5

REQUIREMENTS GENERATION PROCESS

Requirements generation is based on a continuing process of assessing the capabilities of the current force structure (people and materiel) to meet the projected threat, while taking into account opportunities for technological advancement, cost savings, and changes in national policy or doctrine. The requirements generation process involves the identification of needs based on mission area responsibilities, called mission area assessment (MAA). Mission areas are broad categories of warfighting responsibility, such as fire support for the Army, amphibious warfare for the Marine Corps, air support and interdiction for the Air Force, and strategic sealift/protection for the Navy. The Training and Doctrine Command (TRADOC) in the Army, the Center for Naval Analysis (CNA) and/or the Office of the Chief of Naval Operations (OPNAV) staff in the Navy, the Marine Corps Combat Developments Command (MCCDC) in the Marine Corps, and the operational commands (e.g., Air Combat Command, Air Mobility Command, etc.) in the Air Force conduct MAAs.

Two documents are used in the Department of Defense (DoD) to describe requirements, the mission need statement (MNS) and the operational requirements document (ORD). The MNS is generated first, based on an analysis of warfighting mission areas. It describes a warfighting deficiency, or an opportunity to provide new capabilities, in broad operational, not system specific, terms. Once alternatives to satisfy the mission need are studied and a system concept selected, an ORD is prepared to describe the system solution.

The study and analysis of mission areas, assessment of alternative solutions (called analysis of alternatives (AA)), and the development of system level requirements are key elements of a resource intensive process. Users are frequently assisted and/or represented by headquarters and other commands. In the Army, the process of developing requirements is called "combat developments" and is handled by TRADOC. Navy fleet commanders provide requirements to the OPNAV staff, who, in turn, prepare and staff fleet requirements for approval. For the Marine Corps, MCCDC performs a function similar to the Army's TRADOC. Air Force operational commands develop requirements for the Air Force.

Once identified, deficiencies (i.e., mismatches between current and projected capabilities and the future threat) need to be resolved, and the first choice is a change in doctrine or tactics, or perhaps additional training. These alternatives, often called "nonmateriel alternatives," are investigated first because of their relatively low cost and ease (i.e., speed) of implementation. Should nonmateriel alternatives prove incapable of resolving the deficiency, we are forced to look for materiel solutions. The requirement for a materiel solution is documented in a MNS.

A MNS is written for all mission needs that may result in an acquisition program, regardless of acquisition category (ACAT). MNSs are not written for mission needs that can be resolved by nonmateriel solutions; they are prepared in accordance with guidance contained in Chairman of the Joint Chiefs of Staff Memorandum of Policy Number 77 (CJCS MOP 77). The overall requirements generation process is depicted in Figure 5-1.

Since a MNS describes a warfighting deficiency or technological opportunity, descriptions of specific performance characteristics or specific system solutions are not appropriate. A requirements validation authority reviews, validates, and ap-

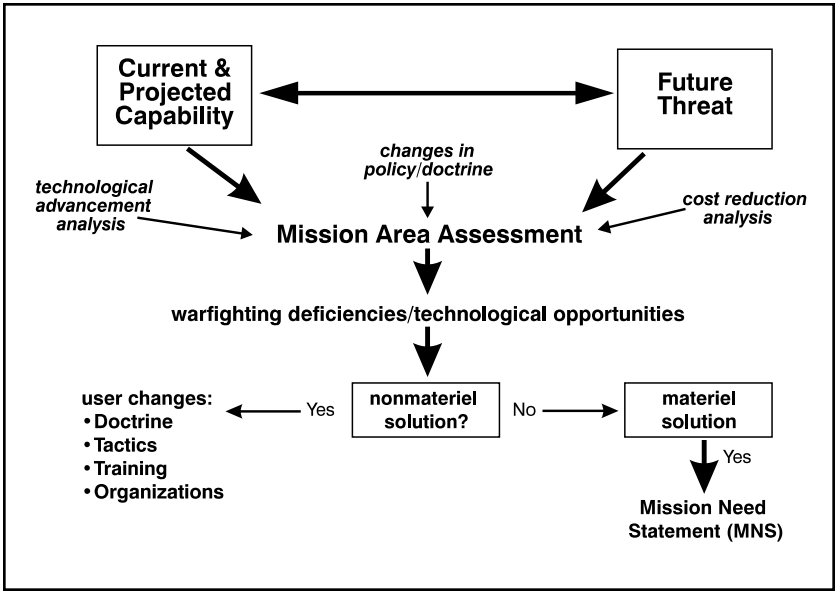

Figure 5-1. Mission Need Determination

proves MNSs. Validation confirms that the need exists and cannot be resolved by a nonmateriel solution. Approval means the validation process is complete and the need is valid. The validation authority also determines joint service potential, and then forwards approved MNSs to the appropriate Milestone Decision Authority (MDA) for a Milestone 0 review. Disapproved MNSs are returned to the originator, who notifies the user. The flow of a MNS from originator to a Milestone 0 is shown in Figure 5-2.

The Joint Requirements Oversight Council (JROC) is the validation and approval authority for MNSs with the potential to lead to Major Defense Acquisition Programs (MDAPs) (ACAT I). For potential non-MDAPs (ACAT II and ACAT III), the chiefs of the military services, heads of defense agencies, and commanders-in-chief (CINCs) of unified commands validate and approve their own MNSs. Once the JROC validates and approves a MNS it is sent to the Under Secretary of Defense

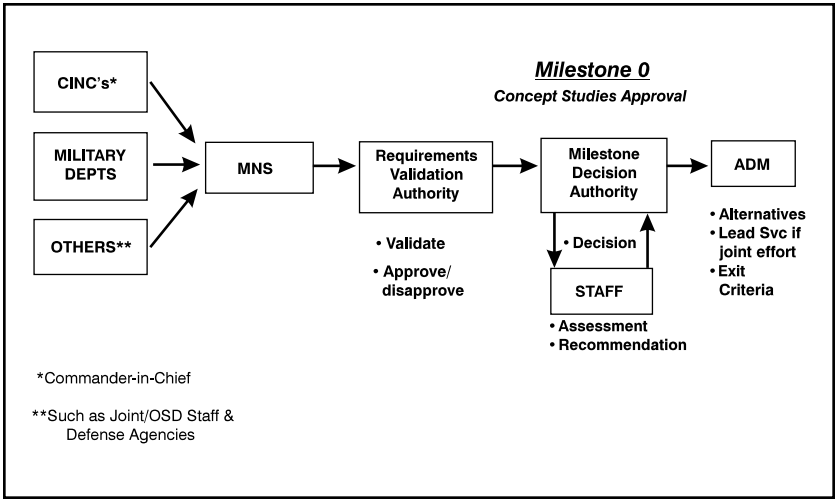

Figure 5-2. Mission Need Statement (MNS) Flow

(Acquisition and Technology) (USD(A&T)) for a Milestone 0 decision. Each MNS that could result in a non-MDAP (ACAT II and ACAT III) is sent to the respective service or component acquisition executive (SAE or CAE) for a Milestone 0 decision.

If the requirement could result in a Major Automated Information System (MAIS) acquisition program (ACAT IA), the MNS is validated and approved by the appropriate Office of the Secretary of Defense (OSD) Principal Staff Assistant (PSA) and/or the JROC. Milestone 0 decisions for these efforts are made by the DoD Chief Information Officer (CIO), the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C^3I)). Requirements that could result in less than MAIS acquisition programs are sent to the service or defense agency CIO for a Milestone 0 decision.

A favorable Milestone 0 decision marks the transition from the requirements generation process to the acquisition management process. Studies and analysis of all feasible alterna-

tive concepts are undertaken, based on the following order of precedence.

- Use or modification of an existing U.S. military system.
- Use or modification of an existing commercially developed or Allied system (nondevelopmental item (NDI) approach).
- Cooperative research and development program with one or more Allied nations.
- New Joint-Service program.
- New service-unique development program.

During this first phase, concept exploration (CE), of the acquisition life cycle, the user will develop an ORD to describe objectives and minimum acceptable requirements (thresholds) for operational performance of the proposed system concept. As the preferred concept is selected (for program initiation) and moves forward through the design, development, and production process, the ORD will continue to evolve. The initial broad objectives and minimum acceptable requirements will become more detailed (in number and specificity) as a result of cost-schedule-performance trade-offs during each phase of the acquisition life cycle (discussed in Chapter 6).