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BUSINESS AND TECHNICAL ASPECTS OF SYSTEMS ACQUISITION

Management of the systems acquisition process not only involves mechanisms for decision making, funding, and responding to congressional oversight, but also the daily tasks of managing the business and technical aspects of the program. The acquisition program manager (PM) must attend to frequent external influences of oversight and funding, many of which are beyond direct control.

Business and Financial Functions

The procurement contract for goods and services is the heart of the acquisition process. Business and financial functions, the latter including management of acquisition funds, include:

- Preparing the acquisition plan (the contracting "checklist") and acquisition strategy (the overall "roadmap");
- Developing and coordinating the acquisition program baseline (APB);
- Preparing the Request for Proposal (RFP);
- Conducting the source selection;
- Selecting contract type, awarding, and monitoring the contract(s);

- Performing contractor surveillance;
- Cost estimating;
- Formulating input for the Program Objectives Memorandum (POM), the budget, and other programmatic or financial documentation in support of the Planning, Programming, and Budgeting System (PPBS);
- Executing the budget (obligating funds and paying the bills);
- Handling program office administration and personnel; and
- Obtaining rights to technical data.

The acquisition planning phase of the contracting process includes determining the system requirement (need), defining/refining the requirement and specification, and preparing the procurement request. Once potential contractors are notified through the formal procurement announcement, the source selection process moves through solicitation, receipt and evaluation of proposals, negotiation, and contract award. The contract is then administered and monitored for compliance to ensure product(s) and services are delivered as stipulated in the contract.

Technical Management Functions

Technical management is a broad term including the management of a totally integrated effort of system engineering (SE), test and evaluation (T&E), production, and logistics support over the system life cycle. Its goal is timely deployment of an effective system, sustaining it, and satisfying the need at an affordable cost. Technical management involves balancing a system's cost, schedule, and performance. Cost includes all

funds required to design, develop, produce, operate, support, and dispose of a system. Schedule includes the time it takes to design, develop, produce, and deploy a fully supported system. Performance is the degree to which a system can be expected to achieve a set of specific mission requirements, and includes both effectiveness (i.e., does it do the job required) and suitability (i.e., can the user employ the system) criteria. Technical management includes:

- Defining the system/product (establishing the configuration management baseline);
- Developing the APB;
- Conducting design engineering;
- Performing SE (system cost, schedule, and performance trade-offs);
- Developing/acquiring computer resources, including software;
- Planning for acquisition logistics;
- Conducting developmental test and evaluation (DT&E);
- Conducting operational test and evaluation (OT&E) (including live fire test and evaluation (LFT&E));
- Identifying and tracking reliability, availability, and maintainability (RAM) requirements;
- Transitioning from development to production;
- Addressing standardization and specifications (e.g., performance specifications);

- Establishing a configuration management (CM) process;
- Ensuring producibility of the final design;
- Defining manufacturing processes and controls;
- Planning for system or product disposal; and
- Investigating the potential for Pre-Planned Product Improvement (P^3I).

Technical management can be described as an input, process, and output. The *input* is the need or requirement. The *process* is how the technical activities are managed. The *output* is the end item. Linking this is a *feedback loop* which improves the end item based on customer (user) comments and recommendations.