

## Acquisition Management Policy - (1/2014)

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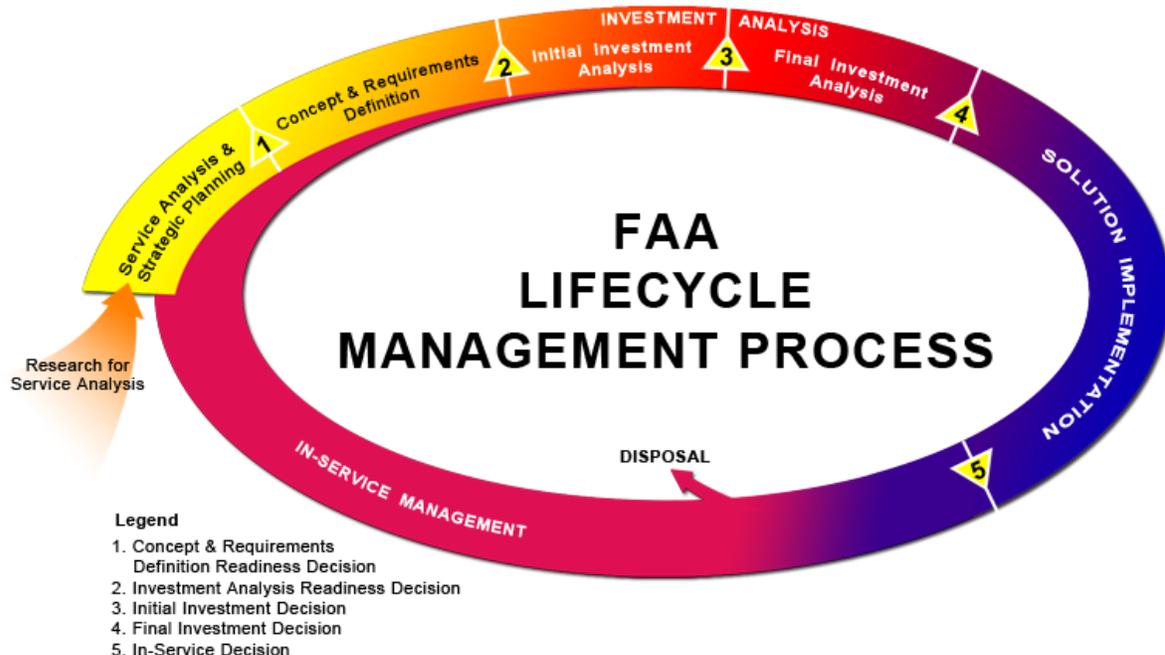
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## 2.1 Overview Revised 4/2013

Lifecycle acquisition management is built around a logical sequence of phases and decision points (see Figure 2.1-1). The FAA uses these phases and decision points to determine and prioritize its needs, make sound investment decisions, implement solutions efficiently, and manage services and assets over their lifecycle. The overarching goal is continuous improvement in the delivery of safe, secure, and efficient services over time. Application is flexible and may be tailored by the Acquisition Executive or Joint Resources Council.

The lifecycle management process is the FAA's Capital Investment Planning and Control Process. Service analysis and investment analysis constitute the select process. Solution implementation is the control process. In-service management is the evaluation process.

*Figure 2.1-1 The FAA Lifecycle Management Process*



### 2.1.1 Key Elements of Lifecycle Management Policy Revised 4/2013

FAA lifecycle management policy emphasizes the following:

- Service organizations are responsible and accountable for managing service delivery throughout the lifecycle;
- Service organizations manage fully integrated portfolios of investment and operational assets to optimize service delivery over time;
- Portfolio managers coordinate implementation of all materiel and non-materiel investment increments necessary to obtain an operational capability;

- Service analysis is the foundation for long-range planning by service organizations and the FAA as a whole;
- Users, customers, and industry work together to define affordable and sufficient requirements so practical solutions can be developed;
- Investment decisions are based on the relative merit of different investment opportunities for satisfying priority service needs and FAA performance goals;
- Commercial and non-developmental solutions are preferred when they satisfy customer needs and make economic sense;
- Investment programs are approved and funded in manageable phases;
- Lifecycle supportability is designed into products and services to minimize both cost and risk;
- Investment programs are managed within approved cost, schedule, performance, and benefit baselines throughout their lifecycle;
- In-service decisions are based on demonstration that operational requirements and readiness are satisfied;
- Evolutionary improvement of service delivery and the quick insertion of productive new technology is encouraged; and
- Operational performance, costs, and benefits are evaluated periodically throughout in-service management as a basis for improving cost-effective service delivery.

### **2.1.2 Evolutionary Product Development** Revised 4/2013

The FAA employs evolutionary product development to limit the design challenge for any one product development cycle by deferring risky technology and immature requirements to later updates. The objective is to minimize risk and facilitate the achievement of cost, schedule, and performance goals. Product development and implementation are appropriate when risk is low, requirements are known and stable, and resources are available.

Evolutionary product development begins during research for service analysis when the FAA develops and evaluates new concepts and technology for possible application to the aviation service environment. Only the best new concepts validated to be technically, operationally, strategically, and financially mature and beneficial enter into the NAS Concept of Operations as candidates for investment and deployment.

During concept and requirements definition, service teams conduct a final assessment of the maturity of marketplace technology and customer requirements. Only low-risk, high-value investment increments proceed to investment analysis and solution implementation. Higher risk concepts are deferred, terminated, or designated for additional research or technology development.

### **2.1.3 Knowledge-Based Decision-Making** Revised 4/2013

The FAA employs knowledge-based decision-making throughout the lifecycle management process. Specific knowledge, as defined by decision criteria, must be achieved for entry into

AMS decision points. These criteria are defined as entrance criteria in the AMS policy section for each decision point. Investment programs that develop systems or software must capture additional design and manufacturing knowledge about their products as prescribed in Section 2.6.1, and base decisions on whether to proceed further in the lifecycle management process on that knowledge.

#### **2.1.4 Standard Program Milestones** Revised 11/2009

Service organizations employ standard program milestones when planning, executing, and reporting progress on agency investment programs, including entries in the Exhibit 300 (designated programs only) and acquisition program baseline. Level 1 through 3 milestones are required.

#### **2.1.5 Standard Lifecycle Work Breakdown Structure** Revised 4/2013

The FAA has one standard lifecycle work breakdown structure that covers the entire acquisition management process and is the foundation for the FAA cost accounting system. The standard lifecycle work breakdown structure is the basis for a high-level work breakdown structure developed during initial investment analysis for each alternative as a means for estimating total lifecycle cost, schedule, and risk. A program work breakdown structure is developed during final investment analysis for the alternative approved for implementation by the Joint Resources Council.

#### **2.1.6 Measurement and Analysis** Revised 4/2013

Measurement and analysis is a management and control process applied throughout the lifecycle of an investment program or operational asset to assess progress, forecast performance, determine status, and define corrective action. Measurement and analysis provides information and visibility toward accomplishing program goals and supporting management information needs.

Each line of business or staff office institutes measurement and analysis processes in accordance with AMS policy and guidance that:

- Collect, store, analyze, and report data on seventeen standard measures defined in [Standard Program Performance Measures](#);
- Collect, store, analyze, and report baseline performance data defined in the Acquisition Baseline Management Standard Operating Procedure for those programs with an approved Acquisition Program Baseline; and
- Provide early warning indicators of program issues before they become major problems.

Measurement and analysis information needs include, but are not limited to:

- Contract information that supports management and executive monitoring of vendor performance;
- Contract information that supports acquisition quality assurance;
- Program, operational, risk, and contract information that supports monitoring of lifecycle cost, schedule, performance baselines, as well as benefits and technical progress;
- Program information that supports achievement of FAA strategic goals and alignment with the enterprise architecture; and
- Operational and business case information that supports investment decision-making.

### **2.1.7 Verification and Validation** Revised 1/2012

The FAA employs verification and validation throughout the acquisition management lifecycle in accordance with AMS verification and validation guidelines to support investment decisions and approvals. Validation ensures the right product is built (fulfills its intended use). Verification ensures a product is built right (according to specifications). Verification and validation are performed early and incrementally throughout the lifecycle management process on select work products, product components, and products. Products are intended for delivery to a customer or end user. Product components are lower-level configuration items of the product. Work products represent, define, or direct product development. The following are sample work products, work components, and products subject to verification and validation:

- Operational concept or procedures
- Planning documents
- Requirement and specification documents
- Procurement and contractual documents
- Models, prototypes, and simulations
- Design documents
- Products and product components