration Environment

- Ensuring consideration of growth alternatives.

- Developing suitable, feasible, and acceptable concepts to execute programs.

- Determining and recommending solutions.

- Obtaining approval for solutions.

- Preparing and executing detailed plans of action.

- Assuring feedback that validates or modifies actions and execution, as necessary.

THE ROLE OF OPERATIONAL REQUIREMENTS IN FORCE INTEGRATION

Within the Army, operational requirements establish the parameters for change management. They include the following-

- Direction and guidance. NCA, JCS, and departmental guidance provide the basis for developing Army plans and conducting operations.

- Missions. Missions are based principally on laws, customs, and directions from higher authority. The Army's statutory, specified, and implied missions establish the

framework within which the Army manages change.

- Doctrine. Army doctrine establishes the broad principles for the conduct of military and other support operations. As missions, allies, history, and technology evolve, the Army reexamines and revalidates or changes its warfighting doctrine.

- Organizations. The Army designs its force structure to conduct combat operations in consonance with approved doctrine. At any point in time, current organizations in the force structure are the baseline from which the Army's evolution must occur.

- Training. The force is structured, equipped, and trained for a given set of missions. Training is a key element in the incorporation and sustainment of organizational change.

- Current and Programmed Force Programs. Force structure changes approved in the defense budget and POM establish the parameters for future activities.

- DOD, HQDA, and MACOM Priorities. Priorities established by these elements can limit the flexibility available to the Army at large to manage change within specific timelines.

- Resources. A key determinant for managing change is resource allocation, directly effecting changes in program execution.

Section IV: Foundations of Force Integration

Force integration is a multidisciplinary, capstone process which examines, validates, modifies, and monitors all aspects of change. It results from activities within functions or functional groupings designed to increase operational capability at the organization level. The AFLCM provides a construct for explanation and examination of the overall process. No function of the model can be viewed as a discrete entity because no single function can be accomplished without reference to, or effect on other functions. The AFLCM is depicted in Figure 4-3, Army Functional Life Cycle Model, with the eight functions supported and influenced by command, management, leadership, and resources.

To articulate the nature of change and to assess the executability and supportability of change, all factors affecting organizations must be considered. The definitions of the nine force integration functional areas (FIFA) provide the standard to be achieved in transitioning organizations from one level of capability to a higher level. They prescribe the correctly structured, equipped, trained, manned, sustained, deployed, stationed, and funded end state to be achieved at the culmination of modernization as well as the required readiness level.

- Structuring. An organization is properly structured when the organization and its direct support/general support (DS/GS) structure have accurate requirements documents, HQDA-approved authorization documents, and registered unit identification codes (UICs).

- Manning. An organization is properly manned when the organization and its DS/GS structure have assigned, by grade and skill, all authorized personnel.

- Equipping. An organization is properly equipped when the organization and its DS/GS structure have the most modern equipment authorized, to include major end items; associated support items of equipment (ASIOE); test, measurement, and diagnostic equipment (TMDE); special tools and test equipment (STTE); maintenance floats; and all authorized common table of allowance (CTA) items.

- Training. An organization is properly trained when the organization and its DS/GS structure have completed all required Army modernization training (AMT) to include NET, DTT and NOT, and have been evaluated and meet ARTEP standards. All authorized organizational training support material and training devices must be in unit hands and all institutional training courses and training

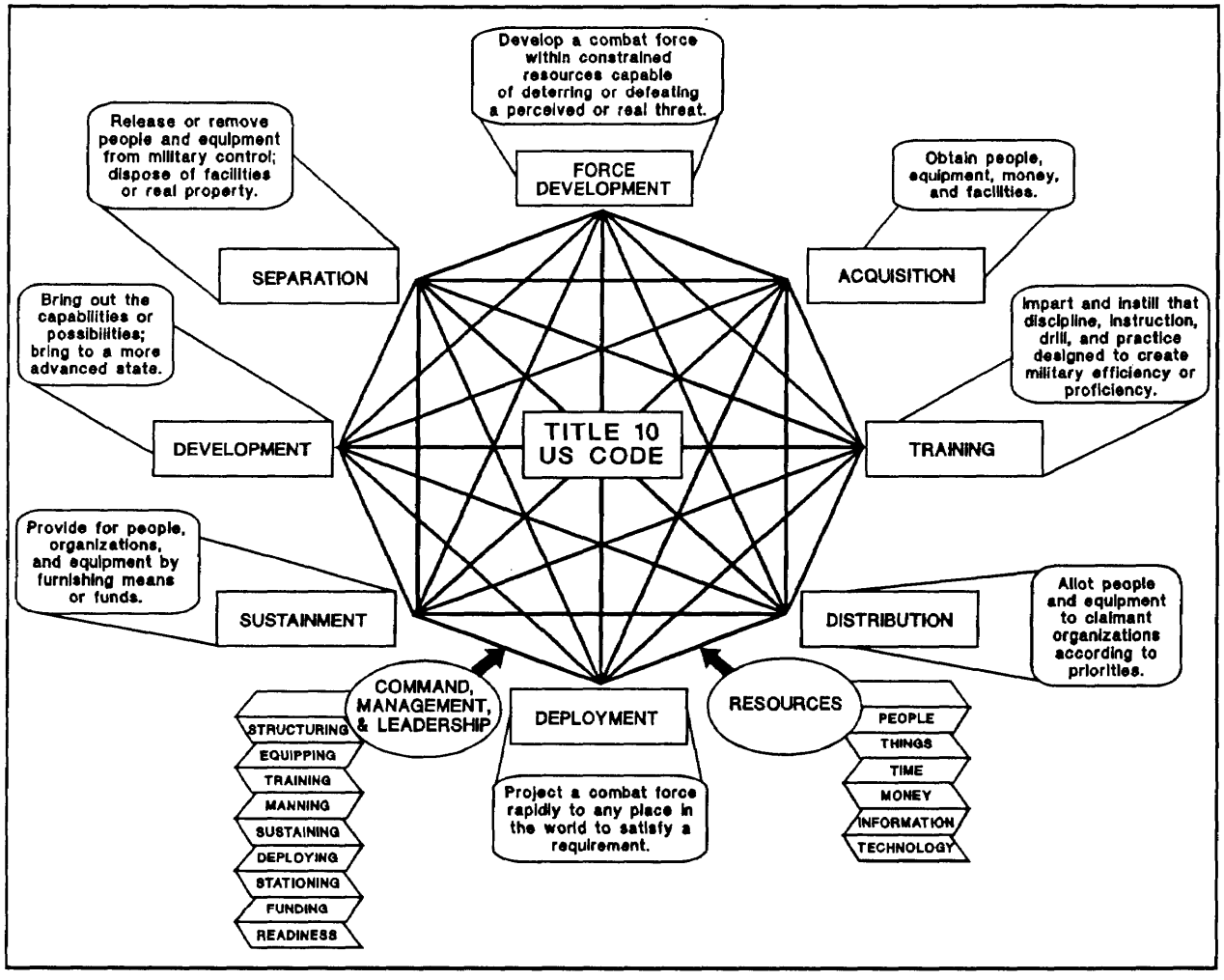


Figure 4-3
Army Functional Life Cycle Model (Expanded Description)

systems, training ammunition, and training facilities must be available. All doctrinal publications must be on hand.

- Sustaining. An organization can be properly sustained when all authorized organization-level combat support and combat service support personnel are assigned and all support equipment, facilities, spares, and supplies are on hand. The DS/GS structure must be structured, equipped, trained, manned, sustained, stationed, and funded to sustain the supported organization. All support publications must be on hand and the organizations must have valid Department of Defense activity address codes (DODAACs).

- Funding. An organization is properly funded when all costs associated with the organization and its DS/GS structure have been identified, programmed, and resourced. Funds must be available to support activation, reorganization, conversion, stationing, property turn-in or transfer, transportation, facility construction or renovation, and operating tempo (OPTEMPO).

• Deploying. An organization is deployable when the organization, its DS/GS structure, and associated round-up/round-out units are structured, equipped, trained, manned, sustained, stationed, and funded to operate as an element of an Army component command. The organization must be compatible with associated round-up/round-out and sister Service organizations.

• Stationing. An organization is properly stationed when the organization and its DS/GS structure have all required organizational facilities and support infrastructure in place. No degradation of quality of life, safety, or environmental standards can exist.

• Readiness. An organization is operationally ready when the organization and its DS/GS structure are at overall and commodity area category levels consistent with the organization's authorized level of organization (ALO).

Horizontal synchronization of these vertical functions is focused on user organizations to achieve an enhanced operational capability after transition.

Section V: Force Integration Planning

PLANNING REQUIREMENTS

Requirements for force integration originate with the NMS with further details found in the DPG. Mid- and long-range planning is further refined by the joint strategic and Army long-range planning systems. Systemic relationships are depicted in Figure 4-4, Defense Planning System Interrelationships.

Planning to execute change involves the efforts of force integrators at all force levels down to the lowest manageable level: regiment, separate brigade, or division. All actions and activities that can be accomplished at these levels must be planned and accomplished to

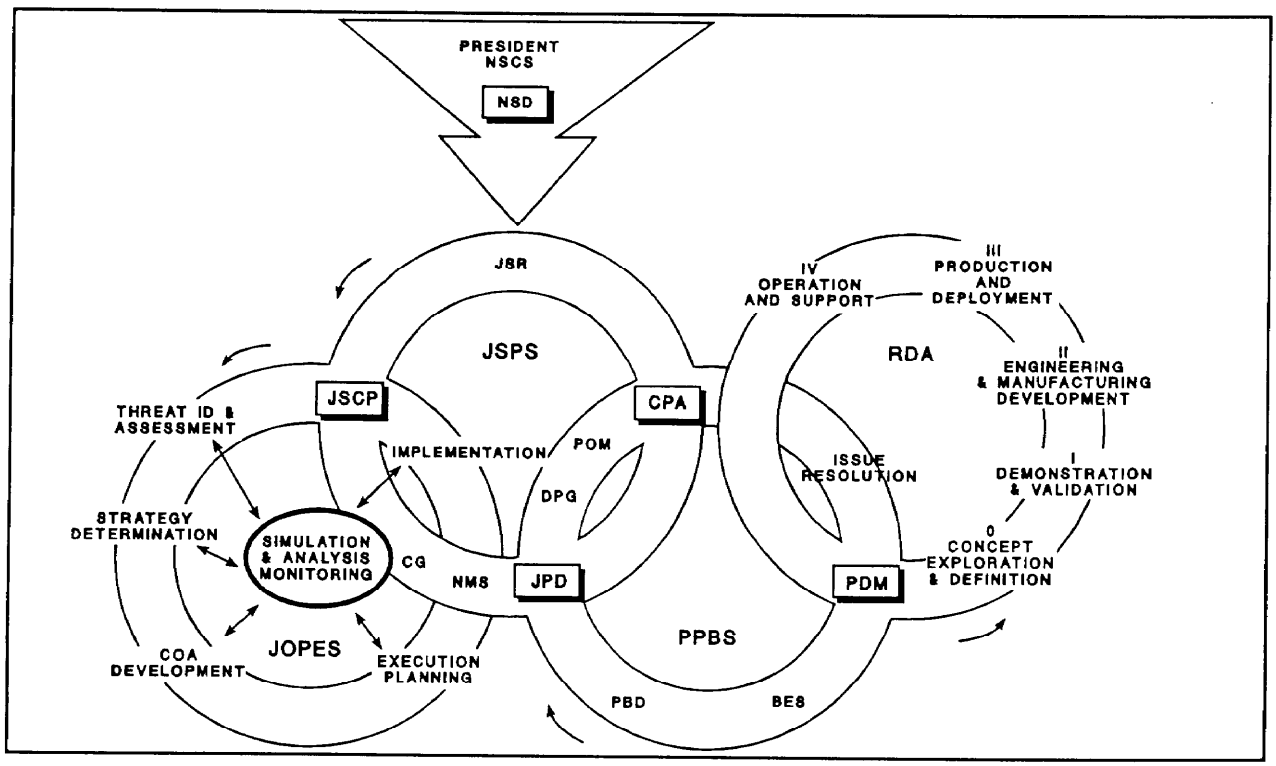


Figure 4-4
Defense Planning System Interrelationships

reduce the complexity of executing change for the ultimate executor: the organization commander. Proponency for planning rests with the staff force integrator, who must monitor execution to ensure changes are introduced, incorporated, and sustained.

Planning and execution of force integration actions will occur in all environments--in peacetime, mobilization, wartime, and during demobilization. Activations, conversions, and reorganizations are programmed and documented to ensure that long-range objectives are attained. This is significant because unilateral decisions to activate, convert, or reorganize units require diversion of programmed resources and may only achieve short-term success. The flexibility of a commander to task organize forces does not give him the license to effect unprogrammed and undocumented organizational change.

IMPACT ASSESSMENTS

Assessments of force integration actions must quantify their impact on organization and force readiness. Changes which are documented in the authorization database without adequate supporting resources may, if implemented, results in a degradation of unit status in terms of personnel, equipment on hand, equipment readiness, or training. If such action could lead to a lower readiness category rating, any associated changes must be subjected to intensive planning and management.

PLANNING FACTORS

Full consideration of selected planning factors is critical for accomplishing the force integration mission successfully. Force integration planning must:

- Identify the nature of change, when it will occur, and what organizations it will affect.
- Ensure that documentation supports the change.
- Develop suitable, feasible, and acceptable concepts to execute the change.
- Assess the executability and supportability of the change.
- Involve affected organizations in the planning process.
- Identify facilities requirements.
- Establish command and staff responsibilities and milestones.
- Control turbulence in organizations.
- Avoid "instant unreadiness."
- Maintain a warfighting focus.

Application of decision support methodologies in the planning process ensures that required tasks are structured in the sequence that they are to be accomplished. A synchronized plan requires that critical and concurrent activities be identified and correlated in time and by organization.

Section VI: International Considerations

lnternational relations and supranational organizations contribute to the need for managing change. The following are essential elements of relationships that may affect the future direction of the Army:

- National priorities. As US interests evolve, their relative importance for achieving national interests will vary. For example, the relative importance of geography, trade, natural resources, or national debt may change. These elements may increase or decrease in significance as their impact on national goals and objectives changes. Such change may, in turn, have corresponding influences on the Army.
- History and World Environment. A nation’s historical perceptions influence its relationships with the family of nations. A nation’s selection of allies also evolves over time as national interests change and significantly influence international relations. Historical alliances have had significant influence on the

future goals of the nation and its military and affect the planning and execution of military operations.

- Potential adversaries. Much like alliances, potential adversaries shift over time as national interests evolve. This results in a periodic reassessment of which nation constitutes a significant threat to national and alliance interests.

- Technology. The accelerated pace of technological developments is a significant element of change. This revolutionary trend directly affects requirements for the timely exploration of technological opportunities and the need to manage change within the military.

- Missions. The above factors directly impact on missions assigned to the military. Modifications in prospective responsibilities, potential alliances, and threats have a profound effect. Furthermore, the evolution of national interests and priorities significantly influence the conduct of warfare and operations other than war.

- Direction and guidance. The sum total of internal and external elements provides the foundation for direction and guidance from the NCA to the JCS and the military departments.

Summary

Management of change through the force integration process is vital to the Army. Change is affected by complex external and internal factors. The process of introducing, incorporating, and sustaining change is the force integration process. Functional process synchronization integrates the activities associated with force integration. This introduction to the complexity of the force integration mission will be expanded in the remainder of this manual.

Chapter 5
Organization Management

Section I: Introduction

Management of organizations is accomplished through organizational integration by focusing on user organizations in the process of introducing, incorporating, and sustaining new structure, equipment, and doctrine into the Army.

The management of functionally similar organizations and major units composed of functionally dissimilar subordinate elements requires structure, objectives, and execution at HQDA, Army component command, MACOM, corps, division, and installation levels. This chapter discusses functional responsibilities at each of these levels. It also addresses organizational structure, integration, and assessments as management tools for cyclic reviews and decision support for changes in Army organizational structure, materiel, and doctrine.

Section II: Organization Management Structure

LEVELS OF CONTROL

The National Level

The executive and legislative branches of government, to include the DOD, affect force integration processes. These agencies are interested in defining and resourcing force structure and approving materiel acquisition programs. Such involvement frequently determines if individual Service planning and programming can be executed or must be changed. Therefore, Army force integration must be planned and programmed in detail while retaining sufficient flexibility for modifications and adjustments.

HQDA is responsible for determining requirements and establishing authorizations for people and materiel. The Army staff (ARSTAF) plans, programs, and develops the force. It develops projections for required force capabilities to accomplish Army missions and functions. The Deputy Chief of Staff for Operations (DCSOPS), HQDA is responsible for Armywide management of force integration.

Army MACOM, Component, and Unit Levels

Force integration staffs of MACOMs and Army component commands plan, program, and develop their portion of the total force from the perspective of their command's specific operational requirements. They also develop the decisions, guidance, and information necessary to ensure effective execution of the force integration process within subordinate organizations.

Force integration staffs at corps, division, regiment, separate brigade, and installation perform the force integration mission at their level. Actual execution of unit activations, conversions, and reorganizations is accomplished by the parent organization of affected units.

Implementation may occur as a result of planned, programmed, and documented organizational change or in support of short-notice unit deployments into combat or operations other than war. In either case, organizations that are activated, converted, or reorganized must be structured, manned, equipped, trained, sustained, deployed, stationed, and funded to function as part of the Army component of a joint task force or unified command. Reserve component organizations that round-up or round-out active component forces must also be capable of being sustained by the active component's parent organization.

Section III: Organization Integration

PURPOSE

Organizational integration is a tool of change management that focuses Army management actions on organizations to ensure orderly introduction, incorporation, and sustainment of new structure, equipment, and

doctrine into the total Army.

The objective of organization integration is to assess the combined impact of Army functional systems on units to ensure the right mix of resources (structure, people, equipment, dollars, facilities) is available to support a planned activity for an organization or system. The results of this activity provide the Army with combat-ready units.

FORCE INTEGRATION COMPONENT ACTIVITIES

Execution of organization integration in the near-, mid-, and far-terms involves-

- Recommending Priorities. Organizations must be considered in their totality when determining priorities for managing change while accounting for total force warfighting requirements during the planning and execution phases.

- Managing Information. Information that is routinely conveyed vertically through functional or branch "stovepipes" must be shared horizontality across the force integration spectrum. Force integration staffs must ensure that echelon-specific information is integrated and analyzed. All available information must be focused on an organizational perspective.

- Synchronizing Activities. Sequencing events in time is involved in virtually all modernization activities because they require multi-functional support from all organizational echelons down to the specific, affected unit. Responsibilities, milestones, and decision points must be established to achieve operational requirements. The definitive critical path of an action allows commanders to synchronize the total integration function.

- Monitoring Execution. Routine functional staff supervision of force integration activities enables adjustments and deconfliction of actions, and provides necessary updates of schedules.

- Assessing Capability. Executability and supportability of force integration activities must be assessed prior to and incident to activations, conversions, or reorganizations to ensure total organization integration.

PROCESS INTEGRATORS

Execution of the force management process depends on the synchronized efforts of organization and functional management and special interests. Special interests are represented by external agencies whose activities affect or are affected by the specific force integration action. Functional management is represented by command or staff proponents of each force integration functional area. Organization management includes numerous integrators as noted below with responsibilities portrayed in Figure 5-1, Force Integration Responsibilities:

Organization Integrator

The Organization Integrator (OI) represents organization interests of functionally similar organizations and integrates management of all aspects of structuring, equipping, manning, training, sustaining, deploying, stationing, and funding. He either speaks for all organizations in a specific standard requirements code (SRC) or specific type organizations within an SRC. He also organizes and synchronizes OI team activities. The organization integrator:

- Assesses the ability of the functional systems to provide personnel, materiel, and facilities for organizations.

- Recommends priorities for allocation of personnel, materiel, and facilities to organizations as integrated packages.

- Assesses the impact on readiness as a result of personnel, training, equipment, facilities, doctrine, or structure changes.

- Reviews distribution plans and determines impacts on organizations.

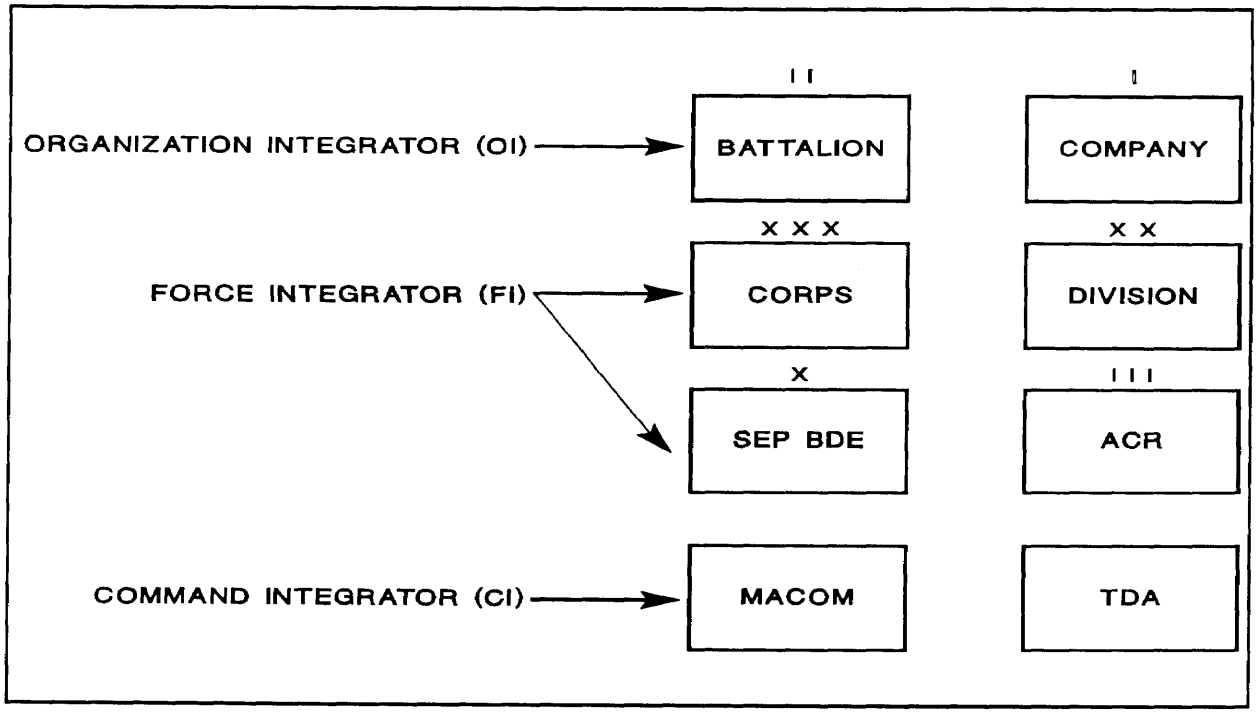


Figure 5-1
Force Integration Responsibilities

- Assesses impact of new capabilities on organization structure, doctrine, or resources.

- Coordinates requirements and authorization documents.

- Maintains the documentation audit trail on all additions, deletions, and other changes to organization authorization documents.

- Develops, maintains, and defends organizational MDEPs for organizations.

- Ensures validity of operating system databases.

Coordination of force integration actions is accomplished by the OI team (Figure 5-2, Organization Integration Team). The team's structure depends on the task and organization(s) affected, to include representation from organizational and functional management personnel. Special interests, to include affected organizations, should also be on the team. The OI team uses information available in existing Army information systems to assess executability and supportability of planned and programmed activities. If problems appear in information systems or the validity of plans, the OI team identifies the issue and assesses the impact by functional area. Action is taken to correct the problems at the lowest manageable level.

Force Integrator

The Force Integrator (FI) represents organization interests of functionally dissimilar organizations grouped into brigades, regiments, divisions, and corps. The FI-

- Assesses the ability of functional systems to provide personnel, equipment, facilities, and fiscal resources for major units.

- Develops, maintains, and defends organizational MDEPs for major organizations.

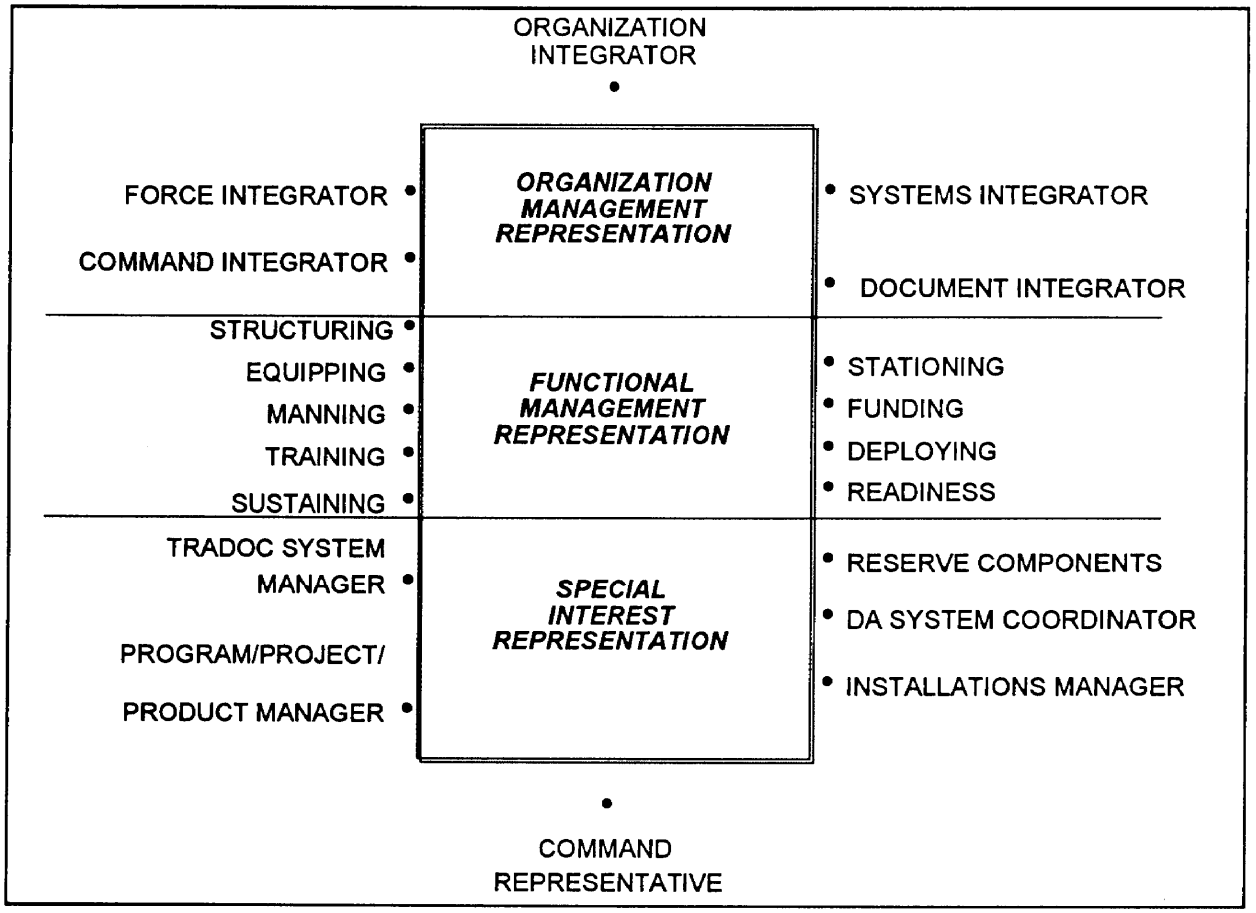


Figure 5-2
Organization Integration Team

- Develops, assesses, and makes recommendations for alternative use of resources for establishing and maintaining major organizations to support a warfighting CINC and other MACOMs.

- Acts as the link between resource allocators and OIs.

- Evaluates and analyzes the total impact of incorporating personnel, facilities, equipment, doctrine, structure, and capability changes into major organizations.

- Ensures validity of operating system databases.

- Reviews requirements and authorization documents.

- Assesses the impact of new doctrine, structure, manning, equipment, and facilities on major units. This includes strategic policy, training, mobilization, deployment, sustainment, redeployment, demobilization, and resource strategies.

Command Integrator

The Command Integrator (CI) represents organization interests of a MACOM, manages its table of distribution and allowance (TDA), and serves as the OI and FI for that MACOM. The CI-

- Acts as point of contact (POC) for command plans and concept plans.

- Maintains the documentation audit trail on all additions, deletions, and other changes to unit TDAs.

- Produces manpower resource guidance for MACOM program budget guidance (PBG).

Systems Integrator

The Systems Integrator (SI) represents user interests in all materiel system management aspects of force integration. The SI is involved in all aspects of equipping, from the front-end requirement determination process through system fielding. The SI-

- Determines requirements for materiel fielding and other user-oriented functions related to materiel acquisition.

- Develops the command position on materiel requirements documents.

- Assesses the affordability of the materiel requirements.

- Develops materiel acquisition or fielding alternatives.

- Recommends materiel acquisition priorities for research, development, test, evaluation, procurement, and materiel change programs.

- Recommends priorities for materiel distribution.

- Participates in system design reviews.

- Ensures all aspects of rationalization, standardization, and interoperability (RSI) are considered.

- Reviews requirements and authorization documents for materiel user implications.

Document Integrator

The Document Integrator (DI) ensures that authorization documents meet approved Army force programs as reflected in the master force and force modernization master plan (FMMP). The DI links the planned or programmed actions and the documentation processes. The DI reviews proposed and approved authorization documents during and after management of change windows. The DI:

- Reviews proposed authorization documents to ensure compliance with manpower, personnel, and equipment policies and directives.

- Reviews requirements documents.

- Produces authorization documents based on HQDA guidance, command plans, and input from the MACOMs.

COORDINATION REQUIREMENTS

Departmental, Army Component Command, and MACOM

Force integration staffs at these echelons manage the planning and execution of the force integration mission through-

- Document integration, including authorization document development and database management.

- Systems integration, including modernization resource information system (MRIS) submissions, requirements and authorization document review, the materiel fielding plan (MFP) process, new equipment training plan (NETP) review, and facilities support plan review.

- Organization integration, including the organizational assessment process, review of

requirements and authorization documents, and doctrine review.

- Force structure management including authorization document management, the automatic update transaction system (AUTS) process, master force, and end strength management.

- Force planning, including the TAA process, command plan process, force reduction planning and monitoring, and concept plan development.

- Readiness management, including status of resource and training system (SORTS) input and the unit status reporting (USR) process.

Corps, Division, Regiment, Separate Brigade, and Installation

Force integration staffs at these levels manage force integration through-

- Force structure management including authorization document and master force management, USR monitoring, and force structure review and analysis.

- Systems integration, including action plan development, distribution plan reviews, and facilities review.

- Organization integration, including organizational assessments, force structure review and analysis, and authorization document review process.

MANAGEMENT APPROACHES

Force integration management, planning, and execution may be accomplished by one or more of several management solutions:

- OIs manage all functionally similar organizations at the appropriate force level. Organization management is accomplished by a designated force integration POC.

- SIs manage materiel systems at the appropriate force level. System management is accomplished by a designated force integration POC.

- Functional area proponents manage organizations and/or materiel systems based on function or branch. Organization or system management by functional area proponents is accomplished within the vacuum of a stovepipe structure divorced from the force integration staff.

- Staff POCs contribute functional expertise to the force integration mission without assuming staff proponency.

- Special task forces are functional subject matter experts task organized for the full-time, intensive management of a specific force integration activity.

Section IV: Assessments

ORGANIZATIONAL ASSESSMENTS

Organizational assessments are management forums for identifying and resolving issues that inhibit execution of short-term organizational change (activations, conversions, and reorganizations) occurring in the budget year and the first year of the POM.

Organizational assessments support the force integration mission of increasing warfighting capability by providing credible information in support of decision making. This should occur with minimum adverse effect on readiness as organizations transition to new structure, materiel, and doctrine, or a combination of any of these. The assessment process uses the force integration functional areas to focus on total organizations; that is, the organization undergoing change and all other DS, GS, round-up/round-out, and sister Service organizations affected. The organizational assessment methodology may be employed to support "call forward" decisions or validation of programmed force structure actions.

Comments from subordinate commands, as well as studies and analyses (e.g., system program reviews) peculiar to a specific functional area, may be used to develop issues to focus the assessment process. Issues are identified, coordinated, and, if possible, resolved throughout the assessment process. Unresolved issues are briefed during the conduct of formal assessment presentations.

FUNCTIONAL AREA ASSESSMENTS

Functional area assessments (FAA) are intensive management forums that allow the Army leadership to identify and resolve issues that prevent or inhibit the execution of near- and mid-term plans and programs. FAAs focus on the Army's ability to execute its force modernization plans and fully support all aspects of programmed unit transitions. The objective is to improve the warfighting capability of the total force with minimum adverse effect on readiness. The VCSA chairs the FAA and may use the FAA process to consider special management areas, such as command and control or force management. The DCSOPS is the executive agent for the FAA process. The proponent and coordinator of the FAA process is the appropriate Training and Doctrine Command (TRADOC) service school commandant or ARSTAF proponent.

EXECUTABILITY ASSESSMENTS

Executability assessments are SRC-specific assessments conducted after publication of a consolidated table of organization and equipment update (CTU) to determine if programmed change should be documented and what the effective date should be.

SUPPORTABILITY ASSESSMENTS

Supportability assessments are UIC-specific assessments conducted for change documented in the current or budget year. Supportability assessments determine the ability of the functional systems to support documented change by projecting the unit status category on completion of the organization transition period. Failure to meet readiness objectives may require action to modify the effective date of change.

Summary

The organization management framework for the force integration process focuses on organizations to ensure that change affecting organizations at all Army levels is coordinated, synchronized, and continually assessed. This coordination, synchronization, and assessment is conducted from HQDA through Army component commands/MACOMs to corps, division, and installation levels.

Chapter 6
Structuring the Force

Section I: Introduction

Force development is initiated by determining battlefield requirements for DTLOMS. These requirements allow the combat developer to accomplish the fundamental task of structuring the force through the design of unconstrained statements of minimum mission-essential wartime requirements for Army organizations to conduct and sustain combat operations.

The development of force structure to accomplish Army functions and missions includes all components and aims at a balanced mix of organizations. Authorizations for required personnel and equipment are constrained by available resources (manpower and dollars) which are provided through the PPBS. Documentation of these authorizations culminates the process of structuring the force. Personnel and equipment resources that cannot be provided to an organization on the effective date of authorization as established by the documentation induces "instant unreadiness."

Force managers who structure the force through the POM period consider the best application of resources to achieve desired result for active or reserve components, the federal civil service workforce, contractor support, or force structure offsets through sister Services or other national assets. Required force structure that cannot be resourced in peacetime is programmed for time-phased activation to enhance the peacetime force during mobilization.

Section II: Source Documentation

The Joint Strategic Planning System (JSPS) and Joint Strategic Capabilities Plan (JSCP), the Joint Operation Planning and Execution System (JOPES), and Planning, Programming, and Budgeting System (PPBS) generally influence force development; however, force structure is particularly affected.

JOINT STRATEGIC PLANNING SYSTEM

JSPS is oriented toward identifying and evaluating the threat. It provides the basis for formulating strategy and resource needs for forces and materiel. The major outputs of JSPS are the NMS and the JSCP, which initiate JOPES and PPBS. The NMS announces the objective force as determined by the JCS. Force sizing, (Figure 6-1) translates the NMS in the JSPS and optimizes the use of resources to meet the warfighting CINCs' operational requirements.

JOINT STRATEGIC CAPABILITIES PLAN

The JSCP translates strategy into taskings and requires that plans be completed to accomplish missions within available resources. The JSCP is the JSPS document that starts the deliberate planning process and is the only formal tie between JSPS and JOPES. As operational plans are developed, resource requirements are prioritized through allocation of resources in the PPBS.

PLANNING, PROGRAMMING, AND BUDGETING SYSTEM

PPBS, the DOD resource allocation system, focuses on the acquisition of resources necessary to execute the strategy identified by the DPG. The PPBS begins with the NMS, which starts the planning phase and serves as the basis for the DPG.

The POM force is developed based on resources projected to be available. Using the major combat forces in the Army fiscally constrained force, extensive analysis determines the complementary combat support and combat service support force structure.

The POM force is a balance between resource availability reflected in the Army POM, the Army's major programming input into the PPBS. Risks associated with the POM force are addressed in the CPA.

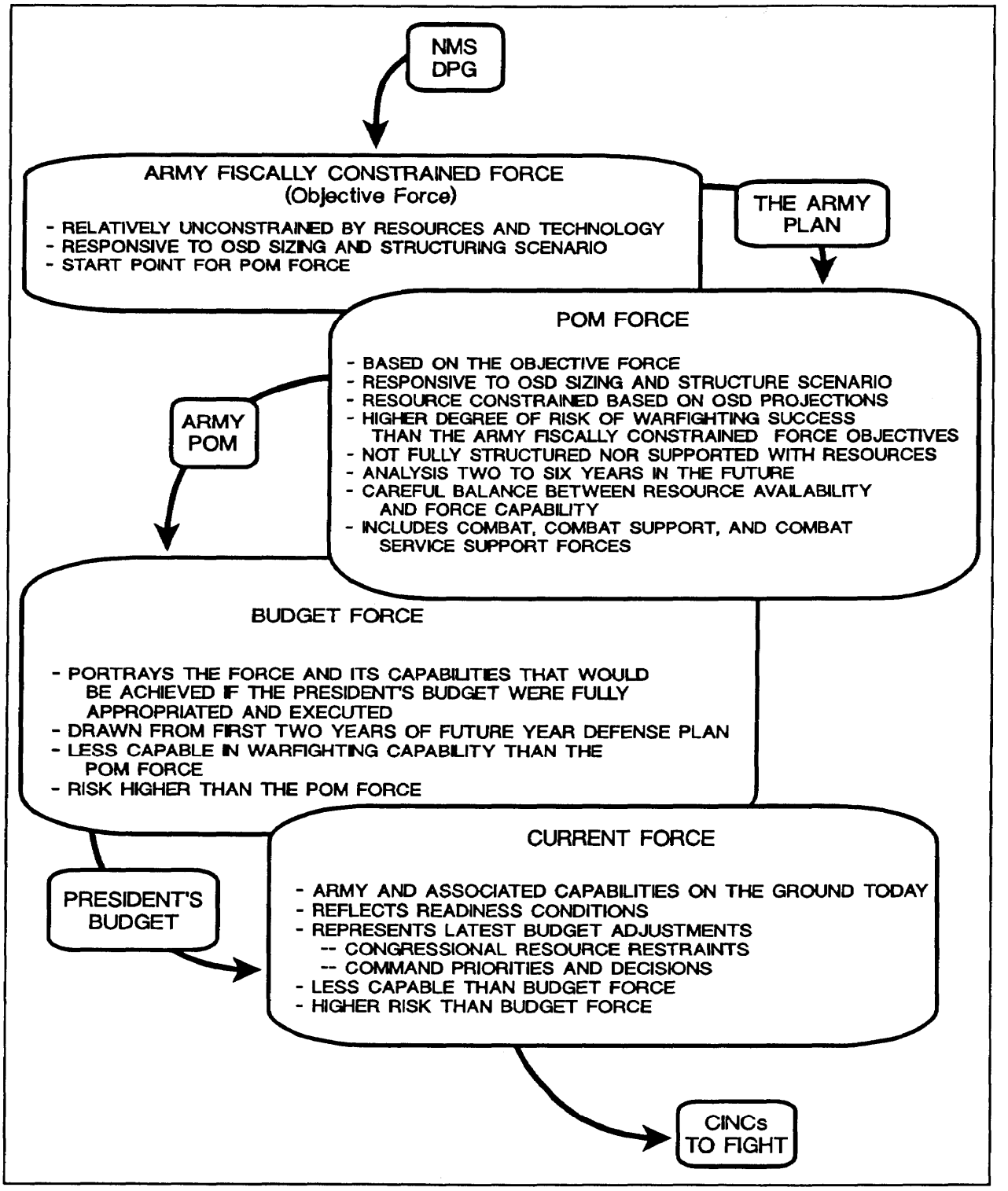


Figure 6-1
Force Sizing

JOINT OPERATION PLANNING AND EXECUTION SYSTEM

JOPES is the final element in the DOD management system and focuses on operational planning. JOPES is oriented on the most effective use of the nation's current military capability against the near-term threat.

Section III: Unit Model Design and Requirements Documentation

When a new or modified organizational structure is required, unit models and requirements documents are developed.

UNIT MODEL DESIGN

Organizational concepts describe unit capabilities and limitations. They are approved through the semi-annual Force Design Update (FDU) process. This process identifies and resolves mature force design or structure issues that have Armywide impact by providing a means of obtaining CSA approval for new force designs or changes to existing designs. Any commander may identify force design issues through the Force Design Directorate (FDD), HQ TRADOC, which will identify:

Resource requirements and a methodology to integrate the design into the force.

A personnel bill-payer methodology.

FDD is responsible for assembling the FDU, establishing the schedule, providing the briefing to the field for comment and DA for decision.

Unit model design consists of three processes:

Develop unit reference sheet (URS) organizations.

Develop basis of issue plan (BOIP) and qualitative and quantitative personnel requirements information (QQPRI).

Develop requirements document with incremental change packages (ICP).

Developing Unit Reference Sheet Organizations

New organizations are initially developed in a URS level of detail that depicts major items of equipment and aggregate personnel strengths at each organizational level. New organizational designs are developed to satisfy new concept requirements or to correct deficiencies in current organizational designs. Major force redesign requires that all associated organizational designs are supported by a discrete series of requirements documents for manpower and equipment.

Manpower requirements are determined by doctrine, for combat squads and crews, and by the manpower requirements criteria (MARC) for combat support and combat service support functions.

Developing Basis of Issue Plans/Qualitative and Quantitative Personnel Requirements Information

A BOIP is a requirements document that establishes the distribution of new equipment and ASIOE and personnel, as well as the reciprocal displacement of equipment and personnel. The BOIP process identifies minimum mission-essential wartime requirements for inclusion into organizational models based on changes in doctrine, personnel, or materiel. Materiel developers use the BOIP as input for concept studies, life-cycle cost estimates, and trade-off analyses during the research and development process. MACOMs use the BOIP to plan for equipment, facilities, initial provisioning, and personnel required to support new or improved materiel systems. The BOIP process begins when the materiel developer receives an approved operational requirements document (ORD) and develops the BOIP feeder data. This allows the assignment of developmental line item numbers and the development of the QQPRI by the materiel developer.

The QQPRI provides organizational, doctrinal, training, duty position, and personnel information used to develop the BOIP. It identifies new or revised military occupational specialties and is used to plan for personnel accession and training needed to operate and maintain the new or improved item. The QQPRI and BOIP also form the basis for the operator and maintainer decision.

Requirements for C4 equipment are established through the ORD, Basis of Issue Narrative Guidance (BOING) and quantitatively documented in BOIP as any other item of equipment. All the above steps are reviewed and validated by the C4 proponent as an organization integrating function. The proponent maintains an Operational Facility (OPFAC) data base and assists TOE/BOIP proponents and others in resolution of C4 requirements issues. The data base information assists the organization proponent, designers and documenters in reducing duplication.

The final BOIP is required 30 months before the first unit equipped date to allow for documentation of authorizations and development of modernization and institutional training.

REQUIREMENTS DOCUMENTATION WITH INCREMENTAL CHANGE PACKAGES (ICP)

Requirements documents for an Army organization prescribe a particular unit's organization, manpower, and equipment and specify the unit's doctrinal capabilities and wartime missions. They are the basis for developing authorization documents and determining future resource requirements. They are used to record and project the force structure of the Army through the POM years and extended planning period. When used with the master force database, they provide a force structure projection that reflects force levels in the program. Requirements documents are also used to depict the future force requirements in the structure and composition system (SACS).

HQDA-approved requirements documents and BOIP are recorded twice a year in the CTU and are used to develop authorization documents.

Authorized Levels of Organization

Requirements documents specify three primary levels of organization based on the personnel strength necessary to sustain combat capability:

Level 1 -- 100% of minimum mission-essential wartime requirements.

Level 2 -- approximately 90% of Level 1 requirements.

Level 3 -- approximately 80% of Level 1 requirements.

Equipment requirements for Levels 2 and 3 are equal to Level 1 except for individual weapons, protective masks, and tool kits that correspond to the personnel strength at each level.

All equipment in a TOE is coded with an equipment readiness code (ERC) to indicate the relative essentiality of the equipment to the organization as a whole. ERC codes are an asset distribution tool that when combined with DAMPL and FAD designator allow DCSOPS and CINCs to establish priority for allocation of equipment that is in short supply. All equipment in a TOE is considered essential for effective mission accomplishment and sustainment. ERC distinguish between primary mission and supporting mission equipment within the same unit. AR 71-13 explains the coding process and meaning.

Living Table of Organization and Equipment System

As indicated in Figure 6-2, Living Table of Organization and Equipment System (LTOES), LTOES documents portray an organization's transition from the least modernized base table of organization and equipment (TOE) toward a fully

modernized objective TOE design capability. This system allows organizations to modernize incrementally, as assets are available, to avoid causing "instant unreadiness" (precipitated by the failure to provide authorized resources to an organization on the effective date of change).

- The intermediate TOE, which is a transition model that portrays the unit's organization, personnel, and equipment requirements at any point in the modernization process. It is developed by applying one or more ICPs to the base to portray organization

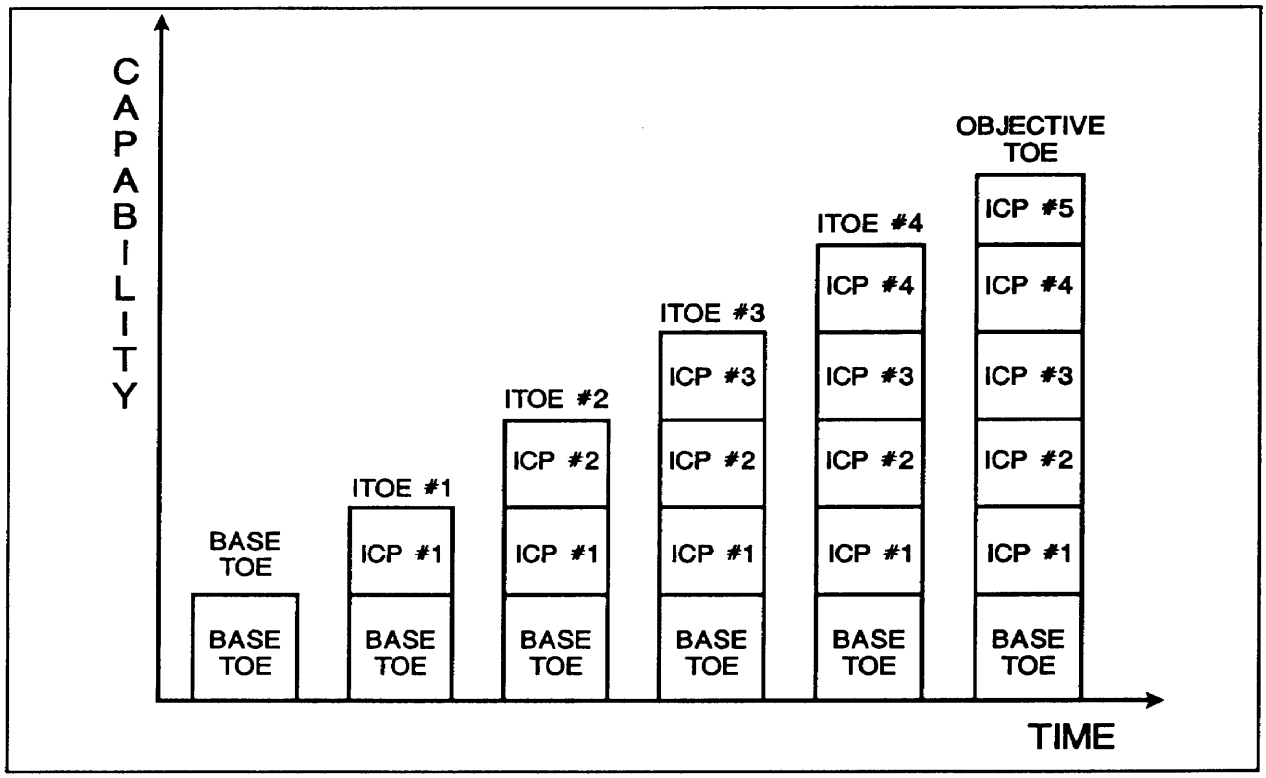


Figure 6-2
Living Table of Organization and Equipment System

To accomplish this, the LTOES is composed of-

- The base TOE, which is the least modernized version of a type organization.

- The ICP and the ICP index.

- ICPs are doctrinally sound groupings of personnel and equipment changes for specific type organizations showing the ideal sequence of applying changes to the base structure. A units's modernization path, standardized by type unit, is depicted by the ICP index.

structure, personnel, and equipment requirements incrementally as resources become available. The intermediate TOE forms the bridge between the base and objective TOEs, and provides the primary tool for planning, programming, and documenting the force.

- The objective TOE, which portrays organization structure and requirements at the most modernized state.

Section IV: Force Structure Development

The mix of unit models that make up a balanced and affordable force structure must support joint and Army planning, programming, and budgeting at the strategic, operational, and tactical levels. Force development is based on an understanding of the objectives to be achieved, the threat, and constraints (dollars, end strength, roles, and missions). The primary differences among various force structures are the extent to which constraints are imposed and the time over which force structure requirements are forecast.

The determination of the size and content of force structure is an iterative, risk/benefit trade-off analysis process. The CJCS fiscally constrained force is capable of achieving the national objectives with some reasonable assurance of success. This force supports the joint strategic planning conducted by the Joint Chiefs of Staff and the CINCs of the unified commands.

SUPPORTING ANALYSIS

Analyses are conducted to identify critical near-term force structure deficiencies and readiness capabilities, resources needed to meet current and programmed requirements, and the distribution of these resources when translated into specific action programs.

The current force capability to mobilize, deploy, and sustain forces in combat is assessed by comparing its actual capabilities with its designed capabilities.

Total Army Analysis

The Army's program force is developed during the TAA process. TAA analytically and subjectively generates the below-the-line tactical support forces and the general purpose forces necessary to support the above-the-line divisional and nondivisional combat forces contained in the Army fiscally constrained force (divisions, separate brigades, special forces groups, and armored cavalry regiments). The POM force is adjusted for affordability and executability to become the basis for POM development. The initial POM force becomes the approved POM force after determining which force structure initiatives will be included in the POM (Figure 6-1, Force Sizing).

The TAA is a multi-phased force structuring process consisting of qualitative and quantitative analyses. It generates tactical support and general purpose forces necessary to sustain the divisional and nondivisional combat forces designated in the Army fiscally constrained force. TAA is a biennial process followed by the FIA. The TAA and FIA are the basis for the Army's POM development and establishment of the POM force.

The TAA consists of four phases: force guidance, quantitative analysis, qualitative analysis, and leadership review. The sequence of the TAA activities is depicted in Figure 6-3, Total Army Analysis.

Force Guidance

Force guidance includes the DPG and TAP, which provide the NMS, threat data, and resource assumptions and priorities DOD-directed scenarios are specified in the illustrative planning scenarios. The Army force planning data and assumptions (AFPDA) is a single-source reference document for theater-level studies and modeling that contains information concerning logistics and personnel planning, consumption and workload factors, host nation support offsets by theater, support to and from other Services, stockage levels, and other planning factors crucial to force structure development. During the force guidance phase, allocation rules are reviewed and updated for use by the Concepts Analysis Agency (CAA) during the quantitative analysis phase. This is accomplished during force structure conference (FSC) I. Allocation rules consist of-

- Existence rules that tie a requirement for one unit to another.
- Workload rules that tie unit requirements to a measure of workload.

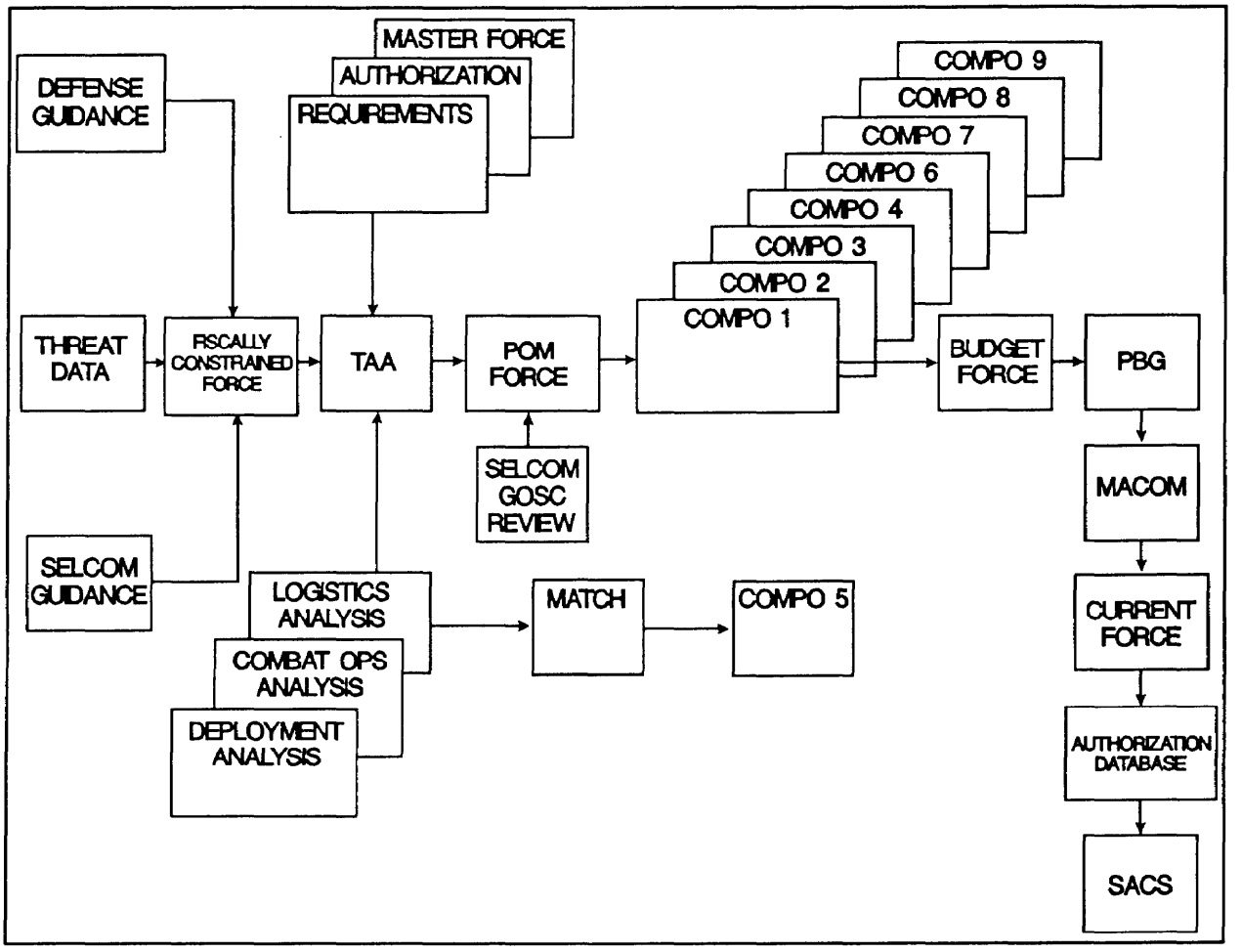


Figure 6-3
Total Army Analysis

- Manual entry (direct input) rules that are theater-unique requirements not identified in other allocation rules.

The force guidance phase culminates with a general officer steering committee (GOSC) to address unresolved FSC issues.

Quantitative Analysis

Quantitative analysis determines tactical support requirements through a series of simulations. The strategic deployment analysis provides the strategic mobility forces and air/sealift data contained in the AFPDA. The output is port-to-port arrival times of combat and support units. This becomes input for the combat operations analysis, a warfighting simulation that produces combat intensities and forward edge of battle area traces, casualty and ammunition consumption rates, and loss rates for major items of equipment. This information, along with allocation rules and logistics data, is used in the logistical operations analysis to generate support force requirements and a time-phased force deployment list.

Using the forces generated by the logistical operations analysis, CAA produces a comparison report (MATCH) of newly determined doctrinal

support requirements with current and programmed units to produce component (COMPO) code 5, organizational requirements not in the current POM.

These simulations are completed for each scenario and the product of the quantitative analysis phase. The TAA decision force is sent to the MACOMs for review and issue formulation in preparation for the qualitative analysis phase and FSC II.

Qualitative Analysis

Qualitative analysis develops the initial POM force, within end-strength guidance, for use in the development of the POM. A series of analyses, reviews, and conferences validates the computer-generated requirements. MACOM and HQDA inputs, proposed changes, and force structure issues centering on claimants versus billpayers are reviewed. FSC II centers on the review of each discrete level and type of TOE unit in the decision force and the integration of TDA issues.

Leadership Review

Leadership review begins after GOSC II to resolve issues from FSC II before briefing the Army leadership in the fourth phase of the process. The VCSA chairs a force program review to review and resolve any issues from GOSC II, which is then briefed to the Chief of Staff of the Army (CSA) for decision. The resulting TAA base force represents the force structure for POM development and includes all authorized structure for all components through the POM years.

The product of the TAA and POM processes is the approved force structure for the Total Army. It is divided for resource management purposes into four components: the active Army (COMPO 1), the ARNG (COMPO 2), the USAR (COMPO 3), and required but unresourced units (COMPO 4). COMPO 4 units are deliberately unresourced so that available resources can be applied to higher priority force structure initiatives and other Army programs.

Three other components-direct host nation support (COMPO 7), indirect host nation support (COMPO 8), and logistics civil augmentation (COMPO 9)--comprise force structure offsets guaranteed by host nation support agreements. CINCs estimate how much additional indigenous labor would be available in wartime, and contract for additional support and services to be provided by domestic and foreign firms. Such agreements and contracts comprise force structure offsets that are reasonably assured by negotiated host nation support agreement.

Force Integration Analysis

FIAs provide the Army leadership with alternatives for resource decisions to field the most capable force possible. FIAs examine unit capability to accomplish assigned and/or programmed missions by determining the executability, supportability, and affordability of the force by answering such questions as-

- Can the force be equipped? Is equipment already in the budget? Are there programs to support the equipment requirements of the force by year?

- Can the force be manned? Is the predicated mix of personnel, by component, grade and skill, needed by the force?

- Can the force be provided facilities? Do facilities in current and budget construction programs meet the living, working, and training needs of the force? Are the required facilities in the right locations?

- Can the force be trained? Do ammunition, procurement spares, and stock-funded repair parts in the supply system support the desired unit training level each year? Do TRADOC and reserve component schools have the capability to support individual training requirements?

- Can the force be sustained? Are spare parts and depot maintenance output available to support the desired OPTEMPO?

Section V: Authorization Documentation

PURPOSE

Unit authorization documentation can be viewed as the integration of unit model design and force structure development. Authorization documents provide each organization or activity with the structure, personnel, and equipment to accomplish its mission or function. An authorization document constitutes authority to requisition personnel and equipment and is the basis for measuring unit status. The authorization document system is used to manage all aspects of personnel and materiel procurement, force planning, programming, budgeting, training, and distribution.

THE COMMAND PLANNING PROCESS

Active Force

The command planning process begins with the forces reflected in the master force (current, programmed, and alternative planning forces) for all components (except COMPO 6, prepositioned materiel configured in unit sets).

MACOM plans are developed based on available dollar and manpower resources; policies, goals, and plans; and the current force structure. The data is refined by the Army structure message, which reflects the results of the TAA and FIA processes.

These inputs are used by the MACOM to develop subsequent guidance that directs subordinate organizations to submit a plan recommending the allocation of manpower by specific units. Command plans are developed by integrating the plans submitted by the subordinate organizations, considering earlier MACOM POM submissions, and incorporating the results of MACOM analyses and decisions. Command plans submitted to HQDA for review and approval contain troop lists representing the current and projected forces of the command, results of executability assessments, and justification for any deviation from HQDA guidance. The command plan troop lists are used to update the MACOM force structure data in the master force. Upon approval by HQDA, they are the basis for the authorization documentation process.

Reserve Components

The USAR and ARNG prepare command plans and develop plans for force structure actions. The Chief of Army Reserves provides the troop action guidance to FORSCOM. FORSCOM, USARC, USAREUR, and USARPAC prepare a reserve component program that contains all organizational actions planned for the USAR in the program years. The reserve component program is submitted to the OCAR for review in coordination with HQDA. The NGB, in coordination with the state adjutants general, produces the ARNG troop structure program (ARNG-TSP). The ARNG-TSP, which contains all organizational actions for three years, is submitted to HQDA for review after acceptance by the states.

DOCUMENTATION PROCESS

The Master Force

The master force, as shown in Figure 6-4, Documentation Process, is established each year in May and November. The May guidance is prepared from the master force after is it "locked" for POM submission in April of every other year. During the years when no POM is prepared, an update will refine guidance from the PBG. This will be based on decisions made during the previous six months. The guidance published in January provides the latest force structure changes that have occurred since May, as reflected in the master force developed during the TAA process or resulting from the FIA in the off years, and provides advance guidance for the upcoming May guidance update.

The master force structure contains the data necessary for force structuring, force planning, and accounting of all Army units. The MACOMs maintain a vertical master force with internal automated force structuring data capability. The MACOM database interfaces with the HQDA master force.

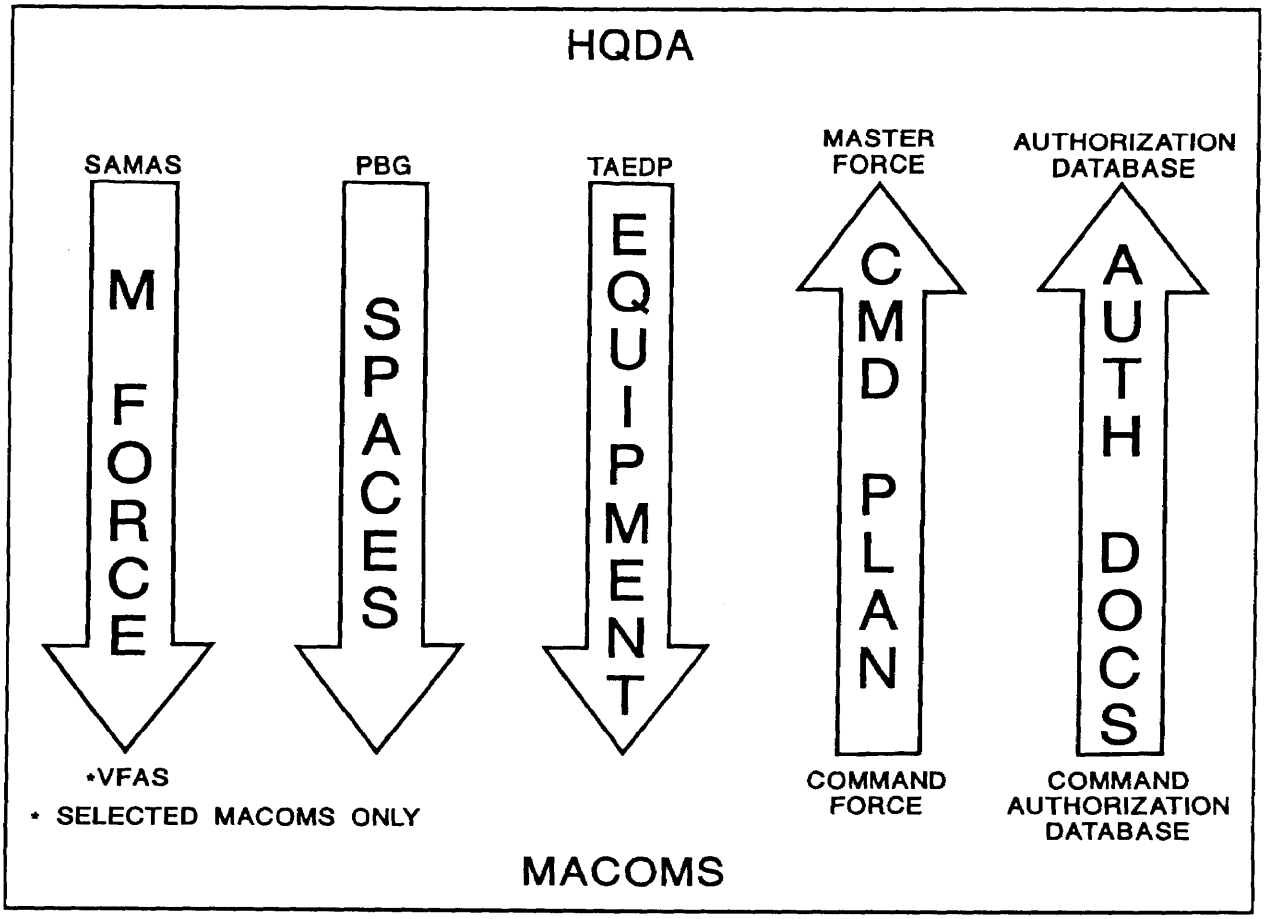


Figure 6-4
Documentation Process

The master force is reconciled semi-annually with the authorization database by the AUTS. The AUTS updates allow command integrators to approve or disapprove authorization documents for resourcing.

The master force structure and manpower automated data processing system is designed to capture national policies, mandates, and directives from OSD and Congress. It contains MACOM program execution input via the command plan; provide the baseline against which MACOMs build and submit authorization documents; and provides force structure input to drive other PPBES and force planning functions. This force structure and documentation guidance permits development of authorization documents to account for personnel and materiel allocation. This guidance is obtained when the master force (established by the TAA for POM submission) and OSD/HQDA guidance (in the form of defense management reviews, program budget decisions, and Army management reviews) directs specific force structure actions be carried out within allocated resources over time. Troop lists for current, budget, and program years are provided in the master force database as the official force structure record. It accounts, by UIC, for all COMPOs (less COMPO 6) over time, with supporting information to include missions, organizational data, program applications, and descriptions.

Command Plan Development

The PBG is provided to the MACOMs to initiate the development of command plans and reflects changes resulting from decisions made in the FIA, those made for other reasons, or to correct previous errors. Development of command plans begins before the receipt of input, using advance (draft) information provided by HQDA. The time allocated to develop the command plans is about three months, as shown in Figure 6-5, Command Plan Development. No specific amount of time is allotted for the development of TAP and the ARNG-TSP. Reserve component plans are due in February and in the October/November timeframe.

The process is completed when changes from all plans are used to create a new master force (M Force). This new M Force reflects all force structure actions taken to comply with the PBG and other management decisions.

The Structure and Composition System

The SACS is updated to reflect the master force and includes requirements, authorizations, and BOIP, as well as mobilization data sources, to produce the logistics (LOGSACS) and personnel (PERSACS) component databases (Figure 6-6, Structure and Composition System). Mobilization data is reflected in MOBPERSACS products. These products are comprehensive,

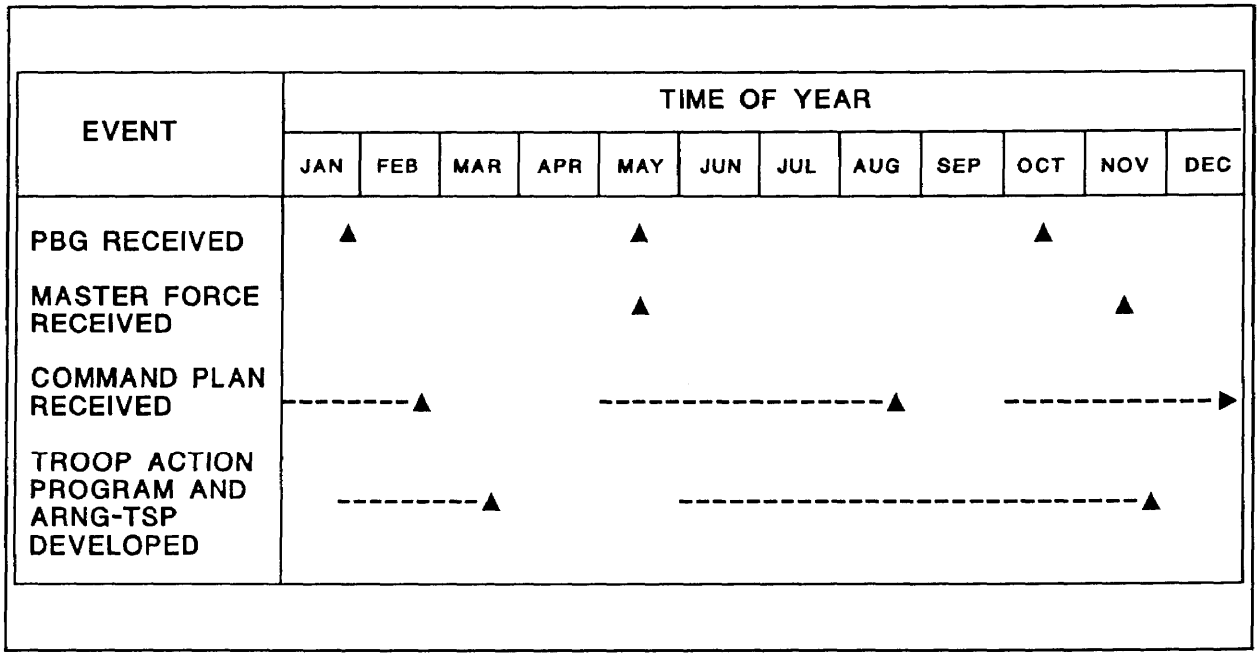


Figure 6-5
Command Plan Development

Command plans are compared with the master force structure files and PBG to determine MACOM compliance with HQDA guidance and direction. Procedures for reviewing the different plans are the same, although the mechanisms used depend on the format of the plan. The master force is updated based on command plan review and approved force structure changes.

multi-year listings of personnel or equipment authorizations and requirements for the total force.

LOGSACS describes the equipment of the force and is the principal input to the Total Army equipment distribution program (TAEDP). PERSACS describes the required and authorized

manpower of the force and provides the COMPO 2 and 3 data used in personnel planning in conjunction with the COMPO 1 data from the Total Army personnel database. PERSACS also contains COMPO 1 data that is used for special studies. PERSACS feeds the M0BPERSACS directly and is also used for troop support planning in the facilities process by the Army stationing and installation plan (ASIP). ASIP also uses structure and manpower allocation system civilian manpower data as an input to its planning analysis.

and distribution dates by unit. This allows documentation of new equipment authorizations.

AUTHORIZATION DOCUMENTATION

Every organization and activity must have an authorization document to reflect an organizational structure that is supportable by the manning and equipping systems. Authorization documents state a unit's approved structure and resources and serve as a basis and authority for requisitioning. Changes to authorization

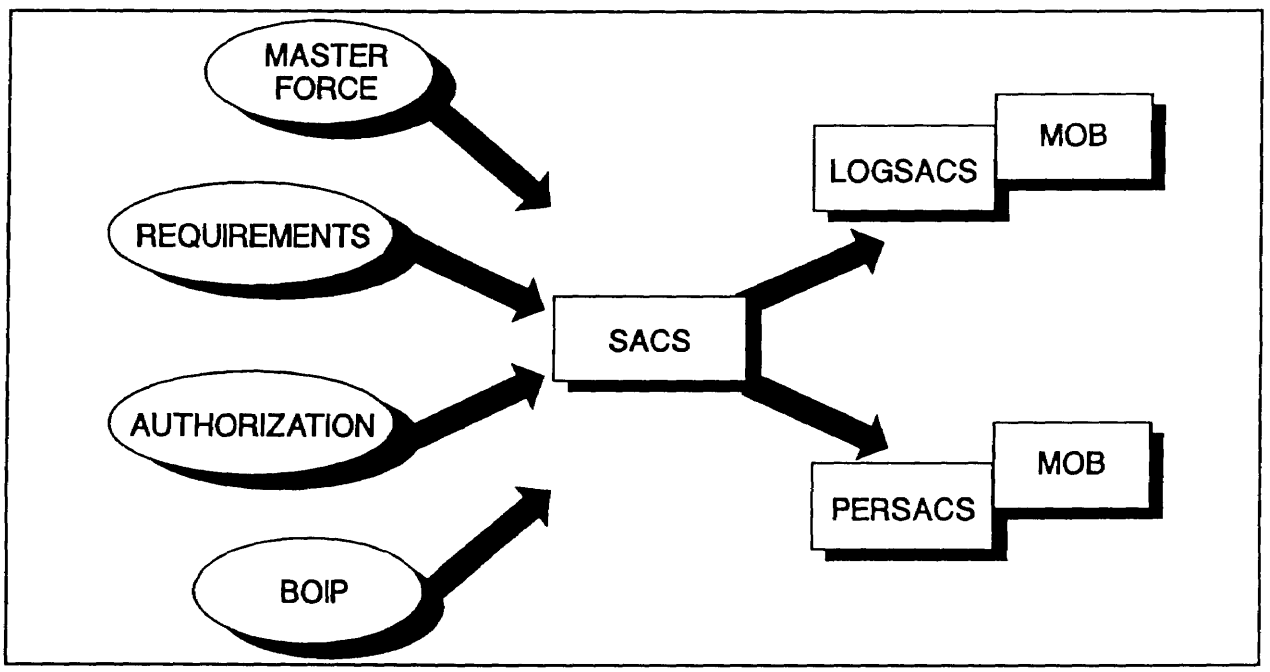


Figure 6-6
Structure and Composition System

Guidance for documenting equipment authorizations is provided in the TAEDP, a comparison of force requirements and priorities against on-hand assets and projected deliveries (see Figure 6-7, Authorization Documentation Schedule). It produces an equipment distribution program for the current, budget, and program years and supports Army modernization by supplementing new and displaced equipment planning information in the BOIP. It provides essential details such as quantities of equipment

documents require synchronization to ensure that direct and general support organizations (supply, transportation, maintenance, fire support, etc.) effect necessary change prior to the organization(s) they support.

The development of authorization documents is supported by an automated system that contains all unit authorization documents. It maintains quantitative and qualitative personnel and equipment data for individual units and the

entire Army force structure. It provides standardized authorization documents for similar parent units and an interface with other automated systems. The authorization document data maintained in the database include organizational structure and personnel and equipment requirements and authorizations.

specific point on its modernization path. It reflects allocation of manpower resources and the unit status objective in its ALO. Thus, an organization structured at ALO 3 is expected to achieve an overall Category 3.

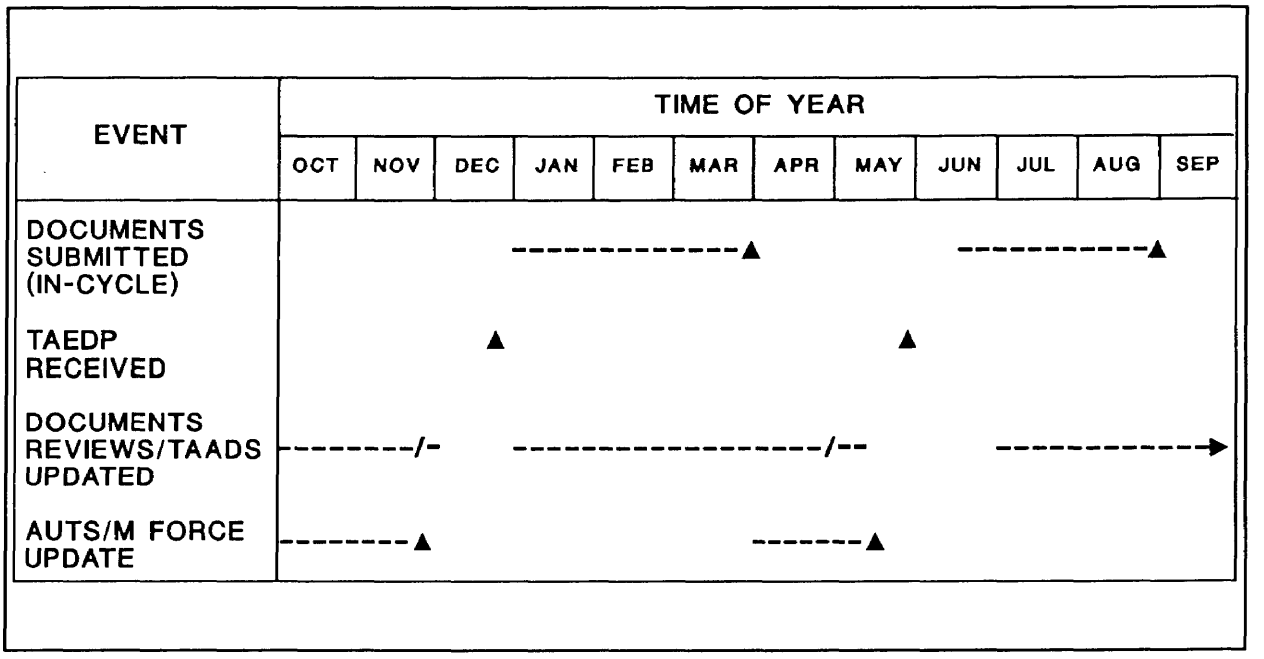


Figure 6-7
Authorization Documentation Schedule

Personnel and equipment authorizations in modified tables of organization and equipment (MTOEs) and TDAs are documented in the same level of detail. Authorization documents also affect the requisition and distribution of personnel and equipment resources and, in case of MTOE units, the determination of unit status by comparing authorized and available resources.

Modified Table of Organization and Equipment

The MTOE prescribes the unit organization, personnel, and equipment authorized to accomplish its doctrinal mission in a specific geographical or operational environment or at a

Table of Distribution and Allowances

The TDA prescribes the organizational structure for an organization or activity with a mission or function for which a TOE does not exist, and may include civilian positions. TDAs are unique authorization documents to attain the most efficient use of personnel and the most effective operational capability within the manpower spaces prescribed in the command force structure to accomplish specific missions and functions. Activities with similar missions may be similar in organization but have substantially different personnel and equipment authorizations due to differences in workload and

the demographics of the population they support. A TDA is used for the same purposes as a MTOE except for unit status reporting, which is not usually required of TDA activities. Manpower determination standards and standard installation organization models establish personnel requirements and authorizations. Equipment utilization data and BOIP will be used to develop TDA materiel authorizations. Types of TDA documents include:

Mobilization TDA.

Augmentation TDA.

Full-time support TDA.

Joint table of allowance.

However, the basis for developing the two documents differs. MTOEs are derived by application of the LTOE(S) to meet specific operational, environmental, or modernization requirements and are consistent with the mission and the availability of manpower spaces as prescribed in the approved command force structure.

Transfer of Organizations

Organizations that are allocated to other MACOMs from their parent MACOM must have authorization documents transferred at the same time that transfer of authority is effected. The structure of organizations that move inter-MACOM must be consistent with the structure of like organizations in the gaining MACOM to ensure sustainability.

Modification of Authorization Documentation

Concept Plan Requirements

Concept plans are required from the MACOM to obtain HQDA approval of unprogrammed requirements for force structure, manpower, or materiel. The concept plan will state the purpose, objectives, advantages, and disadvantages of the proposed activation or reorganization. Proposed authorization documents are submitted concurrently with the plan to accelerate the review process. Approved concept plans do not serve as an authorization document but support the creation of one. In some cases, HQDA may specify the organizational structure of newly activated units and provide the authorization document to the MACOM. In other cases, MACOMs may be delegated the authority to develop documents for newly activated units based on an approved concept plan.

HQDA Review

HQDA reviews all authorization documents to ensure compliance with standardization of mission, capabilities, organization, ALO, and the allocation of resources. Organizations should not substantially change authorization documents more than once a year. Substantial change is any personnel and/or equipment change that would degrade unit status in any measured commodity area by one category level.

Unresourced Modifications

Documentation of personnel or equipment authorizations that are not supported by the requirements base places resourcing responsibility on the MACOM and affects the ability of the support system to sustain the change over time. The support of non-standard materiel systems and organizational structure detracts from the doctrinal capability the organization was designed to achieve and uses resources designed to man, equip, train, sustain, and fund the approved current force. Ultimately, the support required to sustain unresourced change and provisional organizations degrades the readiness of the organization as a whole. Within one year of origination, materiel and structure that are not supported by a valid requirement and documented in an authorization document should be allocated against an existing authorization.

Demobilization Requirements

The process of activating new organizations and converting and reorganizing existing organizations is evolutionary. It is based on capability increases in doctrine, force design, and acquisition of materiel. However, the demobilization process requires that decreased levels of capability be determined and force structure be inactivated. The processes of increasing and decreasing force capability are identical in the incremental approach to total organizations. Like modernization, force reduction considers impacts on direct and general support organizations. Force capability is reduced by inactivations of organizations followed by support structure and support infrastructure.

Summary

Structuring of organizations is accomplished through the integration of unconstrained requirements determination to establish organizational capability models and the resource-constrained determination of allocation of assets to increase and sustain organization capability. These processes are complemented by organization management efforts to:

- Dampen organizational and documentation changes.
- Stabilize the force for the budget year.
- Identify and correct systemic problems in data processing and management systems.

Chapter 7
Manning the Force

Section I: Introduction

The Congress, the Office of Management and Budget, the Office of Personnel Management, the Office of the Secretary of Defense, and the Office of the Secretary of the Army establish annual manpower end-strengths. They may develop policies that restrict the availability of military and civilian manpower or limit the latitude available to personnel managers. Policies may limit permanent changes of station (PCS), set tour lengths, set officer grade limitations, or place a ceiling on local national hires.

Manpower management determines minimum essential requirements, alternative means of providing resources, and the policies to be followed in utilizing manpower. It involves the development and evaluation of organizational structure and reviews the use of active, National Guard, USAR, and civilian personnel. It also includes contractors when a requirement is satisfied by contractual services.

Manpower managers deal with human resource requirements relative to the organizational structure in which they will be most efficiently and economically used. They focus on requirements demanding specific grades and skills to perform specific tasks before determining which requirements will be supported with authorizations ("spaces"). Personnel managers implement authorization through the acquisition, training, and assignment of personnel ("faces") to authorized positions.

Section II: Army Manpower

MANPOWER SPECTRUM

The total military strength of the active Army is a dynamic measure of personnel "faces" consisting of the operating strength (personnel available for assignment to authorized positions), and the individuals account (personnel not available for assignment to authorized positions) (Figure 7-1, Military Manpower Spectrum). The individuals account includes transients, trainees, holdees (hospital), and students (TTHS) and averages 11 per cent of the total strength. TTHS accounts for personnel moving between assignments or preparing for future assignments. The size and composition of TTHS will vary throughout the year due to seasonal increases in transients during the summer and in trainees during the fall and winter.

Force structure allowance is a dynamic measurement of manpower "spaces" authorized in organizations and activities. It changes daily as organizations are activated, inactivated, reorganized, and converted. The dynamic nature of "faces" and "spaces" creates an environment of continuous fluctuation and variance.

The difference between the operating strength ("faces") and the force structure allowance ("spaces") is the operating strength deviation. This deviation may be positive (personnel inventory exceeds authorizations), negative (personnel inventory is less than authorizations), or be negligible (balanced). Manpower and personnel managers monitor the operating strength deviation and adjust personnel policies to create the best match of personnel, by grade and skill, to authorized positions. The goal is to meet the congressionally authorized end strength on the last day of each fiscal year while maintaining a balanced fighting force.

FORCE ALIGNMENT

Force alignment manages the dynamics of personnel and authorizations by grade and skill to ensure that the active component operating strength is qualified and available for distribution. Force alignment is the synchronization of recruiting, accessions, training, reenlistment, promotions, and reclassification. Special and incentive pays are also available to provide professional career development consistent with force manning levels for qualified soldiers. The goal is to achieve a grade and skill match

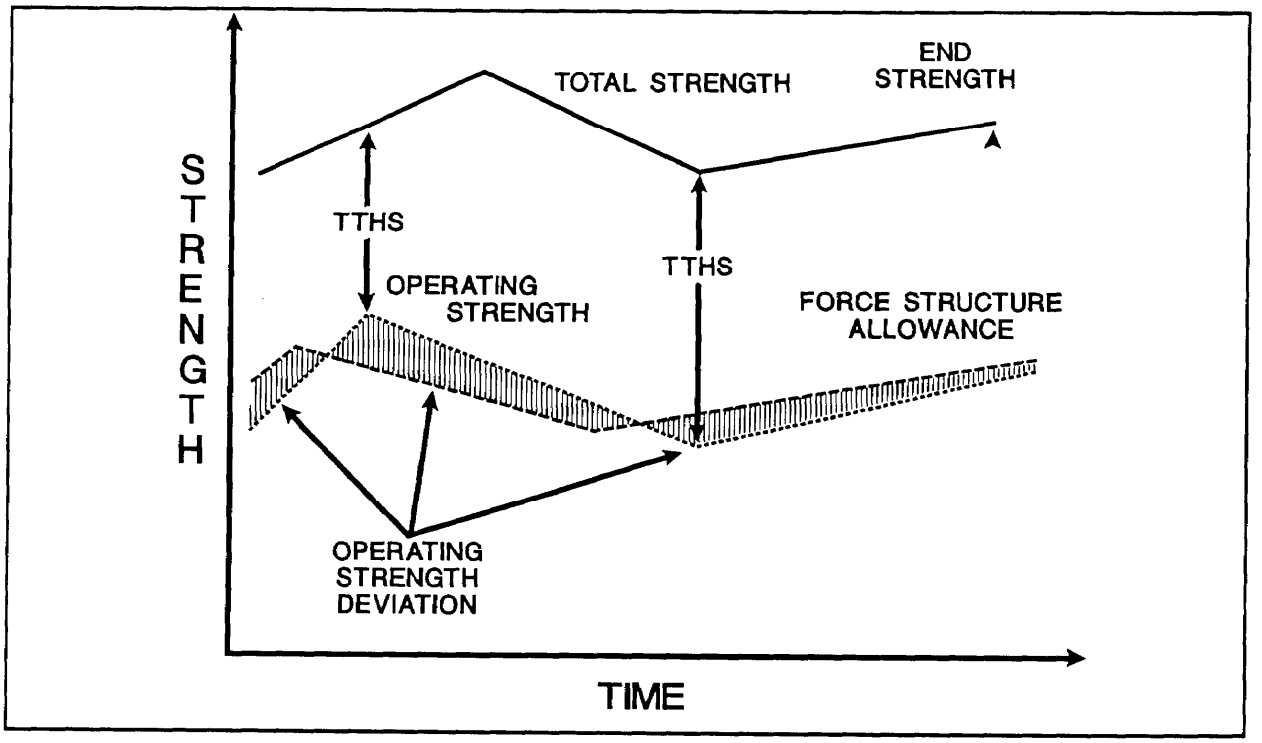


Figure 7-1
Military Manpower Spectrum

between the operating strength and force structure authorizations for the current year, budget year, and program years.

ACTIVE ARMY MILITARY MANPOWER PROGRAM

The active Army military manpower program (AAMMP) is updated monthly and used to support the POM, OSD budget submission, and President's budget. The AAMMP is a product of the enlisted loss inventory model-computation of manpower program using linear programming (ELIM-COMPLIP) system. Inputs include personnel strength and gain and loss data from the officer projection aggregate level system, military occupational specialty level system (MOSLS), unit level system, TTHS forecasting system, and the Army training requirements and reporting system (ATRRS). The ATRRS provides training data by funded and unfunded course, category of training, training load, and many other details. After the structure manning decision review has been completed, ATRRS provides refined training data to the ARSTAF via the personnel databases.

The AAMMP uses six years of data to create a predictive database. Using ELIM-COMPLIP, it operates within constraints such as end strengths, man-years, and recruiting capability to develop an operating strength that matches the force structure allowance as closely as possible. Reporting categories include the TTHS account losses and gains; training inputs; and the officer, cadet, and female programs.

Section III: Personnel Acquisitions and Documentation

ACQUISITIONS

Personnel required to man the force structure consist of enlisted, warrant officer, and

officer accessions. The PERSACS combines data from the master force, authorizations, and requirements. It supports planning for personnel recruiting, training, promotions, requisition validation, and distribution for the current, budget, and program years. Additionally, MOBPERSACS is used by Personnel Command (PERSCOM) for mobilization planning.

Enlisted Acquisitions

Based on authorizations by skill and grade, skills and grades on hand, and projected accessions in the aggregate, the MOSLS projects the numbers and training requirements for all MOSs (see Figure 7-2).

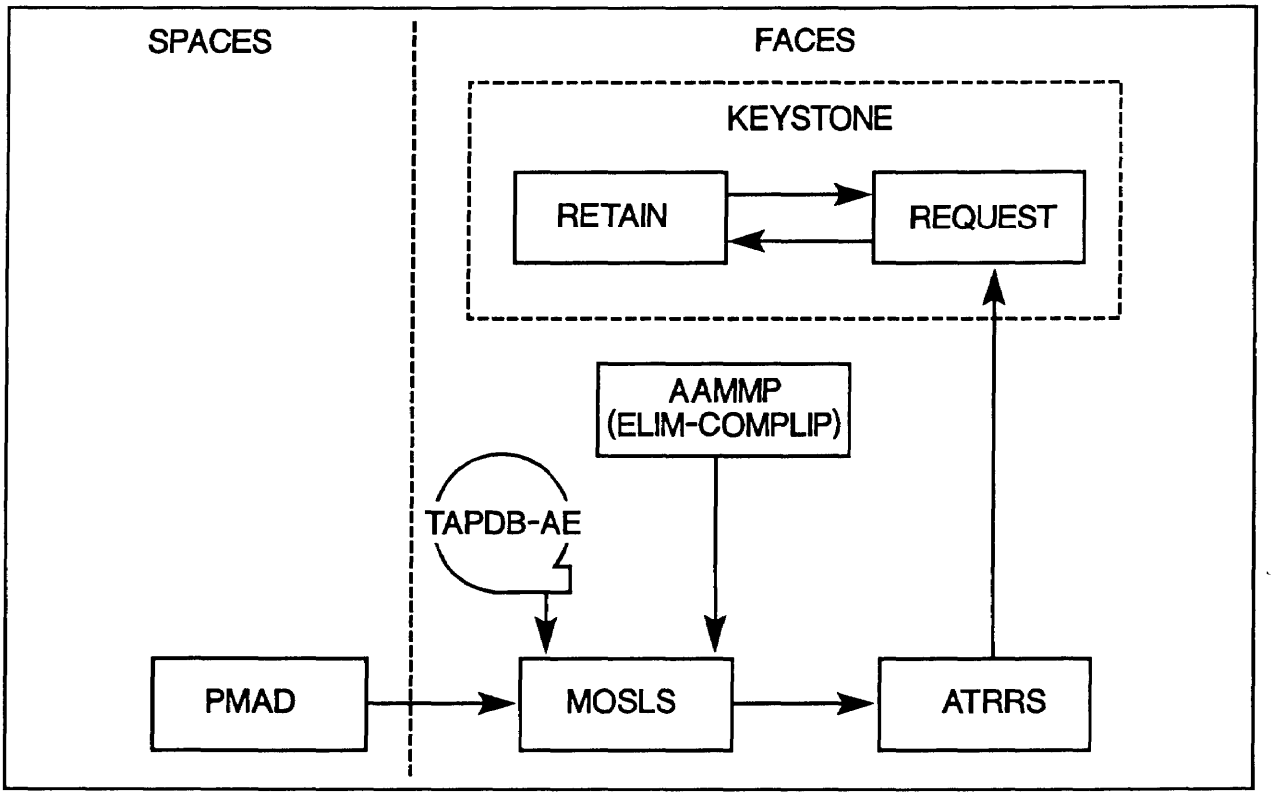


Figure 7-2
Enlisted Procurement

The US Army Recruiting Command Enlisted Procurement (USAREC) admits the quantity and quality of recruits to meet active Army and USAR requirements. USAREC uses the recruit quota system (REQUEST) to translate the personnel needs of the force into total recruiting objectives. REQUEST provides the means of allocating training resources to accessions. Except during mobilization, enlistment options are based on the mental and physical aptitude, individual preference, and Army MOS requirements. A matching algorithm aligns applicant qualifications and aptitudes to the Army's needs.

Warrant Officer Requisitions

Warrant officers are single-specialty, system-oriented officers appointed to perform a single function throughout their careers. Candidates are recruited for the active component by USAREC. Recruiting goals are developed by the Office of the Deputy Chief of

Staff, Personnel (ODCSPER) to fill shortages by fiscal year. Applicants are recruited from active Army enlisted ranks, enlisted personnel from other Services, technically qualified civilians, commissioned officers, and members of the reserve components.

Officer Acquisitions

Officer acquisition for the basic branches occurs through the Officer Candidate School, Reserve Officers' Training Corps (ROTC), and United States Military Academy. The special branches (medical, judge advocate, and chaplain) select officers through individual branch programs. Service obligations for officers vary with the program.

Officer end-strength may be constrained by OSD-mandated officer strength ceilings. Limitations can be placed on the percentage of the officer corps in the grade of major or higher. Annual accessions must ensure availability of officers by grade, branch, functional area, and skill over the life cycle of the year group.

PERSONNEL MANAGEMENT AUTHORIZATION DOCUMENTATION

Personnel Management Authorization Documentation

The personnel management authorization document (PMAD) is built from the master force and the authorization databases. PMAD is the basis for decisions on accession, training, force alignment, promotions, and distribution of personnel. PMAD is adjusted periodically using an updated authorizations document (UAD) to capture changes. The PMAD and its most current UAD are the sole source of active Army authorizations by UIC, MOS, grade, and additional skill identifier (ASI) level of detail for the current and budget years. The focus of the PMAD and UAD is on detail for near-term distribution.

Notional Force System

For personnel planning through the POM years, the notional force (NOF) system converts broad force structure guidance into MOS and grade projections. The NOF modifies the PMAD to make force structure changes that are anticipated but have not been programmed. The NOF then generates data at MACOM, unit type code, MOS, and grade level of detail, but not in UIC level of detail. In contrast to the PMAD, which is focused on the execution and budget years, the NOF is focused on the program years. Combined with the PMAD, the NOF provides a projection of affordable authorizations for the active Army.

Total Army Personnel Database

The Total Army personnel database (TAPDB) is an automated, standardized database containing military personnel data. It supports the manning and sustaining functions during peacetime and under mobilization. Personnel information on individual officer and enlisted personnel is contained in the TAPDB-active officer/enlisted.

Section IV: Distribution and Assignment

The distribution and assignment processes place the right soldier, in the right skill, at the right place, at the right time. M0Ss and grades are nearly balanced when the overseas-to-sustaining base ratio is supportable and there is a high density of personnel in substitutable skills. When these conditions don't exist, problems arise in the distribution and assignment processes and a sharing of shortages is required for all commands. Organizations exempted from "fair share" due to operational priority or modernization requirements increases the depth of shortages in lower priority organizations.

The decision to except organizations from fair share manning must consider the impact across the force during the period of exception. The impact will decrease proportionally if the

decision is made and managed at the highest force level, usually the MACOM.

The distribution and assignment systems support a number of scenarios (peace, limited mobilization, and full mobilization) and can evaluate "what if" scenarios. Based on the scenario, assignments of individual replacements and unit packages can be altered and transmitted to the field.

Personnel distribution is influenced by assets on hand, authorizations, and priorities according to a master distribution plan that will ensure that all commands, agencies, and activities receive, according to priority, an appropriate share of the available inventory.

ENLISTED DISTRIBUTION

Enlisted personnel distribution is based on changes to force structure, recruiting, training attrition rates, retention rates, authorizations, funding constraints, end strength, and the unpredictability of the individual soldier. All of these variables affect distribution, including the accuracy and timeliness of data used for analysis. Unprogrammed force structure changes make the distribution system less responsive.

Priorities for the distribution of enlisted personnel are based on initial assignments, PCS reassignments, reassignments within commands, and unit moves. Distribution is driven by approved authorizations documented in PMAD/UAD, directed military overstrengths, space imbalance MOS overstrengths, and overstrengths in specific high priority units. Priorities are documented in the personnel priority group codes in the DA master priority list (DAMPL). Special priorities are based on operational and training requirements for special skills, such as Ranger and linguist, which do not necessarily correspond to DAMPL.

Enlisted distributions are managed by projecting personnel strength of major overseas commands, FORSCOM and TRADOC installations in the CONUS, and special management and functional commands worldwide from the current month out to 11 months. The number of soldiers distributed to commands is established by current enlisted distribution policy. Aggregate totals are arranged by rank bands (PVT-SPC, SGT-SSG, SFC-SGM) and are the basis for transitioning to individual MOS requirements.

DISTRIBUTION CONSIDERATIONS

Forward deployed forces and early deploying forces are structured at higher ALO and may be manned at or above ALO. Later deploying organizations are structured at lower ALO and are filled to ALO 1 in the predeployment phase of operations. OCONUS troop strength is governed by Congressional mandates, OSD ceilings, PBG, and military manpower strength projection report by region and country. PERSCOM manages the aggregate enlisted strength against the PBG rather than the PMAD authorizations.

Requisitions submitted by MACOMs are validated based on projected requirements. Discrepancies between projections and requisitions may be caused by an authorization change not yet recorded in PERSACS, by more current authorizations data available to PERSCOM through the use of PMAD, or by more current gain or loss data. The problem is resolved before submission of the validated requisitions for assignment processing.

Organizations that are undergoing activation, reorganization, or conversion are excepted from fair share manning during the transition period to accomplish the force integration mission. Failure to man units at 100% or higher of the minimum mission-essential wartime requirement degrades the processes necessary to incorporate and ultimately sustain changes in doctrine, structure, or materiel. Key personnel by MOS and ASI, must be available and stabilized through and beyond the transition period to ensure the viability of the changes to the organization. Organizations that provide direct support must be considered to ensure that low density skills in these organizations are managed in the same manner. Personnel are

inextricably linked to modernization as part of a total system approach.

Section V: Personnel Sustainment

The goal of the manning system is to create a stable unit environment by managing personnel turbulence so that organizations can achieve higher levels of cohesion and collective proficiency. Planners and executors of change must reduce the effect of organizational turbulence in the transition to a higher level of capability.

Personnel sustainment depends on authorizations being documented at least two years prior to the effective date of change. The lead time is necessary to ensure that the personnel acquisition system and the training system can support changes in the force structure.

To maintain balance and capability in the force, the separation of officers, warrant officers, and enlisted personnel is a continuous process. In each case, procedures are in place for qualitative and, when required by Congress, quantitative reduction of the force. No person has an inherent right to continued service.

REQUIREMENTS DOCUMENTATION

The output data of the various supporting information systems are used for military and civilian personnel planning activities. These include accessions, gains and losses, promotions, career area management plans (career management field and area of concentration for military), and many other personnel actions.

Military Personnel

MACOM plans contain aggregate authorizations by UIC and the authorization database shows grade and skill-specific detail. Command plans are entered in the master force and changes to authorization documents are made to the authorization database. The AUTS process compares and resolves differences between the two files.

Changes in military personnel status are sent via the standard installation/division personnel system to the officer and enlisted databases. These files are the source of current active force military inventory data to include grade, skill, and UIC, and portray these changes over time for personnel analysts.

Enlisted personnel, warrant officers, and officers may be involved in separation actions. These include release from active duty, discharge, nondisability retirement, physical disability retirement, and separation and resignation.

To improve the enlisted career force, a qualitative management program (QMP) program was established that consists of two subprograms. Qualitative retention establishes retention control points that are specific time-in-service limits established by the rank of the soldier. Qualitative screening is the bar-to-reenlistment aspect of the QMP. Soldiers not selected for retention are barred from reenlistment.

Reserve Personnel

Reserve force personnel inventory and projected inventory data are maintained in the same detail as the active force. In case of mobilization, these files will be incorporated with the active component file. Military personnel-Army costs, as well as reserve component personnel costs by pay category, are calculated within budget modules that reflect costs for all years within the PPBES.

Civilian Personnel

The civilian personnel system is similar to the military system. It identifies the objective force or force structure required to support the Army, formulates personnel policies, and manages career progression.

ODCSPER and the ASA(M&RA) are responsible for civilian manpower management. Civilian manpower authorizations are documented in the master force at the program element level

for program manager controls and analytical purposes. After decisions on authorizations have been made by the ARSTAF, they are sent to the MACOMs by the PBG and the manpower addendum to the PBG from the master force.

Civilian manpower utilization is documented in the MACOM POM and command budget estimates (Schedule 8) and is used to update appropriate ARSTAF databases. Other inputs are out-of-cycle requests from MACOM commanders or Army leadership-directed actions.

Installation civilian personnel offices report actual strength and civilian manpower obligation data. The MACOMs are also required to develop civilian employment level plans. Strengths, work-years, and obligations are reported from the civilian payroll system. These include monthly strength projections for the execution year that are portrayed to the Congress. Civilian projected inventory is maintained within the civilian forecasting system.

Summary

A major objective of manning the force is to ensure the timely fill of a rapidly changing force structure that includes changes in the geographic location of the force. The size and location of the force changes inside the cyclic PPBES. This requires flexibility and a thorough understanding of the changes throughout the force. A major force management task and a force integration requirement is to predict the impact of decisions on organizations and the force as a whole. The Army's competitive edge will depend, in part, on the application of technology. The manning system must ensure the timely placement of soldiers with the proper skills and experience to operate new and improved systems coming into the force. Maintaining force readiness at the prescribed levels despite significant change will be a continuous challenge for commanders and staffs throughout the Army.

Chapter 8
Equipping the Force

Section I: Introduction

Successful integration of new or improved equipment into organizations increases force capability and depends on the effective synchronization of the equipping, structuring, training, manning, sustaining, stationing, and funding functions. Equipping progresses through research and development, to production, and materiel fielding. The goal is to increase overall capabilities with a minimum expenditure of resources.

Equipping the force involves operational commanders; materiel, training, and combat developers; logisticians; personnel managers; and design and facility engineers. They work within parameters that balance overall affordability against competing operational and support requirements and which acknowledge the need to maintain the industrial base capabilities. Synchronization and integration of related activities involves organizations and staffs at all levels, to include the gaining units. Centralized planning, management, and decision support processes should also provide for the development of decentralized supporting plans and their execution.

The process of equipping organizations considers the introduction of systems into the force, not disparate pieces of equipment. Systems are the sum of force structure, equipment, personnel, doctrine, facilities, support infrastructure, and resources. Every materiel item introduced must be viewed as a total system to reduce the negative impact on readiness. Materiel that is provided to organizations as a fully operable package reduces the impact on the gaining unit by lessening the period of time required to distribute, configure, and hand-off the system to the user.

Section II: Materiel Development and Acquisition

SUPPORTING DOCUMENTATION REQUIREMENTS

DOD policies and procedures provide detailed direction and formats concerning documentation required for materiel acquisition programs. The primary documents required for equipping the force are described in Figure 8-1, Materiel Acquisition Documentation. Critical force integration factors involve the synchronization of capability and supportability aspects of the materiel system internally and with overall force capabilities. They are the basis for all materiel acquisition programs and allow tailoring to meet the unique needs of each program.

SCOPE

Materiel acquisition includes-

- activities from development through disposal. This includes three major decisionmaking support systems: the requirements generation system; the planning, programming, budgeting, and execution system; and acquisition management.

- decision reviews, concept development, system development, production, testing and evaluation, human system integration, integrated logistics support, total package fielding, and training.

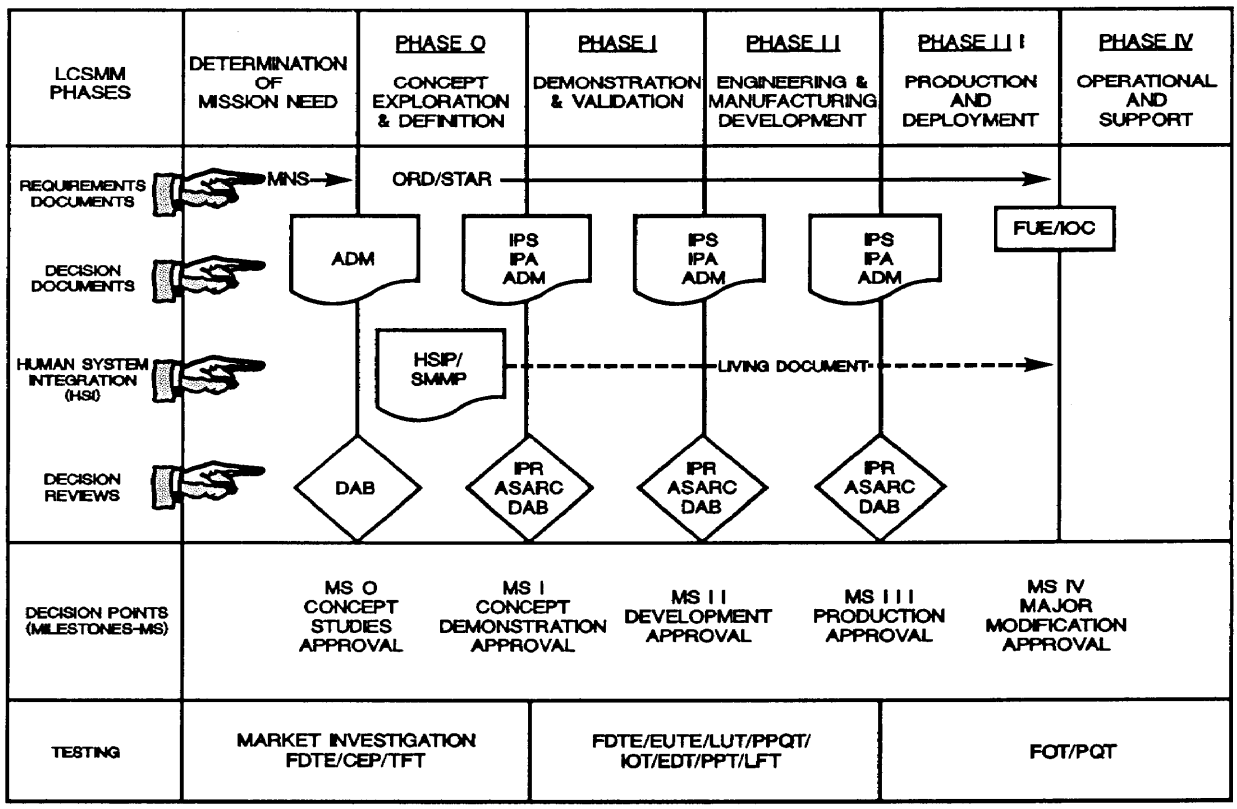
MATERIEL ACQUISITION LIFECYCLE SYSTEM MANAGEMENT

Functional and temporal interfaces for materiel acquisition are described in the life cycle system management model (LCSMM) and include programmatic sequencing and decision points. Figure 8-2, Materiel Acquisition Life Cycle System Management Model, p. 8-3, provides a general overview.

DOCUMENT	MILESTONE					REQUIRED BY CONGRESS
X: Prepared by Military Department o: Prepared by OSD Staff	O	I	II	III	IV	
Mission Need Statement	X					
Operational Requirements Document		X	X	X	X	
System Threat Assessment Report		X	X	X	X	
Integrated Program Summary		X	X	X	X	
Program Life Cycle Estimate		X	X	X	X	
Acquisition Program Baseline		X	X	X	X	yes
Test & Evaluation Master Plan		X	X	X	X	yes
Manpower Estimate Report			X	X		
LRIP Report for Naval Vessels & Satellites			X			yes
Live Fire Test & Evaluation Waiver			X			yes
Competitive Prototyping Strategy Waiver		X				yes
Component Cost Estimate		X	X	X	X	yes
Cost & Operational Effectiveness Analysis		X	X	X	X	
Early Operational Assessment Report			X			
Operational Test & Evaluation Report				X		yes
Development Test & Evaluation Report			X	X		
Environment Assessment/Environment Impact Statement		X	X	X	X	yes
Defense Intelligence Agency Report	o	o	o	o	o	
Joint Requirements Oversight Council Report		o	o	o	o	
Integrated Program Assessment		o	o	o	o	
Independent Cost Estimate Report		o	o	o	o	yes
Live Fire Test & Evaluation Report				o		yes
Beyond Low-Rate Initial Production Report				o		yes
Acquisition Decision Memorandum	o	o	o	o	o	

Figure 8-1
Materiel Acquisition Dcumentation

The LCSMM is a tool for planning and executing materiel system development and acquisition. Together with its constituent activities, the LCSMM provides guidelines for combat, materiel, and force developers in all aspects of materiel program planning and execution. These range from determination of operational needs through maturation of technology, prototyping, testing, and evaluation. Production, fielding, and life cycle support are also included. Cyclic activities provide for opportunities to prioritize and allocate resources



ADM - ACQUISITION DECISION MEMORANDUM
ASARC - ARMY SYSTEM ACQUISITION REVIEW COUNCIL
CEP - CONCEPT EVALUATION PROGRAM
DAB - DEFENSE ACQUISITION BOARD
EDT - ENGINEERING DESIGN TEST
EUTE - EARLY USER TEST & EXPERIMENTATION
FDTE - FORCE DEVELOPMENT TESTING & EXPERIMENTATION
FOT - FOLLOW-ON OPERATIONAL TEST
FUE - FIRST UNIT EQUIPPED
HSIP - HUMAN SYSTEM INTEGRATION PLAN
IOC - INITIAL OPERATIONAL CAPABILITY
IOT - INTITIAL OPERATIONAL TEST
IPA - INTEGRATED PROGRAM ASSESSMENT
IPR - IN-PROCESS REVIEW
IPS - INTEGRATED PROGRAM SUMMARY
LFT - LIVE FIRE TEST
LUT - LIMITED USER TEST
MNS - MISSION NEED ASSESSMENT
ORD - OPERATIONAL REQUIREMENTS DOCUMENT
PDM - PROGRAM DECISION MEMORANDUM
PQT - PRODUCTION QUALIFICATION TEST
PPT - PREPRODUCTION PROVE OUT TEST
SMMP - SYSTEM MANPRINT MANGEMENT PLAN
STAR - SYSTEM THREAT ASSESSMENT REPORT
TFT - TECHNICAL FEASIBILITY TEST

Figure 8-2
Materiel Acquisition Life Cycle System Management Model

for programs, prepare and review documentation, and review and approve programs.

Integral to each acquisition program are the program, project, or product manager, management staff, and user representation. Close coordination among combat and materiel

developers, supporting commands and staff elements, and MACOMs and their subordinate commands enables operational and technical integration of new and improved equipment capabilities. Their effective integration is necessary to ensure detailed and sound planning and recommendations, and efficient execution of all aspects of the fielding process.

FORCE INTEGRATION CONSIDERATIONS

Force integration considerations begin before formal program initiation and continue throughout a system's life cycle. Execution requires continuing assessments of the impact of introducing equipment into the force at and beyond the time of fielding. These assessments address structuring, training, manning, sustaining, deploying, stationing, and funding considerations, and weigh the readiness impact for gaining organizations. Equipping the force must also assure that supporting rationale and processes are continually reviewed and updated.

Throughout the process, combat, training, materiel, and doctrine developers, with input from gaining organizations, ensure that decisions involve-

- Operational integration characterized by the capability to function effectively in a combined arms environment with current and developmental materiel.

- Technical integration, characterized by the physical capability to interface and operate current and developmental systems to field combined arms, joint, or combined force capabilities.

- Integration of equipment capabilities with manpower and personnel as well as logistics supportability.

Section III: Materiel Requirements Definition

Initial identification of requirements for new or improved equipment is accomplished through the materiel requirements determination process. The definition and approval of materiel requirements are established by mission need statements (MNSs) and/or ORDs (Figure 8-3,

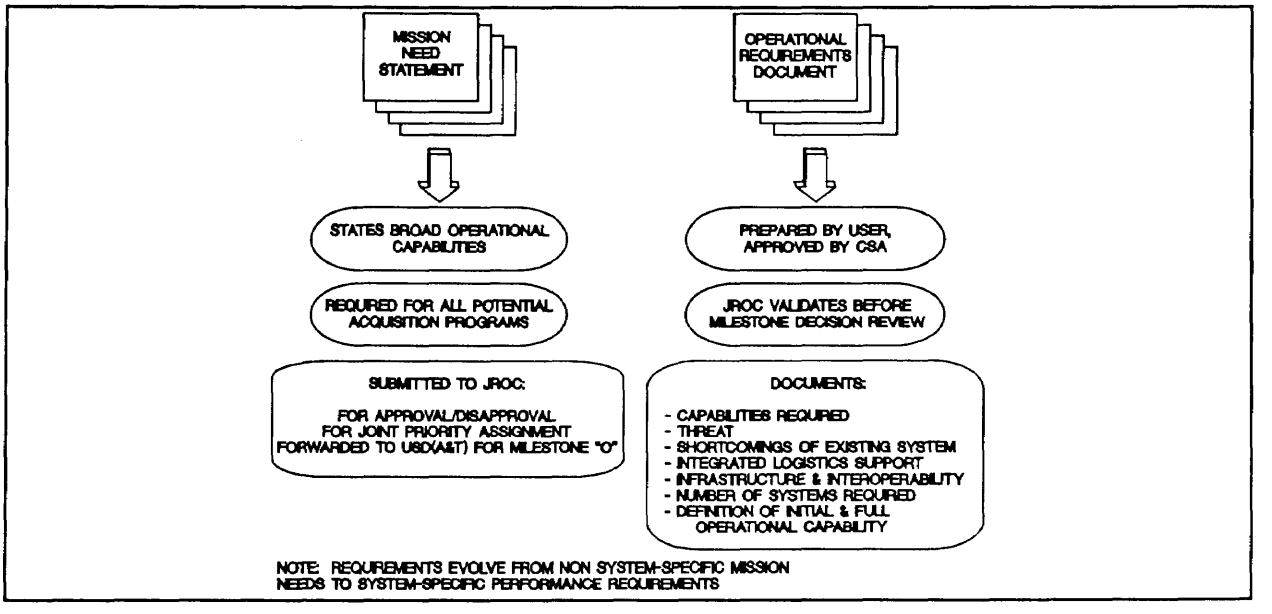


Figure 8-3
User Requirements Documents

User Requirements Documents). They are approved by the appropriate acquisition category (ACAT) approval authority for the program involved. MNSs for major programs are reviewed and approved at the JROC chaired by the Vice Chairman, Joint Chiefs of Staff. ORDs for this level of programs are confirmed by the Joint Requirements Oversight Council (JROC) before each milestone decision review (MDR).

Training and Doctrine Command acts as the leading representative of field users in the domains of doctrine, training, leader development, organizations, and materiel focused on the soldier. In the mid-to-far term, the ECBRS provides the analytical basis to determine future Army capability and materiel requirements.

REQUIREMENTS DOCUMENTATION

Planning, programming, and budgeting for materiel capabilities is initiated by the Army modernization plan (AMP). It identifies future requirements and provides the structure within which multiple competing elements can be analyzed, balanced, and integrated into the POM. The AMP reflects the constrained subset of systems and programs that the Army plans to resource and execute.

The level of decision review for each program is representative of the ACAT assigned to that program in addition to JROC consideration for initiation and continuation of major programs. The principal decision review forums, membership, and decision authority are summarized in Figure 8-4, Army Materiel Acquisition Program.

These decision forums provide for diverse and comprehensive membership by decisionmakers and staff elements from the organizational levels charged with decisions on the program involved. They provide for participation by materiel and combat developers, Office of the Secretary of Defense, and appropriate Service representation.

Program Category	Program Management	Primary Criteria	Milestone Review Forum	Milestone Decision Authority
ACAT ID	PEO/PM	S300M RDTE S1.8B Proc (Note 3)	DAB	USD(A&T)
ACAT IC	PEO/PM	S300M RDTE S1.8B Proc (Note 3)	ASARC	AAE
ACAT II	PEO/MAT CMD CDR/PM	Approximately S115M RDTE S540M Proc (Note 3)	ASARC	AAE
ACAT III	PEO/MAT CMD CDR/PM	High Visibility, Special Interest	IPR	PEO/MAT CMD CDR (Note 1)
ACAT IV	PEO/MAT CMD CDR/PM	All other acquisition programs	IPR	PEO/MAT CMD CDR (Note 2)

NOTES:
1. PEO-equivalent level commander of a materiel developing command.
2. May be further delegated at the materiel commander's discretion.
3. CY 90 constant dollars.

Figure 8-4
Army Materiel Acquisition Program

Integrated priority lists (IPLs) provide access to the planning, programming, and budgeting systems by the CINCs of unified commands. The CINC IPL can be provided to the Joint Chiefs of Staff or by the Army component commanders to the ARSTAF. ECBRS provides a mechanism to surface and support immediate requirements, rapidly emerging capabilities, and command or theater unique needs to be interjected into the programming and budgeting processes.

Materiel acquisition programs mature and are approved for further execution through milestones shown in Figure 8-1. Through this maturation the definition of requirements is expressed both in operational requirements and constraints delineated in the ORD, and from more focused exit criteria approved to define the program's progression through each MDR. Systems integrators and combat and materiel developers focus on operational and technical integration during requirements determination and documentation. They ensure that critical aspects of these parameters are the basis of approved exit criteria to allow for integration of the system into the force as it emerges from development and is tested and fielded. Significant elements of decision criteria for the force integration process include:

- Operational Capabilities. The integrated, synergistic capabilities of the force.
- Technical Capabilities. Within the program and across the projected force.
- Programmatic Risk. Technical risks, time, and cost.
- Impact on other Functions. This includes structure, manpower, personnel, training, doctrine and tactics, and organizational sustainability.
- Operational Priorities and Relative Affordability.

RESOURCE ALLOCATION

Considerations

Resources available for systems development, production, and fielding must be distributed to achieve a balance between current readiness and future needs. This requires that combat, materiel, training, and force developers-

- Understand and support priorities for future force capabilities.
- Understand emerging technology potentials and attendant risk.
- Articulate conceptual and doctrine-based requirements for future materiel system capabilities.
- Participate in decision processes that distribute technology base and other investment account resources.
- Provide comprehensive assessments and rationale that document the operational and technical basis for recommended investments.

Investment Accounts

DOD and Army investment accounts are directed toward basic research, technology development, and technology insertion. This includes development and early demonstration of potential materiel applications. These investment accounts are research, development, test, and evaluation (RDT&E) and procurement.

Technology Base

The technology base is encompassed within the 6.1 through 6.3A budget elements of Army RDT&E:

- Category 6.1: Research includes scientific study and experimentation. It is directed toward increasing knowledge and understanding in those scientific fields that are related to national security needs. It provides

fundamental knowledge for solution of identified military problems. It also provides part of the base for subsequent exploratory and advanced developments in defense related technologies of new or improved military function capabilities.

- Category 6.2: Exploratory development includes efforts directed toward solving specific military problems. It includes fundamental applied research, sophisticated prototype development, study, programming, and planning efforts. It also considers studies and minor developmental efforts and development of technological processes that will be used to support the acquisition process. Technological processes are characterized as models, techniques, and simulations that are needed to optimize product development. These processes focus on developing criteria and evaluating the feasibility and practicality of proposed solutions and determining their parameters. Program control normally is maintained by general level of effort.

- Category 6.3: Advanced development includes all projects that are ready for demonstration where technical maturity has been achieved and technical risk to initiate full-scale development is low. In addition, nonmaterial brassboard prototypes may be evaluated for technical maturity using experimental laboratory or field tests. Advanced development is characterized by line item projects. Program control is exercised on a project basis and addresses technological options and uncertainties in both system and nonsystem RDT&E efforts.

- Category 6.3A: Advanced development involving nonsystems is characterized by the development of generic components and subsystems, advanced technology transition demonstrations, and nonmaterial technological demonstrations, such as simulations.

Decisions are made and carried out concerning technology base investments. They are reviewed to ensure that the following elements are supportive of other technologies transitioning out of the technology base.

- Operational and technical integration has occurred with current and projected systems; this requires planning for the conduct of joint, combined, and coalition operations.

- Synchronization of development and fielding timelines to assure capabilities of fielded forces.

- Production within projected resource constraints.

Development, Test and Evaluation, and Procurement

Systems development capitalizes on proven technological capabilities to support stated requirements for new and improved materiel systems. This normally involves funding categories 6.3B, advanced development (system); 6.4, engineering development; and 6.7, operational systems development.

Systems development activities are highlighted by prototyping of systems, proving readiness for production, and optimizing manufacturing and related technologies. The conduct of technical and operational testing demonstrates system readiness for fielding and operational employment.

The production phase of the LCSMM encompasses affordable procurement of materiel systems, including total package fielding (TPF) requirements. It also includes completion of post-production testing and live fire testing using production materiel. The production phase concludes with the system's fielding based on Army requirements and priorities.

Force integrators monitor the progress of each of these activities during the production and fielding phases. They focus on continuing assessments of relative priorities and program affordability within the constraints of overall force capabilities. They also ensure that production articles meet performance, supportability, and operational suitability

requirements of the force.

Figure 8-5, Equipment Test and Evaluation Activities, shows that developmental and operational testing and evaluation activities are an integral part of the process of ensuring that planned equipment acquisitions meet required standards. Specific events of the testing cycle allow tailoring of the acquisition program to meet unique requirements and demands. The final process of testing and evaluation ensures that soldiers receive material that is safe, maintainable, and capable on the battlefield.

Section IV: Manpower, Personnel, and Logistics Integration

MANPOWER AND PERSONNEL INTEGRATION

Manpower and Personnel Integration (MANPRINT) is the Army's human system integration program. It emphasizes front-end planning of soldier-materiel system design for optimum total system performance. It is part of the Army materiel systems acquisition and associated support requirements so that systems can be operated and maintained in the most cost-effective and safest manner within Army resource constraints. MANPRINT is focused on influencing materiel systems design and associated support requirements so that systems can be operated and maintained in the most cost effective and safest manner within resource constraints. These considerations are incorporated into requirements and the acquisition process to determine the answers to the following question: Can this soldier with this training perform these tasks to these standards under these conditions?

MANPRINT increases Army warfighting capabilities by enhancing operational effectiveness of the total system through continuous integration of all relevant information concerning the following domains:

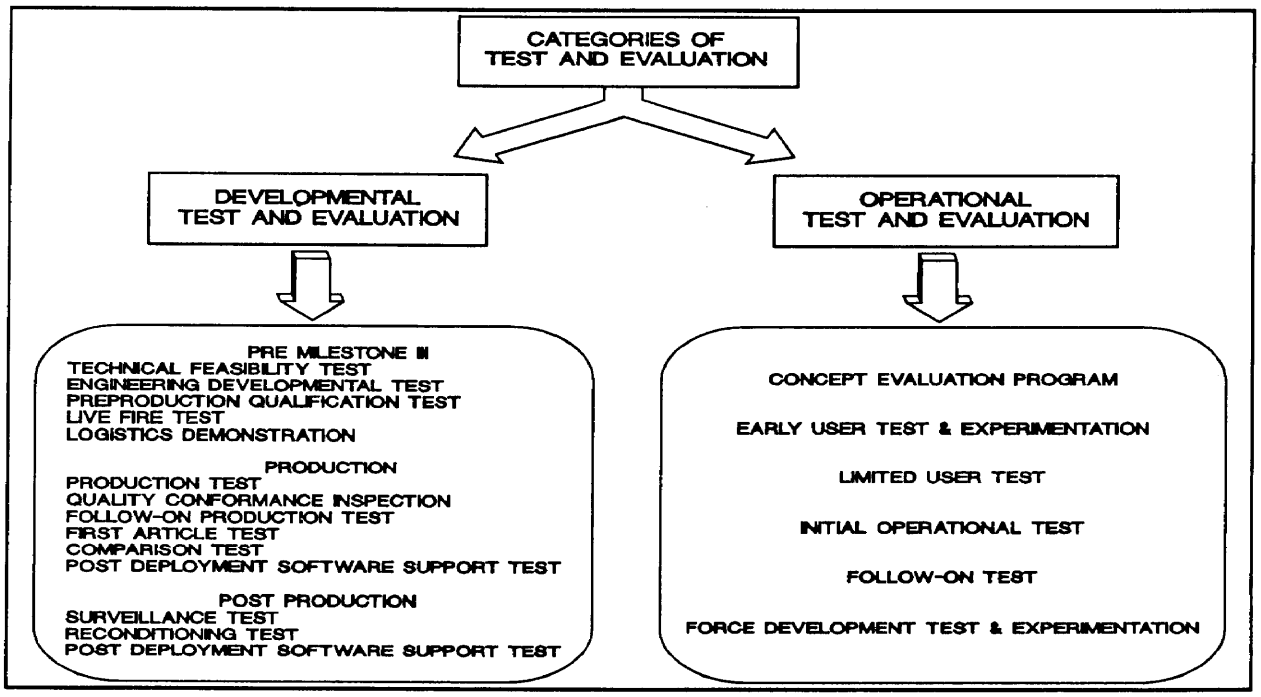


Figure 8-5
Equipment Test and Evaluation Activities

- Human factors engineering.
- Manpower.
- Personnel.
- Training.
- System safety.
- Health hazards.
- Soldier survivability.

LOGISTICS INTEGRATION

Integrated logistics support (ILS) planning begins before formal program initiation. It ensures the planning and execution of all necessary equipment support tasks and associated training and enhances materiel system and support system effectiveness. ILS assessment considerations include-

- Design influence.
- Maintenance planning.
- Manpower and personnel.
- Supply support.
- Support equipment and TMDE.
- Training and training devices.
- Technical data.
- Computer resource support.
- Packaging, handling, and storage.
- Transportation and transportability.
- Facilities.
- Standardization and interoperability.

Section V: Major End Item Distribution

Distribution of new and displaced equipment is based on the Army's priorities for force readiness and the ability of units to receive materiel. There are no absolute criteria for determining the sequence and timing of equipment distribution throughout the force. This critical function can be understood by a discussion on authorizations, priorities, and distribution execution.

DISTRIBUTION AUTHORIZATIONS

Organizational requirements and authorizations form the basis for determining Army requirements for major end items of equipment. The Army acquisition objective (AAO) includes:

- Equipment authorizations for the Total Army that make up the initial issue quantity.
- Wartime active replacement factors (WARF) determined from scenario-based analyses of expected warfighting losses that require replacement.
- Prepositioned materiel configured to unit sets. The total of these authorizations is subtracted from WARF requirements beyond D +30 of the scenario used.
- Operational project stocks.
- Maintenance float requirements expressed as either operational readiness float or repair cycle float.

Organizational requirements for major items of equipment are documented and summarized in the authorization database. The programmed force structure is documented in the master force. Overall projections of equipment requirements are projected in the LOGSACS. AAO requirements and subtotals for each element are then aligned with Army priorities.

DISTRIBUTION PRIORITIES

The Defense priorities and allocation system defines overall priorities for limited industrial base assets in times of emergency. It also provides priority performance on contracts and orders to distribute materials and facilities necessary for national defense under the Defense Production Act.

The determination of distribution of major equipment items in relative priority to conform with the Army's overall requirements for readiness, contingencies, and training is based on the DAMPL (Figure 8-6, Equipment Distribution Methodology). It prioritizes organizations and non-unit claimants to meet the "first to fight, first resourced" concept. The Army order of precedence provides departmental guidance for specific priorities that diverge from specified DAMPL priorities. MACOMs may request distribution to subordinate commands in out-of-DAMPL sequence due to MACOM-specific requirements.

These prioritization mechanisms are focused on providing highest priority for new and improved materiel capabilities by force package. This force packaging methodology does not encompass all possible exigencies or unique equipment requirements of certain organizations. Requirements to provide mission-essential equipment for training may demand deviation from the DAMPL. The Army equipping strategy

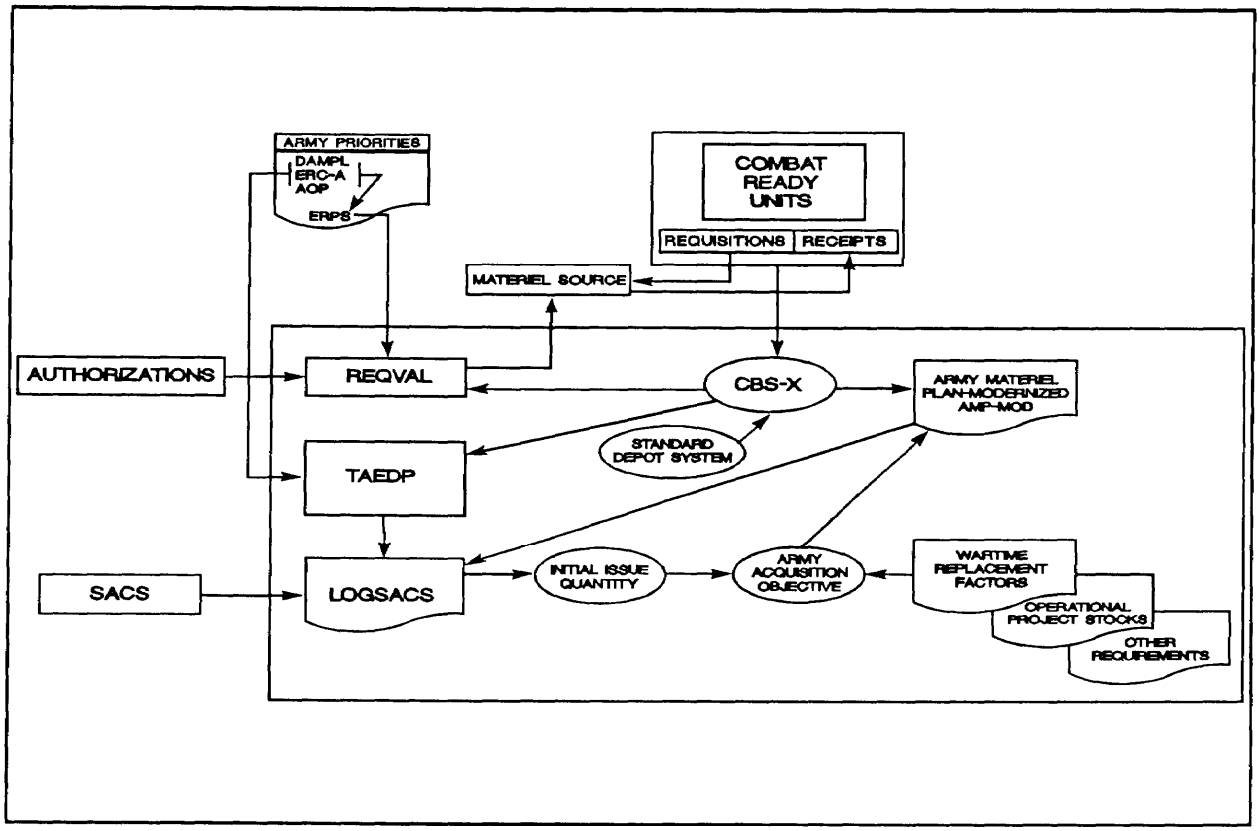


Figure 8-6
Equipment Distribution Methodology

provides policy guidelines for executing equipment distribution to Army elements by force package utilizing a "trickle-down" modernization methodology.

DISTRIBUTION EXECUTION

The Army's authorizations for major items of equipment are documented in the Total Army equipment distribution program (TAEDP). TAEDP combines requirements and authorizations with existing assets as reflected in the continuing balance system-expanded (CBS-X). This composite data provides input to the distribution of equipment against projected force structure.

Section VI: Fielding and Sustainment

Successful fielding and initial sustainment of new and improved items of equipment require planning to realize each item's full capability within gaining units. The Army's TPF process is designed to achieve this capability. TPF merges all aspects of fielding to provide an initial operating capability and sustainment of new Army equipment.

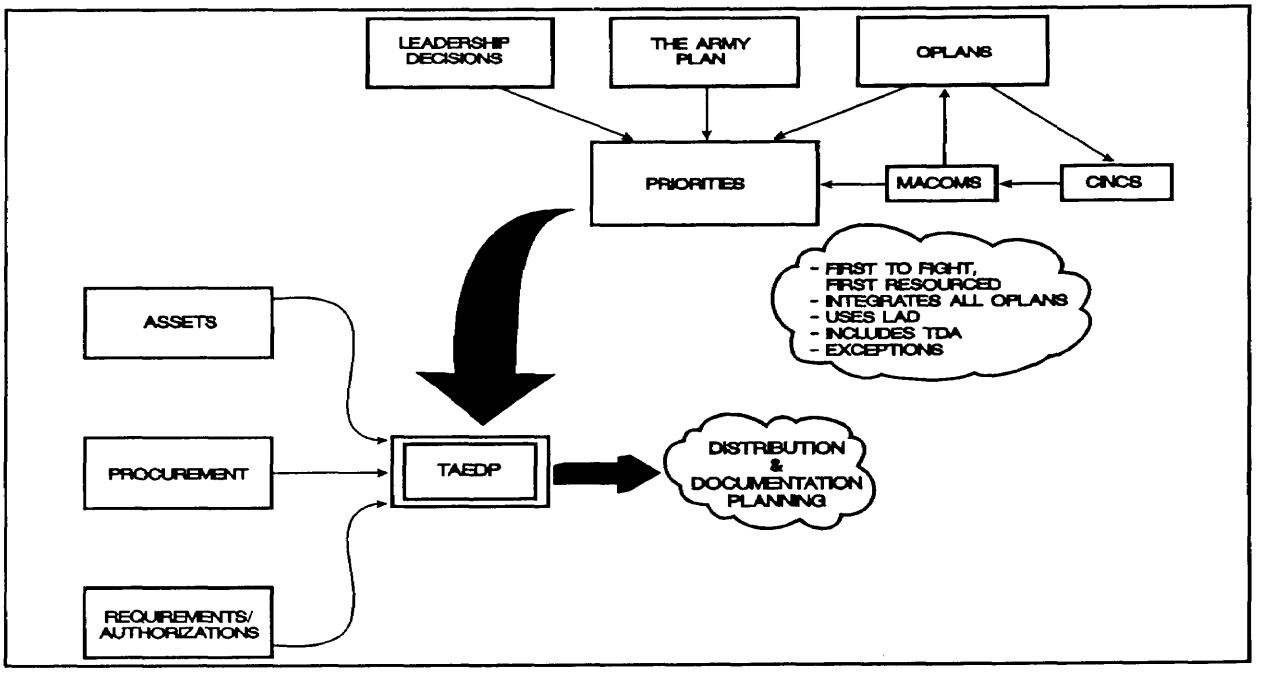


Figure 8-7
Distribution Priorities

The requisition validation system merges current authorizations with on-hand assets reflected in CBS-X. The equipment release priority system prioritizes the shortages using priorities for equipment release and distribution (or redistribution). These processes are detailed in Figure 8-7, Distribution Priorities, and Figure 8-8, Distribution Execution.

TOTAL PACKAGE FIELDING

With certain exceptions, fielding of new and improved Army systems is accomplished within the context of TPF as the standard and preferred framework. Its intent is to reduce

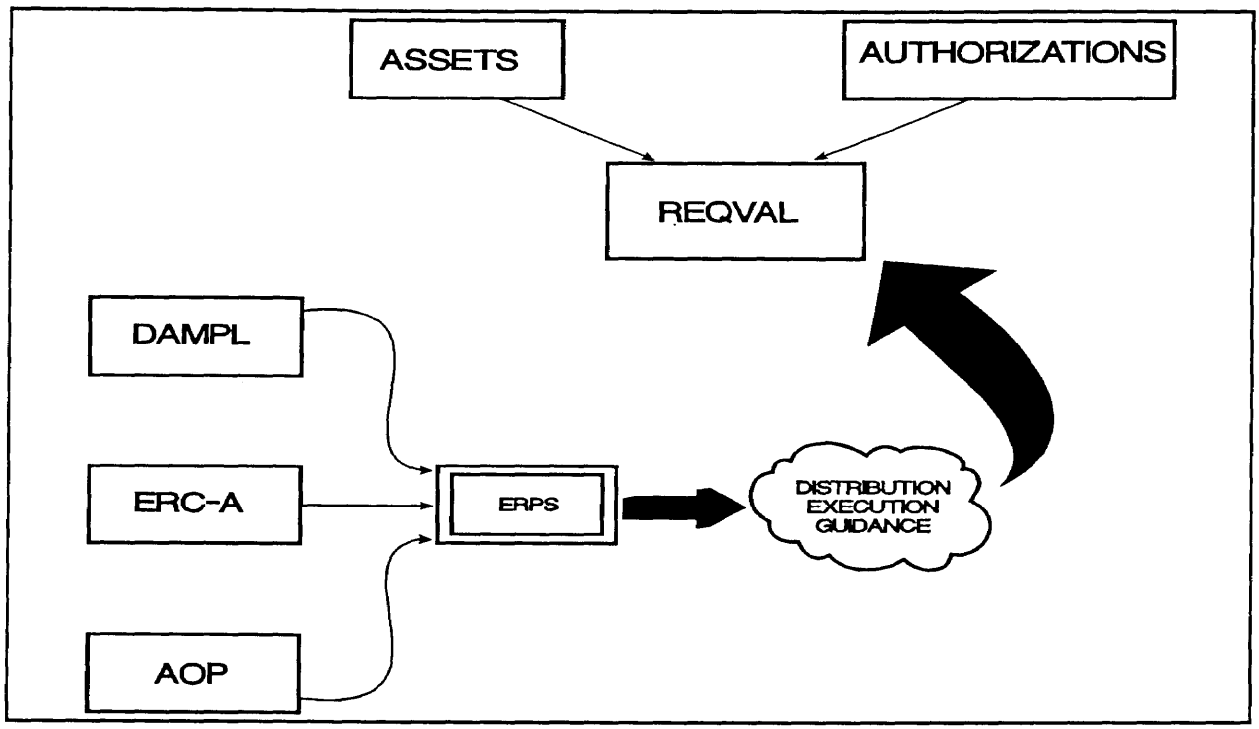


Figure 8-8
Distribution Execution

logistics burdens on the gaining MACOM and its subordinate organizations.

Considerations

Equipping the force requires integration of functional processes and products to enable development and fielding of individual items of equipment or major materiel systems. To integrate issues addressed in fielding new equipment, all involved agencies must-

- Synchronize and balance operational and technical capabilities at system, organization, and force levels.

- Consider the operational and technical impact of:

  - System and force lethality.

  - System, soldier, and force survivability.

  - Force structure and technology within affordability, force sustainment, and operational constraints.

Planning for and executing materiel fielding operations also recognizes that-

- Limited resource levels require fielding to be conducted in a cost-effective manner.

- Fielding, training, and support for new and improved operational capabilities must assure rapid assimilation of new equipment into the force.

- Major categories of materiel systems must be in continuous modernization (production, upgrade, or development).

Most materiel fieldings will affect direct support organizations that sustain combat and combat support organizations. The support

infrastructure modernization is inextricably tied to the operational capability of the supported organization. It requires intensive management due to low density of personnel and equipment authorizations. Failure to introduce and incorporate changes to combat service support organizations ultimately degrades sustainment and operational capability of the supported force.

Responsibilities

Several Army organizational elements have responsibilities for equipping the force. Materiel and combat developers and supporting contractors are the principal planning and execution agencies at the early stages of system evolution. Departmental agencies, MACOMs, and gaining organizations participate as involvement in a particular program matures.

Department of the Army

The ARSTAF has overall responsibility for establishing policies and priorities. They also are directly involved in planning, programming, and budgeting for materiel research, development, and acquisition. Operational and technical inputs are provided by the combat and materiel developer, respectively. The Office of the Assistant Secretary of the Army (Research, Development, and Acquisition) (ASA[RDA]) is an element of the Army secretariat and includes Army program executive officer (PEO) organizations and their subordinate project, product, and program managers (PMs). The ASA(RDA)/PEO and the Army Materiel Command (AMC) have principal responsibility for technology development, system development, and production. This responsibility includes technical testing; cost estimation; and research, development, and acquisition resource management.

The Office of the Deputy Chief of Staff, Operations is responsible for development and articulation of program priorities. Additional responsibilities include integrated rationale and inputs that support technology, system development, equipment acquisition, and distribution. The ARSTAF and ASA(RDA) each have responsibilities for supporting databases and decision support mechanisms. Responsibility for equipment distribution and support planning belongs to the Office of the Deputy Chief of Staff, Logistics.

Army Materiel Command

AMC encompasses the remaining Army PMs, the Army Laboratory, and subordinate research and development commands.

Training and Doctrine Command

TRADOC, including its headquarters, major subordinate commands, and proponent commandants (several of whom are concurrently responsible for battle laboratories), has principal responsibility for operational requirements determination. TRADOC, as the principal combat developer, receives significant input from AMC, the principal materiel developer.

Major Army Commands

MACOMs are responsible for logistics functions for Army organizations. To ensure all aspects of fielding new and improved equipment are considered, MACOM force integration staffs assess structuring, manning, training, stationing, deploying, and funding of resources that are programmed for inclusion in MACOM POM submissions. Concurrently, MACOMs and subordinate headquarters plan, coordinate, and supervise adherence to detailed timelines to meet fielding milestones.

Army components of unified commands also provide input to operational requirements through generation of requirements in a CINC IPL or through routine staffing of ORDs. MACOMs recommend priority for equipment distribution to subordinate commands. This internal distribution may be out-of-DAMPL sequence.

Within MACOMs, activities and organizations plan for equipment distribution by programming and budgeting resources to support equipment fielding at specific sites. This ensures availability of the necessary personnel, facilities,

support capabilities, and materials, when required.

Reserve Components

Reserve component modernization reflects the roles of the Army Reserve and National Guard in the Army mission. Reserve component organizations may round-up or round-out active component formations or provide the support infrastructure to sustain them. Organizations in the reserve forces must be structured, equipped, and trained to perform combat functions and be capable of sustainment by the active component support infrastructure. These requirements may necessitate dedicated procurement of major materiel systems for reserve component units. The DPP improves readiness of the total force by increasing equipment-on-hand status of the reserve forces.

Other Commands

Limited combat and materiel development responsibilities are also vested in the Information Systems Command, Special Warfare Center, and the US Army Medical Department Center and School. The Intelligence and Security Command also retains materiel development responsibilities.

TPF Planning and Execution

As the program's development cycle progresses through the engineering and manufacturing development phase, plans for fielding transition into detailed planning, coordination, and initial execution. This sequential planning is designed to ensure-

- Sufficient planning and resourcing capability by both the fielding commodity command and the gaining command.
- Full understanding of fielding support requirements including structure, personnel, facilities, and training.
- Successful transition of fully operational and supportable systems to operational units.

Specific TPF activities and responsibilities on the part of fielding and gaining commands are based on categories of TPF (I through III) and levels of materiel system complexity (1 through 4) in category I. In all categories of TPF, the materiel fielder-

- Programs funds for initial issue material.
- Requisitions initial issue material.
- Provides the gaining organizational customer documentation.

TPF places the responsibility on the commodity command to field equipment in accordance with the BOIP for materiel system fielding (category 1), the authorization document for activations (category 2), and the difference between the current and new authorization document for reorganizations or conversions (category 3). The commodity command must achieve at least C-3 for equipment on hand at the time of hand-off to the gaining organization. Equipment to be provided to the gaining unit is specified in the materiel requirements list (MRL) based on negotiated agreement and should consider implications of ERC "B" and "C" line item numbers of equipment.

Both the materiel developer, fielding agency, and the gaining command have specific responsibilities and activities to fulfill within the overall TPF. The process encompasses hand-off of the primary equipment system and its support package, to include-

- Associated basic issue items (BII).
- ASIOE and the associated BII.
- STTE.
- TMDE.
- Starter set of technical publications, including technical manuals.

- Authorized initial issue spare/repair parts, including essential repair parts stockage list when approved by DA.

- Appropriate training support package.

TPF Fielding Documentation

Planning and executing materiel fielding is a process of determining organizational requirements for introduction, incorporation, and sustainment of materiel and of documenting specific responsibilities and procedures. Key information sources for the development of fielding plans include-

- The Army Modernization Information Memorandum. It contains resource-oriented data for selected new, improved, and displaced equipment systems to provide resource impacts of systems.

- Modernization Resource Information Submission (MRIS). This provides input to forecast operations and support costs for fielding and sustainment of new and displaced equipment systems other than DA intensively managed systems. MRIS is one input for determining resources to support force modernization.

- Force Modernization Master Plan. This plan provides organizational transition guidance and resource requirements to support fielding at UIC level. A semi-annual segment is incorporated in the TAEDP to provide Army equipment distribution priorities to aid materiel fielding programming and budgeting.

- Materiel Fielding Memorandum of Notification (MON). This document begins the formal materiel fielding process. It is provided by the materiel developer to the gaining MACOM at least 240 days before award of a developmental system production contract. The MON provides system description, fielding milestones, and the draft materiel fielding plan (if required).

- Materiel Fielding Plan (MFP). The MFP is prepared by the materiel developer for each gaining MACOM or as an annex tailored to each gaining MACOM. Annexes include the approved mission support plan and materiel fielding agreement. The MFP includes the logistic support concept, system description, gaining command and fielding command responsibilities, support transition plan (if applicable), and detailed resource impacts on the gaining command. Detailed milestones will be specified.

- Mission Support Plan (MSP). The MSP is prepared by the gaining command and contains maintenance and supply support structure for the system being fielded by specific identification of using and supporting units.

- Materiel Fielding Agreement (MFA). The MFA is jointly prepared by the fielding agency and gaining command to document the mutual agreement of plans, policies, responsibilities, procedurs, and schedules governing fielding of the equipment item to a particular MACOM.

- Materiel Requirements List (MRL). The MRL is prepared by the fielding command and specifies all items required to field and initially support the materiel system.

DISPLACED EQUIPMENT DISPOSITION

Transfer of displaced items of equipment is separate from, but related to, the process for fielding new or improved items. New materiel fielding activities require transfer of displaced items to other organizations, theater stocks, or the depot system for rebuild or modification. Detailed planning and execution for displaced equipment is required to ensure training, assimilation, and early operational capability.

Transfer of materiel between organizations requires the following:

- A memorandum of agreement, which provides planning by and coordination among MACOMs for equipment transfers.

- A materiel transfer plan (MTP), which provides for actions and responsibilities of the involved MACOMs, as well as supporting commands. A MTP is required when the displaced system has not been used or supported before by the gaining MACOM or when the system will be transferred to the Army wholesale system for refurbishment with a subsequent fielding.

- A displaced equipment training plan, which provides for the conduct of training for operators and maintenance and support personnel of displaced equipment for which a MTP is required.

Summary

Equipping is an integral part of force modernization. It is technical, operational, and organizational in nature and resource intensive. The integration challenge is complicated by missions, priorities, and interests of combatant commands, departmental decisionmakers and staffs, materiel development activities, and TRADOC proponents. These diverse interests and priorities are also affected by political, business, and industrial base demands. The processes, outputs, decision mechanisms, and organizational involvement that support equipping the force are not discrete activities accomplished in isolation from other functions. Equipping the force is achieved within the related context of structuring, manning, training, sustaining, funding, and maintaining force readiness. The balance of functional and force perspectives must be focused on a goal that synchronizes equipping the force with all other aspects of force effectiveness and affordability.

Chapter 9
Training the Force

Section I: Introduction

Training and leader development are tools force integrators use in incorporating and sustaining new capabilities in organizations based on changes in concepts, doctrine, organizational structure, and materiel systems. This chapter defines the role of training in accomplishing the force integration mission.

The Army's primary function is to achieve and sustain the capability to win America's wars. It must therefore be structured, equipped, manned, and trained to achieve the required favorable outcome. To protect national interests, it must be capable of responding to any level of conflict by projecting and sustaining forces over extended distances and accomplishing a variety of operational missions.

Developing competent and confident leaders is a key element of Army training. Commanders and leaders must be educated to understand the nature of organizational change to execute planned and programmed force integration actions. They must be able to assimilate change effectively and efficiently to maintain combat-ready units.

Section II: Combined Arms Training Strategy

The Combined Arms Training Strategy (CATS) is the Army's overarching approach guiding the training of the current and future force. It describes how the Army will train the total force to standard in three major components: institutional training, unit training, and self-development training. These components are mutually supportive and incorporate the Army's standards for training.

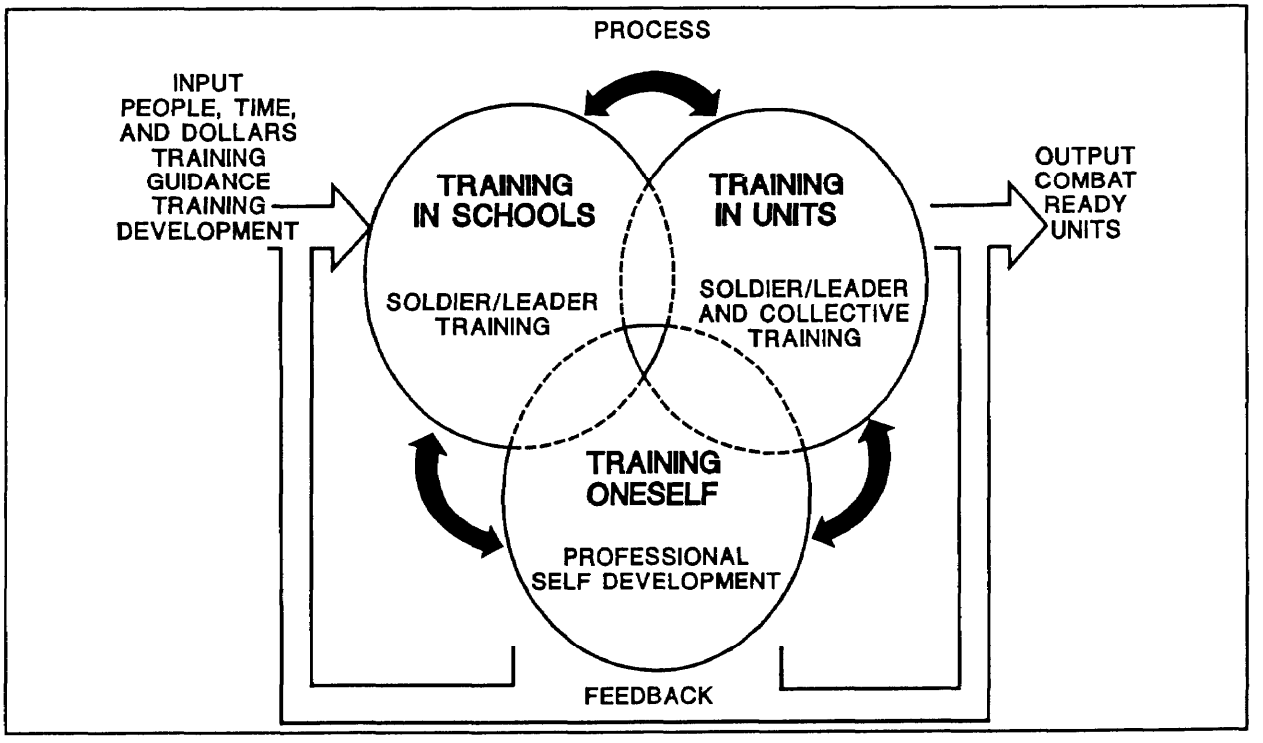


Figure 9-1
Army Training System

CATS enables the Army to create subordinate training strategies for institutions and units and to quantify and justify required training resources (Figure 9-1, Army Training System).

PRINCIPLES OF INDIVIDUAL AND UNIT TRAINING

To achieve the Total Army training goal, leaders at all echelons must understand the principles of training. Individuals and units must-

- Train with leaders as the primary trainers. Leaders are responsible for planning and conducting training and evaluating individual soldiers and unit performance. Their personal involvement in training is essential to battlefield success.

- Train as they fight. Units must train as they are structured, equipped, manned, and sustained for combat. Organizations are designed and tasked to perform doctrinal missions at maximum operational capability.

- Train as combined arms and as part of joint teams. Cross-attachment of units is required to exploit operational capability. They must be able to form effective company teams and task forces and integrate combat support and combat service support units at the appropriate force level.

- Conduct multi-echelon training. Individual training, leader training, and unit training must be planned and conducted concurrently at every opportunity.

- Use performance-oriented training. Units become proficient in the performance of mission-essential tasks by training to standard on tasks with coaching by leaders.

- Train to sustain proficiency. The cornerstone of the Army Training and Evaluation Program (ARTEP) is sustaining proficiency (train-evaluate-train). Evaluation identifies training strengths and weaknesses. The mission training plan sequentially outlines training components and allows selection of tasks and groups of tasks to facilitate this process.

- Train to maintain. Operators and organization and direct support maintenance personnel must train to sustain equipment and organizations at their designed level of capability.

- Train to challenge. Tough and realistic training builds competence and confidence by developing and honing skills. It inspires excellence by fostering initiative, enthusiasm, and eagerness to learn.

- Use published Army doctrine. Doctrinal publications establish the basis for sustainment, training, and evaluation.

Section III: Training Development

Achieving the Total Army training goal depends on the development of effective training. In addition to training mission essential tasks, the ability to incorporate and sustain organizational capabilities depends on the quality of modernization and sustainment training. The training development process begins with the systems approach to training (SAT) and culminates with the training requirements analysis system (TRAS).

SYSTEMS APPROACH TO TRAINING

SAT disciplines thinking on what to train, how to train, and how to evaluate training. It ensures that critical performance requirements establish the content of training. SAT consists of five interrelated processes:

- Evaluation. Evaluations determine whether students can perform tasks to training standards. They also determine the effectiveness of graduates and exported training materials in meeting the needs of units.

- Analysis. Analysis is a systematic process of identifying specific training needs from performance requirements by assessing unit missions, mission-critical collective tasks, leadership tasks, and critical individual tasks.

- Design. Design involves the sequencing of training events to satisfy learning objectives. Learning objectives should meet the established criteria, as measured by performance-oriented tests.

- Development. This is the production of resident and nonresident training programs and support materials that ensures the attainment of training objectives.

- Implementation. This is the ability to train the trainers and conduct institutional and unit training.

TRAINING REQUIREMENTS ANALYSIS SYSTEM

TRAS facilitates the timely development and implementation of training by documenting the evaluation, analysis, and design of requirements in SAT. TRAS addresses both individual training and unit training, but emphasizes institutional training. TRAS integrates the training development and implementation process with external resource acquisition systems for personnel, facilities, and training devices. The TRAS process is supported by three documents:

- Individual Training Plan (ITP). The ITP is a long-range planning document that outlines the resident and nonresident training strategy for an occupational specialty or separate training program, while ensuring that the SAT process is integrated with the sources of training needs, the PPBES, evolving training initiatives, and related resource acquisition systems.

- Course Administrative Data (CAD). The CAD provides critical planning information about a resident course that enables the recruiting, quota management, and personnel systems to take the actions needed to have students and instructors on-station in sufficient time to meet Army requirements.

- Program of Instruction (POI). The POI is a requirements document that provides a general description of course content, duration of instruction, and types of instruction. It also lists resources required to conduct peacetime and mobilization training and critical tasks and supporting skills and knowledge taught, including distributive training phases of the course.

Section IV: Army Modernization Training

Army modernization training (AMT) is designed to transfer knowledge about new doctrine, organizations, and equipment from the developer to the user.

SYSTEM TRAINING PLAN

The system training plan (STRAP) is the master training plan for new or improved materiel systems. It is developed by the TRADOC proponent for a materiel system. STRAP-

- Documents the results of training analyses. It determines who requires training, what tasks need training, and when, where, and how proponents will conduct training.

- Starts the planning process for all necessary courses and course revisions, training products, and training support required for the new system.

- Sets milestones to ensure timely development of training and training support to permit testing and fielding of total systems.

- Communicates training and resource requirements within and among TRADOC schools, materiel developers, MACOMs, and HQDA.

- Establishes the basis for assessment of training subsystem progress.

The initial STRAP is required NLT 90 days prior to MS 1. Revised STRAPs are due 30 days before management decision reviews.

MODERNIZATION TRAINING APPROACHES

The knowledge necessary to modernize effectively is transferred through a variety of training approaches, either singly or in

combination, to respond to the specific demands of the modernization under consideration:

New Equipment Training

Purpose

NET is the initial transfer of knowledge from the materiel developer to the trainer, user, and supporter to achieve operational capability in the shortest possible time through the identification of personnel, training, and training aids and devices. The strategy and duration of NET depends on the state of the institutional training system and its ability to provide trained soldiers. NET-

- Focuses on company-size or smaller units.
- Determines specific requirements for training on new or improved equipment.
- Integrates training for staff planners, testers, trainers, users, and supporters.

NET Planning

New equipment training plans (NETP) are prepared, reviewed, distributed, and stored in the Army modernization training automation system. It is a fully integrated, automated system with a capability for interactive development, updating, staffing, and distribution of NETPs.

NET Focus and Strategies

NET planning must be flexible, considering the unique challenge of each new and improved item of equipment. Several training strategies are available for consideration:

- Organizational Training. Following advanced individual training, personnel required to activate an organization can be brought together for unit training at one location. Training on the equipment is integrated into organizational training to provide a capability for training in the CONUS, followed by overseas deployments. This retains flexibility to support unit activation for CONUS only.
- Total Unit Training. Some materiel fieldings can take advantage of an existing organizational structure, cohesion, and chain of command to train all assigned operators and maintenance personnel of the gaining unit.
- Institutional Training. The ideal training strategy occurs when the institutional training base is established and is producing sufficient graduates to support equipment fielding. It requires trained personnel to be distributed to the gaining unit. This strategy precludes the need for a NET team.
- Cadre Training. Selected personnel from the gaining organization are trained to conduct training for other unit personnel (train-the-trainer). This training may be conducted at the materiel developer's location, the institutional training location, a contractor facility, or an installation receiving the equipment.
- Instructor and Key Personnel Training. Some systems are operated and maintained by a selected number of key personnel. In these instances, it is more economical and effective to train all individuals who operate or maintain the equipment. Training and cost effectiveness will dictate the number of locations where training will be conducted.
- Exportable Training. Some materiel fieldings require only exportable training material because of the simplicity of the equipment or its similarity to current equipment. The training developers will use material procured by the materiel developer when available.

Displaced Equipment Training

Displaced equipment, while not new to the Army, is often viewed as new equipment by the receiving unit and can generate a training requirement. Displaced equipment training (DET) must be planned and executed as carefully as new equipment training; however, an established

knowledge base may exist in the units receiving the equipment. DET-

- Integrates trained personnel assigned to the unit.
- Utilizes available training within TRADOC, ARNG, and US Army Reserve Force schools.
- Employs supervised on-the-job training using exportable training packages.

Doctrine and Tactics Training

Doctrine and tactics training (DTT) provides commanders, leaders, planners, and operators the knowledge to employ and support new organizational capabilities. DTT is based on changes to current doctrine and tactics and considers the uses and functions of a new system or organization. It must be transmitted to user personnel so they can fully exploit the new capabilities and improve their combat effectiveness.

New Organization Training

The training of individuals on new or modified doctrine and tactics is encompassed by DTT; however, a void in organization training often occurs when changes significantly alter the capabilities, structure, and mission of a unit. A new organization must be trained to perform its new or modified doctrinal mission. New organization training (NOT)-

- Focuses on battalion-size units.
- Does not supersede requirements for NET, DET or DTT.
- Trains units to perform their new or altered mission based on changes required by new equipment, doctrine, or tactics.
- Requires the determination of needs for training at the proponent school based on the impact of the change in the unit's mission and readiness.
- May be integrated, as an event, into unit training.

NOT planning includes the employment and support of the new organization. Although NOT planning considerations are similar to DTT, they focus on the battalion mission. Training must be transmitted to user personnel so they can fully exploit the new unit capabilities and improve combat effectiveness.

NOT is designed to ensure that a modernized unit can perform its assigned mission in light of significant changes. It meets a training requirement at the organization level that is not met by NET/DET and DTT.

Sustainment Training

The level of training and capability achieved during AMT cannot be maintained without sustainment training (ST). Organizational capabilities must be sustained through a combination of institutional and individual and collective training at unit level (Figure 9-2, The Band of Excellence).

Effective sustainment of capabilities depends on the continuing efforts of unit commanders and the institutional training system to support commanders with training and doctrinal materials and trained individual replacements.

Planning and execution of ST is an integral part of an organization's peacetime mission. Commanders at all echelons must make use of the available assets (human, physical, financial, and time) to support ST. Commanders assess the ability of individuals or units to perform assigned missions after training on new or displaced equipment or systems fielding. Results of ARTEP and battle command training program (BCTP) evaluations are used in the development of the unit's ST plan.

MODERNIZATION TRAINING RESPONSIBILITIES

Army modernization training responsibilities are as noted in Figure 9-3.

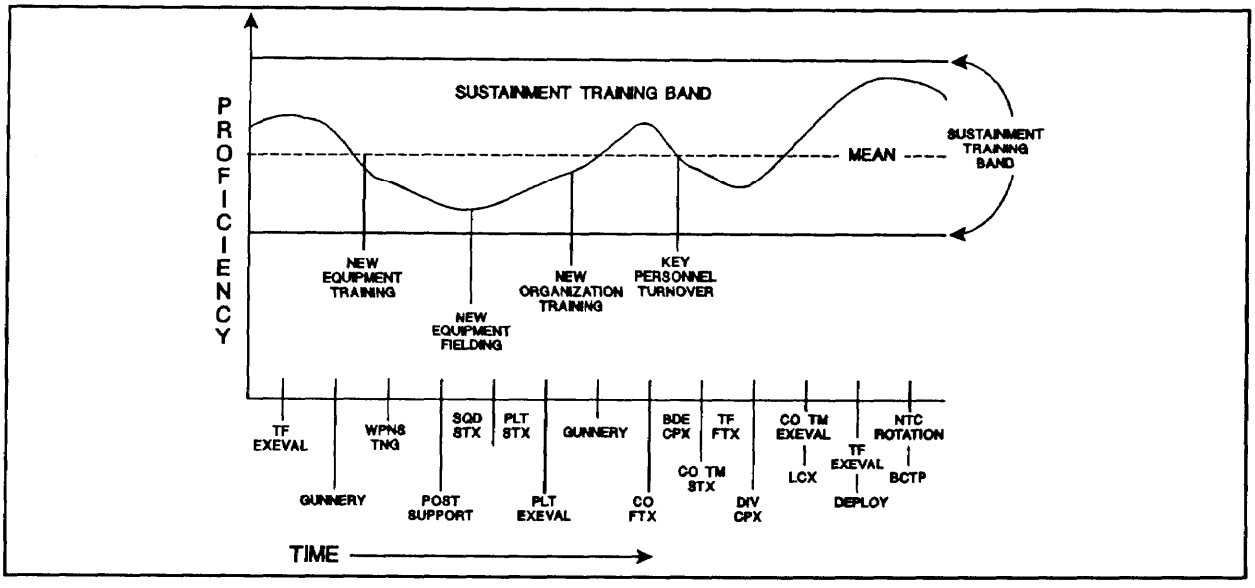


Figure 9-2
The Band of Excellence

Training requirements, schedules, and resources required to train units are documented by the AMT proponent. This ensures that resources programmed in support of AMT are synchronized with developmental milestones. They are coordinated with combat and training developers to define strategies. These plans are developed as materiel development, operations, maintenance, and fielding concepts evolve.

ARMY MODERNIZATION TRAINING	PROPONENT		
	ACTIVE COMPONENT	RESERVE COMPONENT	
NET	AMC	AMC	
DET	TRADOC[1]	FORSCOM USARPAC USAREUR	NGB
DTT	TRADOC	TRADOC	
NOT	TRADOC	USARC	NGB
ST	MACOM[2]	USARC[2]	NGB[2]

Notes:
1. The Surgeon General (TSG) for Medical Items
2. In Coordination with TRADOC

Figure 9-3
Army Modernization Training Responsibilities

TRAINING SEQUENCE

Successful modernization training efforts depend on sequencing events to ensure that new capabilities are at their maximum level as modernization training ends and ST resumes. Personnel identified to attend AMT must be selected based upon retainability in the organization. Regardless of the specific strategy to transfer knowledge to the operator, maintenance personnel, or trainer, organizations must be at 100% or more of authorized strength for the MOS and additional skill identifiers affected. This level of manning must be sustained through the transition period or beyond to lessen the impact of the departure of trained soldiers.

Training courses for leaders, operators, and maintenance personnel should be scheduled to ensure that soldiers and leaders are trained in adequate numbers to support equipment hand-off. Training should be conducted in conjunction with, or completed prior to hand-off of new equipment. If the period between completion of training and hand-off is too long, the ability of the organization to incorporate and sustain the capability will decrease as knowledge and skills decay and trained soldiers depart units.

TRAINING PLAN DEVELOPMENT

Modernization training plans for staff planners, testers, trainers, supporters, and users must address-

- Similarity of new doctrine, organizational structure, or materiel to existing doctrine, structure or equipment.
- Current ability of the training base to provide trained replacements.
- Technical complexity of the equipment.
- Impact on training by interim contractor maintenance support and warranty restraints on systems.
- Fielding rate by item or organization.
- Effect of materiel fielding on unit readiness.
- Overall modernization training strategy.
- Equipment density (number of systems per organization and number of organizations).
- Available training devices, equipment, ranges, facilities, and doctrinal and training materials.
- Facilities required for training and equipment hand-off.
- Capabilities and dispersion of reserve component units.

TRAINING EVALUATIONS

Evaluation is the capstone process of modernization training. An organization must be evaluated on its ability to execute doctrine and exploit operational capabilities gained through new structure or new materiel systems. Organizations and their command and control and support structures must be stressed in a realistic assessment of design capability. This evaluation process validates the functional systems' success or failure in producing a combat-ready unit. The ARTEP evaluation or BCTP rotation for an organization terminates the modernization transition and provides the point of departure for ST.

RESERVE COMPONENT MODERNIZATION TRAINING

The ability of reserve component units to accomplish AMT is also limited by available training days and may require that NET, DET, DTT, or NOT be extended over two or more annual training periods. The authority to extend AMT must be approved by HQDA.

Selected reserve component units will receive new or improved equipment early in the distribution schedule. This finding may be concurrent with equipment distribution to active component units. Detailed NET planning is essential to ensure that the unique challenges inherent in modernizing reserve component units are met.

Reserve component units will often have significant mission changes upon receipt of new or displaced equipment that completely alters the structure of that unit. This often occurs during mobilization when fielding of new or displaced equipment for reserve components is accelerated.

MOBILIZATION AND WARTIME REQUIREMENTS

During mobilization and in wartime environments, the need for AMT becomes more critical. Accelerated requirements during mobilization often necessitate a unit to receive new equipment or change its structure during mobilization, deployment, or upon entry into theater. This challenges unit commanders to increase capability on an accelerated schedule. The combat effectiveness of a unit greatly depends on how well this training is integrated into its preparations for combat.

Summary

Force modernization introduces incorporates, and sustains new doctrinal, structural, and materiel capability into organizations. Modernization training ensures that the capability is, in fact, incorporated. Sustainment training is the key to maintaining excellence.

Chapter 10
Sustaining the Force

Section I: Introduction

The Army sustains organizations through the acquisition of personnel, materiel, and facilities. The arrival of additional people and materiel through the force integration process creates changes to the organizational paradigm. Changes to the organization and its support structure must sustain a designated level of capability. This level must be maintained through replacement, repair, or rotation of its existing assets.

The sustainment of organizations affects the supported and supporting units. Deviations at installations from the doctrinal supported/supporting unit relationships must be addressed in detail during deployment and operational planning. In addition, as maneuver units modernize, the supporting units (i.e., organization and direct support maintenance teams) must also change.

The determination of requirements and the allocation of resources identifies the current, budget, and program forces that must be sustained. Integration of requirements and authorizations in the structure and composition system provides for sustainment of organizations with personnel and materiel.

Producing materiel is not simply developing, buying, and shipping the systems to the user organizations. It is also continuing to support the systems after fielding. Operational capabilities are maintained by providing repair parts, diagnosing failures, and developing necessary modifications through the life cycle of the system.

Section II: Logistics Functions, Levels, and Support

The Army's logistics tasks originate with its statutory functions to organize, equip, and train Army forces for the conduct of prompt and sustained combat operations on land. They are further refined by the defense planning guidance. Within this broad guidance, the Services develop their own programs. The Army's implied logistics tasks are to:

- Equip Army forces.
- Sustain land combat operations.
- Establish reserves of equipment and supplies and provide for expansion of the force.
- Formulate logistics doctrine and support procedures.
- Develop, supply, equip, and maintain bases and other installations.

Logistics concepts, policies, programs, plans, and systems evolve from the core requirements to support and maintain force readiness logistically.

LOGISTICS FUNCTIONS

The standard Army logistics system supports the movement and sustainment of the force through the following functional elements of logistics:

- Supply, which is the acquisition, distribution, maintenance, and salvage of materiel.
- Maintenance, which maintains materiel in an operational status, restoring it to a serviceable condition, or upgrading its functional utility through modification.
- Transportation, which is the movement of personnel and equipment to meet mission requirements.
- Services, which provide food service, water support, laundry, fumigation and bath, property disposal, and mortuary affairs.

- Facilities, consisting of real property programs and real property maintenance activities pertaining to the operation of utilities, maintenance of real property, minor construction, and other engineering support.

LOGISTICS LEVELS OF SUPPORT

Levels of logistics are determined by the organizational level at which the support is required. There are two primary levels of logistics:

- Wholesale. This level includes the national inventory control points, national maintenance points, depots, arsenals, and factories. The work is generally performed in CONUS.

- Retail. This level includes support at installations and in the theater of operations. It consists of the following three functions:

  - General support (GS), which provides logistics support primarily at the theater-level.

  - Direct support (DS), which provides logistics support to individual user units and activities.

  - User and organizational support, where unit level personnel perform maintenance on organic equipment and perform unit supply functions.

INTEGRATED LOGISTICS SUPPORT

Requirements for new materiel necessitates an Operational Requirements Document, which outlines the employment and support of a materiel system in using organizations. It describes how a system will be integrated into the force and deployed, operated, and sustained in peacetime and wartime. The ORD establishes required readiness objectives and is the basis for Integrated Logistics Support (ILS).

Logistical supportability of materiel systems is assessed during the system acquisition process through the ILS program. ILS is a disciplined, unified, and interactive approach to the management of technical activities necessary to-

- Integrate support considerations into system and equipment design.

- Develop support requirements that are related consistently to readiness objectives, design, and each other.

- Acquire the required support.

- Provide the required support during the operational phase at minimum cost.

- Seek readiness and life cycle cost (LCC) improvements in the materiel system and support systems during the operational life cycle.

- Repeatedly examine support requirements throughout the service life of the system.

ILS considerations are to be integrated into the system design effort throughout the life cycle management model. The objective is to ensure that developed systems are reliable, maintainable, transportable, and supportable. Concurrently, the required support resources must be developed, acquired, tested, and deployed as an integral part of the materiel acquisition process.

The total ILS strategy for a materiel system is prepared by the materiel developer and coordinated with the combat developer, logistician, technical and operational evaluators, and other program participants before Milestone 1. The approved ILS plan will prescribe materiel system acquisition events and processes requiring ILS action, interface, or support. These processes include system engineering, contracting, and MANPRINT. The plan also lists requirements for support and sustainment of the

system after fielding by addressing potential upgrade, replacement, or disposal considerations.

Section III: Logistics Planning

Logistics planning focuses on the transition from peacetime to wartime. The adequacy of the logistics support considers:

- Strategic and theater lift availability.
- Sustainability requirements of supported forces.
- Availability of in-place prepositioned war reserve stocks.
- Logistic force shortfalls.
- Warning time.

PLANNING RESPONSIBILITIES

Department of the Army

A comprehensive logistics analysis of OPLANs for various theaters is conducted to identify, develop, and recommend logistics concepts, policy, programs, plans, and systems. It also includes assessing logistics readiness and sustainability. This evaluation is performed to assess logistics supportability, adequacy of logistics force structure, and enhancement of logistics planning efforts. OPLAN logistic analyses focus on three primary aspects:

- Logistics force structure and deployment.
- Logistics planning guidance.
- Logistics support capabilities and constraints.

The logistics data network (LOGNET) supports both Army and joint crisis action and mobilization efforts. It provides data on unit materiel operational capability, requirements for support to a deployment force, and sustainability of the force over time. LOGNET uses time-phased force deployment lists (TPFDL), applies wartime attrition replacement factors and consumption rates, computes requirements for selected classes of supply, and applies asset availability to those requirements. It can project redistribution of major end items among mobilization stations and ensure that both reserve and active component units have authorized materiel.

Army Materiel Command

The AMC is the wholesale logistics command responsible for the materiel function of research, development, acquisition, and sustainment of a trained, ready Army. The mission of AMC and its subordinate commodity commands falls within three areas: the acquisition of materiel, responsibility for supporting the readiness of that materiel while in user hands, and eventual disposal of the materiel.

SUSTAINMENT PLANNING

Logistics sustainability projects the future availability and serviceability of equipment. It examines requirements versus availability of repair parts and other supplies, issue/turnaround times, storage and transportation, and related facilities.

Sustainment planning is a function of integrating several processes to ensure that support and sustainment are considered from the initiation of a concept through Phase IV of the LCSMM.

During Phase IV of the LCSMM, the materiel system is operated, supported, and maintained in accordance with its intended operational concept. An analysis of the system is conducted to ensure it meets the original requirements. Analysis also is used to identify areas for continued improvement in cost, performance reliability, and capability of the system. The system is sustained in the active inventory until the decision is made for upgrade, replacement, or disposal.

Logistics Supportability Considerations

Logistics supportability is a subset of cost, schedule, and performance. A continuous interface between the program management office and the manpower and logistics communities should be maintained throughout the acquisition process. ILS plans and programs, including host nation support, should be structured to meet peacetime readiness and wartime employment objectives and tailored to the specific system. Innovative manpower and support concepts should be considered early in the development process to influence the design of the system being acquired. Alternative support concepts should be assessed during the requirements and concept formulation phases.

Manpower and Personnel Integration

MANPRINT focuses the materiel acquisition and development process on the capabilities and limitations of the soldiers who operate, maintain, repair, and support equipment. The goal of MANPRINT is to optimize total system performance, including the human dimension. The program integrates the domains of manpower, personnel, training, human factors engineering, systems safety, and health hazards parameters and constraints.

MANPRINT issues are considered throughout requirements generation, early analysis, solicitation, system review, and test and evaluation processes. Emphasis is placed on design influence in the early phases. MANPRINT is a separate major area with the same visibility as technical, management, supportability, and cost areas.

Logistics Support Analysis

Logistics support analysis (LSA) supports decisionmaking concerning the scope and level of logistic support requirements. Initial LSA strategy development is the responsibility of the combat developer. It begins in the preconcept phase concurrent with development of the acquisition strategy and is included in the ILS plan.

The LSA process is thus applicable to all phases of the life cycle and all types of acquisition efforts. It is intended to apply ILS and MANPRINT influences in system design and selection and in developing the required support system.

LSA Objectives

Specifically, LSA is performed at the system and subsystem levels to identify-

- Existing or proposed support structure and any associated constraints.
- Total support requirements for the system.
- Significant support, cost, and readiness drivers of similar fielded systems. This will provide comparative baselines and establish ILS-related goals and thresholds for materiel system development.

LSA Focus

LSA includes the use of analytical techniques and models to-

- Develop and evaluate alternative support concepts.
- Project logistic support requirements.
- Perform design trade-offs to optimize logistic supportability and MANPRINT considerations.
- Perform trade-offs among the ILS elements.
- Measure the impact of LCC on materiel and support system alternatives.

Integrated Support Management Model

The integrated logistics support management model includes-

- The Acquisition Management Milestone System (AMMS). This is an automated management information system designed to provide a standard system for scheduling the major milestone events throughout the acquisition cycle for developing, testing, and fielding a total system.

- The Computer Aided Milestone Schedule (CAMS). This is an AMMS management tool. It is designed to assist the materiel system and equipment proponent for new and current acquisition programs in establishing an AMMS milestone schedule. This program identifies significant life cycle dates and determines the scheduled dates for the remaining AMMS milestones.

- The LSA Application Status System (LASS). LASS provides an automated means of maintaining and retrieving application status information on LSA and logistic support analysis record requirements. LASS accomplishes this during all life cycle phases of a materiel system or equipment acquisition.

Systems Effectiveness Considerations

The effectiveness of a system depends on its capability and availability to perform a specified military mission. Overall effectiveness depends on the materiel design capabilities and the concepts of employment and support. Consequently, the effectiveness of a system will vary according to its reliability and maintainability. Effectiveness will also vary according to the effectiveness of support under multiple-system uses in an operational environment.

The reliability, availability, and maintainability (RAM) program has significant impact on achieving and maintaining the required levels of effectiveness and readiness at minimum cost throughout the life of the system.

The RAM program ensures that materiel systems are operationally ready for use, will perform assigned functions, and can be economically operated and maintained within the scope of logistics concepts and policies. The program contributes to reducing LCCs while increasing the overall operational effectiveness of systems by fielding systems that can be operated and maintained by trained personnel.

Appropriate RAM parameters must be properly quantified in requirements documents, included in contract specifications, and measured during tests. This will-

- Influence design of the system.
- Determine test requirements and test results.
- Permit logistics support planning.

Tailored Materiel Fielding Plan

To ensure that new materiel systems are properly supported when handed off to the user, the materiel developer of AMC initiates a tailored materiel fielding plan. It contains the plans, schedules, procedures, and command actions necessary to deprocess, deploy, and sustain the new equipment. The total package fielding (TPF) method provides gaining commands significant relief from much of the initial burden associated with force modernization fielding. Under TPF, commodity commands provide the user with AMC-prepared, free-issue materiel packages.

Total Package Fielding Responsibilities

Under TPF, the materiel fielder assumes responsibilities for relieving much of the logistics burden from the gaining MACOMs and their subordinate units. The materiel fielder develops, plans, and acquires the materiel system. In addition, the materiel fielder requisitions the system and virtually all its support. A total materiel requirements list is coordinated with the gaining MACOM. The materiel developer consolidates and packages the initial issue support items by unit level. The delivery of the packaged support items and the major end items is coordinated with the gaining units. Finally, a joint inventory with the gaining units is conducted before hand-off. The materiel

developer also provides the necessary documentation for all materiel to be posted to gaining unit records.

Coordination Requirements

Materiel hand-off requirements are identified and coordinated during fielding coordination meetings. The actions required by the fielding and gaining commands will vary based on system complexity and on whether a formal hand-off is conducted by the fielding command. Under TPF, the fielding command is responsible for ensuring the successful fielding and initial supportability of the materiel system.

Section IV: Maintenance Function

Materiel maintenance includes all actions taken to keep materiel in a serviceable condition, restore it to serviceability, or upgrade its utility through modification. As a general policy, maintenance is performed where equipment is operating or has failed.

Maintenance management in the Army is vertically oriented either on commodity groups or weapons systems. Within commodity groups, the management effort is predicated upon cost and item essentiality. Vertical maintenance management provides a direct line from HQDA to the ultimate user through the commodity management chain. Wholesale support responsibility is centralized at AMC. Vertical management techniques are used to obtain cost-effective operations and responsive improvements and rely on standardization of management systems, improvement of asset reporting, and control. This provides better asset knowledge and visibility, streamlines the Army's logistics support structure, and conserves resources.

LEVELS OF MAINTENANCE

Army Maintenance (Less Aviation)

The maintenance framework for non-aviation units contains four levels:

- Unit Level. Unit-level maintenance is performed by the user and is characterized by quick turnarounds based on repair by replacement and minor repair. The cornerstone of unit maintenance is preventive maintenance checks and services.

To improve forward maintenance to the user, there is greater use of built-in-test/built-in-test-equipment, modularity, common tools and test equipment, and discard of components and selected small end items.

- DS Level. This level is performed by combat service support units assigned to divisions and corps. This level is characterized by high mobility, a forward orientation, and repair by replacement. Divisional maintenance units support maneuver elements while nondivisional units provide area support and reinforcing support to the division. DS units are organized on a modular team basis to support specific systems and their auxiliary equipment (tank system support teams, engineer system support teams, etc).

- GS Level. GS maintenance is a semifixed, deployable sustaining maintenance capability at theater level. Its basic purpose is to support the theater supply system through repair of components. Maintenance at this level is job or production line operations, as appropriate, and is performed by modular units composed of commodity-oriented platoons.

- Depot Level. Maintenance at this level supports the wholesale supply system. It is production-line oriented and is performed by select commodity-oriented organizations, special repair activities, AMC depots, and contractor personnel.

Aviation Maintenance

Aviation maintenance is performed at three levels. Aviation unit maintenance (AVUM) is a combination of organizational and limited DS maintenance. Aviation intermediate maintenance (AVIM) is a combination of the remaining DS and limited GS maintenance capabilities. Lastly,

depot maintenance includes some maintenance previously performed at GS level.

Section V: Transportation Function

Transportation is the movement of personnel and materiel to meet Army requirements and commitments. It can be considered the connecting link among the logistics functions, enabling the system to operate.

FOCUS

The transportation management program focuses on maintaining a wartime lift capability in a peacetime environment. This helps ensure strategic mobility and a continuous movement of supplies to deployed forces. To develop and maintain this capability, the most responsive transportation systems are incorporated into the transportation program. Containerization, intermodalism, electronic data interchange systems, and the air lines of communications are used to improve transportation services during peace and war.

Strategic mobility is defined as the capability to deploy and sustain military forces worldwide in support of national strategy. The DOD concept for strategic mobility includes airlift, sealift, and overseas prepositioning of materiel. The US transportation Command provides this support to the Army.

The development of containerized shipping techniques permits the rapid surface movement of materiel. The direct support system is designed to take advantage of this capability and to deliver materiel directly to the user. Although airlift capabilities have increased, the Army still relies on surface movement for the bulk of its cargo.

TRANSPORTATION FUNCTIONAL AREAS

A transportation system within a theater of operations is divided into three functional areas:

- Modal Operations. These consist of the physical movement of personnel and materiel on a transportation conveyance. Basic modes of transportation are air, rail, road, and water.

- Terminal Operations. This involves the transfer of cargo from one mode of transport to a different mode. It also includes the transfer of cargo from one type of transport within a mode to a different type at an intermediate point along the transportation system. Terminal operations in a theater of operations typically take place at railheads, truckheads, pipeheads, airheads, inland waterway terminals, ports, or beaches.

- Movement Management. This includes staff planning and coordination to ensure that the transportation system is used for the movement of personnel and cargo to the right place, at the right time by the most economical and efficient means. Movement management functions are performed by staff elements and control centers at various levels of command. The two major elements of movements management are transportation movements and highway regulation.

Section VI: Supply Function

Supply is the procurement, distribution, maintenance while in storage, and salvage of commodities needed to equip, maintain, and operate a force. This includes the determination of type and quantity of supplies.

SUPPLY CATEGORIES

There are three categories for requesting and issuing supplies:

- Scheduled Supplies. These respond to requirements that can be reasonably predicted (Classes I, III [bulk], V, and VI),

- Demand Supplies. These are supplies for which a requisition must be submitted (Classes II, III [packaged], IV, VII, and IX).

- Regulated Supplies. These are supplies that the commander has decided must be closely controlled because of scarcity, high cost, or mission need.

LEVELS OF SUPPLY

Levels of supply, expressed in days of supply, are the quantities of materiel to be held in anticipation of future demands. The Deputy Chief of Staff, Logistics, Department of the Army prescribes levels of supply authorized to be on hand or on requisition based on experience factors. They are maintained at various levels of logistics support.

Theater Level

Theater stocks consist of war reserve materiel (stock for initial wartime consumption), operational project stocks, prepositioned materiel configured to unit sets, and a theater safety level. Additionally, the theater holds those stocks that are excess to the DS and user echelon and are within DOD retention criteria.

DS and GS Level

Authorized stockage list stocks are held by DS/GS units. They consist of demand-supported, mission-essential, and initial provisioning items. Inventory at the DS/GS level is used to support the consuming organizations.

Unit Level

A unit's prescribed load list (PLL) consists of demand-supported and mission-essential items to support unit maintenance and initial provisioning items. Materiel authorized for unit stockage (PLL stocks) must be on hand or on order (replaced as consumed).

OTHERS

Other supply programs include Army food program (subsistence, troop issue, wholesale subsistence supply, and garrison and field food service), clothing sales/initial issue activities programs, organizational clothing and individual equipment items program.

Section VII: Organization Sustainment

AUTHORIZATION DOCUMENTS

An organization must have the ability to place demands on the Army supply system. To do this the organization must have a HQDA approved authorization document and a valid address so the system has the ability to deliver to specific organizations. The SORTS is the single automated system within the DOD used to provide the National Command Authorities and the Joint Chiefs of Staff with authoritative identification, location, and resource status information on organizations. Before a unit can be documented in the authorization document database or assigned people and equipment, it must first be registered in SORTS. This address is based on the UIC uniquely assigned to parent organizations and the Department of Defense Activity Address Code (DODAAC). The DODAAC is a unique address code that identifies a specific unit authorized by DOD to requisition, receive supplies, or receive billing.

FORCE READINESS CONSIDERATIONS

Assessment of the Army's capability to mobilize, deploy, and sustain forces defines current force readiness by comparing its actual capabilities with its designed capabilities. The logistical sustainability of the force is analyzed to identify and measure the effects of various readiness and resource shortfalls and indicate possible solutions. The results are incorporated into Army guidance documents. They are used as an analytical basis for establishing priorities and allocating resources in the POM process by-

- Assessing the capability of the Army to deploy logistically ready forces and to sustain them in combat, consistent with the prescribed scenario.

- Providing a common baseline that facilitates wartime planning by the logistics community.

- Developing a means to allocate resources and establish priorities by expressing the relationship between logistical assets and requirements.

The force integration analysis is a detailed affordability and executability analysis providing a link between the planning and programming processes by assessing affordability and executability of the Total Army analysis force.

Summary

Logistics sustainability is the "staying power" of forces, units, weapon systems, and equipment. It includes those mechanisms, equipments, and facilities necessary to provision organizations with people and materiel over prolonged periods. Sustainment capability must be structured into all the Army plans, processes, products, and organizations. The measurement of sustainment is the basis for success of Army forces in combat.

Chapter 11
Deploying and Stationing the Force

Section I: Introduction

The process of deploying and stationing organizations involves Service and joint planning and execution in peacetime and operational and contingency environments. It requires facilities and the necessary support infrastructure to ensure that organizations have the necessary real property assets for peacetime stationing and mobilization, deployment, and redeployment operations.

The deployment of organizations differs from the deployment of personnel replacements and items of equipment. Unit deployments could be the result of requirements generated by the Joint Operations Planning and Execution System (JOPES), the Army Mobilization and Operation Planning and Execution System (AMOPES), force modernization, or through changes in force structure. In addition, Army organizations routinely deploy and redeploy to and from combat training centers, joint and combined exercises, and in support of National Command Authorities directives. The deployment of battalions to installations in or outside the continental United States (CONUS/OCONUS) after completion of initial organization training may also be the result of modernization activities. Redeployment of organizations from OCONUS to CONUS also occurs as the Army changes from a largely forward deployed to a force projection force.

One of the major resource constraints in the force integration process is the availability of organizational facilities. The condition and types of real property affect the organization's ability to function at maximum capability and are linked to the Army's ability to modernize the force.

Section II: The Deployment of Organizations

Organizations deploy to or from a permanent station. This "home" station provides soldiers and their families with the organizational facilities and support infrastructure to maintain the required readiness and desired quality of life. Stationing implies that the total organization is located in properly configured sets of real property to accomplish the organizational mission.

MISSION - US TRANSPORTATION COMMAND

The US Transportation Command is responsible for providing global air, land, and sea transportation to deploy, employ, and sustain military forces in response to national security objectives. TRANSCOM's component commands are the Air Mobility Command, the Military Sealift Command, and the Military Traffic Management Command. In support of this mission, USTRANSCOM executes the following tasks-

- Coordination and execution of force and resupply movements for the deployment of all forces.
- Resolution of transportation shortfalls with supported and supporting commanders, military transportation agencies, and the Services.
- Development and coordination of contingency plans and refinement of time-phased force deployment lists.
- Design, development, and operation of automated systems to support crisis management.
- Maintenance of the deployment database to ensure the compatibility of deployment planning in the deliberate planning process and crisis action procedures (CAP).
- Review of time-phased force deployment data (TPFDD) with supported and supporting commanders, Services, and the transportation component commands.

DEPLOYMENT PLANNING

Deliberate Planning

The objective of JOPES is the timely development of operation plans (OPLANs) based upon missions, major forces, and support levels as outlined by the national military strategy. The basic planning parameters and other supporting data to unified commanders are found in the joint strategic

capabilities plan. The deliberate planning phases are:

- Initiation. Planning tasks preassigned and forces and resources available for planning identified.

- Concept Development. All factors that can have a significant effect on mission accomplishment are collected and analyzed. After analysis, the best course of action is determined and the concept of operations is developed.

- Plan Development. Force requirements are identified, the force list is structured, resupply and transportation requirements are determined, and time-phased force deployment information is developed.

- Plan Review. All elements of the plan are assessed, validated, and approved by the Joint Chiefs of Staff.

- Supporting Plan Development. All required supporting plans are completed, documented, and validated.

During the planning portion of the OPLAN development phase, component and subordinate commanders establish time-phased force deployment lists. This allows for the proper arrival sequencing of forces under the concept of operations. Planning for deployment is the product of mission analysis and intelligence assessments, keyed to the supported commander's concept of operations. Such planning is based on Service doctrine, guidance, and review and is ultimately the responsibility of the supported joint commander. Component commanders develop detailed lists of combat and support forces to be employed in accomplishing the assigned tasks. This includes the required closure time of forces (as specified in the supported commander's concept of deployment) to be deployed into the area of operations. This phase concludes with the production of the Army component command's (ACC's) TPFDD. The TPFDD includes assigned forces, augmentation forces, and supporting forces to be deployed to the area of operations and forces stationed within the area of operations.

Closely related to major force planning is support planning, to determine support requirements necessary to sustain the force. This entails computation of support requirements based on Service planning guidance and the time-phasing of this support under the supported commander's overall concept of support. Most critical to the whole process is the proper assignment of airlift or sealift to time-phased requirements. This determination will ensure optimum use of mobility and transportation assets.

For Army oranizations, deployment activities are accomplished through AMOPES. It is in this process that combat, combat support, and combat service support forces are apportioned based on guidance and the commander-in-chiefs statements of combat support/combat service support requirements. These include the ClNC's required delivery dates and latest arrival dates. After apportionment, TPFDD are generated to form the ClNC's OPLANs.

When a plan has been approved, subordinate and supporting commands and Services must update or modify force and resupply requirements. They must also identify specific units based upon asset availability and readiness.

Execution Planning

Deliberate planning is followed by execution planning, which is the transitional planning necessary to transfer an OPLAN or CONPLAN to an operation order (OPORD). The objective is to achieve a timely military response to a specific situation.

Crisis action plans maintained in the JOPES provide a starting point for course of action development and assessment during a crisis external to CONUS (Figure 11-1, Joint Planning Summary (Crisis and Deployment Management Overview)).

The JCS CAP provide a framework for developing and exchanging time-sensitive information within the deployment community. They also provide for the evaluation of military courses of action and the production of the OPORDs necessary to carry out the decisions of

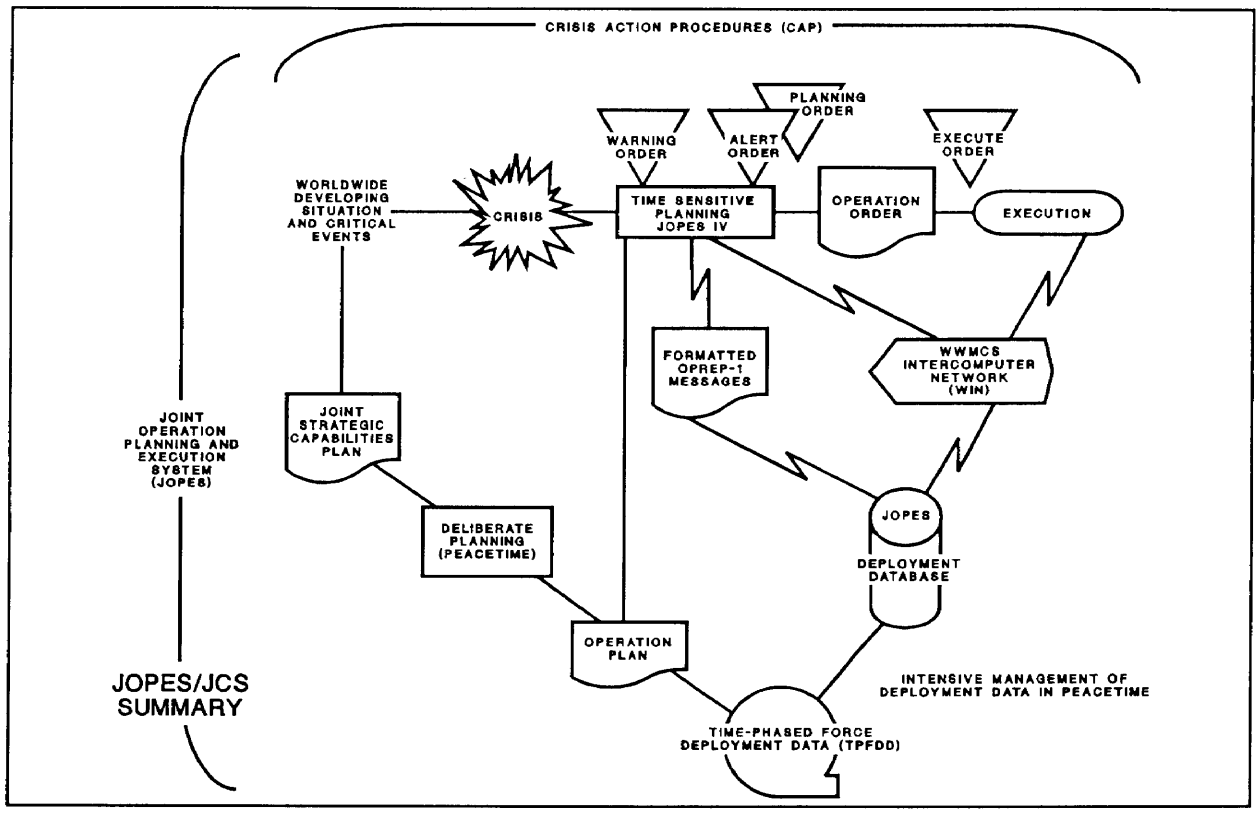


Figure 11-1
Joint Planning Summary (Crisis and Deployment Management Overview)

the NCA. CAPs are divided into six sequential phases:

- Situation Development. This phase covers the day-today activities leading to the detection and initial assessment of a serious event that could become a crisis. The responsible unified commander submits an assessment to the Joint Chiefs of Staff that states what forces are readily available, the earliest time they could be committed, and any factors limiting their deployment.

- Crisis Assessment. During this phase, surveillance and reporting are significantly increased. The NCA evaluates the extent of the crisis to determine if it warrants a response from the United States. The development of options, including diplomatic and military courses of action, may be directed and a JCS warning order would be prepared for release. The President could decide on a single military course of action and assign an execution time. Such a decision would mean moving directly from the crisis assessment phase to the decision phase, eliminating the course of action phase.

- Course of Action Development. This phase is initiated by a JCS warning order. The warning order also establishes command arrangements for forces participating in the operation. It provides potential courses of action for the commander to consider and updates the information available from the JCS perspective. The commander further defines the mission and considers alternative courses of action. In this process, existing OPLANs are reviewed for suitability and modified to fit the existing situation. If a CONPLAN can be used, it must be expanded to include forces and support requirements. If a plan does not exist, an OPORD must be developed. The commander submits a

commander's estimate to the Joint Chiefs of Staff and recommends a course of action in the crisis action procedure, instead of selecting the best course of action as he does during deliberate planning. The commander's estimate is also sent to USTRANSCOM and its component commands to finalize deployment estimates and to update the JOPES deployment database.

- Course of Action Selection. During this phase, the commanders estimate, the courses of action, the ClNC's recommendation, and the deployment estimates are reviewed. With this information, a recommendation is presented to the NCA. If the President decides on a military option, he will, typically, approve the recommended course of action. His decision is announced in a JCS alert order.

- Execution Planning. This phase begins with the receipt of the JCS alert order or planning order to the supported commander and USTRANSCOM. The alert order describes the military course of action selected by the NCA and sets actual or tentative target dates. A planning order will be issued when execution planning is desired before NCA approval of a course of action. The primary purpose of the planning order is the timely development of an OPORD that can be implemented when directed by the NCA. The OPORD is the end product of the execution planning process. The supported commander completes the force list using actual forces, origins, and dates. Resupply and replacement requirements are detailed to the maximum extent possible. Supporting commands and the transportation component commands develop supporting OPORDs as required.

- Execution. This phase starts with a presidential decision to execute the planned operation and the Secretary of Defense's direction to the Joint Chiefs to issue an execution order. This order instructs the supported commander to execute the OPORD. During the deployment, the supported commander can request changes to the deployment flow. USTRANSCOM coordinates such requests and adjusts the flow schedule. The execution phase may be limited to a deployment of forces and not full execution of the OPORD.

In all environments, JOPES and AMOPES provide the methodology to monitor, plan, and execute mobilization, deployment, employment, and sustainment activities.

Additional Deployment Considerations

Nondeploying units may execute requirements in support of a deploying force. This responsibility and specific deploying and nondeploying units must be designated as early as possible. Support tasks may include crew gunnery qualification, sea port of embarkation and aerial port of embarkation staging, and movement command and control.

Deployability criteria for personnel and materiel is established by the gaining command; nondeployable personnel revert to control of rear detachments or mobilization activities. Equipment that cannot meet full or partial mission capability standards is evacuated to a nondeploying maintenance activity. Deploying organizations must be at authorized level of organization 1 and manned at 100% of authorization in the predeployment phase. All mission-capable, authorized equipment must be prepared for movement and shortages filled through release of war reserve stocks. Maintenance float materiel is deployed for use in the operational theater and not used to fill predeployment shortages.

Cross-leveling of personnel and equipment between earlier and later deploying units will ultimately degrade the organizational capability of the force. Units that cannot be manned and equipped to full authorization should deploy as currently filled without cross-leveling. As forces deploy, active and reserve organizations and individual ready reserves may be employed as unit and individual replacements for the deployed force.

Upgrading unit capabilities during predeployment, deployment, entry, and operational phases may be accomplished through conditional materiel release of developmental and nondevelopmental items and fielding of full production items of equipment. This in-stride modernization may require changes in organizational structure and doctrine on accelerated timelines. Each level of command, from the losing and gaining major commands to

division level, must retain the capability to manage and document changes to organization authorization documents prior to and after transfer of authority.

Section III: Organization Stationing

To station a new organization or relocate an existing one requires a detailed plan that encompasses all aspects of stationing. Quality of life issues for soldiers and family members during the transition period must be assessed. All affected installations (gaining and losing) and units including moving units, support units, and support infrastructure agencies, must be involved in planning and execution.

PLANNING ORGANIZATIONAL STATIONING

The underlying philosophy of the facilities strategy is to make maximum use of current facilities and to maintain what is owned. This includes renovation and modification of existing facilities. Only as a final option should new facilities be constructed.

Stationing Analysis

The decisionmaking process for stationing organizations includes a detailed stationing analysis. This analysis considers-

- Facility upgrade costs.
- Change-of-station costs for soldiers.
- Materiel movement costs.
- Maintenance costs.
- Impact on soldiers and family members.
- Conflict with long-range plans.

Organizational assessments examine the impacts of stationing requirements, to include availability of organizational and support infrastructure facilities. They determine if the stationing process can support force modernization and force structure decisions. The ability to properly station a total organization must be considered as a factor affecting unit readiness.

Installation Planning Board

The installation planning board (IPB) develops the installation master plan in coordination with Department of the Army, Department of Defense, and other federal agencies, and local and state governments. The IPB ensures that plans and programs are developed in harmony with environmental, energy, safety, and security requirements.

The Army has assigned an installation support mission to the US Army Corps of Engineers (USACE) to augment the installations' organic capabilities. These services are both reimbursable and nonreimbursable, and are available to assist installations in accomplishing their environmental, housing, and real property maintenance activities (RPMA) programs.

Army Stationing and Installation Plan

Total Army analysis (TAA) decisions concerning changes in the Army force structure are reflected in the master force. The master force provides changes to the Army stationing and installation plan (ASIP) in terms of the number of personnel by year, unit, and installation. The ASIP also receives input from the authorization database and planned student populations at Army schools. Finally, the ASIP reflects changes to the composition of tenants, other than Army, on individual installations as provided by the MACOMs.

Information obtained from the ASIP is used to compare future population and unit requirements with those currently being supported.

Installation Master Plan

Installation master plans (IMPs) are revised to reflect major projects, upgrading existing facilities or new construction to replace existing facilities. Out-of-cycle force structure changes and decisions as a result of organizational assessments are also integrated into the IMP.

The IMP reflects existing facilities and planned replacements and improvements. It is

reviewed to determine whether the existing master plan will properly support future facilities requirements of the installation. New or revised requirements, in the form of management decision packages, are included in the MACOM POM submission. If the decisions are supported in the PPBES, modifications to existing structures maybe required, or projects may be substituted for previously planned and programmed construction (assuming that sufficient lead time exists for facility design).

Real Property Planning and Analysis System

Real property planning focuses on adequately defining requirements. It is key to satisfy facility needs for mission accomplishment.

The real property planning and analysis system (RPLANS) and headquarters RPLANS are automated master planning took. They provide the capability to calculate peacetime facility space allowances and compare them to available real property assets for a wide range of facility types.

FACILITIES PROGRAM DEVELOPMENT PROCESS

The facilities program development process identifies all facility requirements (construction, maintenance, or repair). It balances this with available resources to satisfy facility requirements driven by new equipment and organizations. This process should-

- Minimize deterioration of unused real property assets.
- Reduce the backlog of maintenance and repair (BMAR).
- Replace and renew deteriorated and obsolete facilities.
- Support statutory and regulatory guidance.
- Accommodate mobilization needs. Requirements for facilities are evaluated in the development of military construction or family housing construction programs. Maintenance and minor modifications of existing facilities are primarily resourced as part of the Army sustainment function. The integrated facilities system (IFS) is the database of record for the real property holdings (land and facilities) of the Army. Although there is no direct interface between ASIP and IFS, both are managed by the Office, Chief of Engineers. The RPLANS and the headquarters RPLANS, link ASIP and IFS data by calculating the facilities required to support Army units described in the ASIP, comparing that with the existing real property holdings, and determining the net deficit or surplus and the associated costs. At installation level this is accomplished by RPLANS and at MACOM and ARSTAF by headquarters RPLANS.

Real Property Management System

The real property management system (RPMS), illustrated in Figure 11-2, is the Army's management system for facilities. It is a continuous process composed of requirements, programming, acquisition, operations and maintenance, and disposal.

Capital Investment Strategy

The capital investment strategy summarizes the status of real property support for installation missions. This unconstrained overall real property investment plan is used by the MACOM engineer to consolidate installation requirements and to integrate and prioritize projects over a six-year program as a part of the MACOM's POM. As much as four years elapse between the development of the original programming documents and beneficial occupancy date (BOD).

Decision Support Systems and Considerations

A structured problem-solving approach is required to determine requirements, identify long-range and short-range projects, and separate facility issues from stationing issues. This decisionmaking process should-

- Consider a materiel system's total impact, including all components and logistics training and maintenance support. The facility support plan (FSP) for the system is used to determine the physical requirements for the new

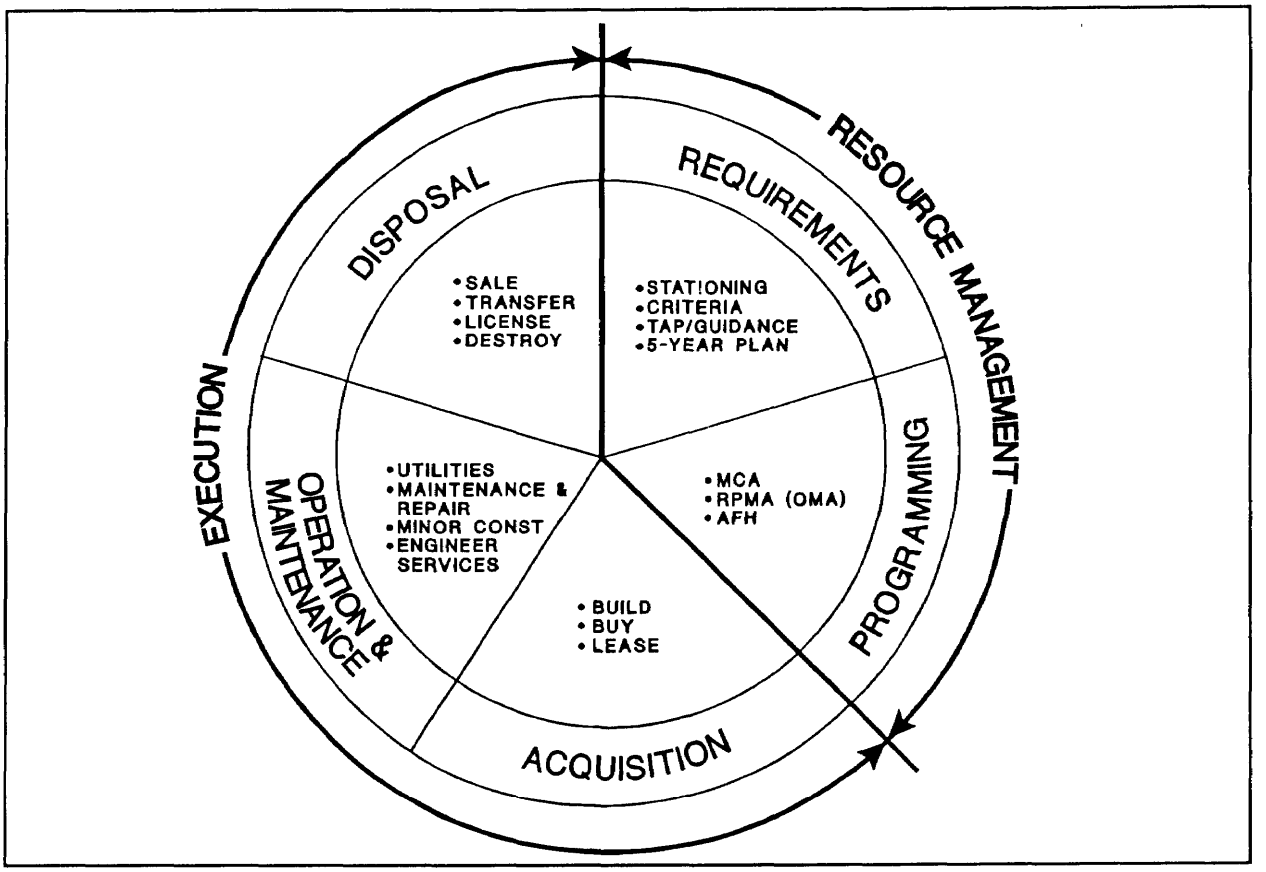


Figure 11-2
The Real Property Management System

system.

- Consider organizational changes for the gaining unit and its direct support structure. These changes can be determined from requirements or authorization documents as well as the FSP for the organization. Effective dates of change must be included in the plan.

- Check for redundant requirements from equipment and organization requirements.

- Compare requirements with current facilities to determine shortfalls.

- Integrate shortfalls into the facility master plan for programming.

- Review and follow up projects to keep them on track.

Decision support systems that are used in the management of requirements for facilities include:

- Stationing Decision Support System (STADSS). This system provides an interface of force structure requirements to the facilities inventory.

- Army Criteria Tracking System (ACTS). ACTS provides a single information source for Army facilities authorization criteria.

- Facility Planning System (FPS). FPS uses organizational requirements criteria to compute facility requirements.

- Integrated Facilities System. IFS is an inventory of installation facilities.

Section IV: Real Property Maintenance

The RPMS seeks to provide user organizations with energy-efficient structures meeting prescribed standards compatible with present-day missions.

OBJECTIVE

The objective of real property maintenance actvities (RPMAs) is to maintain those facilities. To accomplish this objective, the installation director of public works (DPW) prepares the unconstrained requirements report (URR) to communicate requirements needed to operate and maintain real property investment. The URR is submitted through the MACOMs to the USACE. It provides the ARSTAF with a statement of total RPMA needs.

THE ANNUAL WORK PLAN

The DPW formulates an annual work plan (AWP) for facilities management. The AWP addresses the resources necessary for accomplishing annual recurring repair, rehabilitation, maintenance projects, and day-to-day services. The AWP is the basic building block for the installation's base operations and maintenance, Army (OMA) budget execution and for the command budget estimate.

FUNDING SOURCES AND GUIDELINES

OMA pays for the day-today support of the Army's force structure. This includes operation, maintenance, and repair of the existing plant and utilities systems; minor construction; and such services as fire prevention and protection. It does not include family housing or research development, test, and evaluation. Unlike construction execution, operations and maintenance execution is the responsibility of the MACOM and installation commanders.

RPMA defines that portion of the appropriation that pays for the maintenance and upkeep of the real property inventory. Execution of RPMAs is decentralized to MACOM and installation commanders, who have considerable flexibility in deciding the resources to be applied to this important task. There is a statutory floor that specifies the minimum amount the Army must spend on repair of its facilities. Neither this floor nor the amount actually expended in recent years has been adequate to meet recurring requirements.

Deferred and backlog maintenance and repair (DMAR/BMAR) is that approved maintenance and repair work that was not accomplished during the year. This work must be identified as a valid DPW work order.

Installation-funded projects are under $300,000 and are normally funded by OMA, the Army industrial fund, procurement of ammunition, Army, or RDT&E appropriations. The facilities that come under this spending limit are normally approved at installation level. Funds for these projects must be programmed in the command operating budget.

Once funds are made available, design and construction must be completed within one year. The project must produce a complete and usable facility within cost limitations. No other funding can be used for any other segment of the facility to bring it up to design standards. The primary advantage of this source of funding is that a new facility can be rapidly constructed.

Section V: Military Construction Program

Management decisions that do not have visibility in the Army guidance/ASIP development process may, nevertheless, have a major impact on future facilities planning and requirements. Facility master planners must be closely associated with their respective installation and MACOM force integration staffs to ensure a valid projection of future force composition.

The military construction, Army (MCA) program is the principal source of new Army facilities. The DPW is responsible for preparation of the following-

- The project development brochure listing the planning objectives, project overiew, and all functional requirements. It is the basis for the cost estimate and conceptual design.

- DD Form 1391, based on the project development brochure. It is used by the Army, DOD, and Congress to determine costs and prioritize projects.

- Timelines in the installation master plan that identify facility construction needs over a 20-year period. Projects that require MCA funding must be identified five to six years before the date the facility is required.

PROGRAM YEARS

MCA programming requires the design of construction projects to be at least 35 percent complete when submitted to Congress. MCA programming consists of the following-

- Guidance Year (GY). The GY begins with HQDA providing each MACOM general instructions and the current policy regarding construction programs in the PBG and Army guidance. During this GY, MACOMs submit their updated six-year MCA program initiated by their installations for each project. The programs and priorities of the MACOMs are compiled, integrated, and prioritized by the HQDA construction requirements review committee (CRRC). The CRRC structures the overall MCA program, but its actions must remain consistent with POM priorities or decisions.

- Design year (DY). By August of the DY, HQDA must establish the project cost estimate based on 35% of design completion.

- Budget year (BY). Each project in the MCA program must be defended before the Office of the Secretary of Defense, Office of Management and Budget (OMB), and Congress. During the BY, final design is largely completed.

- Current year (CY). The CY, or execution year, is the year funds are made available for construction. It is the first year of the execution phase of each MCA project.

CONSTRUCTION APPROPRIATIONS PROGRAMMING, CONTROL, AND EXECUTION SYSTEM

The construction appropriations programming, control, and execution system (CAPCES) database provides functional source information. It is updated as required and provides input to program optimization and budget evaluation (PROBE). The link between facility inventories and construction capabilities to support force structure changes is developed by RPLANS.

MINOR MILITARY CONSTRUCTION ARMY

Minor military construction Army (MMCA) consists of projects of less than or equal to 1.5 million dollars. Projects that cannot be delayed for the normal programming process come under the exigent (requiring immediate action) minor program. The MMCA has specific limits for cost, scope, and new-start criteria. All projects must result in a complete and usable facility within spending limits. As such, provisions must be made in the total amount of the contract for other cost variables that could push the contract over the assigned spending limit. The amount of time from conception of the project to a completed facility is half of the processing time required for MCA projects.

ARMY FAMILY HOUSING

The Army family housing (AFH) account is a separate appropriation within MCA. It is designed to provide housing facilities for military and key civilian personnel. The AFH appropriation is unique among the facilities accounts in that it funds both the family housing construction and operations and maintenance programs. Its major program elements include new construction, improvements, energy conservation investments, leasing, operations, maintenance, and repair. AFH construction projects adhere to the same regulatory guidelines as MCA projects. Leasing has become another method of acquiring family housing.

Section VI: Real Property Acquisition Process

This acquisition process consists of acquiring real property, consisting of land and facilities. Outgrants provide "for use by others" land and facilities that do not interfere with the installations' missions. Real property that is not within the planned needs required for immediate public use may be granted to another entity for certain uses as allowed by law. The entity may be a federal, state, or local government agency or private parties. This type of use may be granted by lease, easement, license, permit, transfer, or exchange. Some outgrants require specilized management actions.

REAL ESTATE

All acquisition of real property requires specific legislative authority and funds appropriated for that purpose. Land may be acquired by purchase, transfer, donation, exchange, or condemnation. For permanent requirements there are two types of acquisition. These are a fee simple title, in which the government owns all rights in a property, or an easement for access and use, such as roads or utility lines.

Land and improvements that are required for short terms are acquired by leasehold. Leasing of unimproved lands and special-purpose space is within the authority of the Secretary of the Army. Leasing general-purpose space is within the authority of the General Services Administration (GSA).

Real estate acquisitions exceeding $200,000 require approval of the Assistant Secretary of the Army for Installation, Logistics, and Environment (ASA[IL&E]) and clearance by the House Armed Services Committee (HASC). The exceptions are those acquisitions for which there is line item military construction (MILCON) authority.

Disposal, in the real estate sense, usually refers to selling a part or all of the property involved. This is based upon a determination that the property is excess to Army needs. Disposal is normally handled by an USACE district real estate division through GSA under that agency's statutory authority. Overseas, disposal of excess real estate is governed by agreements in force with the country involved.

The need for base rights and the use and development of US facilities in overseas areas during contingencies, war, or deployments in peacetime must be recognized. Acquiring real estate in a friendly overseas area is a command responsibility governed by agreements peculiar to the country involved.

FACILITIES

While land may be acquired when authorized, the acquisition process for facilities consists largely of the design and construction of new fixed facilities on existing Army installations. This process also includes build-to-lease contracts as authorized by Congress.

The final design is based on a statement of user requirements, existing criteria, and regulations. It is packaged as a set of contract documents that is advertised for competitive bids from construction contractors. A lump-sum, fixed-price construction contract is awarded to the lowest qualified bidder. The design portion of the project proceeds in parallel with the programming process for projects in a fiscal year MILCON program.

Summary

The Army is constantly exposed to organizational deployments and stationing; therefore, the force integrator must understand these processes under both deliberate and crisis conditions. Stationing soldiers in adequate facilities is a key quality of life issue that could have a major impact on unit readiness.

Chapter 12
Funding the Force

Section I: Introduction

The DOD Planning, Programming, and Budgeting System (PPBS) provides the biennial framework for making decisions on current and future programs consistent with national security objectives, policies, and strategies. The Secretary of Defense provides direction throughout the cycle while giving the Services and DOD agencies the authority to execute the program and budget. The PPBS was instituted to facilitate budgeting for forces, systems, and programs rather than resource categories. It is the primary DOD system for managing the department's military functions. Each phase of the process aims at achieving the best mix of forces, manpower, materiel, equipment, and support within funding constraints.

The Army's PPBES interfaces with the PPBS. These two systems enable all processes to structure, man, equip, train, sustain, station, and deploy organizations. Force integration manages the resulting changes by planning, coordinating, synchronizing, and executing related activities and operations.

Section II: The DOD Resourcing System

The committees and decisionmaking bodies involved in the execution of PPBS include-

- The DOD Executive Committee (EXCOM). The EXCOM is chaired by the Secretary of Defense. It is the senior deliberative and decisionmaking body within the Department of Defense for all major defense issues.

- The Defense Resource Board (DRB), The DRB is chaired by the Deputy Secretary of Defense. It reviews guidance for planning and programming and the program and budget; promotes long-range planning and stability; and advises the Secretary of Defense on proposed decisions.

- The Defense Acquisition Board (DAB). The DAB is chaired by the Undersecretary of Defense for Acquisition with the Vice Chairman, Joint Chiefs of Staff as the vice chairman. The DAB oversees systems acquisition through review of major acquisition programs at each milestone decision point in a system's life cycle.

- The Joint Requirements Oversight Council (JROC). The JROC is chaired by the Vice Chairman, Joint Chiefs of Staff. It validates military needs at initiation of major acquisition programs and subsequently validates system performance goals and program baselines at successive milestones.

Section III: The Army Resourcing System

PURPOSE

The Army's PPBES complements and responds to Office of the Secretary of Defense (OSD) and joint strategic planning guidance. It provides the basis for determining force requirements and objectives and structuring, documenting, prioritizing, and executing current and planned programs. It also sets priorities and establishes the basis for the Army's Program Objective Memorandum (POM). It is the Army's primary strategic management system used to allocate and manage constrained resources and provide the architecture and tools to achieve approval for the programming and execution of Army programs. PPBES is the principal foundation for force integration activities in terms of functioning, timelines, and interrelationships at all levels.

PPBES APPLICATIONS IN FORCE INTEGRATION

In consonance with the PPBS, the Army uses PPBES to facilitate program reviews, prioritization, approval, and execution. Among other applications, PPBES provides a basis to determine force, system, and program costs and to compare cost and benefit alternatives. The interrelated phases of cyclic PPBES activities

provide for an orderly progression from national security objectives, policies, and strategies to the development of Army missions, force and materiel requirements; establishment of force structure and programs within resource constraints; and finally to the preparation, review, and execution of the budget. Specifically, PPBES supports force integration by-

- Providing essential focus on departmental policy and priorities for Army functional activities.

- Planning the size, structure, strength, equipment, and training required to support the national military strategy.

- Programming the distribution of available manpower, fiscal resources, and materiel among competing requirements based on Army resource allocation policy and priorities.

- Budgeting to convert program decisions on fiscal resources and manpower into requests for congressional authorization and appropriations.

- Executing programs to apply resources to achieve approved program objectives and adjust resource requirements based on execution feedback.

- Executing programs and budgets to manage and account for funds to carry out approved programs.

PPBES RESPONSIBILITIES

Office of the Secretary of the Army

At the departmental level, the principal responsibilities involving PPBES include-

- Functional oversight by the Office of the Secretary of the Army (OSA).

- Policy and system oversight by the Assistant Secretary of the Army (Financial Management) (ASA[FM]).

- Budgeting formulated and executed by the Deputy Secretary of the Army for the Army Budget.

- Acquisition by the Assistant Secretary of the Army (Research, Development, and Acquisition) (ASA[RD&A]), Army acquisition executives (AAEs), Program Executive Officers (PEOs), and program, project and product managers (PMs).

Army Staff Proponencies

Army staff (ARSTAF) proponents with responsibility for management of PPBES phases include:

- Planning executed by the Office of the Deputy Chief of Staff, Operations (ODCSOPS).

- Programming executed by the Director of Program Analysis and Evaluation (DPAE).

- Requirements determination by the ODCSOPS.

PPBES Committees

The principal PPBES committees supporting the process (Figure 12-1) include -

- The Select Committee (SELCOM). The SELCOM is co-chaired by the Vice Chief of Staff, Army and the Undersecretary of the Army. The SELCOM includes membership from the secretariat and the ARSTAF, with others on an as-required basis. It functions as Headquarters, Department of the Army's (HQDA's) senior committee and reviews, coordinates, and integrates PPBES actions. It reviews program performance and budget financial execution, and disposes of actions or refers them to the Army leadership for disposition.

- The Strategy and Planning Committee (SPC). The SPC is chaired by the Assistant Deputy Chief of Staff, Operations and includes planning officials of the ARSTAF and

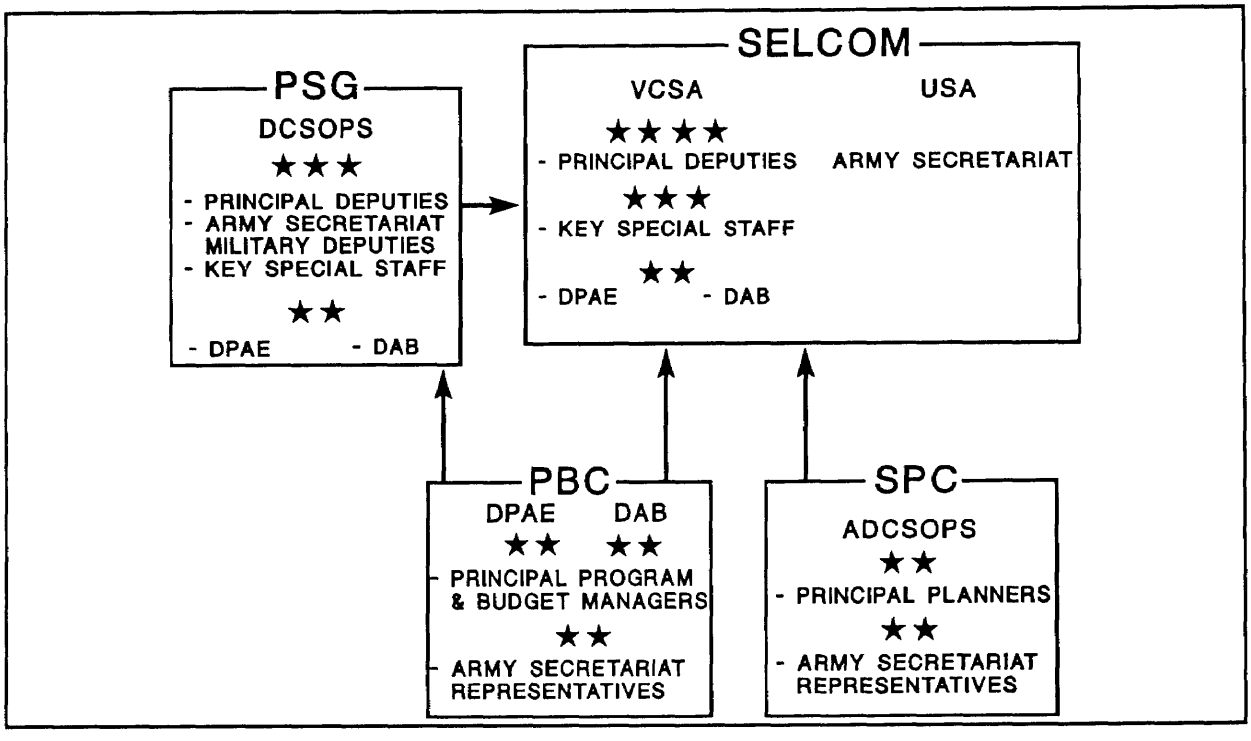


Figure 12-1
Principal PPBES Committees

secretariat, including the Director of PAE and Deputy Assistant Secretary of the Army for the Army Budget. The SPC provides an integrated forum for Army planning, including force structure guidance, force development, and coordination for The Army Plan (TAP).

- The Program and Budget Committee (PBC). The PBC is co-chaired by the DPAE and DAB and includes ARSTAF and secretariat membership responsible for programming or budgeting. The committee oversees the programming, budgeting, and execution phases of the PPBES, including feedback among phases, and functions in a coordinating, executive and advisory role. It provides a continuing forum in which program and budget managers review, adjust, and decide issues.

- The Prioritization Steering Group (PSG). The PSG is chaired by the DCSOPS and includes ARSTAF and secretariat membership. The PSG reviews unresourced programs submitted by Major Commands (MACOMs) and PEOs and proposed decrements recommended by the PBC, and resolves differences. The PSG makes recommendations, including off-setting decrements, to the SELCOM.

- The Program Evaluation Groups (PEGs): PEGs maintain consistency during planning and program review as well as budget analysis, preparation, and defense. During execution, PEGs track program and budget performance. Throughout the PPBES phases, PEGs coordinate resource changes with HQDA staff agencies having proponency for affected management decision packages (MDEPs) and translate budget decisions and approved manpower and funding into program changes, ensuring that data transactions update MDEP databases.

- The Army System Acquisition Review Council (ASARC).

- The Materiel Acquisition Review Board (MARB).

- The Major Automated Information Systems Review Council (MAISRC).

- The Study Program Coordination Commitee (SPCC).

- The Construction Requirements Review Committee (CRCC).

- The Stationing and Installations Planning Committee (SIPC).

- The Installation Management Steering Committee (IMSC).

Section IV: Budget Planning, Guidance, and Direction

OPERATIONAL PLANNING REQUIREMENTS

Operational planning addresses the short term, extending out two years from the current year. It is conducted under the Joint Operation Planning and Execution System (JOPES) and the Army Mobilization and Operation Planning and Execution System (AMOPES). Through JOPES, the Commanders-in-chief (CINCs) and their Service component commands develop wartime Operational Plans (OPLANs) to employ the current force to carry out assigned military tasks. OPLAN reviews provide information about shortfalls and limiting factors for consideration in current planning, programming, and budgeting.

Time-phased Force Deployment Data (TPFDD) specify arrival priorities for force augmentation, resupply, and troop replacement. TPFDD review and subsequent logistics and transportation assessments identify adjustments required to support CINC OPLANs. Issues that cannot be satisfactorily negotiated become subjects for subsequent force, logistics, and transportation conferences. Identified shortfalls and limitations are injected into future requirements through the force integration analysis and program development processes.

CINC OPLANs are submitted for Joint Chiefs of Staff review and approval in July of odd years. These OPLANs provide a basis for CINC integrated priority lists.

DEPARTMENT OF DEFENSE BUDGET PLANNING GUIDANCE

Guidance in support of budget estimate submissions (BESs) is prepared by OSD after approval of the POM and is provided for the preparation of the Army BES. This guidance includes:

- New requirements and changes initiated by Congress, OMB, and OSD.

- Current year guidance, including items to be considered in supplemental budget requests.

- Budget year guidance for preparation of budget estimates based on force levels, program decisions, and total obligation authority (TOA) levels in the POM (as modified by PDMs).

- Authorization estimate guidance.

- Additional guidance applicable to all sections of the budget (e.g., inflation indices, outlay rates, use of contingency funds).

ARMY BUDGET PLANNING GUIDANCE

The Army Long-Range Planning Guidance

The Army Long Range Planning Guidance (ALRPG) addresses the period ten to 30 years in advance and allows the senior leadership to create and clarify a vision of the future Army. The products of long-range planning guide the midterm vision used in developing the force and setting program requirements.

The ALRPG analyzes national security objectives against a range of potential threats and necessary force capabilities projected

worldwide over the period under consideration. The document is distributed in the fall of each even year. The ALRPG provides the long-term perspective for solutions developed within the enhanced concept-based requirements system (ECBRS) to satisfy projected warfighting needs. The Army modernization plan (AMP) provides input to the development of the long-range research, development, and acquisition plan (LRRDAP).

The Army Plan

Together with command and agency supporting long-range plans, the ALRPG guides a preliminary TAP version. It is prepared late in odd years to set the course for requirements determination and force development for the following PPBES biennial cycle.

TAP documents policy and force levels and provides resource guidance. Force levels are stabilized initially by force requirements planning and then refined by objectives planning. Objectives planning includes Total Army Analysis (TAA) and Force Integration Analysis (FIA). Covering the POM period and ten years beyond, TAP distills Army missions. It coalesces information from the Defense Planning Guidance (DPG), Joint Strategic Planning System (JSPS) planning products, the ALRPG, and other guidance.

Several draft TAPs are published early in the odd year, followed by the final TAP, which is published after the DPG in October or November. It documents the Army fiscally constrained force approved by the Secretary of the Army and Chief of Staff of the Army. Together with Army program guidance (APG), the final TAP provides direction to the programming, budgeting, and execution phases of PPBES. It reflects the Army's priorities within expected resource levels.

The Army Planning Guidance

Purpose and Scope

Based on direction provided by DPG, the APG structures and guides program development supplemented by other instructions and guidance used within the Army and its MACOMs. It contains resource-constrained guidance predicated upon affordability analyses and estimates of OSD directed fiscal constraints. CSA and SA guidance are also necessary in the development of the Army BES. Input from the MACOMs and PEOs is reviewed and used by appropriation sponsors and budget program managers in preparing their estimates.

The APG directs HQDA agencies to prepare alternative programs to support the Army POM force. Such alternatives provide insights on ways to apply resources to achieve Army goals and flexibility to adapt to resource levels.

Draft APG

A draft APG is issued with the draft TAP in January of even years. The draft APG translates planning objectives into an initial plan. This plan applies constrained resources for building an integrated and balanced Army program to achieve Army goals, and reflects the President's budget being sent to Congress. The draft APG-

- Reflects the base force updated through the TAA process.
- Considers positions taken by Congress in its review of near-year programs.
- Incorporates program adjustments from the OSD PDM.
- Projects the availability of manpower and fiscal resources.
- Includes economic assumptions.
- Describes preliminary program guidance, including the following-
  - Base force proposed for the program period.
  - Military end strength.
  - Force readiness goals.

- Equipment modernization.
- Secondary item levels.
- Base operations support levels.
- Unit training goals.
- Forces stationing.

Final APG

The final APG is distributed the following June, and is also included as part of TAP. The format of the APG parallels that of the POM, with the following standard topics-

- Force structure.
- Force deployment and prepositioning.
- Modernization and investment.
- Force readiness and sustainability.
- Facilities construction and maintenance.
- Manpower.
- Unified commands.
- Automated information systems.
- Nonstrategic nuclear forces.

Program Budget Guidance

Purpose and Scope

The Army PBG is issued after receipt of OSD dollar and prioritization guidance. It provides resource guidance to the MACOMs, PEOs, and other operating agencies, to include-

- Force structure and associated manpower.
- Appropriations of immediate MACOM and PEO interest-
  - Operation and maintenance, Army (OMA) and Army Reserve (OMAR).
  - Military Construction, Army (MCA) and Army Reserve (MCAR).
  - Army family housing (operation and maintenance [AFHO] and construction [AFHC]).
  - Research, Development, Test, and Evaluation (RDT&E) and procurement appropriations.
  - Construction using trust funds for commissary construction and nonappropriated funds (NAF) for morale, welfare, and recreation (MWR) construction.

PEG Publication Milestones

In the odd years, a PBG is issued that reflects the President's budget and guides agency program development. It also guides preparation of the resource management update (RMU), refining the command budget estimate (CBE) submitted the previous even year. Later, a PBG update follows publication of the final TAP and APG in June. In September, another PBG records the result of the July RMU submissions and publishes probable fiscal guidance for MACOM and PEO use in completing field POMs submitted about November 1.

In even years, the President may submit an amended budget and the PBG will be provided for information to MACOMs and PEOs. A PBG follows submission of the POM to OSD in April, reflecting the new program and guiding preparation of CBEs. A PBG update in the fall reflects Army budget estimates submitted to OSD in September.

Other sources of information that are used in programming include-

- Army Modernization Information Memorandum (AMIM).

- Force Modernization Master Plan (FMMP).

- Modernization Resource Information Submissions (MRIS).

- Total Army Equipment Distribution Program (TAEDP).

HQDA Administrative Instructions

Administrative instructions are provided by HQDA during the programming phase. They include-

- The MACOM POM development instructions (MPDI), which provide administrative instructions to guide MACOMs and PEOs in preparing their program submission and for MACOMs to submit high-priority warfighting needs.

- The Army POM preparation instructions supplement (APPIS), which provides administrative instructions for use by HQDA in final preparation of the Army POM submission as an augmentation to OSD POM preparation instructions (PPI).

Section V: Programming and Budgeting

PROGRAMMING

Programming Purpose and Scope

Programming translates OSD and Army planning guidance, the DPG and TAP, into a comprehensive and detailed allocation of forces, manpower, materiel, and fiscal resources for a six-year period. Programming allocates resources to support Army functions and missions. In the process, the PPBES provides the mechanism for integrating and balancing centrally managed programs for manpower, operations, RDA, stationing, and construction.

Programming Responsibility

The DPAE has responsibility for the programming phase, to include the Army's program review. The DPAE ensures that the program accurately reflects the cost estimates for major weapon systems approved by the ASARC and the major information systems approved by the MAISRC. Affordability is evaluated by assessing the effects of resource constraints on alternative program options. The ASA(FM) closely monitors POM development to transition from the first two program years into the next biennial budget.

Program Development

Program development is formally initiated when the final TAP is published with the included APG, which reflects affordability analyses from the FIA process. TAP and APG lock in the Army POM force, stabilize manpower and key equipment requirements for program development, and serve as the program baseline for the following:

- An Army force posture statement.

- The POM years of the LRRDAP.

- MACOM and PEO POM requirements.

BUDGETlNG

Budgeting expresses resource requirements in manpower and dollars, classified by congressional appropriation, with emphasis on the first two years of the approved six-year program. The three stages of Army budgeting are as noted below.

Budget Formulation

Budget formulation is the main budgeting task and requires the development of detailed fund estimates to support plans and programs. At Department of the Army level, it includes a joint analytical review of the Army's budget estimate submissions by OSD, the OMB, and

subsequent program budget decisions (PBDs) by the Deputy Secretary of defense or the Secretary of Defense. It concludes with the transmission to Congress of the approved DOD budget as part of the President's budget.

Budget formulation concentrates on the development of the CBEs. The CBE process is essentially one of "communicating down" the projected resource availability and "communicating up" the planned use of those resources. The CBE represents the commander's financial plan and has as its basic purposes-

- Providing a record of activities to be conducted and the resources required to support them.

- Identifying the actions that are to be accomplished by each subordinate element.

- Establishing a standard to measure accomplishments and resource utilization.

The installation role in budgeting is primarily to allocate resources based on fiscal guidance. The starting point of the budgetary process at installation level is the receipt of the constrained PBG from the MACOM. The PBG provides the installation with expected dollar and manpower availability for the budget and program years.

Various schedules are submitted in support of the CBE, including the commander's narrative, which describes the situation at the installation for resources. When the CBE and the various required schedules are sent from the installation through the MACOM to HQDA, the formulation process for budget year funds is complete.

Budget Justification

This stage involves congressional review and approval. Budget justification entails the presentation of budget requests in support of the various programs and appropriations before the House and Senate Armed Services and Appropriations Committees. When the congressional reviews are completed, a vote is taken on the committee bills. Any differences between the versions are resolved in joint conference.

Budget Execution

In this stage, the Army reconciles budgets with approved congressional funding levels and develops instructions for execution of approved programs. This stage also includes apportionment requests, allocation, obligation, expenditure, and accounting for funds. Budget execution is fundamentally a continuous event. The budget execution stage begins the first day of the fiscal year and continues until the final day of that same fiscal year. The following steps must occur sequentially in the expenditure of government funds-

- Receipt of funding authority. An apportionment distributes funds by making specified amounts available for obligation. Appropriation sponsors request apportionment from OMB by submitting justification through the DAB and OSD at the time of budget review. OMB approves the requests, returning the apportionment through OSD.

- Institution of administrative funds control procedures.

  - Transaction identification, accounting, reporting, (including obligation of funds), and review of unliquidated obligations.

  - Year-end reconciliation of files and records, use of remaining funds, and submission of certified year-end financial reports.

In this phase, the Army also evaluates how well resources are applied to achieve approved program objectives and adjusts resource requirements based on execution feedback. This may entail financing unbudgeted requirements caused by conditions unforeseen at the time of budget submission and of higher priority than the requirements from which the funds have been diverted. Congress recognizes this need for flexibility during budget execution to accommodate unforeseen requirements or

changes in operating conditions. Accordingly, federal agencies may reprogram existing funds to finance unbudgeted requirements as controlled by stated restrictions and within specified dollar thresholds.

THE PROGRAM OBJECTIVE MEMORANDUM

The final product in the program development process is the POM. The Army POM normally consists of nine volumes (Figure 12-2, Army POM Volumes), with additional volumes included as required to address special issues.

POM Program Cycle

The POM program cycle begins in the fall of even years. It occurs after OSD program review and near the end of the even-year TAA process. In this early stage of the cycle, planning and programming center on publishing the draft TAP with included preliminary programming guidance. The activity continues with an FIA to establish the preliminary program force.

From January through the end of May, the FIA of the TAA force serves as a link between midterm planning and projections for the availability of resources. The FIA develops and costs major force alternatives. From these alternatives, the Secretary of the Army and the Chief of Staff, Army select and confirm the preliminary program force. The FIA examines the affordability of each alternative of the TAA base force, adjusting the force to reflect resource constraints. It also examines the capability of alternative force units to perform assigned missions in support of CINC operational requirements.

The FIA considers inputs from several areas, including the effect of deliveries from earlier budget and execution cycles on the first two years of the program, execution and current production rates, program impacts resulting from

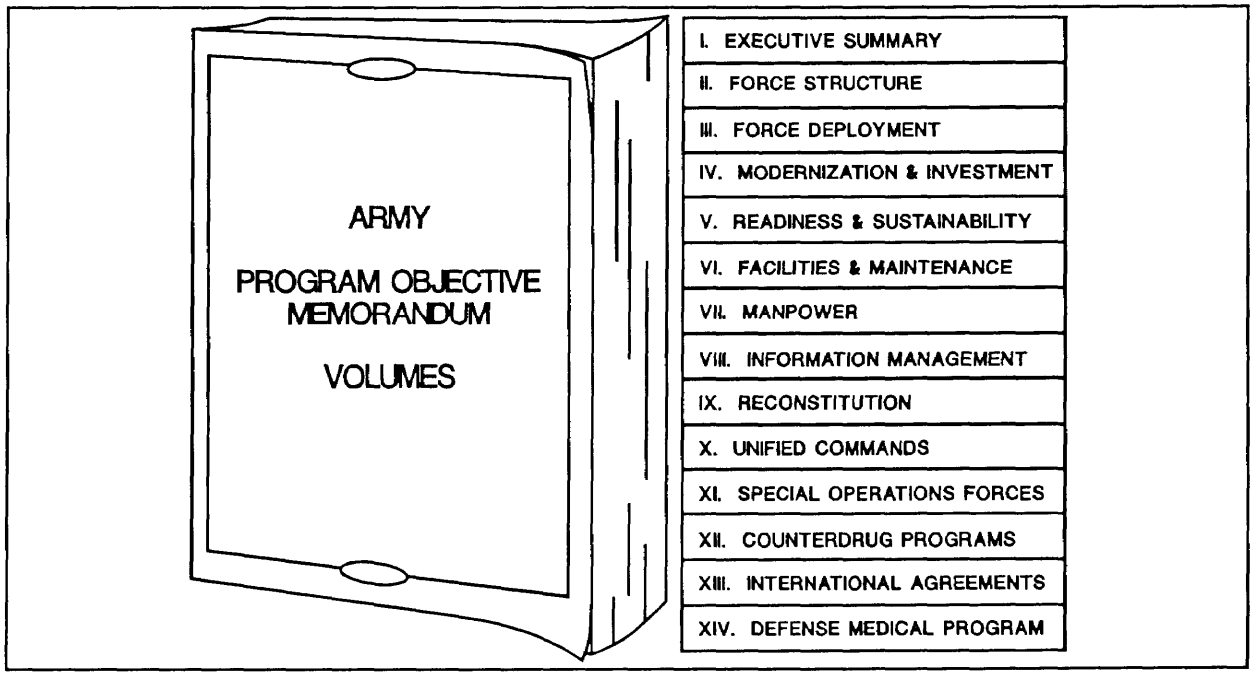


Figure 12-2
Army POM Volumes

OSD budget reviews, and fiscal guidance issued by OSD following submission of the President's budget to Congress.

Upon receipt of the MACOM POMs, DPAE verifies data and loads it to the HQDA decision support system (DSS), accessible to POM developers to include the 14 program evaluation groups.

The development of the POM matches resources to missions in a rapidly changing fiscal environment. The functional review process follows the steps shown in Figure 12-3, Program Functional Reviews.

Role of Program Evaluation Groups

PEGs oversee resources from a functional or program perspective but within subprogram and appropriation structures. PEGs build the Army program at budget level of detail by reviewing and validating MACOM POM submissions. MACOM program realignments that conflict with HQDA guidance are returned to the MACOM for revision. If they cannot be resolved, the PEG elevates the issue to the PBC for resolution. The PEGs are thus program validators and program integrators that identify and resolve programmatic problems. PEGs also spread OSD-directed fiscal decrements. PEGs remain in operation through the PPBES process to maintain consistency as program development transitions into BES development and budget defense before the committees of Congress. During execution, PEGs track program and budget performance.

Program Optimization and Budget Evaluation

Army submissions to update and maintain the future years defense program are provided through the program optimization and budget evaluation (PROBE), the resourcing database. PROBE is used to support the process of developing the POM and formulating the budget.

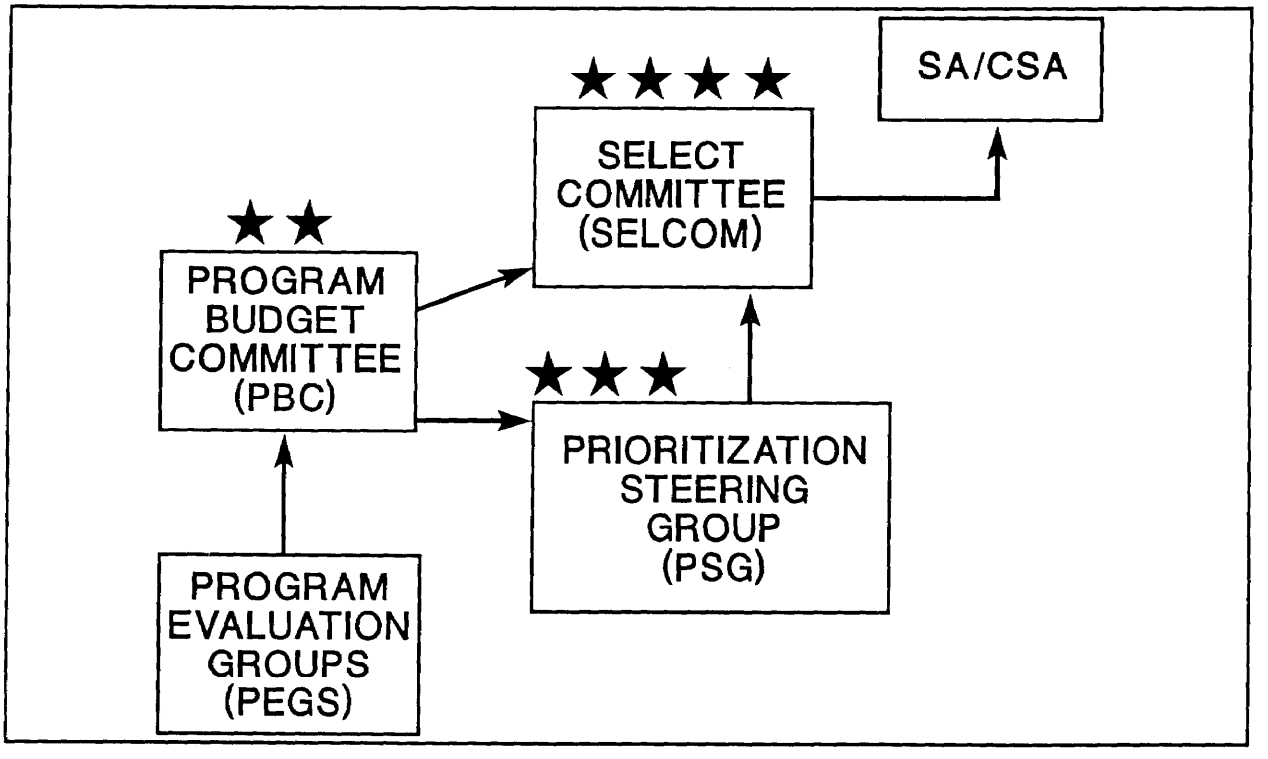


Figure 12-3
Program Functional Reviews

It is a data-gathering, organizing, and translating system. PPBES data from the MACOMs or ARSTAF automated systems are forwarded to the PROBE for collection and analysis. PROBE uses the same PPBES data, with some modifications, to generate both the POM and the budget. The POM is coded by program, appropriation, and program element. The budget is coded by appropriation, budget activity, and PBD.

Maintenance files in the PROBE database are kept current and provide the basis for editing all entries in the data files. To optimize the use of available time in the constrained POM/budget preparation cycle, the DSS has controlled access to the PROBE database to assist programmers and senior decisionmakers.

MANAGEMENT DECISION PACKAGES

Early in the PPBES process, the resource management architecture allocates program and budget resources. It does this by appropriation and program element to MDEPs, which provide a resource management tool (Figure 12-4, MDEP Structure and Functionality).

Purpose

MDEPs structure programs for consideration, approval, and prioritization. During execution, they provide for program review and evaluation. During programming, MDEPs provide visibility to assess program worth, confirm compliance, and rank resource claimants. During budgeting, MDEPs help convey approved programs and priorities into budget estimates. Providing the mechanism for data entry, MDEPs also help PEGs post program changes caused by budget decisions and approved funding. During execution, the posted MDEPs allow evaluation of program and financial performance.

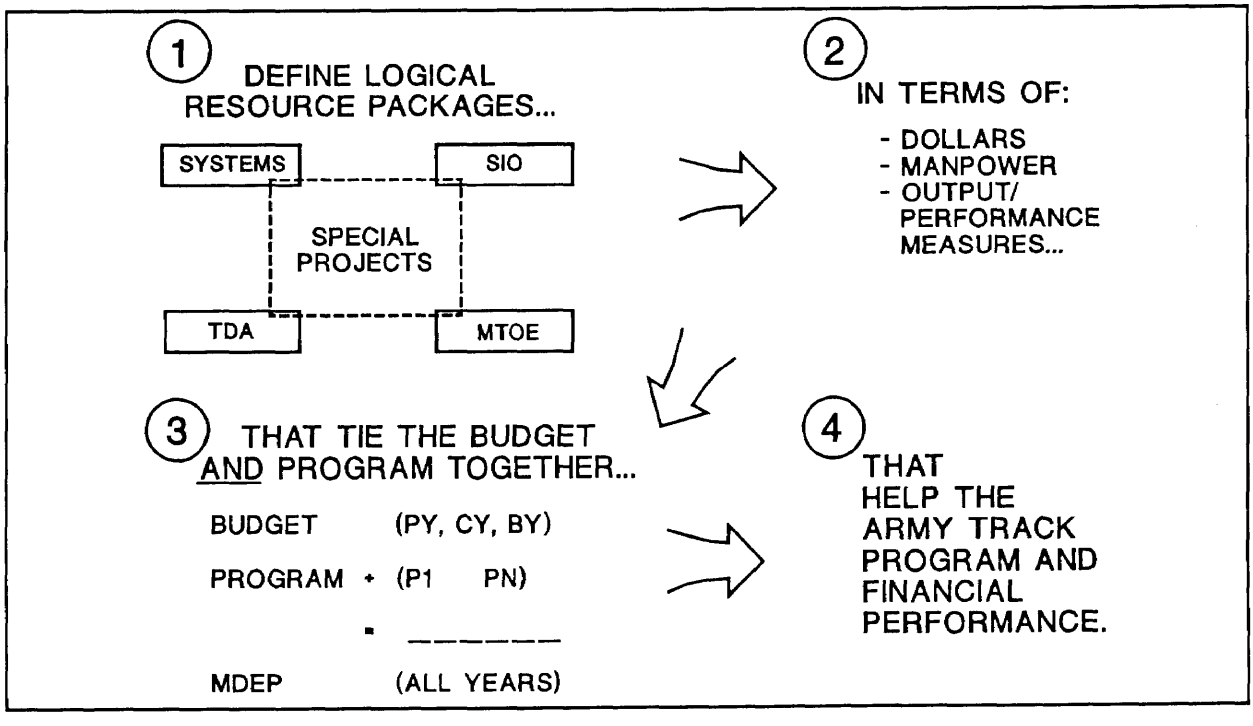


Figure 12-4
MDEP Structure and Functionality

Origins

MDEPs are derived from four sources-

- Field-Initiated MDEPs. These are program initiatives and other requirements or displays submitted by MACOMs and PEOs.

- DA-directed MDEPs. These address deficiencies that significantly hinder the Army in performing its mission.

- Compliance MDEPs. These adjust Army functional programs mainly to meet requirements mandated by the DPG.

- Self-initiated MDEPs. These fill program gaps not covered by existing or other new MDEPs. These include technical MDEPs to support technical management and pricing during programming and budgeting, and military pay MDEPs.

Scope

Taken collectively, MDEPs account for all Army resources. Resources summed across all MDEPs in a given year represent the total projection for the Army for that year. Individually, an MDEP describes a particular organization, program, or function and also records the resources associated with the intended output. An individual MDEP applies uniquely to one of the following six management areas-

- Missions of Modified Table of Organization and Equipment (MTOE) units.

- Missions of Table of Distribution and Allowances (TDA) units and Army-wide standards and functions.

- Missions of Standard Installation Organizations.

- Acquisition, Fielding, and Sustainment of Weapon and Information Systems (with linkage to organizations).

- Special Visibility Programs.

- Short-Term Projects.

MDEP Connectivity

The MDEP links Army decisions and prioritization structures with FYDP accounts. FYDP accounts record Service positions in OSD and Army management structure (AMS) accounts. AMS accounts record funding transactions in Army activities and installations. The MDEPs link databases with the master force, authorizations and manpower allocations, individual training programs, and depot maintenance programs.

MDEPs also link program outputs to TAP objectives, giving visibility to prioritized resource claimants in relation to DPG compliance, TAP priorities, and CINC IPLs.

MDEP Application

Using MDEPs, program development applies information from the APG published in June to refine and extend the program of the previous PPBES cycle. Program development by MACOMs, PEOs, and other operating agencies begins early in the odd year. The resource position reflected in the FYDP and the President's budget and related PBG serve as the base for developing program requirements. Upon publication of the APG, agencies adjust requirements to conform to guidance by preparation of-

- RMUs submitted in July, updating even-year CBEs.

- Command plans validating the latest force structure changes or requesting internal reprogramming to meet them.

- MACOM and PEO POMs submitted about November 1.

- A validated economic analysis for the POM years when a program is first funded.

Information for the early years of the approved LRRDAP serves as the RDA program equivalent to MACOM and PEO POMs.

MACOM MDEP Prioritization

Within the confines of TAP guidance, MACOMs conduct trade-off analyses to determine which MDEPs must be fully resourced, which ones can be partially resourced, and which, if any, can be billpayers for higher priority MACOM needs. The MACOM commander may submit a Schedule 8 that proposes these zero-sum resource "push-arounds" between MDEPs as initially resourced in the PBG. He may also submit a prioritized listing (Schedule 1) of MDEPs that would be more fully resourced if allowed by PBG guidance. MACOMs may submit a list of MDEPs (Schedule 1A), which could be decremented if required.

The MACOM commander thus defines the MACOM's core needs by realigning resources across MDEPs (Schedule 8) and the margins of his program. This is done by identifying his highest priority unresourced needs (Schedule 1) and his lowest priority resourced programs (Schedule 1A).

COMMAND BUDGET ESTIMATES

Purpose and Scope

The MACOMs and PEOs respond to the PBG with submission of CBEs. CBEs are used by MACOMs and PEOs to show command operating programs for the prior and current years and requirements for the upcoming fiscal years. They include budget and workload data needed by appropriation sponsors in developing and evaluating their budget estimates and management initiatives taken by the command or agency to reduce costs based on POM submissions and the ensuing PBG.

Application

Drawing from CBEs, each appropriation sponsor reviews and marks up the separate estimates for every appropriation. A major objective during budgeting and execution is to maintain consistency within the program. Acceptance of any change to program levels in the approved POM requires determining program trade-offs to achieve a zero-sum change. Proposed program changes submitted in the CBE are reviewed by functional proponents, PMs, and appropriation sponsors. Appropriation sponsors submit their budget estimates for review by the PBC, the same forum that reviewed the Army POM. The DAB chairs the PBC while it discusses the issues and alternatives to the proposals of the appropriation sponsors. Following PBC revision of the budget estimates for each appropriation, the appropriation sponsors present the proposed budget estimates to the ASA(FM) for review. The DAB then presents summary budget estimates to the SELCOM, CSA, and SA for review and decision.

THE BUDGET ESTIMATE SUBMISSION

The DAB develops for OSD the Army's coordinated budget BES based on the approved POM as modified by the PDM. The BES also conforms to specific budget guidance received from OSD. The BES covers the prior year, the current year, and the two budget years.

The BES is submitted to the DRB and is analyzed by OSD and OMB. After this analysis, the BES is reviewed. Based on the results of this process, OSD forwards a PBD to the Deputy Secretary of Defense in which at least one alternative is offered to the Army estimate.

OSD PROGRAM BUDGET DECISION CYCLE

During the PBD cycle, each Service identifies certain pending decrements and addresses the impact of the decrements as major budget issues (MBIs). At the end of the PBD process, the SECDEF makes the final decision on MBIs to request fund restoration or recommend other action.

OSD issues DRB decisions on major budget issues as final PBDs and OMB incorporates final budget controls for the current and budget years into the President's budget. The DPAE uses this

data plus the outyear controls to update the future year defense plan (FYDP) to reflect the President's budget submission. Appropriation sponsors use the adjustments to post MDEPs at the program element, standard study number, or project level of detail.

Section VI: Resource Management

Resource management is the direction, guidance, and control of financial and other resources. It involves the application of programming, budgeting, accounting, reporting, analysis, and evaluation to-

- Acquire resources.
- Allocate resources according to priorities.
- Account for resources.
- Analyze and correct programs as required.

ARMY RESPONSIBILITIES, POLICIES, AND PROCESSES

The Army is vested with the public's trust and confidence for defending the nation and has a responsibility for the assets that have been entrusted to it. Resource management is an integral part of the commander's role in fulfilling this responsibility. Responsible resource management is the key to sustaining and modernizing the Army and is essential for the maintenance of the Army's readiness posture.

Resource management policy addresses the need for particular programs, how they serve specific Army missions, and whether those missions and strategies are sensible.

Programmatic and financial resource processes examine the efficiency of how funds are allocated and spent and how effectively programs are managed and integrated. Resource management at the programmatic level encompasses the way the Army integrates soldiers, civilians, facilities, equipment, information, time, and dollars to produce a viable force capability.

Stewardship is the ability of the Army to get the right resources to the right commands so that subordinate activities can accomplish their missions. Army stewardship ties together all phases of PPBES and focuses on the interdependence among commands and the involvement of the Defense Finance and Accounting Service (DFAS). Stewardship keeps the Army focused on the key issues, to include mission transfers to the reserve components; equipment acquisition strategy; information and resource management; and the integration of equipment, doctrine, and organizations into combat-ready organizations.

The ASA(FM) has statutory responsibility for Army budgeting and execution. A sponsor for each congressional appropriation assists the Assistant Secretary and the Director of the Army Budget in discharging statutory responsibilities relative to fund management. The appropriation sponsors also coordinate the allocation of funds in support of the Army program. In the actual execution of funds, the ultimate responsibility for fund control lies with the DFAS.

FUNDS AUTHORIZATION

Congress

Budgetary Controls

The Constitution forbids the disbursement of funds from the Treasury except by appropriations made by law. Congress has taken five major actions to control budgetary affairs. These actions are-

- Requiring budget justification, to consist of an authorization action to justify selected major facets of the Army's program and a separate appropriation action to finance the authorized items.
- Requiring the executive branch to develop procedures to control the flow of funds to prevent overspending. OMB does this by

apportioning or releasing funds to the agencies as they are required, rather than when Congress makes them available.

- Requiring each department to establish a resource management organization (i.e., ASA[FM]) to provide technical competence for the management of funds appropriated by Congress.

- Forbidding the acceptance of voluntary supervision on behalf of the government, except as may be necessary in emergencies involving the safety of human life or the protection of property.

- Establishing the General Accounting Office (GAO) as the watchdog over expenditures and to institute standards for financial and other resource management systems.

Funds are thus provided by Congress in specific amounts for specific purposes through public law. The phrase "administrative control of funds" as required by law is used to identify those actions, events, or systems that are required to ensure that-

- Funds are used only for the purposes intended.

- Fund amounts, in excess of those available, are neither obligated, disbursed, nor further distributed.

- Agency heads are capable of fixing responsibility, if violations occur.

Punitive Provisions

The United States Code prohibits illegal use of funds and establishes punitive provisions for violations. The Anti-Deficiency Act:

- Forbids making or authorizing an expenditure or obligation in excess of the amount available in an appropriation or an apportionment or in excess of the amount permitted by agency regulations.

- Forbids involving the government in any contract or obligation to pay money in advance of appropriations.

- Provides administrative and criminal penalties for a violation.

- Requires apportionment by regular periods, by activities or functions, or by a combination of both methods.

Continuing Resolutions

The appropriations act provides budget authority to incur legal obligations and to make payments. When Congress fails to pass an appropriation by the end of the fiscal year, it usually passes a Continuing Resolution Act, providing emergency legislation that authorizes the funding of government operations without appropriations. A temporary measure, the continuing resolution usually restricts funding to the prior-year level and prohibits new initiatives.

Office of the Secretary of Defense

OSD controls multi-year procurement accounts through program releases that specify the quantity of an authorized item that may be bought. Authorization controls apply thresholds on budget programs and activities funded by operating accounts that govern rates of expenditure. Within these thresholds, execution accommodates changes in pricing and in adjusting command priorities.

The program budget guidance or the budget and manpower guidance provides direction, but does not include the specific authority to obligate funds. The fund authorization document (FAD) is used to allocate, suballocate, and allot annual funding programs and to provide obligation authority. For procurement and RDT&E appropriations, an approved program document accompanies the FAD to provide further administrative limitations on the use of funds.

Department of the Army

The Army, as an operating agency, must first receive OSD program authorizations through the DFAS before any funds can be obligated. It can then allocate apportioned funds to executing agencies in subordinate commands and installations. This is done by allotments that authorize users to place orders and award contracts for products and services to carry out approved programs. Installations obligate funds as orders are placed and contracts awarded. They make payments as materiel is delivered or as services are performed.

Early in the fiscal year, the Director of the Army Budget prepares initial obligation and outlay plans for all Army appropriations and funds that will be active during the year. After an appropriation act passes, he and appropriation sponsors review plans based on MACOM and PEO estimates of annual obligations. The ASA(FM) sends completed obligation and outlay plans to the OSD comptroller. The plans are tied to the obligation and outlay controls of the President's budget. There, under the Gramm-Rudman-Hollings Act, the controls are agreed to by DOD and Congress before the President submits the budget.

EXPENDITURE EVALUATIONS AND CONTROLS

Department of Defense

OSD conducts a biennial execution review as a scheduled event in the DOD PPBS process. The measure focuses exclusively on execution of the defense program. The review considers subjects selected by the Deputy Secretary of Defense from candidates nominated by OSD, the CINCs, and the Services. OSD uses review findings to influence future OSD policy and the defense program. The findings also lead to new guidance for conducting current efforts.

Department of the Army

HQDA conducts a quarterly management review of selected Army programs under the program performance and budget execution review system (PPBERS). It compares actual program performance with objectives set by the Secretary and the Chief of Staff, Army at the beginning of the year. It then takes corrective action to improve goal accomplishments. The PBC receives the quarterly PPBERS presentations, from which it selects topics for further presentation to the SELCOM.

Means for evaluating system program performance include milestone reviews of designated acquisition programs by the ASARC and milestone and IPRs of designated automated information systems by the Army MAISRC.

The program and budget accounting system is a departmental system that provides for departmental accounting and reporting. This system uses centralized processing and decentralized control over program and fund distribution functions from HQDA to the MACOMs and to the installations. This system also uses central accumulation of installation trial balances to verify DA reports.

The standard Army financial inventory accounting and reporting system performs financial inventory accounting for stock-funded supply transactions. This includes recording obligations, receipts, and payments related to inventory transactions; maintaining a general ledger; producing management reports; and generating obligations and disbursement records for the Standard Financial System (STANFINS).

DA Subordinate Commands and Agencies

MACOMs, PEOs, and other operating agencies carry out the approved program within funding provided. They review budget execution and account for and report on the use of allocated funds by appropriation, program, Army management structure code, and MDEP. The financial data obtained as feedback help MACOMs and agencies develop future requirements.

The STANFINS performs "consumer fund" accounting for most Army installations (exceptions are AMC and communications and

electronics activities). It records funding authorizations; accumulates and reports on obligations and disbursements against fund authorizations for control purposes; and provides breakout to installation, MACOM, and HQDA financial managers of funds, obligations, and disbursements by appropriation. STANFINS serves as the Army's primary record at installation level for installation-level appropriation accounting. It produces the financial reports required by higher authorities.

The tactical unit financial management information system (TUFMIS) is an automated system that is operated in direct support units (DSUs). DSUs receive requests for materiel from tactical units. TUFMIS records inputs and outputs to and from DSUs by supported units/organizations. The system produces daily and cumulative-to-date reports on commitments for materiel costs by unit and by weapon system. TUFMIS provides reports and information for resource management at the tactical level; however, it is not a formal accounting system with certifiable records. TUFMIS does provide commanders with the dollar value of supply requisitions by unit and the availability of funds to purchase supplies from a higher echelon source.

Summary

The PPBES goal is to ensure that the program is designed to meet the demands of the national military strategy within available resources. The decisions and priorities established during the programming cycle are the foundation for the Army BES. Depending on the particular phase of the PPBES cycle, actions proceed under the direction of functional proponents: planning under the DCSOPS, programming and evaluation of program performance under the DPAE, and budgeting and financial execution under the ASA(FM) and the DFAS.

Chapter 13
Force Readiness

Section I: Introduction

Unit readiness reflects a unit's ability to perform its doctrinal mission of achieving specified wartime objectives as structured. Unit capabilities are intended to increase as organizations are modernized. However, as an organization transitions from a lower to a higher level of capability during the modernization and reorganization process, readiness may initially be adversely affected, creating a direct relationship between readiness and force integration. Force integrators must ensure that the transition period is clearly defined, effectively managed, and accurately reported. One of the force integration goals, therefore, is to maximize capabilities while minimizing adverse effects on readiness. To achieve this goal, the focus of readiness management at all force levels should be on properly structured, equipped, manned, trained, sustained, deployed, stationed, and funded organizations.

Section II: Readiness Management

FORCE READINESS

Purpose and Scope

Force readiness, as a military capability, is one of the six pillars of defense. It is a strategic management goal and a priority for force improvements. It requires that forces, organizations, units, weapon systems, and equipment have the ability to operate within their operational design parameters. Force readiness requires the total force to man, equip, and train organizations in peacetime while concurrently preparing to mobilize, deploy, fight, sustain, redeploy and demobilize forces in war within timelines.

Readiness Costs and Trade-offs

Force readiness is highly situational. It is composed of a complex group of interrelated processes that cannot be accurately measured by any one means. This makes the measuring of readiness a difficult task because each individual element is made up of many tangible and intangible factors, some subjective and some quantifiable. In a peacetime environment, the only measure of return on investment that the Services can show is some level of force readiness, as deduced from analytical tools and other indicators.

Current force readiness must be balanced against other investment program needs such as RDT&E; procurement; and construction programs. It must also satisfy current readiness needs such as training, quality of life, spare parts, depot maintenance programs, and war reserve stockage.

Incremental costs of readiness increase as high levels of readiness are approached. At unit level, sustaining high readiness is cost-intensive due to increased demands for repair parts and supplies and training costs (ammunition and fuel), which all contribute to increased incremental costs. Because of the incremental costs of readiness and the response time of war plans, the Army maintains some units at a higher level of resources and readiness than others. Strategic lift should be correspondingly ready in increments. This stratification of readiness is done to allocate personnel, materiel, and dollars to achieve the greatest return on investment and to accept risk wherever possible.

Strategic Readiness Tasks

There are nine tasks that must be accomplished to achieve strategic readiness. Planners must:

- Ensure forces and supplies are sized and available for employment or deployment in a timely manner.
- Determine size and composition of forward-presence forces.

- Determine personnel and industrial mobilization requirements.

- Determine location and quantity of war reserve stocks.

- Determine transportation modes to move forces and supplies to aerial ports of embarkation.

- Size strategic lift to deploy forces and supplies.

- Anticipate means to receive and process forces and supplies in theaters of operations.

- Integrate the employment of forces in joint and combined operations.

- Determine means to expand and sustain the force.

The purpose for these strategic tasks is the timely deployment of units and supplies, the generation of sufficient combat power, and the sustainment of units in combat in accordance with the theater commander's campaign plan.

Force Readiness Factors

The status of personnel and equipment can be objectively measured. However, morale, cohesion, or the quality of leadership are subjective determinations. The status of unit training is based on objective standards, but it requires a degree of subjectivity because an organization may be constrained in its ability to train on some mission-essential tasks in peacetime.

For instance, an estimate of force readiness would include-

- Unit status (of many units; aggregate judgment).

- Weapon systems capability (both qualitative and quantitative comparisons).

- Availability of facilities (judgmental).

- Availability of supplies (quantitative inventory; judgmental requirements).

- Relationships with allies (judgmental).

- Strategic intelligence capability (qualitative and quantitative).

- Unit cohesion, operational readiness, and training (judgmental based on some objective data).

- Civilian work force availability, experience, and ability to sustain the force (judgmental).

- Quality of soldier and family support services (judgmental).

- Civilian and military airlift capability (quantitative inventory; judgmental requirements).

- Civilian and military sealift capability (quantatative inventory; judgmental requirements).

- Civilian and military ground transportation capability (qualitative inventory; judgmental requirements).

- Line of communications preparation (quantitative inventory; judgmental requirements and locations).

- Availability of prestocked equipment (quantatative inventory; judgmental requirements).

- Mobilization capability (highly judgmental until executed).

- Availability of manpower for military and industry (highly judgmental).

- Capability to receive, process, and transport forces in theater (highly judgmental).

- Quality of senior leadership, strategic planning, and decisionmaking (qualitative judgment).

- Capability of the threat (qualitative and quantitative comparison; largely judgmental).

- Quality and morale of personnel (judgmental).

UNIT READINESS

Readiness Prioritization

The Department of the Army master priority list (DAMPL) prioritizes organizations according to deployability dates to sequence distribution of equipment and personnel. This "first to fight, first resourced" policy ensures that early deploying units are resourced fully. It allows shortages where minimum risk and maximum flexibility exist.

Based upon the DAMPL, units are assigned an authorized level of organization (ALO) commensurate with their primary mission and required availability date, which are determined from war plans. The ALO of an organization determines allocation of manpower spaces and the distribution of personnel. It is a statement of total resourcing. It correlates to operating tempo (OPTEMPO) and operations and maintenance funding.

Unit Readiness Reporting Levels

Every organization reports overall status and the status of four measured resource areas by category level. The category level (C-1 through C-4) indicates the degree to which personnel and equipment requirements and maintenance and training standards have been achieved. Category levels do not project a unit's combat ability once committed to action. Rather, this status is measured against the resources and training required to undertake the wartime mission for which the unit is organized or designed. The four calculated category levels are-

- C-l . The unit possesses the required resources and is trained to undertake the full wartime mission for which it is organized or designed.

- C-2. The unit possesses the resources and has accomplished the training necessary to undertake the bulk of the wartime mission for which it is organized or designed.

- C-3. The unit possesses the resources and has accomplished the training necessary to undertake the major portions of the wartime mission for which it is organized or designed.

- C-4. The unit requires additional resources and/or training to undertake its wartime mission, but if the situation dictates, it may be directed to undertake portions of its wartime mission with resources on hand.

Normally the overall unit category level will be identical to the lowest level recorded in any of the unit's measured resource areas of personnel, equipment on hand, equipment readiness, and training. The overall unit category level may be upgraded or downgraded by the unit commander based on his judgment and experience; however, the computed status of each measured resource area must be reported as calculated.

Unit Equipment Requirements and Authorizations

Equipment requirements and authorizations are categorized by equipment readiness codes (ERCs) that specify, by line item number (LIN), the relation of a specific item of equipment to the organization's mission. ERC "A" LINs are primary weapons or equipment essential to mission accomplishment. ERC "B" LINs include auxiliary equipment that supports or replaces inoperative primary items. ERC "C" LINs are administrative support equipment. Pacing items (ERC "P") are those ERC "A" items that define the organization's doctrinal capability (tank, infantry fighting vehicle, attack helicopter).

The Army equipment distribution strategy specifies a minimum C-3 status for all units. The principal elements of the strategy are to-

- Fill pacing items (including associated support items of equipment to 100% for all organizations).
- Fill selected organizations to 100%.
- Fill forward-deployed forces and major combat forces deploying by C+30 to C-2.
- Fill remaining forces to C-3.
- As assets permit, fill all organizations to 1OO%.

Section III: Measuring Unit Status

Unit status reflects the combat readiness condition of a unit at a given point in time. As noted earlier, this status is reported in the areas of personnel, equipment on hand, equipment readiness, and training. It is calculated by comparing wartime requirements specified in the unit authorization document for personnel and equipment to assets on hand.

The National Military Command Center maintains the capability and status of US forces assigned to support the Joint Chief of Staff operations plans. It also provides information to the National Command Authorities.

The Joint Chiefs of Staff Status of Resource and Training System (SORTS) tracks changes in unit locations, command lines, and mobilization and deployment status. Its primary purpose is to provide unit status information that can be used to make operational decisions through integration into the Joint Operations Planning and Execution System (JOPES). The Army input to SORTS is through unit status reports (USRs).

ARMY READINESS MANAGEMENT SYSTEM

Commander-in-Chief's Preparedness Assessment Report.

The requirement for military capability reporting is accomplished using the commander-in-chief's preparedness assessment report (CSPAR). Status reporting is accomplished in the SORTS within the Army Readiness Management System as portrayed in Figure 13-1.

The CSPAR is prepared biannually to assess the ability of apportioned forces to carry out assigned missions. The report assesses ability to deploy; materiel sustainability; host nation support; combat service support structure; nuclear, biological, and chemical defense posture; and support by other commands and logistic agencies. These CSPARs are fundamental in providing a balanced picture of the force.

Unit Status Reporting System

The USR provides the status of Army units to the JCS and NCA. It is used as a management tool at all force levels to identify and assess conditions and trends affecting organizations. These include factors that degrade unit status; differences between minimum mission-essential wartime requirements, authorizations, and assets on hand; and resource allocation requirements (Figure 13-2, Unit Status Reporting Channels for Active Army and US Army Reserve, p. 13-6; Unit Status Reporting Channels for the Army National Guard are shown in Figure 13-3, p. 13-7).

The USR provides information to MACOM commanders in summary form that depicts trends and identifies units not attaining category levels equal to their ALO. It also allows management-by-exception in correcting problems.

The US Army Reserve Command (USARC) monitors the status of all CONUS US Army Reserve (USAR) units in coordination with each Continental US Army (CONUSA). The USARC manages and allocates the necessary resources

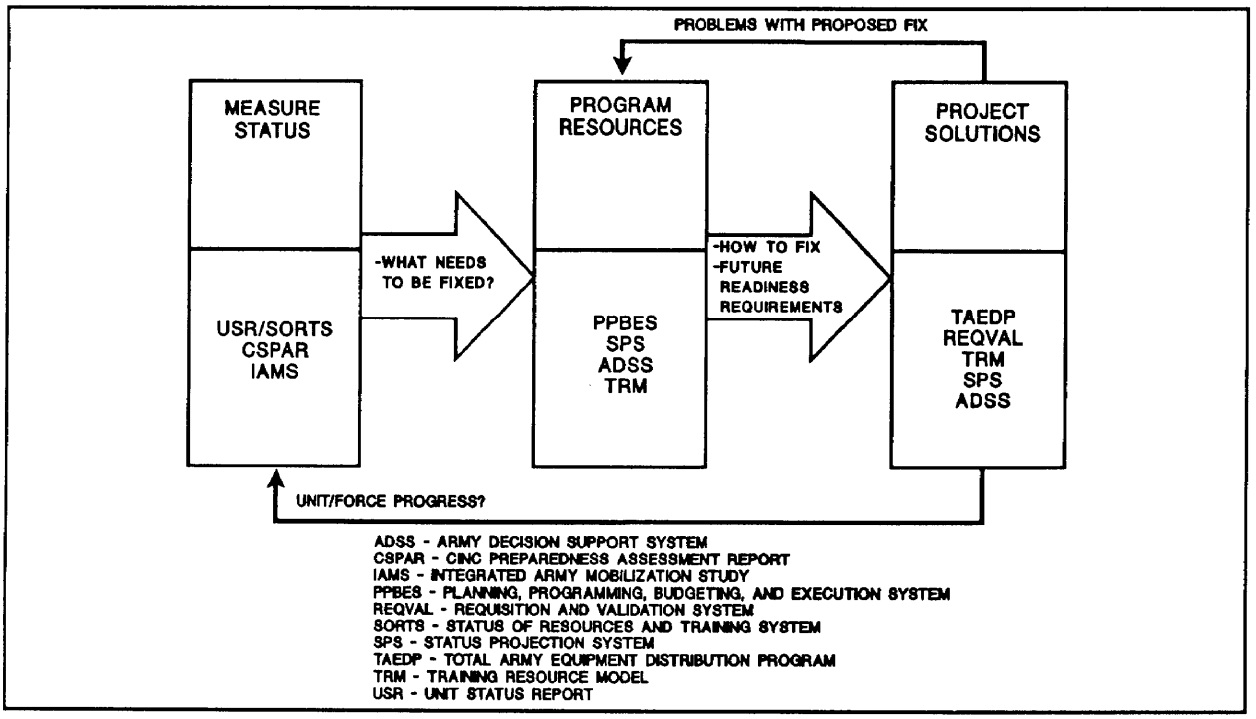


Figure 13-1
Army Readiness Management System

to maintain an acceptable level of readiness. It coordinates status reporting of all USAR units and implements, reviews, and provides guidance on Forces Command (FORSCOM) readiness policies. The CONUSAs are focused on improving readiness and mobilization capabilities of reserve component units. The ability of mobilization stations to bring C-4 units to an acceptable level of readiness for deployment is assessed. Based on USR analyses, training reports, and command readiness inspections, CONUSAs prioritize units, evaluate selected units, and conduct readiness management forums.

Although corps are not in the formal unit status reporting chain, corps commanders use USRs to assess trends and factors that degrade readiness and allow resourcing and prioritization decisions to be made.

Division, separate brigade, regiment, and group commanders use unit status reporting as one of many management tools to determine whether subordinate commanders are using available resources effectively. The composite report submitted by commanders at this force level gives an overall assessment of the status of their commands. These commanders also provide narrative comments to highlight areas that require resolution at corps, or higher, level. USRs of round-up and round-out organizations are submitted to the parent organization commander for inclusion in the composite report. The USRs of direct support organizations also provide the supported commander with valuable information and insights concerning the warfighting capability of his force.

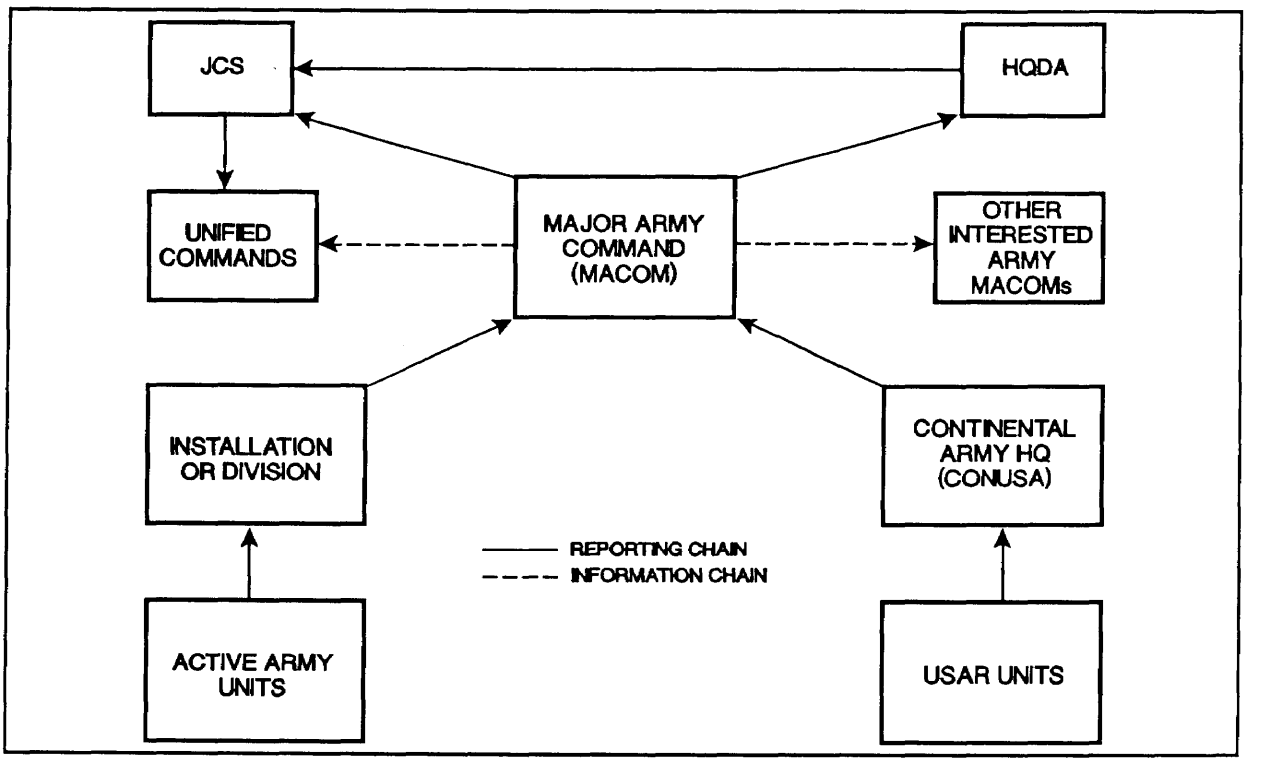


Figure 13-2
Unit Status Reporting Channels for Active Army and US Army Reserve

The USR gives the commander at any level a finite measurement of his unit's status and evolution over time. The commander's comments are used to highlight situations where special attention, intensive management, or higher command echelon involvement is needed.

Section IV: Planning and Executing Organizational Change

As previously noted, organizations that are activating, converting, or reorganizing are undergoing a series of activities that are disruptive and turbulent. The process of structuring, equipping, manning, training, deploying, and stationing an organization or its subordinate units requires that leaders focus on the execution of change. The time allocated to accomplish activation, conversion, or reorganization starts when organization capability and readiness are first affected. It continues until the transition is complete and the unit is C-3 or higher in personnel, equipment on hand, equipment readiness, and training.

TRANSITION PERIOD ACTIVITIES

Events that define the transition period are those in which capability and readiness degradation and enhancement are quantifiable (Figure 13-4, Organization Capability in Transition, p. 13-8). Turn-in of major end items identifies the start of transition. This may be incident to new equipment hand-off or inactivation of subordinate units as part of restructuring. Completion of a training evaluation allows mission-essential tasks to be assessed and terminates the transition period.

Readiness goals, in terms of minimum acceptable category levels to be achieved at the end of the transition period, must be established

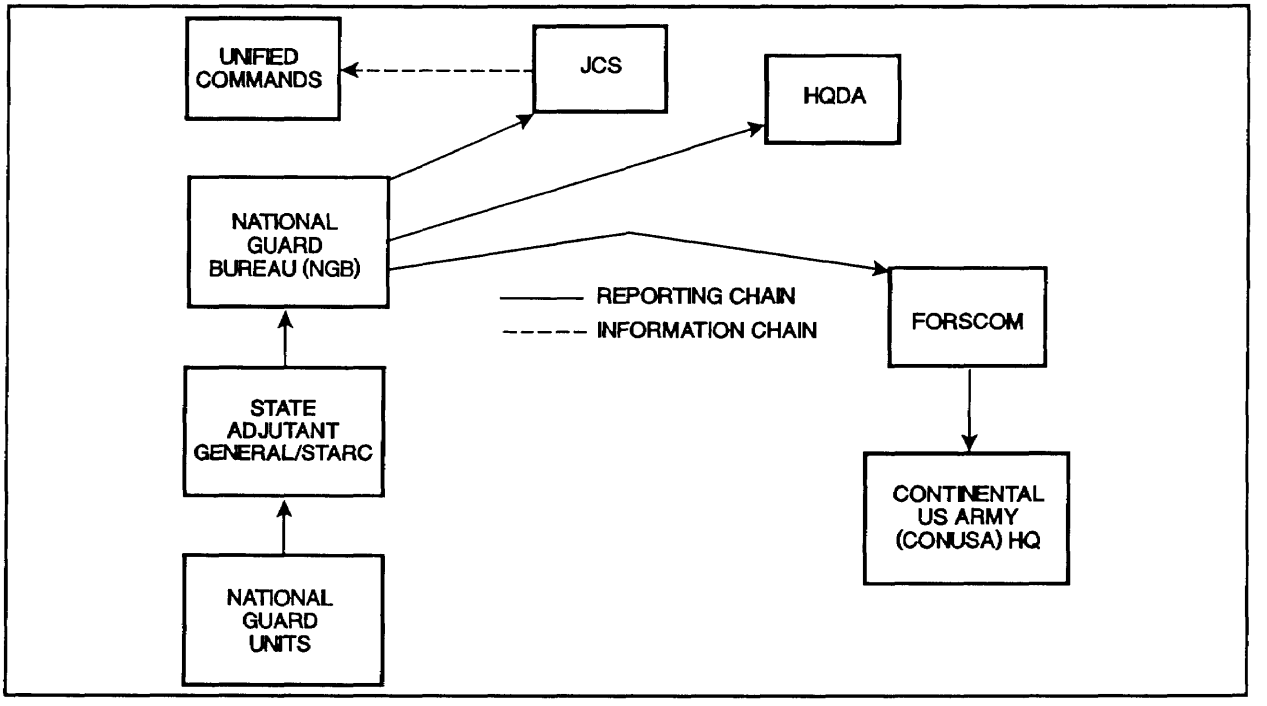


Figure 13-3
Unit Status Reporting Channels for Army National Guard

in the planning process. These goals should consider loss of trained personnel and key leaders subsequent to completion of the transition due to normal attrition, release of personnel extended to accomplish transition, relief from excepted unit status, and return to fair share manning. The impact of personnel loss may be protracted over several months.

During the transition period, the organization is not prepared to undertake the wartime mission for which it is organized or designed. If the situation dictates, it may be directed to undertake portions of its wartime mission with resources on hand. Organizations in transition report C-5 in affected commodity areas and C-5 overall when-

- Reorganizing or converting.
- In HQDA-directed cadre status.
- Activating or inactivating.
- Not manned or equipped, but required in wartime.
- Organized as training units that could be tasked to perform a wartime mission.
- Structured at ALO 4 or below.

MISSION ACCOMPLISHMENT ESTIMATES

Commanders of organizations in transition must quantify the organizations' mission accomplishment estimates as capability increases over time. These estimates include objective and subjective assessments in order to articulate, by percentage, the capability of the organizations to accomplish their doctrinal missions.

Unless previously approved, organizations should not execute reorganization, activation, or conversion that is projected to result in a C-4 category level upon completion of the transition period. Organizational assessments will begin

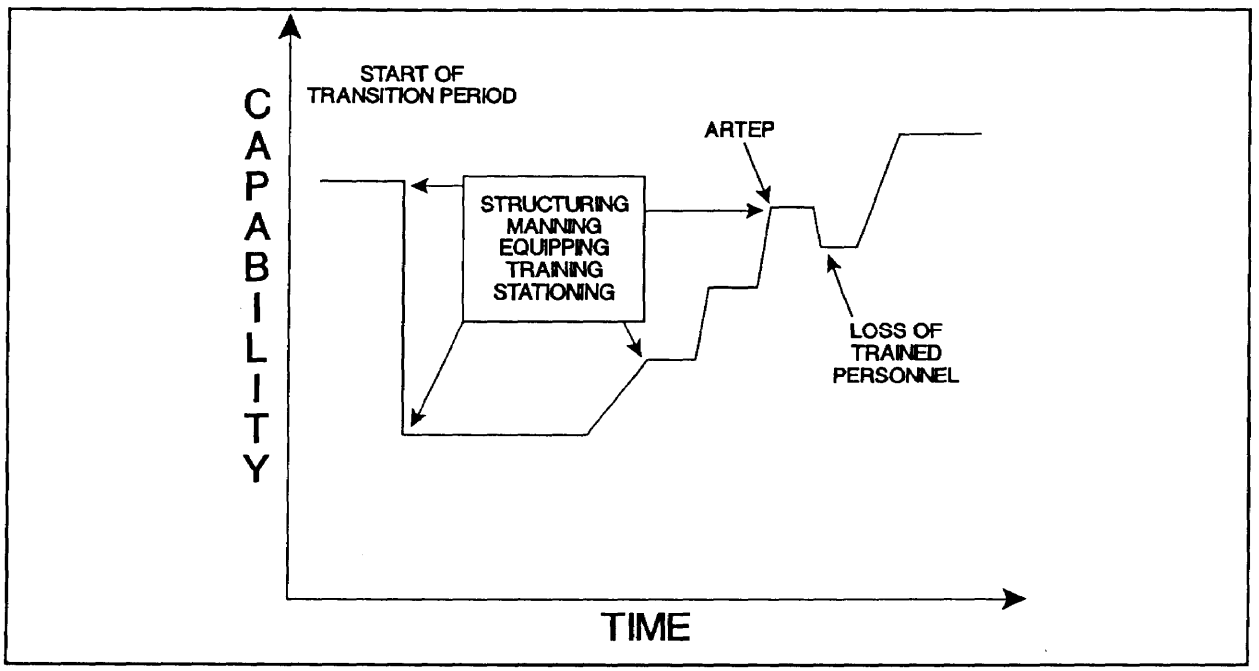


Figure 13-4
Organization Capability in Transition

evaluating projected unit status under a new authorization document. This will identify and resolve problems in attaining at least a C-3 readiness status upon transition to a new structure and/or new materiel systems. Issues that cannot be resolved must be communicated to MACOM and HQDA as soon as practical.

FORCE VALIDATION PROCESS

The force validation process assesses organizations activating or converting to ensure that minimum readiness standards are met on the effective date of change (EDATE). This process depends on MACOM-level assessments of organizations undergoing change. HQDA may change the EDATE for activating, converting, or reorganizing units that are not projected to meet minimum readiness standards.

Failure to provide authorized resources to organizations at the EDATE results in degradation of capability. "Instant unreadiness" is the condition that occurs when personnel and/or equipment are required and authorized, but are not on hand at the unit level on EDATE.

Summary

Readiness measures the peacetime output of the total force. Unit status reporting provides the chain of command with current information for plans and operations. Readiness measurement can also ascertain whether or not the resources provided achieve the expected readiness levels of the force and allows for management-by-exception. The integration of new capabilities into the force affects readiness. It is a cost of modernization and must be managed to ensure that readiness degradation is limited in impact and time.

Appendix A
Decision Support Analysis

Section I: Introduction

Complex decisions associated with the execution of the force integration mission can exploit decision support analysis in the decisionmaking process. Dollars, time, equipment, and personnel must be allocated to accomplish the mission to structure, man, equip, train, sustain, deploy, station, and fund organizations effectively. To assimilate the information available efficiently, quantitative decisionmaking methods are used to structure the planning process to introduce, incorporate, and sustain change in organizations.

Decisionmaking involves setting objectives; developing, evaluating, and selection alternatives; and considering the consequences of that decision. Decision analysis is the consideration of all quantitative (objective) and qualitative (subjective) factors important to a particular situation involving system effectiveness, manpower planning, force structure development, and facilities. Modern quantitative methods can greatly facilitate this decision process through objective analysis, the preparation and analysis of cost estimates, and evaluating alternative courses of action, thereby reducing uncertainties of experience, judgment, and risk taking.

Section II: Program Evaluation and Review Technique

The program evaluation and review technique (PERT) is used to analyze projects and determine duration and cost when completion times are uncertain. PERT uses network diagrams that graphically display all the tasks in the project. The network diagram assists the decisionmaker in analyzing all the requirements and planning the sequence of tasks of the project. Figure A-1, Network Diagram Model, is an example of a simple network diagram. Events are depicted as circles and activities are depicted as arrows.

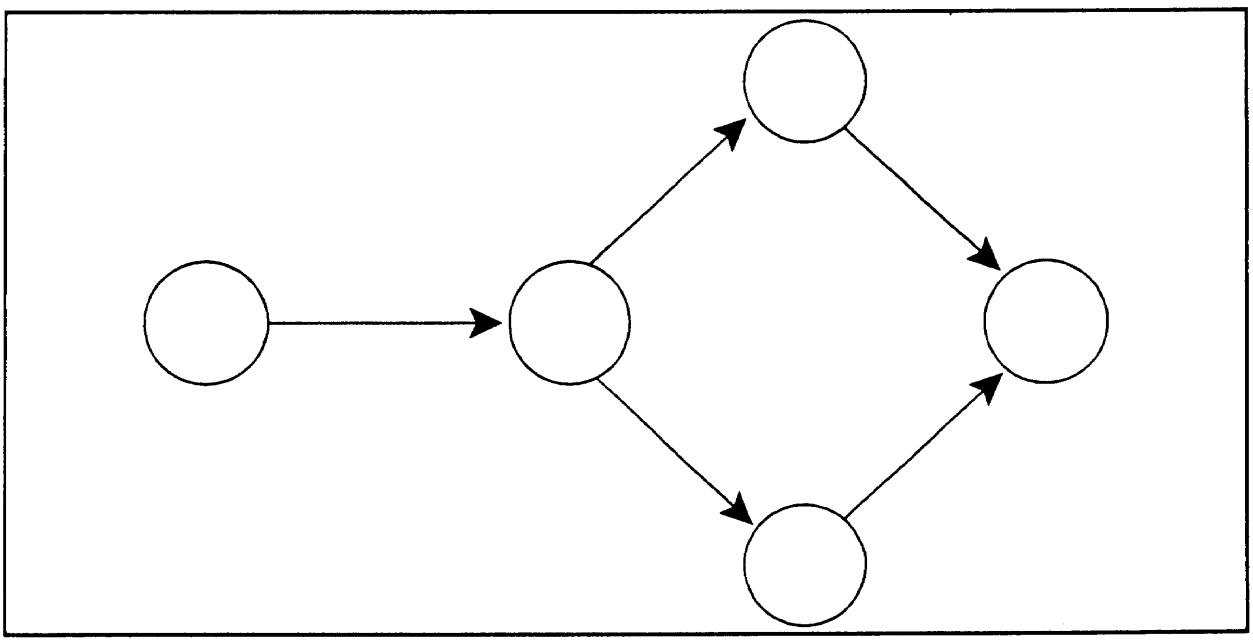


Figure A-1
Network Diagram Model

The first step in the PERT application is to define and list all activities or tasks. Events are distinguishable points in time, having no known duration, that coincide with the beginning and end of specific activities. The PERT network graphically portrays events (beginnings and endings of activities) and activities (time-consuming tasks) that must be accomplished to achieve the project goal. Events and activities are arranged in a logical sequence and assist in planning the project. Figure A-2, Example of Network Diagram with Activities, illustrates events and Activities.

Events are identified by assigning successive identifiers to them. The successive numbering system is commonly used with computer programs in solving the PERT problems.

When one activity precedes another, it is expressed as illustrated in Figure A-3, Activity Precedes Activity.

When activities can be accomplished concurrently, they are expressed as indicated in Figure A-4, Concurrent Activities.

Events with multiple activities leading into them indicate that all of those activities must be completed before one can proceed. A dummy activity is introduced to tie these events together or to establish a logical sequence of activities. Dummy activities are the same as other activities except that they take no time for completion and are represented by dashed arrows. Figure A-5, Dummy Activities, p. A-4, illustrates the technique.

A network will identify the relationship of the activities and the activities' time duration to enable the planner to determine project duration and tasks that are critical. The expected project duration is based on the estimated time required to accomplish each activity in the longest path within the network diagram. The time estimate for each activity is the expected time required to complete the activity and is represented by the symbol t_e.

The PERT technique uses three time estimates for each activity to determine its expected time (t_e) rather than basing it on a single time estimate. PERT time estimates consider the chance variation that affects all

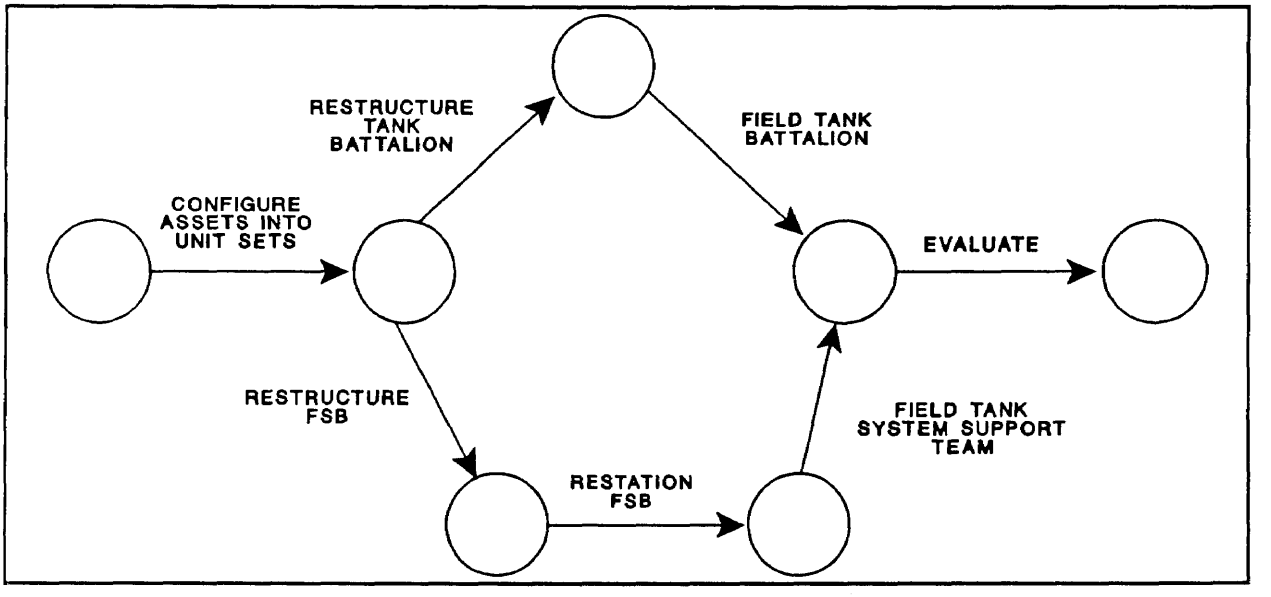


Figure A-2
Example of Network Diagram with Activities

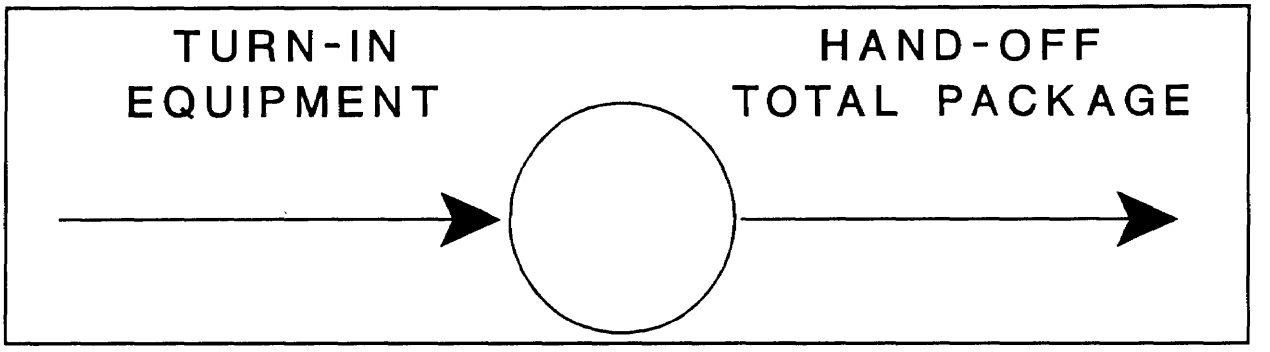


Figure A-3
Activity Precedes Activity

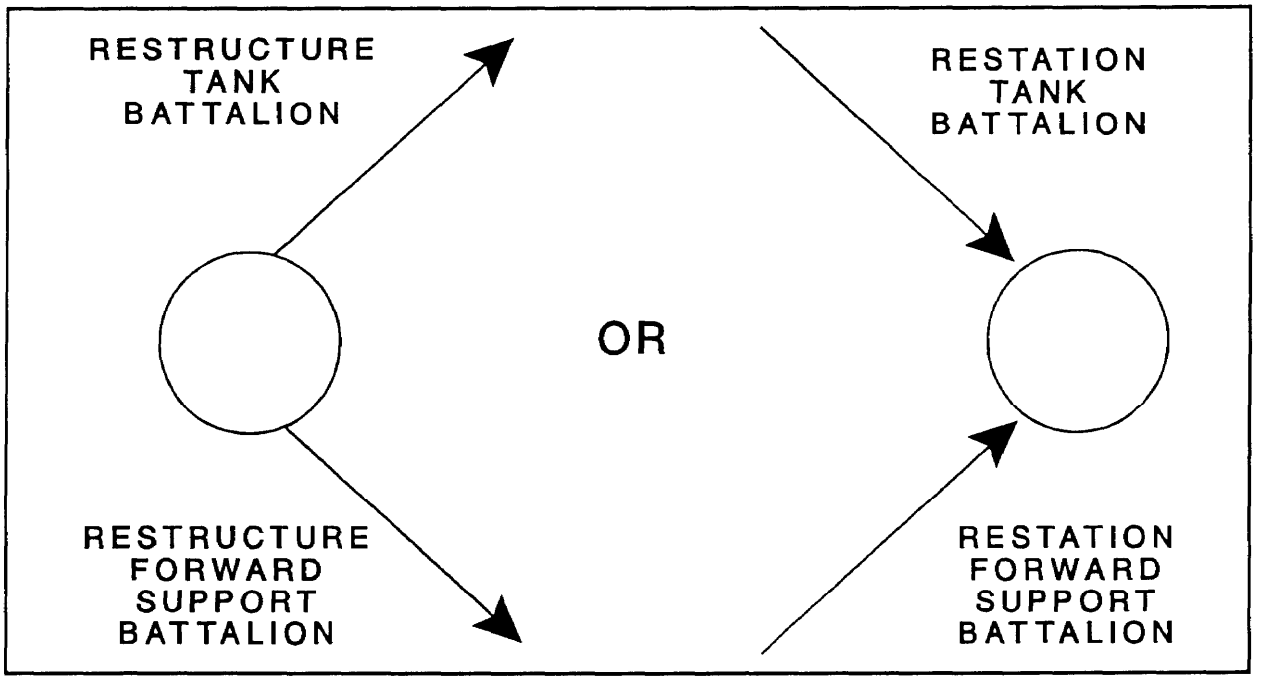


Figure A-4
Concurrent Activities

project activities. The three time estimates used are optimistic time, most likely time, and pessimistic time.

- The optimistic time estimate is defined as the shortest time required to accomplish the activity. There is little likelihood of completing the activity in less than the optimistic time. Optimistic time is represented by the symbol "a" in the expected time computation.

- The most likely time estimate is the time that would occur most often if the activity were repeated under exactly the same conditions many times. The most likely time is the most

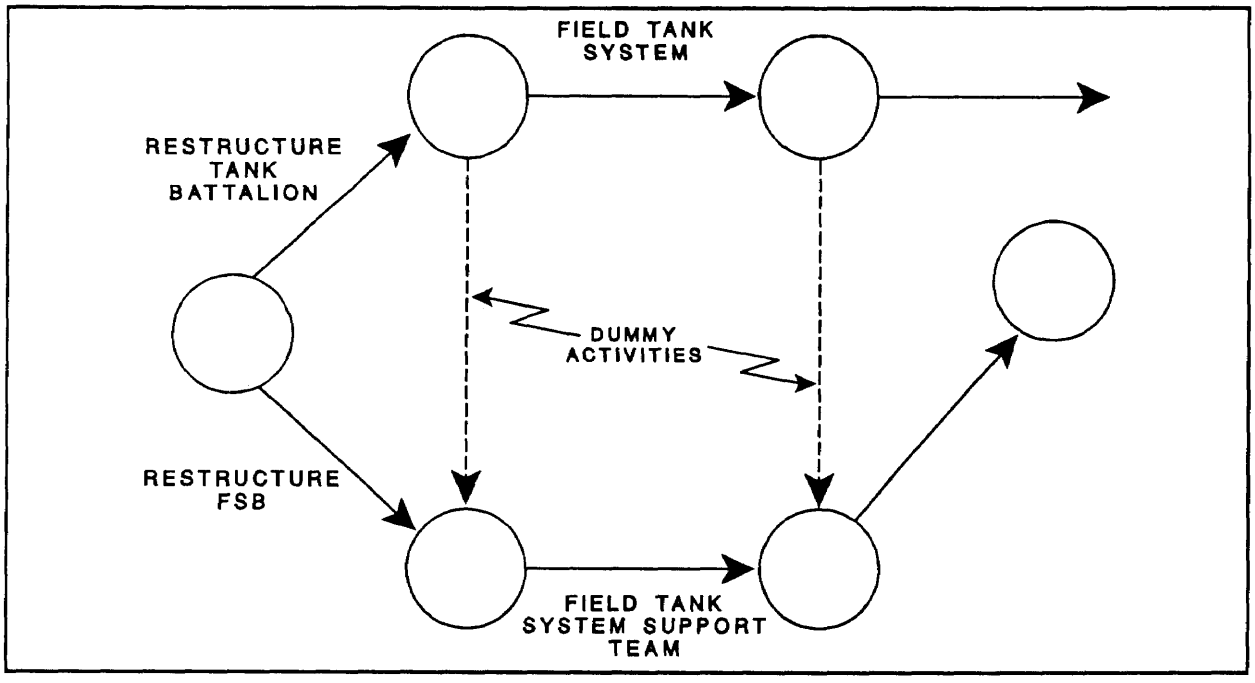


Figure A-5
Dummy Activities

realistic estimate of the time the activity might consume. The most likely time is represented by the symbol "m" in expected time computation.

- Pessimistic time is an estimate of the longest time the activity would require under the most adverse conditions. Pessimistic time is represented by the symbol "b" in the expected time computation.

To determine the activity's most probable or expected time (t_e) use the expected time (t_e) where t_e is the weighted arithmetic mean of the time estimates.

$$t_e = \frac{a+4m+b}{6}$$

The network diagram is used to portray graphically all activities that must be accomplished in a project in a logical sequence. Scheduling tasks to be done is not new; however, the more complex the project, the more difficult it becomes to estimate the total time required for its accomplishment.

The network diagram is analyzed to determine the project duration based on the estimated time required to accomplish each activity in the longest time path within the network diagram. This is accomplished by examining each event and determining its earliest expected start time (T_E) as illustrated in Figure A-6, Earliest Expected Start Time. The earliest expected start time (T_E) of a particular event is the time at which the event will occur if all the preceding activities start as early as possible. The earliest expected start time (T_E) at each event is determined by adding the duration of the activity (t_e) to the earliest expected time start time (T_E) of the preceding event.

In Figure A-6, T_E is shown above each event by a square. T_E for Event 10 is determined by adding te = 6 to Event 5's earliest expected start time (T_E). The T_E for Event 15 is computed in the same manner.

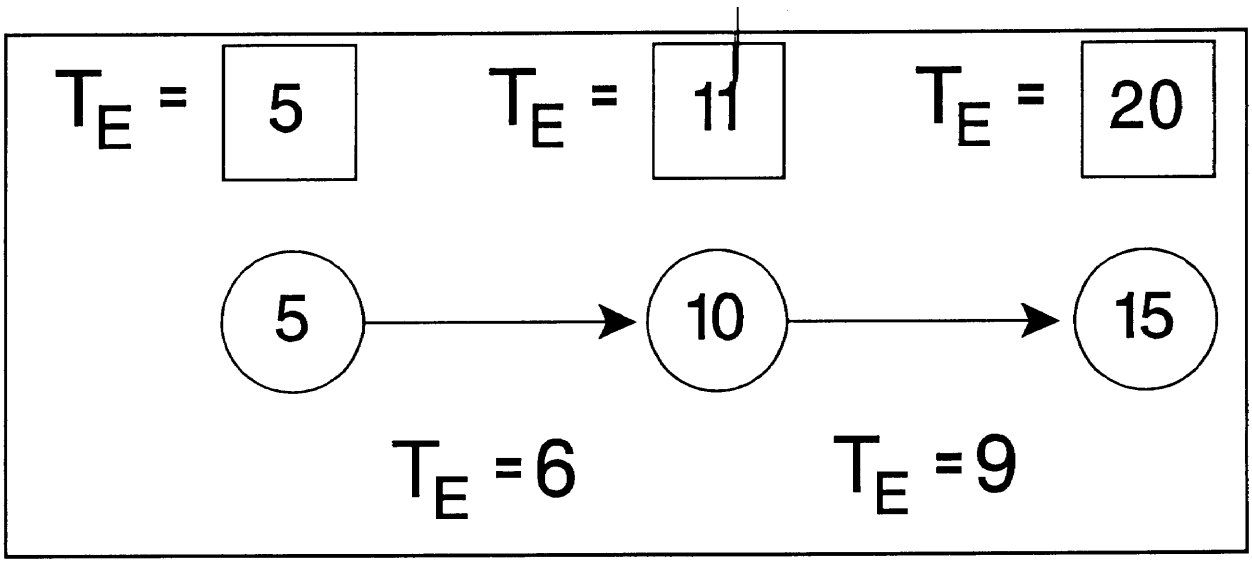


Figure A-6
Earliest Expected Start Time

The decision trace starts at the origin of the initial event. The first event is assigned zero time value for its earliest expected start time (T_E). The trace continues through the next activity to the next event, adding the activity's duration (t_e) to the preceding event's earliest expected start time (T_E).

When more than one activity arrow terminates at an event, each activity's expected duration (t_e) is added to the preceding event's earliest expected start time (T_E). This is the activity's earliest expected completion time. The largest of the activity's earliest expected completion times is assigned as the successor event's earliest expected start time (T_E). Figure A-7, Calculating T_E with Various Activity Arrows at One Event, is an example of computing the earliest expected start time (T_E) for an event with more than one activity terminating in it.

The project duration is the earliest expected start time of the last event in the network diagram. The trace through the diagram that provides this value is the critical path, which is also the longest path. Any event that occurs beyond its earliest expected start time of accomplishment will affect the outcome of the project. Therefore, priority is placed on the activities on this path. There may be more than one critical path, but they will have the same earliest expected start time.

After determining the project duration, the next step is to identify the latest allowable start time (T_L) of each event. T_L is the latest start time that can occur without delaying the completion of the project beyond its earliest expected start time. The determination of the latest allowable start time (T_L) for each event is accomplished in the reverse order (backwards through the network) of the project's duration. Beginning at the last event, the planner assigns a value (T_L) equal to the T_E that was just calculated. Working backwards through the network diagram, the latest allowable start time (T_L) for each event is determined by subtracting the activity t_e from the latest allowable start (T_L). This is represented in Figure A-8, Latest Allowable Time.

In Figure A-8, T_L is shown below each event by a triangle. T_L for Event 15 is determined by subtracting Activity 15-20s' t_e = 6 from Event 20's latest allowable start time, T_L = 15. This is entered under Event 15. The same is done for Event 10, giving T_L = 6.

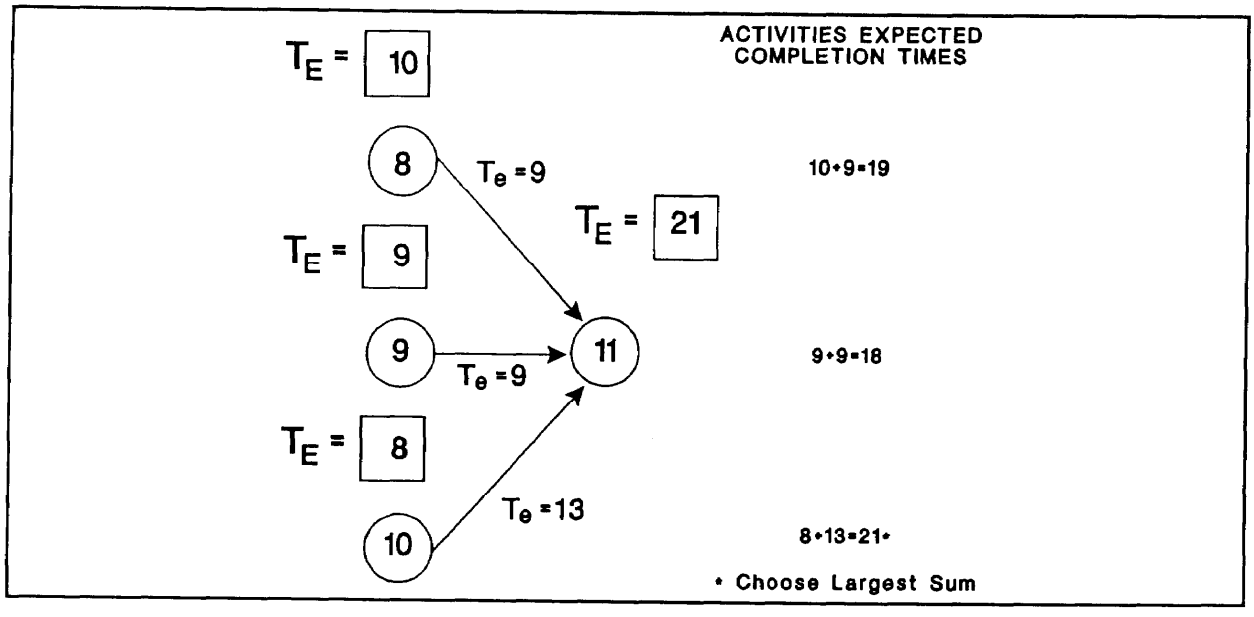


Figure A-7
Calculating T_E with Various Activity Arrows at One Event

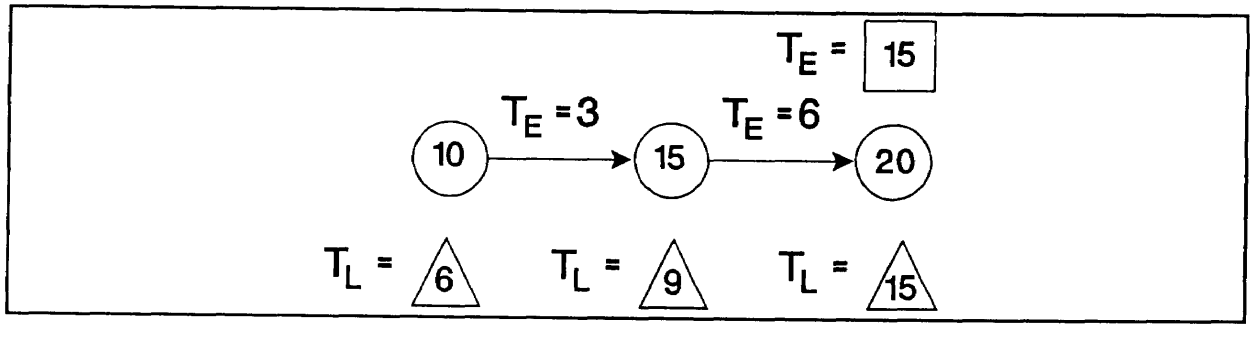


Figure A-8
Latest Allowable Time

When the tail of more than one activity arrow begins at an event, the duration time of each activity (t_e) is subtracted from the latest allowable start time (T_L) of the event following it. The least time obtained is latest allowable start time (T_L) for the event under consideration. This is illustrated in Figure A-9, Calculating T_L with more than One Activity Arrow at an Event.

T_L for Event 20 is determined by subtracting the activity's t_e = 7 from Event 25's T_L = 18 and subtracting the activity's t_e = 11 from Event 30's T_L = 21. The smaller T_L for Event 20 is selected.

Slack time (T_S) indicates how much delay can be tolerated in reaching an event without delaying project completion. This is determined by subtracting the earliest expected start time (T_E) from the latest allowable start time (T_L) for an event ($T_S = T_L - T_E$).

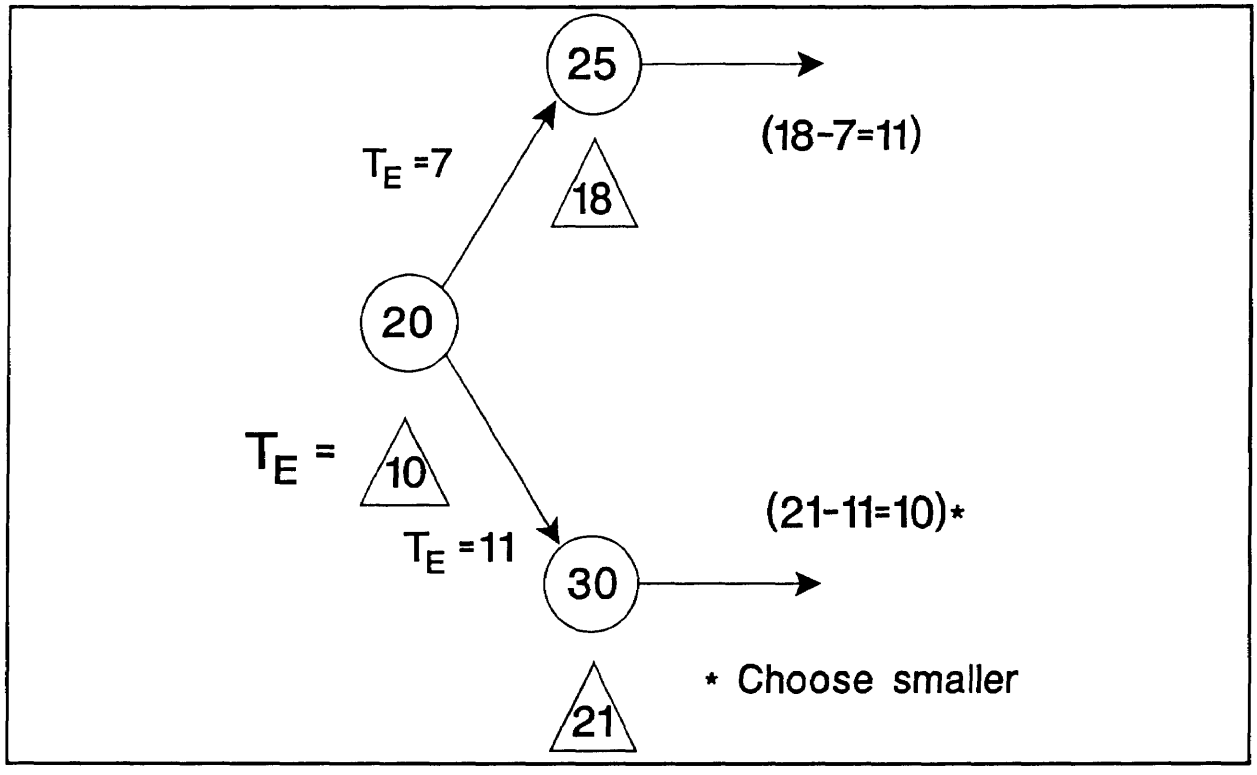


Figure A-9
Calculating T_L with More than One Activity Arrow at an Event

Figure A-10, Slack Time, illustrates that, within the network below, the slack time for Event 70 is one unit (23 -22 = 1).

The critical path for the project may also be defined as the longest path through the network that connects all events having zero slack time. Events not on the critical path all have positive slack time. Therefore, some delay in the expected time for accomplishing these events probably will not affect the project completion time.

Activities not on the critical path have a positive slack time and can be delayed without changing the project duration. The amount of time an activity can be delayed is based upon the slack time of the event in which the activity terminates. If an activity is delayed by a portion or all of the event's slack time, the diagram must be recomputed to determine the effect on subsequent events or critical paths.

Figure A-11, Complete Network Diagram, is an example of a network diagram that has a total of eight flowing from seven events within the network.

Activities 2-4, 4-6, 6-12, and 12-14 (shown by the double line arrows) are on the critical path and have zero slack. The remaining Activities 4-8, 8-10, 8-12, and 10-14 have slack time and can be delayed. Activity 4-8 can be delayed by two days, new t_e = 6, without affecting the project duration. This delay then affects subsequent events, slack time, and critical path as follows:

- Event 8: T_E=11, T_L=11, T_S= 0

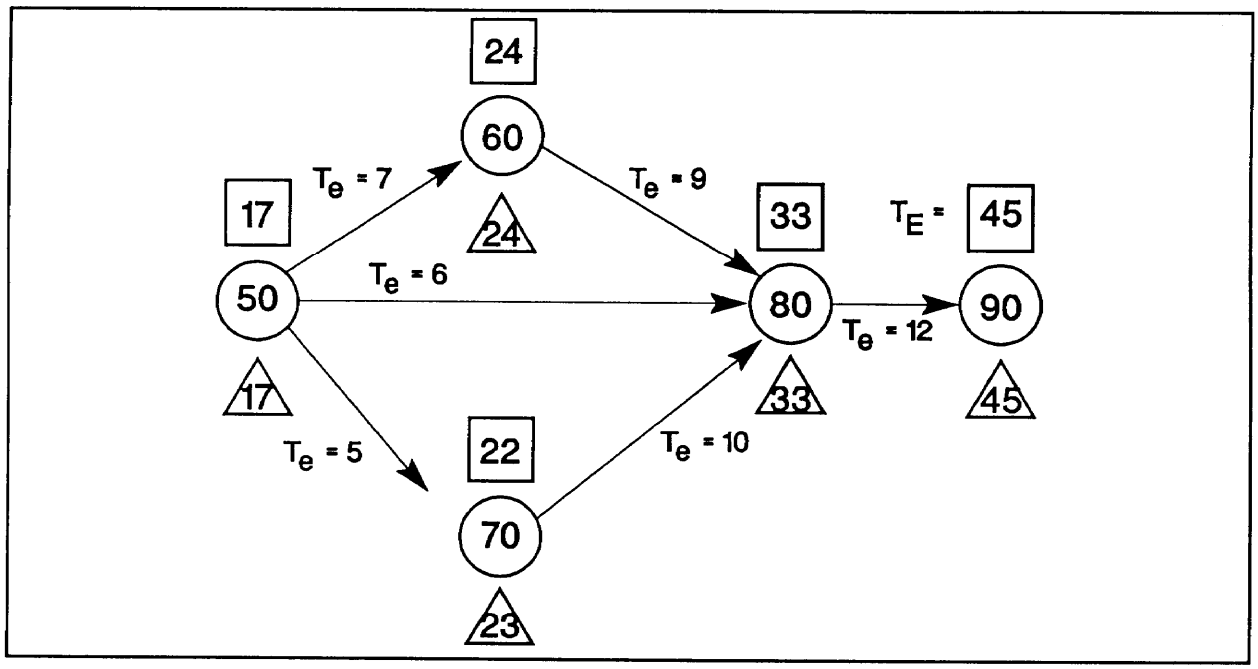


Figure A-10
Slack Time

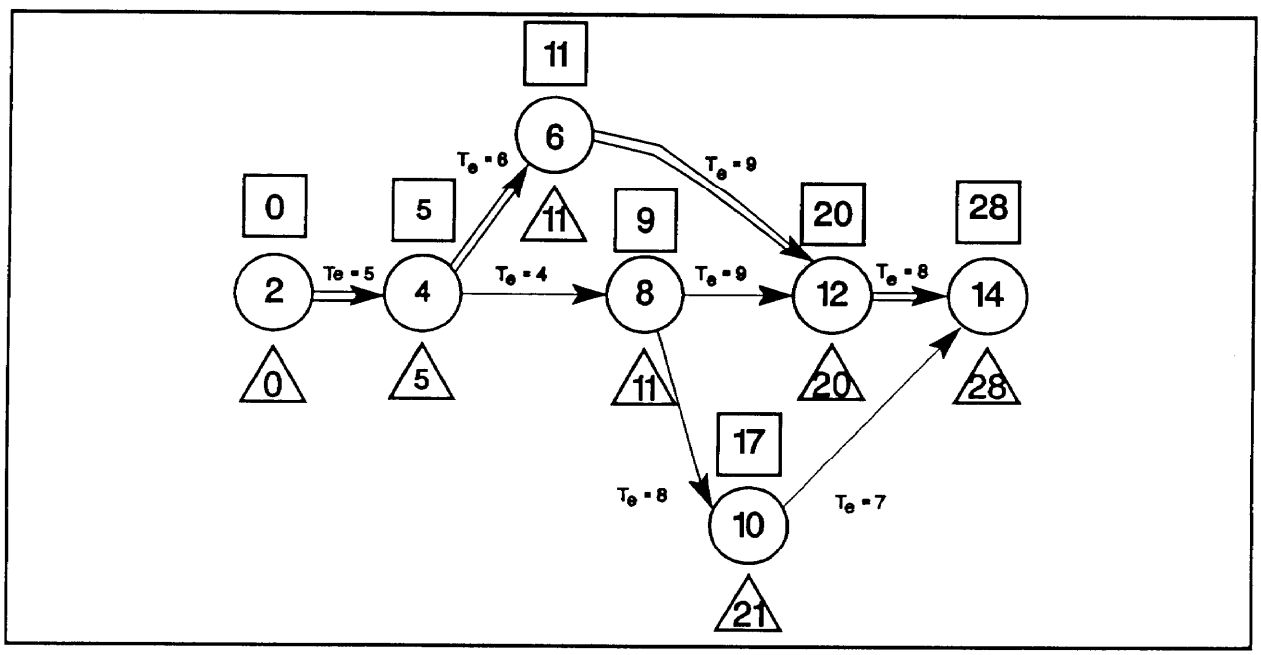


Figure A-11
Complete Network Diagram

- Event 10: T_E=19, T_L= 21, T_S= 2

- Critical paths: 2-4-6-12-14 and 2-4-8-12-14.

Once the network diagram is completed, the information is tabulated into a schedule. Tables A-1, Event Table, and A-2, Activity Table, illustrate methods of tabulating PERT data into useable formats.

PERT is a management tool that can accurately estimate project duration, identify those activities that are most likely to be bottlenecks, and provide a means to evaluate effects of program changes. Contemplated shifts of resources can be evaluated as well as resource and performance tradeoffs and effects of deviation from actual to predicted time requirements.

EVENT	T_E	T_L	SLACK
2*	0	0	0
4*	5	5	0
6*	11	11	0
8	9	11	2
10	17	21	4
12*	20	20	0
14*	28	28	0

* Critcal path

Table A-1
Event Table

ACTIVITY NAME	EVENT		ACTIVITY DURATION (t_e)	LATEST START TIME	EARLIEST EXPECTED COMPLETION TIME
	FROM	TO			
A*	2	4	5	0	5
B*	4	6	6	5	11
C	4	8	4	7	9
D*	6	12	9	11	20
E	8	10	8	13	17
F	8	12	9	11	18
G	10	14	7	21	24
H*	12	14	8	20	28

* Critical path

Table A-2
Activity Table

Section III: Critical Path Method

The critical path method (CPM) seeks to achieve the most efficient use of resources in the minimum feasible time by using time-cost trade-off calculations to make an analysis in maximizing use of available resources.

The CPM technique is used when the duration of projects is known. CPM obtains a trade-off between cost and time by emphasizing the relationship between applying more resources to shorten the duration of given jobs versus the increased cost of applying the additional personnel or resources. CPM has been widely used in environments where time factors and resources versus time relationship is known.

The first step in preparing the CPM model is to conduct a detailed analysis of the project. Figure A-12, Normal CPM Network Diagram, illustrates the CPM model. As in PERT, this is done by using a network diagram. After constructing the network diagram, the planner assigns the "crash" and "normal" time-cost estimates for each activity on the diagram. The "normal" time-cost estimation is based on previous experience and its associated cost. The "crash" time-cost is the minimum possible time to complete an activity by applying additional personnel and resources.

In Figure A-12, the example of a CPM network has a critical path of A-D-E indicated by the double line arrows. This portrays the path of the longest duration of the project using "normal" time. The first number in the parenthesis is the "normal" time estimate and the second number is the "crash" time of each activity.

The next step is to do a time versus cost trade-off analysis. First, the cost slope for each activity is calculated using the following formula:

$$\text{cost slope} = \frac{\text{crash cost - normal cost}}{\text{normal time - crash time}}$$

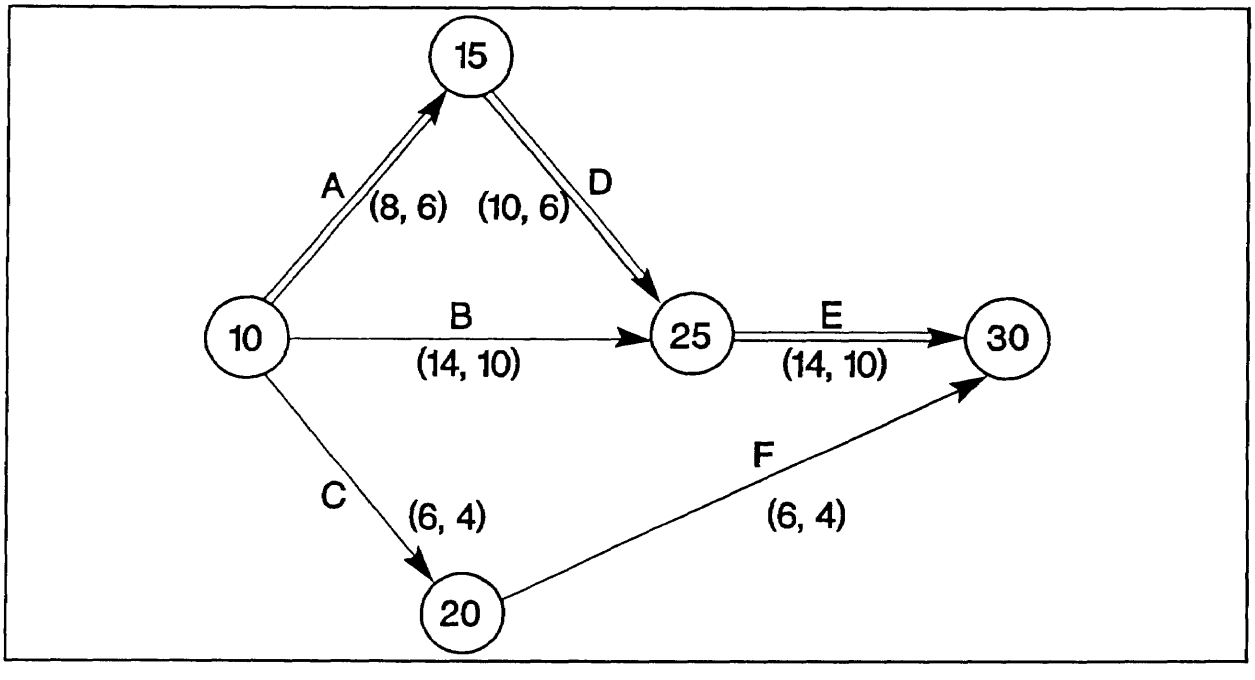


Figure A-12
Normal CPM Network Diagram

Cost slope is defined as the cost per day of accelerating an activity expressed as cost ($)/time period. Table A-3, Cost Table (a hypothetical cost table), compares the cost slopes for all the activities in Figure A-12.

	Normal		Crash		
Activities	Time (Days)	Cost ($)	Time (Days)	Cost ($)	Cost Slope ($/Day)
A	8	200	6	400	100
B	14	560	10	1040	120
C	6	100	4	200	50
D	10	400	6	720	80
E	14	400	10	960	140
F	6	200	4	400	100
TOTALS		1860	3720		

Table A-3
Cost Table

Based on Table A-3, a time versus cost analysis is conducted and alternatives for accelerating the project are formulated. Activities C and D are the least costly to accelerate. Activities E and B are the most costly. Using this information, alternative project durations can be determined as shown in Table A-4, Time versus Cost Alternatives.

Table A-4 shows that a project can be accelerated at relatively minimal cost, $420 for seven days. Any further acceleration will cost more based on the greater cost slopes for Activities A, B, E, and F. Decisionmakers must then weigh the increased cost against the benefits of further project acceleration.

Objective data in terms of time and cost are used in determining whether projects should be accelerated. Other subjective factors, such as quality of life or readiness, will factor into the final decision. Intangible factors such as these can potentially drive up the final cost of the project when not considered.

Project Duration	Cost ($)	Remarks
32 Days	1860	"Normal" duration along the critical path
31 Days	1910	Crash Activity C, decrease 1 day (+$50)
30 Days	1960	Crash Activity C, decrease 2 days (+$100) NOTE: Activity C can only be accelerated ("crashed") 2 days based on the minimum time for that activity
29 Days	2040	Crash Activity, decrease 2 days (+$100) and Activity D, decrease 2 days (+$160)
28 Days	2120	Crash Activity, decrease 2 days ($100) and Activity D, decrease 2 days (+160)
27 Days	2200	Crash Activity, decrease 2 days ($100) and Activity D, decrease 3 days (+$240)
26 Days	2280	Crash Activity, decrease 2 days (+$100) and Activity D, decrease 4 days (+$320) NOTE: Activity D can only be accelerated ("crashed") 4 days based on the minimum time for that activity

Table A-4
Time Versus Cost Alternatives

Section IV: Gantt Charts

Gantt charts provide graphic representation in the form of a bar chart to depict the time elements of activities within a project. These are represented by bars along a timeline.

The main elements of a Gantt chart are:

- The list of activities for a specific project.
- The scheduled start time for each activity.
- Projected completion time for each activity.
- Status.

Actual start and completion dates for each activity may also be included as project management tool.

Figure A-13 shows a hypothetical Gantt chart using the activities and start and completion times from Figure A-12. Gantt charts are constructed by placing the list of activities or phases in a column with scheduled start and projected completion of the activity indicated by the beginning and end of each bar. The actual start and completion dates of each activity are indicated by Xs above each bar graph. The arrow below each bar provides the activity completion status. "Today's Date" is used as a reference.

The large volume of information that must be considered when making decisions requires that analysis be applied in making the best possible decisions. PERT, CPM, and Gantt are used when developing plans to incorporate new

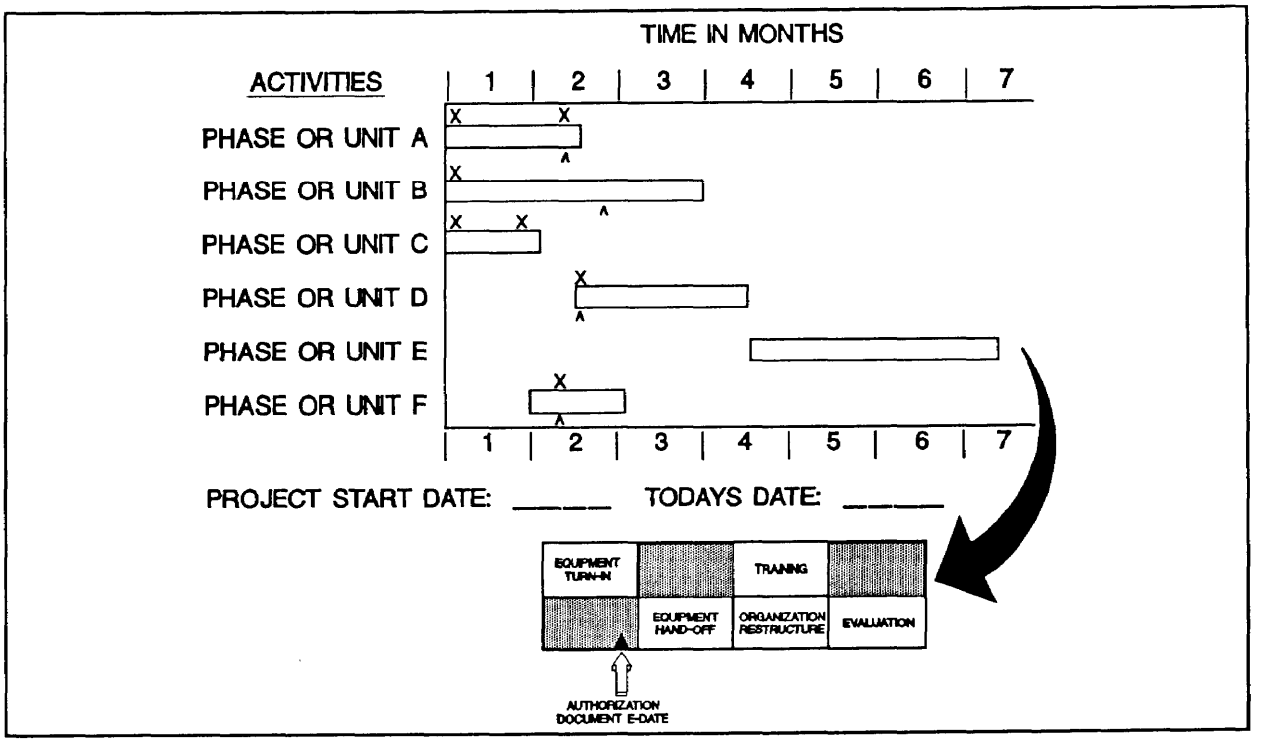


Figure A-13
Gantt Chart

materiel, new doctrine, and new structure into the force structure. Constraints will force decisions that make the best use of the resources available. The decision support analyses described in this appendix can assist in providing the efficiency and effectiveness needed in accomplishing the force integration mission.

Appendix A
Bibliography

Books

1. Wiest, Jerome D., and Levy, Ferdinand K., A Management Guide to PERT/CPM: With GERT/PDM/DCPM and other Networks; Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632; 1977, 1969 (pages 1-2, 4, 26, 28, 62-71, and 141-142).

2. Whitehouse, Gary E., Systems Analysis and Design Using Network Techniques; Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632; 1973 (pages 31 and 51-54).

3. Moder, Joseph J., and Phillips, Cecil R., Project Management with CPM and PERT, Second Edition; Litton Educational Publishing, Inc., 1970. Published by Van Nostrand Reinhold Company; 450 West 33rd Street, New York, New York 10001. Certain portions of this work copyright 1964 by Reinhold Publishing Corporation (pages 5-8, 12-13, 20).

Magazine Articles

Page, G. William, "Using Management Software in Planning," APA Journal, Autumn 1989 (page 494).

Appendix B
Planning, Programming, Budgeting, Execution Agencies and Activities

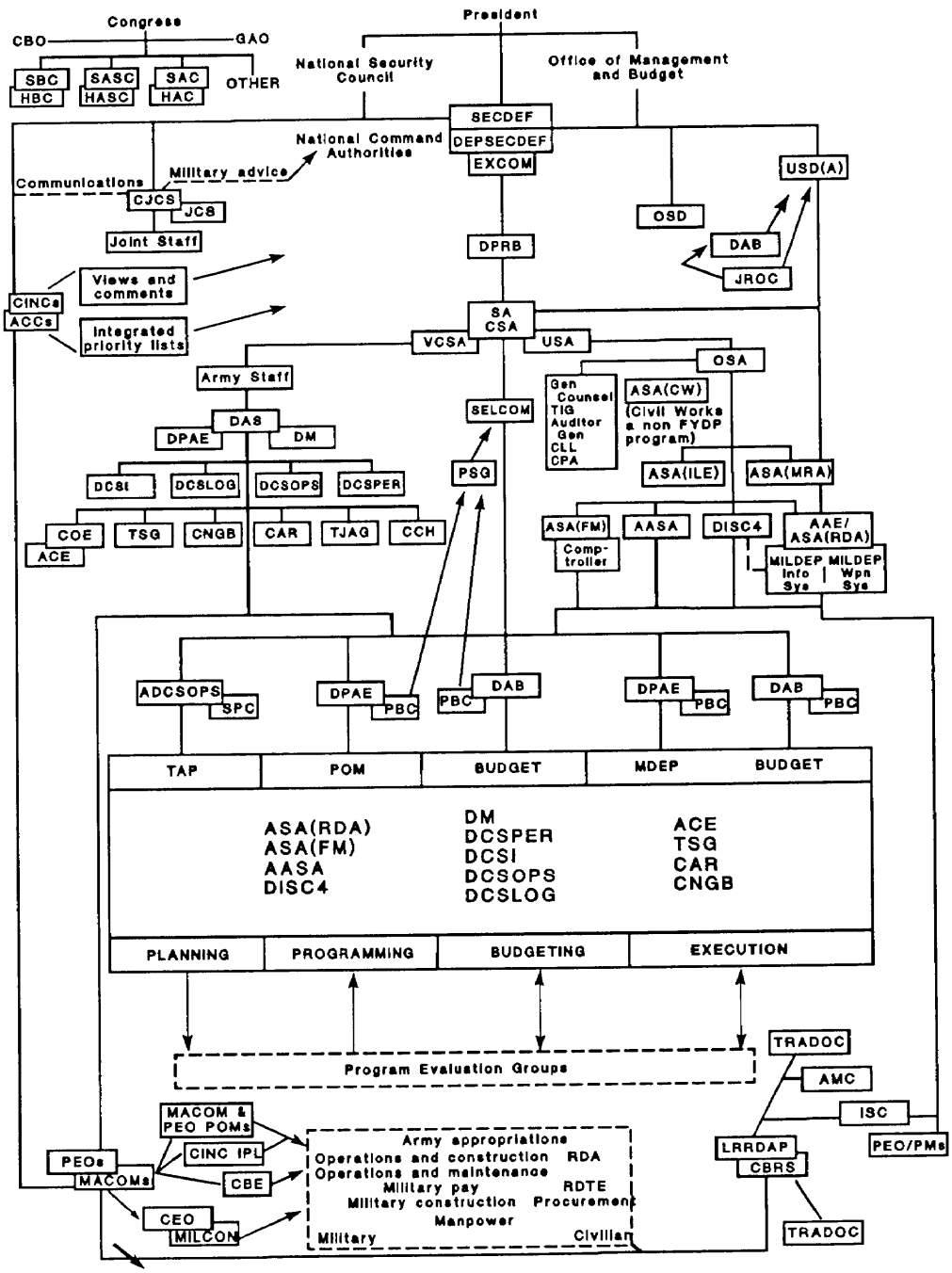


Figure B-1
PPBES Organizational Framework

AAE	Army Acquisition Executive
AASA	Administrative Assistant to the Secretary of the Army
ACC	Army Component Command
ACE	Assistant Chief of Engineers
ADCSOPS	Assistant DCSOPS
AMC	US Army Materiel Command
ASA	Assistant Secretary of the Army
ASA (FM)	ASA (Financial Management)
ASA (CW)	ASA (Civil Works)
ASA (RDA)	ASA (Research, Development, and Acquisition
ASA (MRA)	ASA (Manpower and Reserve Affairs)
ASA (ILE)	ASA (Installations, Logistics, and Environment)
CAR	Chief, Army Reserve
CBE	Command Budget Estimate
CBO	Congressional Budget Office
CBRS	Concept Based Requirements System
CCH	Chief of Chaplains
CINC	commander in chief
CJCS	Chairman, Joint Chiefs of Staff
CLL	Chief, Legislative Liaison
CNGB	Chief, National Guard Bureau
COE	Chief of Engineers
CPA	Chief of Public Affairs
CSA	Chief of Staff, US Army
DAB	Defense Acquisition Board, Deputy Assistant Secretary of the Army for Army Budget
DAS	Director of the Army Staff
DCSI	DCS for Intelligence
DCSLOG	DCS for Logistics
DCSOPS	DCS for Operations and Plans
DEPSECDEF	Deputy SECDEF
DISC4	Director of Information Systems for Command, Control, Communications, and Computers
DM	Director of Management
DPAE	Director of Program Analysis and Evaluations
DPRB	Defense Planning and Resources Board
EXCOM	Executive Committee
FYDP	Future Years Defense Program
GAO	General Accounting Office
HAC	House Appropriations Committee
HASC	House Armed Services Committee
HBC	House Budget Committee
HQDA	Headquarters Department of the Army
IPL	Integrated Priority List
ISC	US Army Information Systems Command
JCS	Joint Chiefs of Staff
JROC	Joint Requirements Oversight Council
LRRDAP	Long-Range Research, Development, and Acquisition Plan
MACOM	Major Army Command
MDEP	Management Decision Package
MILCON	military construction
OSA	Office of the Secretary of the Army
OSD	Office of the Secretary of Defense
PBC	Program and Budget Committee
PEO	Program Executive Officer
PM	Program/project/product manager
POM	Program Objective Memorandum
PSG	Prioritization Steering Group
RDTE	Research, Development, Test, and Evaluation
SA	Secretary of the Army
SAC	Senate Appropriations Committee
SASC	Senate Armed Services Committee
SBC	Senate Budget Committee
SECDEF	Secretary of Defense
SELCOM	Select Committee
SPC	Strategy and Planning Committee
TAP	The Army Plan
TIG	The Inspector General
TJAG	The Judge Advocate General
TRADOC	US Army Training and Doctrine Command
TSG	The Surgeon General
USA	Under Secretary of the Army
USD (A)	Under Secretary of Defense for Acquisition
VCSA	Vice Chief of Staff US Army

Figure B-1. PPBES Organizational Framework (continued)

Title	Proponent	Area of Activity
Manpower and Force Structure	DCSOPS	Active Army and reserve component modified table of organization and equipment (MTOE) and table of distribution (TDA) units; Individuals Account (TTHS: trainees, transients, holdees, and students); force manning decisions, civilian and military.[1&2]
General Purpose Forces	DCSOPS	Program 2, General Purpose Forces; Program 10, Support of Other Nations
Information Management (Sustaining)	DISC4	Program C3, Communications; (Sustaining) Information Systems for Command and Control, Communications, and Computers (C4); Automation MDEPs (including MSxx, MUxx, and Information management PEO MDEPs).
Intelligence	DCSI	Program 31, Intelligence
Army National Guard (ARNG)	CNGB	Military Construction, Army National Guard (MCNG); Operation and maintenance, Army National Guard (OMNG); National Guard personnel, Army (NGPA).
US Army Reserve (USAR)	CAR	Military Construction, Army Reserve (MCAR); Operation and maintenance, Army Reserve (OMAR); Reserve Personnel, Army (RPA).
Modernization (Battlefield)	DCSOPS ASA (RDA)	Research, Development, Test, and Evaluation, Army (RDTE); procurement appropriations fielding support costs.[1&2]
Supply and Maintenance	DCSLOG	Program 7S, Central Supply; Program 7M, Maintenance; Transportation; Defense Business Operations Fund (BDOF); including Army Stock Fund (ASF) and Army Industrial Fund (AIF).
School and Institutional Training	DCSOPS	Program 8T, Training.
Medical	TSG	Program 8M, Medical.
Personnel Activities	DCSPER	Program 80, Other personnel activities; Military Personnel, Army (MPA).
Administrative	AASA	Program 9, Administration and Associated Activities and other subprograms within the Operation and Maintenance, Army, appropriation.
Base Operations (BASOPS)	DM	Program 12, BASOPS including xxxx96 (BASOPS minus), xxxx78 (RPM K account), xxxx75 (RPM L account), and xxxx56 (environment) Table 1-3 lists individual letter accounts).
Construction and Housing	ACE	Military Construction, Army (MCA); Army Family Housing (AFN); Home Owners Assistance (HOA).

NOTES:
[1] The Manpower and Force Structure PEG and Modernization PEG address fundamental, strategy driven operational requirements. Remaining PEGs address functional requirements to sustain the force and to maintain readiness and the support bases.

[2] The Manpower and Force Structure PEG administers unit counts and end strength without dollars. The Modernization PEG deals with equipment quantities and dollars. Other PEGs deal with dollars only.

Figure B-2
Program Evaluation Groups

Army appropriation and fund managers

Resource Identification Code	Appropriation (fund)	Manager for Requirements Determination	Manager for Program and Performance
	Investment		
RDTE	Research, Development, Test, and Evaluation, Army	DCSOPS	ASA (RDA)
ACFT (APA)	Aircraft Procurement, Army	DCSOPS	ASA (RDA)
MSLS (MIPA)	Missile Procurement, Army	DCSOPS	ASA (RDA)
WTCV	Procurement of Weapons and Tracked Combat Vehicles, Army	DCSOPS	ASA (RDA)
AMMO	Procurement of Ammunition, Army	DCSOPS	ASA (RDA)
	Other Procurement, Army	DCSOPS	ASA (RDA)
	OPA 1	DCSOPS	ASA (RDA)
OPA	OPA 2	DCSOPS	ASA (RDA), DISC4
	OPA 3	DCSOPS	ASA (RDA)
MCA	Military Constructions, Army	ACE	ACE
MCNG	Military Construction, Army National Guard	CNGB	CNGB
MCAR	Military Construction, Army Reserve	CAR	CAR
AFHC	Family Housing, Army (Construction)	ACE	ACE
	Operations		
OMA	Operation and Maintenance, Army	Table 1-3	Table 1-3
OMNG	Operation and Maintenance, Army National Guard	CNGB	CNGB
OMAR	Operation and Maintenance, Army Reserve	CAR	CAR
MPA	Military Personnel, Army	DCSPER	DCSPER
NGPA	National Guard Personnel, Army	CNGB	CNGB
RPA	Reserve Personal, Army	CAR	CAR
AFHO	Family Housing, Army (Operation)	ACE	ACE
NBRP	National Board for the Promotion of Rifle Practice, Army	DCSOPS	DCSOPS
DBOF	Defense Business Operations Fund	ASA (FM)	ASA (FM)
AIF	Army Industrial Fund	DCSLOG	DCSLOG
ASF	Army Stock Fund	DCSLOG	DCSLOG
SCA	Surcharge Collections, Sales of Commissary Stores, Army	ASA (FM)	ASA (FM)
CAWCF	Army Conventional Ammunition	ASA (RDA)	ASA (RDA)
MAP	Military Assistance Program	DCSLOG	DCSLOG
IMET	International Military Education and Training Transfer Appropriation	DCSLOG	DCSLOG
FMF	Foreign Military Financing Program	DCSLOG	DCSLOG
FMS	Foreign Military Sales Program	DCSLOG	DCSLOG
HOA	Home Owners Assistance Fund, Defense	ACE	ACE
ATF	Department of the Army Trust Funds	ASA (FM)	ASA (FM)

Notes:
[1]ASA (FM) serves as Appropriation Sponsor for all appropriations (funds) except Army National Guard and US Army Reserve appropriations, whose Sponsors are the Chief, National Guard Bureau and Chief, Army Reserve, respectfully.

Figure B-3
Army Appropriation and Fund Managers

Glossary

Part I--Acronyms and Abbreviations

A

AAE	Army Acquisition Executive
AAMMP	Active Army Military Manpower Program
AAO	Army Acquisition Objective
AASA	Administrative Assistant to the Secretary of the Army
ABCS	Army Battle Command System
AC	Active Component
ACC	Army Component Command
ACAT	Acquisition Category
ACE	Assistant Chief of Engineers
ACTS	Army Criteria Tracking System
ADCSOPS	Assistant DCSOPS
ADT	Active Duty for Training
AFH	Army Family Housing
AFHC	Army Family Housing (Construction)
AFHO	Army Family Housing (Operation and Maintenance)
AFLCM	Army Functional Life Cycle Model
AFPDA	Army Force Planning Data and Assumptions
AGR	Active Guard and Reserve
AIT	Advanced Individual Training
ALO	Authorized Level of Organization
ALRPG	Army Long Range Planning Guidance
AMC	Army Materiel Command
AMIM	Army Modernization Information Memorandum
AMMS	Acquisition Management Milestone System
AMOPES	Army Mobilization and Operation Planning and Execution System
AMS	Army Management Structure
AMT	Army Modernization Training
AMP	Army Modernization Plan
APG	Army Program Guidance
APPIS	Army POM Preparation Instructions Supplement
ARCOM	Army Reserve Command
ARFPC	Army Reserve Forces Policy Committee
ARNG	Army National Guard
ARPERCEN	Army Reserve Personnel Center
ARSTAF	Army Staff
ART	Army Reserve Technicians
ARTEP	Army Training and Evaluation Programs
ASA	Assistant Secretary of the Army
ASA(CW)	ASA (Civil Works)
ASA(FM)	ASA (Financial Management)
ASA(ILE)	ASA (Installations, Logistics, and Environment)
ASA(M&RA)	ASA (Manpower and Reserve Affairs)
ASA(RDA)	ASA (Research, Development, and Acquisition)

ASARC	Army System Acquisition Review Council
ASA(RDA)	ASA (Research, Development, and Acquisition)
ASD(RA)	Assistant Secretary of Defense (Reserve Affairs)
ASI	Additional Skill Identifier
ASIOE	Associated Support Items of Equipment
ASIP	Army Stationing and Installation Plan
AT	Annual Training
ATC	Army Training Centers
ATD	Advanced Technology Demonstrations
ATRRS	Army Training Requirements and Resources System
AUTS	Automatic Update Transaction System
AWE	Advanced Warfighting Experiments
AWP	Annual Work Plan

B

BCBL	Battle Command Battle Lab
BCTP	Battle Command Training Program
BES	Budget Estimate Submissions
BII	Basic Issue Items
BLWE	Battle Lab Warfighting Experiments
BMAR	Backlog of Maintenance and Repair
BoD	Board of Directors
BOIP	Basis of Issue Plans
BT	Basic Training

C

C4	Command, Control, Communications, and Computers
CAA	Concepts Analysis Agency
CAD	Course Administrative Data
CAP	Crisis Action Procedures
CAR	Chief of the Army Reserve
CATS	Combined Arms Training Strategy
CBE	Command Budget Estimate
CBO	Congressional Budget Office
CBRS	Concept Based Requirements System
CBS-X	Continuing Balance System-Expanded
CCH	Chief of Chaplains
CEP	Concept Evaluation Programs
CG	Chairman's Guidance
CI	Command Integrator
CINC	Commanders-in-Chief
CJCS	Chairman, Joint Chiefs of Staff
CLL	Chief, Legislative Liaison
CNGB	Chief, NGB
COMPO	Component
CONPLAN	Concept Plan (Operations Plan in Concept Format)
CONUS	Continental United States
CONUSA	Continental US Army

CPA	Chairman's Program Assessment/Chief of Public Affairs
CPG	Contingency Planning Guidance
CPM	Critical Path Method
CPX	Command Post Exercises
CRRC	Construction Requirements Review Committee
CSA	Chief of Staff, U.S. Army
CSPAR	Commander-in-chief Preparedness Assessment Report
CSSBL	Combat Service Support Battle Lab
CTA	Common Table of Allowance
CTU	Consolidated Table of Organization and Equipment Update
CY	Current Year

D

DA	Department of the Army
DAB	Defense Acquisition Board
DAMPL	DA Master Priority List
DARNG	Director of the Army National Guard
DAS	Director of the Army Staff
DBSBL	Dismounted Battle Space Battle Lab
DCSI	DCS for Intelligence
DCSOPS	Deputy Chief of Staff for Operations
DCSLOG	DCS for Logistics
DET	Displaced Equipment Training
DEPSECDEF	Deputy SECDEF
DI	Document Integrator
DISC4	Director of Information Systems for Command, Control, Communications, and Computers
DM	Director of Management
DOD	Department of Defense
DODAAC	Department of Defense Activity Address Codes
DPAE	Director of Program Analysis and Evaluation
DPG	Defense Planning Guidance
DPP	Dedicated Procurement Program
DPW	Director of Public Works
DRB	Defense Resource Board
DRMO	Defense Reutilization and Marketing Office
DS	Direct Support
DSABL	Depth and Simultaneous Attack Battle Lab
DSS	Decision Support System
DSU	Direct Support Units
DTLOMS	Doctrine, Training, Leader Development, Organization, Materiel, and Soldiers
DTT	Doctrine and Tactics Training
DY	Design Year

E

ECBRS	Enhanced Concept Based Requirements System
EDATE	Effective Date of Change

EELSBL	Early Entry Lethality and Survivability Battle Lab
ELIM-COMPLIP	Enlisted Loss Inventory Model-computation of Manpower Program Using Linear Programming
ERC	Equipment Readiness Code
EXCOM	Executive Committee

F

FAA	Functional Area Assessment
FAD	Fund Authorization Document
FASTALS	Force Analysis Simulation of the Theater Administrative and Logistics Support
FDU	Force Design Update
FI	Force Integrator
FIA	Force Integration Analysis
FIFA	Force Integration Functional Areas
FM	Field Manual
FMMP	Force Modernization Master Plan
FMS	Foreign Military Sales
FORSCOM	Forces Command
FPS	Facility Planning System
FSC	Force Structure Conference
FSP	Facility Support Plan
FTS	Full-time Support
FTX	Field Training Exercises
FYDP	Future Year Defense Plan

G

GAO	General Accounting Office
GOCOM	General Officer Command
GOSC	General Officer Steering Committee
GOWG	General Officer Working Group
GS	General Support
GSA	General Services Administration
GY	Guidance Year

H

HAC	House Appropriations Committee
HASC	House Armed Services Committee
HBC	House Budget Committee
HQDA	Headquarters, Department of the Army

I

ICP	Incremental Change Packages
IDT	Inactive Duty Training
IFS	Integrated Facilities System
ILS	Integrated Logistics Support

IMA	Individual Mobilization Augmentation
IMP	Installation Master Plans
IMSC	Installation Management Steering Committee
ING	Inactive Army National Guard
IPD	Installation Planning Board
IPL	Integrated Priority List
IPPT	Integrated Process and Product Teams
IRR	Individual Ready Reserve
ISC	US Army Information Systems Command
ITP	Individual Training Plan

J

JCS	Joint Chiefs of Staff
JMNA	Joint Military Net Assessment
JOPES	Joint Operations Planning and Execution System
JPD	Joint Planning Document
JROC	Joint Requirements Oversight Council
JSCP	Joint Strategic Capabilities Plan
JSPS	Joint Strategic Planning System
JSR	Joint Strategy Review

L

LAM	Louisiana Maneuvers
LASS	LSA Application Status System
LCC	Life Cycle Cost
LCSMM	Life Cycle System Management Model
LIN	Line Item Number
LOGNET	Logistics Data Network
LOGSACS	Logistics Structure and Composition System
LTOES	Living Table of Organization and Equipment System
LRRDAP	Long-range Research, Development, and Acquisition Plan
LSA	Logistics Supportability Analysis

M

MAC	Maneuver Area Commands
MACOM	Major Army Command
MAISRC	Major Automated Information Systems Review Council
MANPRINT	Manpower and Personnel Integration
MARB	Materiel Acquisition Review Board
MARC	Manpower Requirements Criteria
MBI	Major Budget Issues
MBSBL	Mounted Battle Space Battle Lab
MCA	Military Construction Army
MCAR	Military Construction Army and Army Reserve

MDEP	Management Decision Packages
MDR	Milestone Decision Review
METT-T	Mission, Enemy, Terrain, Troops, and Time Available
MFA	Materiel Fielding Agreement
MFP	Materiel Fielding Plan
MILCON	Military Construction
MMCA	Minor Military Construction Army
MNS	Mission Need Statement
MON	Memorandum of Notification
MOS	Military Occupational Specialty
MOSLS	Military Occupational Specialty Level System
MPES	Mobilization Planning and Execution System
MPDI	MACOM POM Development Instructions
MRIS	Modernization Resource Information System
MRL	Materiel Requirements List
MSP	Mission Support Plan
MTC	Maneuver Training Commands
MTP	Materiel Transfer Plan
MTOE	Modified Tables of Organization and Equipment
MUSARC	Major US Army Reserve Commands
MUTA	Multiple Unit Training Assemblies
MWR	Morale, Welfare, Recreation

N

NAF	Nonappropriated Funds
NCA	National Command Authorities
NET	New Equipment Training
NETP	New Equipment Training Plan
NGB	National Guard Bureau
NMS	National Military Strategy
NOF	Notional Force
NOT	New Organization Training
NSC	National Security Council

O

OCAR	Office of the Chief, Army Reserve
OCONUS	Outside the Continental US
ODCSOPS	Office of the Deputy Chief of Staff, Operations
ODCSPER	Office of the Deputy Chief of Staff, Personnel
OI	Organization Integrator
OMA	Operations and Maintenance, Army
OMAR	Operations and Maintenance, Army Reserve
OPCON	Operational Control
OPFAC	Operational Facilities
OPLAN	Operational Plan
OPORD	Operation Order
OPTEMPO	Operating Tempo
ORD	Operational Requirements Document

OSA	Office of the Secretary of the Army
OSD	Office of the Secretary of Defense
OSUT	One-station Unit Training
OT&E	Operational Testing and Evaluation

P

PAR	Preparedness Assessment Report
PBC	Program and Budget Committee
PBG	Program and Budget Guidance
PCS	Permanent Change of Station
PEG	Program Evaluation Groups
PEO	Program Executive Officer
PERSACS	Personnel Structure and Composition System
PERSCOM	Personnel Command
PERT	Program Evaluation and Review Technique
PLL	Parts Load List
PM	Program Managers
PMAD	Personnel Management Authorization Document
POC	Point of Contact
POI	Program of Instruction
POM	Program Objective Memorandum
PPBERS	Program Performance and Budget Execution Review System
PPBES	Planning, Programming, Budgeting, and Execution System
PPBS	Planning, Programming, and Budgeting System
PPI	POM Preparation Instructions
PQT	Production Qualification Test
PROBE	Program Optimization and Budget Evaluation
PSG	Prioritization Steering Group

Q

QMP	Qualitative Management Program
QQPRI	Qualitative and Quantitative Personnel Requirements Information

R

RAM	Reliability, Availability, and Maintainability
RC	Reserve Components
RCCC	Reserve Component Coordination Council
RDA	Research, Development, and Acquisition
RDT&E	Research, Development, Test, and Evaluation
REP-63	Reserve Enlistment Program of 1963
REQUEST	Recruit Quota System
RFPB	Reserve Forces Policy Board
RMU	Resource Management Update
ROE	Rules of Engagement
ROTC	Reserve Officers' Training Corps
RPLANS	Real Property Planning and Analysis System
RPMA	Real Property Maintenance Activities

RPMS	Real Property Management System
RSI	Rationalization, Standardization, and Interoperability

S

SA	Secretary of the Army
SAC	Senate Appropriations Committee
SACS	Structure and Composition System
SASC	Senate Armed Services Committee
SAT	Systems Approach to Training
SBC	Senate Budget Committee
SECDEF	Secretary of Defense
SELCOM	Select Committee
SI	Systems Integrator
SIPC	Stationing and Installation Planning Committee
SOCOM	Special Operations Command
SOF	Special Operations Forces
SORTS	Status of Resource and Training System
SPC	Strategy and Planning Committee
SPCC	Study Program Coordination Committee
SRC	Standard Requirement Code
ST	Sustainment Training
STANFINS	Standard Financial System
STARC	State Area Command
STRAP	System Training Plan
STTE	Special Tools and Test Equipment

T

TAA	Total Army Analysis
TAEDP	Total Army Equipment Distribution Program
TAG	The State Adjutant General
TAP	The Army Plan
TAPDB	Total Army Personnel Database
TBEP	Training Base Expansion Plan
TDA	Table of Distribution and Allowances
TMDE	Test, Measurement, and Diagnostic Equipment
TOA	Total Obligation Authority
TOE	Table of Organization and Equipment
TOM-D	Training, Operation, Mobilization, and Deployment
TPF	Total Package Fielding
TPFDD	Time-phased Force Deployment Data
TPFDL	Time-phased Force Deployment List
TPU	Troop Program Unit
TRADOC	Training and Doctrine Command
TRAS	Training Requirements Analysis System
TSG	The Surgeon General
TSOP	Tactical Standing Operating Procedures
TTHS	Transients, Trainees, Holdees, and Students
TTP	Tactics, Techniques, and Planning

TUFMIS	Tactical Unit Financial Management Information System

U

UAD	Updated Authorizations Document
UIC	Unit Identification Code
URR	Unconstrained Requirements Report
URS	Unit Reference Sheet
USA	Under Secretary of the Army
USACE	US Army Corps of Engineers
USACGSC	US Army Command and General Staff College
USACOM	US Atlantic Command
USAR	United States Army Reserve
USARC	USAR Command
USAREC	US Army Recruiting Command
USARF	US Army Reserve Force
USARPAC	US Army Pacific
USC	US Code
USCENTCOM	US Central Command
USD(A&T)	Under Secretary of Defense for Acquisition and Technology
USEUCOM	US European Command
USPACOM	US Pacific Command
USPFO	United States Property and Fiscal Officer
USR	Unit Status Report
USSOCOM	US Special Operations Command
USSOUTHCOM	US Southern Command
USSPACECOM	US Space Command
USSTRATCOM	US Strategic Command
USTRANSCOM	Transportation Command
UTA	Unit Training Assemblies

V

VCSA	Vice Chief of Staff of the Army

W

WARF	Wartime Replacement Factors

Part II--Definitions

acceptability. The consideration of costs and risks in the formulation of courses of action.

activate. Place a constituted unit on active status with or without personnel or equipment.

activity. An organizational structure not designed to perform a combat mission.

allot. Assign an organization, unit, or activity to a component.

anticipation. The ability to avoid surprise and make mental and physical adjustments as a result of monitoring current activities and determining future actions.

assessment. The process of evaluating activities to objective and subjective criteria.

authorization. The allocation of resources against a stated requirement.

capability. The potential to achieve an objective.

combat development. The process of determining doctrinal, training (to include leader development), organizational, and materiel requirements and translating organizational requirements into unit models.

combat service support. The essential functions, activities, and tasks necessary to supply, maintain, transport, and service organizations.

combatant commander. A commander-in-chief of a unified command with warfighting responsibilities.

command. The exercise of legal authority.

command integrator. Member of organization management structure responsible for representation of major command interests and management of TDA structure for MACOMs.

component. One of the nine elements into which resources and/or force structure are allotted; one of four armed Services.

component commander. Commander of a Service-specific force in a unified command.

concept. A concise statement of parameters to influence actions and activities to achieve a desired end state.

conflict termination. The point at which conflict ends and postconflict activities begin.

consolidate. Merge existing organizations, units or activities.

constitute. Place an organization or unit on the official rolls of the Army.

constraint. Resource (manpower, materiel, money, time, technology, or information) limitations that restrict freedom of action.

convert. Change an organization or unit structure (from SRC to SRC).

demobilization. The process of returning force structure and materiel to a premobilization condition or other designated end state.

deployment. The movement or relocation of forces to a station or area of operations.

discontinue/disestablish. Terminate a TDA organization or activity.

distribution system. The facilities, installations, methods, and procedures designed to receive, support, allocate, and control the flow of personnel or materiel from the acquisition source to user organization or activity.

doctrine. Fundamental principles that are authoritative but require judgment in application based on local conditions.

doctrine development. The process of translating doctrinal requirements into publications that prescribe doctrine, tactics, techniques, and procedures.

document integrator. Member of organization management structure responsible for documentation of programmed organizational change.

end state. A set of prescribed conditions to be achieved at termination of planned activities.

force. A structured group of functionally dissimilar organizations designed to accomplish a doctrinal mission.

force development. The process of translating materiel and organizational requirements into research, development, and acquisition programs and force structure.

force integration. The management process that enables the introduction, incorporation, and sustainment of organizational, doctrinal, and materiel change.

force integration functional areas (FIFA). Vertically oriented functions that structure, man, equip, train, sustain, deploy, station, and fund combat ready organizations.

force integrator. Member of organization management structure responsible for representation of interests of functionally dissimilar organizations grouped into brigades, regiments, groups, divisions, and corps.

force management. The process of determining force requirements and alternative means of resourcing requirements by allocating resources and assessing the utilization of resources to accomplish Army functions and missions.

force modernization. The improvement of force capability through force integration.

force package. Forces assigned to a prioritized group based on geographic orientation or time-phased deployment.

force projection. The deployment of forces from CONUS or OCONUS stations to conduct combat operations or operations other than war; spans mobilization through demobilization activities.

force readiness. The readiness of the Army as measured by its ability to man, equip, and train its forces and to mobilize, deploy and sustain them as required to accomplish assigned missions.

force structure. The composition, by number and type of organizations, of the current, planned, or programmed Total Army.

forward presence. Forces assigned or deployed OCONUS.

functional area assessment. A method for integrating the efforts of the Army Staff, the US Army Training and Doctrine Command (TRADOC), the US Army Materiel Command (AMC), and other major Army commands (MACOMs) to identify discontinuities in Army plans and develop action plans that will assure success of Army force integration.

inactivate. Place an organization or unit on inactive status without personnel or equipment.

infrastructure. The facilities, organizations, activities, and utilities that support forces in a region.

instant unreadiness. The result of failure to provide authorized resources (personnel and/or equipment) to an organization on the effective date of authorization.

leadership. The art of influencing others to accomplish functions and missions by providing purpose, direction, and motivation.

logistics. The process of moving and sustaining forces through supply, maintenance, transportation, and field services.

major Army command. One of the commands directly subordinate to HQDA.

management. The process of directing or guiding people or agencies to meet objectives and goals.

manpower. The aggregate number of people required or authorized in the Total Army.

materiel development. The process of translating materiel requirements into executable programs within cost, schedule, and performance standards.

mobilization. The process by which a force is brought to a condition of readiness for combat operations or operations other than war by activating and assembling organizations, individuals, supplies, and materiel.

operations other than war. Military activities during peacetime or conflict not involving direct contact between two organized forces.

operating tempo. The estimated average annual system usage expressed in miles or hours per year, or other appropriate units of measure of resources required per system.

organization. A color-bearing battalion or squadron formation composed of subordinate units designed to perform a combat mission; unit identification code designator of "AA."

organization development. The process of translating organization requirements into unit models.

organization integration. Management of change in organizations.

organization integrator. Member of organization management structure responsible for representation of interests of functionally similar organizations.

organize. Assign personnel and equipment to an organization or unit to make it operative.

port of embarkation/debarkation. An air or sea port where organizations and materiel are deployed from/to a theater of operations.

power projection. The application of elements of national power to respond to a crisis.

readiness. The ability of an organization to perform as structured.

redesignate. Change an organization or unit noun or numeric identification.

reorganize. Change an organization or unit structure (within the same SRC).

requirement. Statement of manpower, materiel, or capability needed to perform a task, function, or mission.

status. The condition of an organization measured at a point in time.

synchronization. The ability to focus resources and activities in time and space to produce a desired result.

system integrator. Member of organization management structure responsible for representation of user interests in materiel system management.

Total Army Analysis. The process that analytically and subjectively generates the below-the-line tactical support forces and the general purpose forces necessary to support the above-the-line divisional and nondivisional combat forces contained in the Army fiscally constrained force (divisions, separate brigades, special forces groups, and armored cavalry regiments).

training development. The process of translating requirements for training into programs, materials, methods, and devices.

unified command. A command with a broad, continuing mission under a single commander that is composed of component commands of two or more Services.

unit. A subordinate company, battery, or troop of a color-bearing organization; unit identification code designator of "TO," "AO," "BO," etc.

References

SOURCES USED

Department of Defense (DOD)

DOD Directive 5000.1, Defense Acquisition, OUSD(A), 23 Feb 91

DOD Instruction 5000.2, Defense Acquisition Management Policies and Procedures, OUSD(A), 23 Feb 91

DOD Manual 5000.2M, Defense Acquisition Management Documentation and Reports, OUSD(A), 23 Feb 91

Joint Publications

Joint Pub 1-02, "Department of Defense Dictionary of Military and Associated Terms," JCS (J7), 23 Mar 94

CJCS Memorandum of Policy No. 7 (CJCS MOP 7), Joint Strategic Planning System, JCS, 17 Mar 93

JCS SM-209-83, Joint Operation Planning System--Volume I (Deliberate Planning Procedures), JCS, 15 Apr 83

US Army Regulations (ARs)

AR 1-1, Planning, Programming, Budgeting, and Execution System (Draft Update), HQDA (ASA(FM)), 30 Jan 94

AR 5-1, Army Management Philosophy, HQDA (DACS-DMM), 12 Jun 92

AR 5-3, Installation Management and Organization, HQDA (DACA-PMI), 9 Oct 92

AR 5-5, Army Studies and Analyses, HQDA (DACS-DMO), 15 Oct 81

AR 5-8, Host-Supported Activity Relationships (Intraservice), HQDA (DACS-DMA), 15 Jan 74, w/Change 1, 10 Jan 75

AR 5-9, Intraservice Support Installation Area Coordination, HQDA (DACA-RMA), 1 Mar 84

AR11-12, Logistics Priorities, HQDA (DALO-SMR), 1 Feb 82

AR 11-40, Functional Area Assessment, HQDA (DAMO-FDY), 11 Sep 86

AR 12-16, Mutual Logistics Support Between the United States Army and Governments of Eligible Countries, HQDA (DALO-PLO), 6 Feb 92

AR 15-14, Systems Acquisition Review Council Procedures, HQDA (DAMA-RA), 1 May 81

AR 18-19, Troop Program Sequence Number, HQDA (DAMO-FDA), 5 Dec 86

AR 25-1, The Army Information Resources Management Program, HQDA (DISC4), 18 Nov 88, with Interim Changes 101, 15 Nov 89, and 102, 8 Apr 91

AR 25-55, The Department of the Army Freedom of Information Act Program, HQDA (SAIS-PS), 10 Jan 90, with Interim Change 101, 30 Sep 91

AR 37-100-93, The Army Management Structure (AMS), FY93, HQDA (OASA(FM)), 1 Jul 92

AR 70-1, Army Acquisition Policy, HQDA (SARD-ZR), 31 Mar 93

AR 70-15, Research and Development: Product Improvement of Material, HQDA (DAMA-PPM-A), 15 Jun 80

AR 71-2, Basis of Issue Plans (BOIP) and Qualitative and Quantitative Personnel Requirements Information (OOPRI), HQDA (US Army Force Integration Support Agency (MOFI-TED)), 16 Jul 90

AR71-3, User Testing, OTEA (CSTE-SP), 1 Mar 86

AR 71-9, Material Objectives and Requirements, HQDA (DAMO-FDR), 20 Feb 87

AR 71-11, Total Army Analysis (TAA) , HQDA (DAMO-FD), 1 Nov 82

AR 71-13, The Department of the Army Equipment Authorization and Usage Program, HQDA (US Army Force Development Support Agency (MOFD-DOC-O)), 3 Jun 88

AR71-31, Management System for Tables Of Organization and Equipment, HQDA (ODCSOPS (USAFDSA)), 20 Jul 89

AR 220-1, Unit Status Reporting, HQDA (DAMO-ODR), 31 Jul 93

AR 220-5, Designation, Classification, and Change in Status of Units, HQDA (DAMH-HSO), 3 Sep 91

AR 310-25, Dictionary of US Army Terms, HQDA (DAAG-AMS-P), 15 Oct 83

AR 310-31, Management System for Tables of Organization and Equipment (The TOE System), HQDA (DAMO-RQR), 2 Sep 74, with Change 1, 15 Sep 80

AR 310-49, The Army Authorization Documents System (TAADS), HQDA (DAMO-FDP), 15 Dec 80

AR 350-35, Army Modernization Training,HQDA (DAMO-TR), 30 May 90

AR 380-90, Troop List, Manpower, and Force Structure Security Classification Guidance, HQDA (DAMO-FDF), 15 Apr 80

AR 570-2, Manpower Requirements Criteria (MARC) -- Tables of Organization and Equipment, HQDA (USAMARDA), 15 May 89

AR 570-4, Manpower Management, HQDA (DAPE-MBA-PS), 25 Sep 89

AR 570-5, Manpower Staffing Standards System, HQDA (DAPE-MB)(US Army Requirements and Documentation Agency), 30 Jun 89

AR 600-83, The New Manning System -- COHORT Unit Replacement System, HQDA (DAPE-MPU), 27 Oct 86

AR 611-1, 611-101, 611-112, 611-201, Military Occupational Classification and Structure (MOCAS) (Officer, Warrant Officer, and Enlisted Specialty Classification), Issue Number 4, HQDA (DAPE-MB), 19 Nov 92

AR 700-127, Integrated Logistic Support, HQDA (DALO-SMS), 17 Jul 90

AR 700-142, Materiel Release, Fielding, and Transfer , HQDA (DALO-SMS), 27 Apr 88

AR 702-3, Army Materiel Systems Reliability, Availability, and Maintainability, HQDA (DCSRDA), 1 May 82

AR 702-9, Production Testing of Army Materiel, AMC, 7 Mar 77

Department of the Army Pamphlets (DA PAMs)

DA PAM 5-9, Planning, Programming, Budgeting, and Execution System (PPBES), HQDA (DACS-DPD), 1 Aug 86

DA PAM 5-25, Army Modernization Information Memorandum (AMIM), HQDA (DAMO-FDR), 7 Jan 91

DA PAM 570-5, The Army Functional Dictionary -- Manpower, HQDA (USAFISA (AFD-M)), 4 Dec 89

DA PAM 700-142, Instructions for Materiel Release, Fielding, and Transfer, HQDA (DALO-SMS), 18 May 88

Field Manuals (FMs)

FM 25-100, Training the Force, HQDA (USACAC (ATZL-SWA-DL)), 18 Nov 88

FM 25-101, Battle Focused Training, HQDA (USACAC (ATZL-SWW-L)), 30 Sep 90

FM 100-5, Operations, HQDA (CGSC), 14 Jun 93

FM 100-11, Force Integration, HQDA (TRADOC (ATZL-SWA-DL)), 29 Sep 88

Chief of Staff, US Army Regulations (CSRs)

CSR 11-24, Force Structure Procedures, HQDA (OCSA/DPAE), 8 Dec 83

CSR 25-70, Force Development Management Information Systems, HQDA (ODCSOPS (USAFISA/USAPOISA)), 17 Sep 91

CSR 71-5, Combat to Support Distribution, HQDA (ODCSOPS), 19 Mar 85

US Army Reports and Studies

1. The United States Army Posture Statement FY93, Secretary of the Army and Chief of Staff, Army, HQDA, 1992

2. The Army Budget: Green Book, FY92-93 ABS, HQDA (Army Budget Office), Apr 92

3. Operation Desert Storm Lessons Learned, CAC (CALL), Volume 1: Significant Stand Alone Subjects, 13 Nov 91

4. Operation Desert Storm Lessons Learned, CAC (CALL), Volume II: Strategic, 13 Nov 91

5. Operation Desert Storm Lessons Learned, CAC (CALL), Volume III: Operational, 13 Nov 91

6. Operation Desert Storm Lessons Learned, CAC (CALL), Vol IV: Tactical, 13 Nov 91

7. Operation Desert Storm Lessons Learned, CAC (CALL), Volume V: Special Subjects, 13 Nov 91

8. Operation Desert Storm Lessons Learned, CAC (CALL), Volume VI: Intelligence/Special Operations Equipment, 13 Nov 91

9. Operation Desert Storm Lessons Learned, CAC (CALL), Volume VII: Redeployment/Demobilization, 13 Nov 91

10. Desert Shield/Desert Storm After Action Report, HQDA (ODCSOPS/CAA), Sep 91, (3 Volumes)

11. Army National Guard, After Action Report, Operation Desert Shield/Operation Desert Storm, NGB, 28 Jun 91

US Army Miscellaneous Publications

1. MQS II, Task S1-9016.01-0002 (Lesson 6), Discuss the Force Integration Concept , FID, undated

2. SB 700-20, Army Adopted/Other Items Selected for Authorization/List of Reportable Items, 1 Mar 90

3. Army Command, Leadership and Management: Theory and Practice -- 1993-1194, US Army War College (Department of Command, Leadership, and Management), Aug 93

4. Force Builder Decision Support System Functional Description, HQDA (US Army Force Integration Support Agency (MOFI-FD-I)), 7 Aug 91

5. Functional Description for the Data Management Control System (DMCS), HQDA (ODCSOPS (USAFISA)), 30 Mar 90

6. Computer Operation Manual for the Data Management Control System (DMCS), Version 2, HQDA (ODCSOPS (USAFISA)), 31 Jul 90

7. HQDA Letter 11-91-1, Army Equipping Policy AEP), HQDA (DAMO-FDR), 15 Mar 91

8. The Structure and Manpower Allocation System (SAMAS) Functional Description, Fourth Publication, HQDA (US Army Force Integration Support Agency (MOFI-RAP)), 17 Oct 91

9. The Structure and Manpower Allocation System (SAMAS) Users Guide, Third Publication, HQDA (US Army Force Integration Support Agency (MOFI-RAP)), 14 Feb 92

10. CTA 50-909, Field and Garrison Furnishings and Equipment, HQDA (Director, US Army Equipment Authorizations Review Agency), 1 Jun 89

11. Management Decision Package Procedures (Draft MDEP Procedures), HQDA (PA&E (DACS-DPD)), 1 Feb 92

12. Force Accounting System Information Guide, HQDA (ODCSOPS (USAFDSA)), undated

13. The Force Development and Integration User's Reference Manual, US Army Force Integration Support Agency (USAFISA), 31 Jul 92

14. Force Integration: Selected Readings, US Army CGSC (FID; ATZL-SWR-FI), Jun 86

Training and Doctrine Command (TRADOC) Publications

TRADOC Reg 11-15, Concept Based Requirements System, HQ TRADOC (ATCD-E), 1 Aug 89

TRADOC Reg 11-16, Development and Management of Operational Concepts, HQ TRADOC (ATDO-D), 20 Aug 86

TRADOC Reg 71-15, Table of Organization and Equipment (TOE) Development, USACAC (ATZL-CDD-P), 20 Dec 91

TRADOC Reg 351-9, Systems Training Development, HQ TRADOC (ATTG-CS), 15 Mar 93

TRADOC Pam 11-9, Blueprint of the Battlefield, HQ TRADOC (ATDO-P), 15 Feb 91

TRADOC Pam 71-6, "How To" Procedures Guide for TOE Development, HQ TRADOC (ATCD-OP), 17 Sep 90

TRADOC Pam 525-5, AirLand Operations, HQ TRADOC, 1 Aug 91

OTHER PUBLICATIONS

Constitution of the United States

Title 10, US Code (10 USC)

Moder, Joseph J., and Phillips, Cecil R., Project Management with CPM and PERT, Second Edition Litton Educational Publishing, Inc., 1970. Published by Van Nostrand Reinhold Company; 450 West 33rd Street, New York, New York 10001. Certain portions of this work copyright 1964 by Reinhold Publishing Corporation (pages 5-8, 12-13, 20).

Page, G. William, "Using Management Software in Planning," APA Journal, Autumn 1989 (page 494),

Whitehouse, Gary E., Systems Analysis and Design Using Network Techniques; Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632; 1973 (pages 31 and 51 -54).

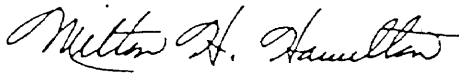
Wiest, Jerome D., and Levy, Ferdinand K., A Management Guide to PERT/CPM: With GERT/PDM/DCPM and other Networks; Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632; 1977, 1969 (pages 1-2, 4, 26, 28, 62-71, and 141-142).

INDEX

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:



MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

DISTRIBUTION:

Active Army, Army National Guard, and U.S. Army Reserve: To be distributed in accordance with DA Form 12-11-E, block 0035, requirements for FM 100-11.

* U.S. GOVERNMENT PRINTING OFFICE: 1995-385-068/20428