

CHANGE REQUEST COVER SHEET

Change Request Number: 09-62A

Date Received: 8/13/2009

Title: addendum

Name: David Woodson

Phone: 202-267-7601

Policy OR Guidance: Policy/Guidance

Section/Text Location Affected: Implementation Strategy and Planning

Summary of Change: delete fastedit section - replaced it with a .doc

Reason for Change: delete fastedit section - replaced it with a .doc

Development, Review, and/or Concurrence: NA

Target Audience: NA

Potential Links within FAST for the Change: already resolved - in Policy appendix B > Exhibit 300 Program Baseline Attachment 3: Implementation Strategy and Planning > change this text 'download Implementation Strategy and Planning template' to 'download implementation strategy and planning document template' and link this doc to it <http://fast.faa.gov/docs/ispdtemplate.doc>

Briefing Planned: No

ASAG Responsibilities: None

Potential Links within FAST for the Change: already resolved - in Policy appendix B > Exhibit 300 Program Baseline Attachment 3: Implementation Strategy and Planning > change this text 'download Implementation Strategy and Planning template' to 'download implementation strategy and planning document template' and link this doc to it <http://fast.faa.gov/docs/ispdtemplate.doc>

Links for New/Modified Forms (or) Documents (LINK 1)

Links for New/Modified Forms (or) Documents (LINK 2)

Links for New/Modified Forms (or) Documents (LINK 3)

SECTIONS REMOVED:

Implementation Strategy and Planning:
APPENDIX: REPRESENTATIVE WORK ACTIVITIES AND PROGRAM EVENTS [\[Old Content\]](#)
Implementation Strategy and Planning:
Program Management [\[Old Content\]](#)
Implementation Strategy and Planning:
Systems Engineering [\[Old Content\]](#)
Implementation Strategy and Planning:
Configuration Management [\[Old Content\]](#)
Implementation Strategy and Planning:
Security and Privacy [\[Old Content\]](#)
Implementation Strategy and Planning:
Hardware and Software development [\[Old Content\]](#)
Implementation Strategy and Planning:
Test and Evaluation [\[Old Content\]](#)
Implementation Strategy and Planning:
Production [\[Old Content\]](#)
Implementation Strategy and Planning:
Physical Integration [\[Old Content\]](#)
Implementation Strategy and Planning:
Functional Integration [\[Old Content\]](#)
Implementation Strategy and Planning:
Human Integration [\[Old Content\]](#)
Implementation Strategy and Planning:
Integrated Logistics Support [\[Old Content\]](#)
Implementation Strategy and Planning:
Deployment [\[Old Content\]](#)
Implementation Strategy and Planning:
In-Service Management [\[Old Content\]](#)
Implementation Strategy and Planning:
PART 2: PROGRAM ACTION PLAN [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 22 : OPERATIONAL ANALYSIS [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 21 : IN-SERVICE MANAGEMENT [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 20 : POST IMPLEMENTATION REVIEW [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 20.1 : Purpose [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 20.2 : Approach [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 20.3 : Measures of Effectiveness [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 20.4 : Data Collection and Analysis [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 20.5 : Products [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 20.6 : Participating Organizations and Responsibilities [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 20.7 : Resources [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 19 : DEPLOYMENT [\[Old Content\]](#)
Implementation Strategy and Planning:

Section 18 : INTEGRATED LOGISTICS SUPPORT [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 18.1 : Staffing [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 18.2 : Supply Support [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 18.3 : Support Facilities and Equipment [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 18.4 : Technical Data [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 18.5 : Training and Training Support [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 18.6 : First and Second Level Repair [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 18.7 : Packaging, Handling, Storage, and Transportation [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 17 : HUMAN INTEGRATION [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 17.1 : Human/Product Integration [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 17.2 : Employee Health and Safety [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 17.3 : Specialized Skills and Capabilities [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 16 : FUNCTIONAL INTEGRATION [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 16.1 : Integration With other National Airspace System and non-National Airspace System Elements [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 16.2 : Software Integration [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 16.3 : Spectrum Management [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 16.4 : Standardization [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15 : PHYSICAL INTEGRATION [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.1 : Real Property [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.2 : Environmental Requirements [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.3 : Energy Conservation [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.4 : Heating, Ventilation, Air Conditioning [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.5 : Grounding, Bonding, Shielding, and Lightning Protection [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.6 : Cables [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.7 : Hazardous Materials [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.8 : Power Systems and Commercial Power [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.9 : Telecommunications [\[Old Content\]](#)

Implementation Strategy and Planning:

Section 15.10 : Special Considerations [\[Old Content\]](#)

Implementation Strategy and Planning:
Section 14 : FACILITIES [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 13 : PRODUCTION [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 12 : TEST AND EVALUATION [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 12.1 : Test Strategy Overview [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 12.2 : System Test [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 12.3 : Independent Operational Test and Evaluation (IOT&E) [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 12.4 : Field Familiarization Test [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 11 : HARDWARE AND SOFTWARE DEVELOPMENT [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 10 : SECURITY AND PRIVACY [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 10.1 : Physical Security [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 10.2 : Information Security [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 10.3 : Personnel Security [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 10.4 : Privacy [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 9 : CONFIGURATION MANAGEMENT [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 8 : SYSTEMS ENGINEERING [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 7 : BENEFITS AND PERFORMANCE [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 6 : PROCUREMENT STRATEGY [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 6.1 : Sources [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 6.2 : Source Selection [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 6.3 : Competition [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 6.4 : Contract Type [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 6.5 : Government-Furnished Property and Information [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 6.6 : Warranties and Data Rights [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 5 : MANAGEMENT STRATEGY [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 5.1 : Management Team [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 5.2 : Quality Assurance [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 5.3 : Contract Management [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 5.4 : Requirements Management [\[Old Content\]](#)

Implementation Strategy and Planning:
Section 5.5 : System Safety Management [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 5.6 : Program Control [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 4 : PROGRAM STRATEGY [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 3 : INTEGRATED PROGRAM SCHEDULE [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 2 : OVERVIEW [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 2.1 : Description [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 2.2 : Objectives and Capabilities [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 2.3 : Key Elements [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 2.4 : Deliverables [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 1 : BACKGROUND [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 1.1 : Mission Need [\[Old Content\]](#)
Implementation Strategy and Planning:
Section 1.2 : Status [\[Old Content\]](#)
Implementation Strategy and Planning:
PART I: LIFECYCLE MANAGEMENT STRATEGY [\[Old Content\]](#)
Implementation Strategy and Planning:
Signature Page [\[Old Content\]](#)
Implementation Strategy and Planning:
Cover Page [\[Old Content\]](#)

SECTIONS REMOVED:

Implementation Strategy and Planning:
APPENDIX: REPRESENTATIVE WORK ACTIVITIES AND PROGRAM EVENTS .

The following work activities and program events are indicative of what may need to be planned, funded, and implemented by the investment program. Use the standard lifecycle work breakdown structure and the in-service review checklist as additional planning aids.

Implementation Strategy and Planning:
Program Management .

Work Activities	Program Events
<i>Planning</i>	<i>Requirements Document approved</i>
<i>Management support</i>	<i>Acquisition Program Baseline approved</i>
<i>Technical support</i>	<i>Acquisition Strategy Paper approved</i>
<i>Grant and contract management</i>	<i>Implementation Strategy and Plan approved</i>
<i>Vendor and subcontractor reviews and audits</i>	<i>System specification approved</i>
	<i>Safety Risk Management Documentation</i>

<i>Documentation review and control</i>	<i>approved</i>
<i>Pre and post award contract audits</i>	<i>System Safety Risk accepted</i>
<i>Process Capability and Process Improvement appraisals</i>	<i>Program Integrated Safety Plan approved</i>
<i>System safety management</i>	<i>Contractor System Safety Program Plan approved</i>
<i>Special analysis and studies</i>	<i>Contract specification complete</i>
<i>Activities to manage risk such as identify and characterize risks, develop risk mitigation strategies, track and evaluate risk mitigation efforts, and reduce risk to acceptable levels.</i>	<i>Risk management plan approved.</i>
<i>Activities to develop program performance targets, track and report program status against targets, identify and implement corrective action for emerging problems</i>	<i>Quality Reliability Officer on site</i>
<i>Activities to establish and manage system safety.</i>	<i>Cost/ schedule/ status/ reporting delivery</i>
<i>Activities associated with management and technical reviews, cost/schedule status reporting; appraisal of process improvement during performance qualification of contract deliverables; contractor deviation reporting and corrective action; contract audits before award, during performance and at completion.</i>	
<i>Activities associated with tasking and funding sent to other agencies and organizations, as well as efforts associated with contracting with industry. Include all aspects of procuring needed services and capabilities such as preparing screening information requests, obtaining industry comment, identification of potential sources, evaluation of proposals, obtain audits, conducting negotiations, source selection, competition process improvement appraisal during performance, contract type, contract audits, government finished equipment and government finished information, acceptance criteria, warranties, and data rights.</i>	
<i>Activities to produce, deliver, and review program and contractor documents. Includes managing, coordinating, editing, scheduling, auditing, and assembling documents and review packages. Also includes acquiring, writing, assembling, reproducing, packaging, and shipping data.</i>	
<i>Contractor quality management.</i>	
<i>Cost/schedule/performance management including</i>	

<p><i>contractor status reporting.</i></p> <p><i>Activities to report, track, analyze, and correct quality problems emerging from contracted efforts.</i></p> <p><i>In-plant Quality Reliability Officer activities.</i></p> <p><i>Independent validation and verification.</i></p> <p><i>Contractor software process monitoring and evaluation.</i></p>	
--	--

**Implementation Strategy and Planning:
Systems Engineering .**

Work Activities	Program Events
<i>Requirements allocation</i>	<i>System Engineering Management Plan approved</i>
<i>Design criteria</i>	<i>Functional baseline approved</i>
<i>Specification development</i>	<i>Development baseline approved</i>
<i>System level data flows, block diagrams, change proposals, and documentation trees</i>	<i>Functional configuration audit complete</i>
<i>Value engineering</i>	<i>System safety analysis complete for each lifecycle phase</i>
<i>Supportability, reliability, and maintenance engineering.</i>	
<i>firmware devices, test procedures, and test cases.</i>	<i>Hazard tracking and risk resolution system implemented</i>
<i>Specialty engineering such as electromagnetic interference and compatibility.</i>	
<i>System safety management – activities that staff and manage system safety throughout solution implementation and in-service management (e.g., system safety hazards analysis, system safety planning, and hazard tracking and resolution)</i>	

**Implementation Strategy and Planning:
Configuration Management .**

Work Activities	Program Events
<i>Configuration management - activities that define, collect, document, and manage requirements including the establishment and maintenance of configuration control procedures, documents, and boards for the configuration management of hardware, software, facilities, data, documentation, interfaces, and tools, including. Includes functional baseline of decomposed requirements, allocated baseline of configuration items, product baseline for production, physical configuration audit, functional</i>	<i>Functional configuration audit complete</i> <i>Physical configuration audit complete</i> <i>Product baseline approved</i>

<p><i>configuration audit, configuration change management, documentation management.</i></p> <p><i>Software configuration management covers source code, source-code-level programming instructions of programmable firmware devices, test procedures, and test cases.</i></p>	
---	--

**Implementation Strategy and Planning:
Security and Privacy .**

Work Activities	Program Events
<p><i>Information security activities to achieve secure processing, storage, or transfer of information related to air traffic control or other sensitive information.</i></p> <p><i>Physical security related to the design and construction of a secure physical plant, as well as procurement of security equipment or resources.</i></p> <p><i>Personnel security activities related to achieving security requirements for personnel, security clearances, security training, and access control.</i></p> <p><i>Privacy impact assessment that evaluates the privacy risks, alternatives, and protective measures implemented at each stage of the information lifecycle.</i></p> <p><i>Assess information security categorization (confidentiality, integrity, and availability) per NIST FIPS PUB 199.</i></p> <p><i>Develop CONOPS and preliminary security requirements.</i></p> <p><i>Develop preliminary vulnerability and risk assessment.</i></p>	<p><i>Physical security requirements defined</i></p> <p><i>Physical security designed</i></p> <p><i>Physical security procured</i></p> <p><i>Physical security fielded</i></p> <p><i>Information security defined, designed, acquired, fielded</i></p> <p><i>Personnel security defined, designed, acquired, fielded</i></p> <p><i>Privacy impact statement</i></p>

**Implementation Strategy and Planning:
Hardware and Software development .**

Work Activities	Program Events
<p><i>Design, fabrication, assembly, and checkout of hardware configuration items.</i></p> <p><i>Design, prototyping, development, and checkout of computer software configuration items.</i></p> <p><i>Integration, assembly, and checkout of hardware, software, system security, and telecommunications components.</i></p>	<p><i>Development screening information request released</i></p> <p><i>Development contract award</i></p> <p><i>Preliminary Design Review complete</i></p> <p><i>Critical Design Review complete</i></p>

**Implementation Strategy and Planning:
Test and Evaluation .**

Work Activities	Program Events

<p>Activities to verify achievement of requirements and Critical Operational Issues in the Requirements Document including: the creation, validation, and execution of developmental and operational test plans; test procedures; test reports; the development or procurement of specialized test equipment such as aircraft, simulators, hardware/software test beds, and computer simulation models; the procurement of special test facilities and equipment, test articles and spares, material, and development of test sites; test data recording and analysis; and the establishment of manpower and training needed by both contractor and government personnel for the test program.</p>	<p>Operational capability demonstration/test (may be element of source selection)</p> <p>Prototype testing complete</p> <p>Factory acceptance testing complete</p> <p>Operational testing complete</p> <p>Facility/equipment integration testing complete</p> <p>Site acceptance testing complete</p>
<p>Activities to define system test objectives; obtain test plans, resources, tools personnel, sites, and procedures; conduct tests and report findings. System test may include developmental, operational, site, first article, and product testing. Includes all activities associated with the development and construction of test facilities, test simulators, test beds, and models required for the performance of the system tests.</p>	<p>Field familiarization testing complete</p> <p>Independent Operational Test & Evaluation Readiness Declaration</p> <p>IOT&E test plans, procedures complete</p> <p>IOT&E complete</p>
<p>Activities to define operational test objectives; obtain test plans, resources, tools personnel, sites, and procedures; conduct tests and report findings. System test may include developmental, operational, site, first article, and product testing. Includes all activities associated with the development and construction of test facilities, test simulators, test beds, and models required for the performance of the operational tests.</p>	<p>IOT&E report delivered</p>
<p>Activities to define field familiarization test objectives; obtain test plans, resources, tools personnel, sites, and procedures; conduct tests and report findings.</p>	
<p>Activities to define IOT&E test objectives; obtain and train test staff; develop test plans and procedures; obtain resources, tools, personnel, sites, and aircraft; and conduct tests and report findings.</p>	

**Implementation Strategy and Planning:
Production .**

Work Activities	Program Events
<p>Engineering activities that take a developmental system to production including production process documentation.</p>	<p>Full production decision</p> <p>Production screening information request released</p>
<p>Full-scale production activities to fulfill quantity requirements including testing on each end item to verify conformance with applicable specifications and absence of manufacturing defects.</p>	<p>Production contract awarded</p>

	<i>First article delivery</i>
	<i>Production units delivered</i>

Facilities

Work Activities	Program Events
<p><i>Architectural and engineering design activities including civil, electrical, mechanical, architectural, industrial. See physical infrastructure for related activities such as space, lighting, heating, cooling, telecommunications, shielding, bonding, and lightning protection.</i></p> <p><i>Site-specific engineering and design activities for both transition and in-service operation.</i></p> <p><i>Construction or modification activities for each site includes all activities to execute, control, schedule, and secure plant equipment and utility services. Also includes activities to resolve JAI exception items, as well as construction and modification of laboratory research test facilities and the supporting infrastructure.</i></p>	<p><i>Architect and engineering contract awarded</i></p> <p><i>Architect and engineering design complete</i></p> <p><i>Site-specific designs complete</i></p> <p><i>Sites prepared</i></p> <p><i>Construction contract awarded</i></p> <p><i>Beneficial occupancy date</i></p>

Implementation Strategy and Planning: **Physical Integration .**

Work Activities	Program Events
<p><i>Activities associated with acquiring real estate needs including data gathering, defining requirements, analyzing candidates, recommending sites, and acquisition. Includes completion of the National Environmental Protection Act process, appropriate Environmental Due Diligence Audits, and other applicable environmental laws before any agreement to acquire property.</i></p> <p><i>Activities associated with acquiring the physical space needed to accommodate systems, auxiliary equipment, and personnel both for end-state operations and during transition to the new capability.</i></p> <p><i>Activities to achieve compliance with environmental or hazardous materials requirements.</i></p> <p><i>Activities to achieve compliance with the National Energy Conservation Policy Act.</i></p> <p><i>Activities to achieve heating, ventilation, and air-</i></p>	<p><i>Environment studies complete</i></p> <p><i>Civil engineering studies complete</i></p> <p><i>Abatement activities complete</i></p> <p><i>Site(s) selected</i></p> <p><i>Site(s) procured</i></p> <p><i>Power systems screening information request released</i></p> <p><i>Power systems delivery</i></p> <p><i>Telecommunications screening information request released</i></p> <p><i>Telecommunications operational</i></p> <p><i>Cable screening information request released</i></p>

<p><i>conditioning requirements.</i></p> <p><i>Activities to achieve grounding, bonding, shielding, and lightning protection requirements.</i></p> <p><i>Activities to achieve cable, cable routing, and raised floor requirements.</i></p> <p><i>Activities to achieve power system and commercial power requirements.</i></p> <p><i>Activities to develop and approve a major airspace design including modeling, simulation and environmental assessment.</i></p> <p><i>Activities to achieve telecommunications needs including security requirements.</i></p> <p><i>Activities to achieve unique requirements related to such factors as fiber optics, water and sewer, and roadway access.</i></p>	<p><i>Cables delivered</i></p> <p><i>Roads/sewage procured</i></p>
--	--

**Implementation Strategy and Planning:
Functional Integration .**

Work Activities	Program Events
<p><i>Activities to interface the solution with other systems, subsystems, networks, facilities in the National Airspace System and non-NAS assets, including all states and modes of operation as well as maintenance monitoring and operational command and control.</i></p> <p><i>Software integration activities to achieve the following, as appropriate: procedural and technical interface requirements; communications, protocols, and standards to ensure compatibility and interoperability with other fielded systems; computer resource support requirements including automated test equipment, required capabilities for integrated computer resources support, unique user interface requirements, demonstration needs, and special software certification.</i></p> <p><i>Activities to achieve requirements related to spectrum management including certification of radio spectrum availability, spectrum compatibility with existing and future components of the National Airspace System.</i></p> <p><i>Activities to achieve the use of standard products already in use in the National Airspace System, and to satisfy any ICAO, ISO, space management or other standard to ensure ease of training, logistics, workforce mobility, or compliance with international, national, state, and local codes and laws.</i></p>	<p><i>Interface requirements defined</i></p> <p><i>Interfaces functional</i></p> <p><i>Software interface requirements defined</i></p> <p><i>Software interfaces functional</i></p> <p><i>RMMS / NIMS available</i></p> <p><i>Operational readiness dates of interfacing systems and equipment</i></p> <p><i>Airline equipage actions complete</i></p> <p><i>Actions by regulatory bodies complete</i></p> <p><i>Interfaces functional</i></p> <p><i>Actions by airport authorities or local governments complete</i></p> <p><i>Rulemaking changes complete</i></p> <p><i>Actions by other programs complete</i></p> <p><i>Actions by operations or maintenance organizations</i></p>

	complete
--	----------

Implementation Strategy and Planning:

Human Integration .

Work Activities	Program Events
<p><i>Activities to ensure products are well designed and appropriate for the workforce that will operate, maintain, and support them. Human factors activity should be consistent with the nature, size, and complexity of the product(s) being acquired.</i></p> <p><i>Human/product interface design to achieve the following: product design is influenced by the capabilities and limitations of operators, maintainers, and support personnel; broad cognitive, physical, and sensory requirements for operators, maintainers are determined and obtained; and the required level of human performance necessary to achieve required product performance.</i></p> <p><i>Employee health and safety activities to achieve compliance with Occupational Safety and Health Administration requirements or other safety requirements; achieve operating environment requirements related to such factors as light, temperature, noise, fire protection, stairs, and ladders; and update the Occupant Emergency Plan When implementation will affect facility egress routes or fire safety.</i></p> <p><i>Special skills and capabilities activities to achieve: cognitive, physical, sensory, and performance for operators, maintainers, or support personnel; human performance thresholds and criteria; and constraints, limitations, and specialized requirements related to training, staffing levels, and personnel skills.</i></p>	<p><i>Human-product interface design complete</i></p> <p><i>Special skills and training identified</i></p> <p><i>Training courses established</i></p> <p><i>Health and safety issues defined</i></p>

Implementation Strategy and Planning:

Integrated Logistics Support .

Work Activities	Program Events
<p><i>Staffing: Activities to define and obtain person work-hours required to perform operations, maintenance, and support actions.</i></p> <p><i>Initial spares and repair parts: Activities to determine, obtain, catalog, receive, store, and issue items of supply.</i></p> <p><i>Test and measurement equipment: Activities to acquire test and measurement equipment. Includes measurement and diagnostic equipment, precision measuring equipment, automatic test systems, test program, sets, interconnect devices, automated load modules, and elated software, firmware, and</i></p>	<p><i>Support needs defined, procured, and fielded (staffing, supply support, training and training support, support equipment, first and second level maintenance, packaging, handling, storage, and transportation, technical data)</i></p>

<p>hardware.</p> <p><i>Support and handling equipment: Activities to acquire tools and handling equipment. Includes ground support equipment, vehicular support equipment, powered support equipment, material handling equipment, and support hardware and software.</i></p> <p><i>Support equipment: Activities to obtain the tools and equipment required to install and support operation and maintenance of the facility, system, or equipment.</i></p> <p><i>Technical data: Activities to obtain recorded information such as manuals, specifications, drawings, and operational testing procedures to operate a product over its intended lifecycle.</i></p> <p><i>Training and training support: Activities to define and obtain processes, procedures, course material, and skills necessary to train personnel to install, operate, and maintain the facility, system, or equipment.</i></p> <p><i>Support facilities: Activities to plan, construct, convert, or expand support facilities for training, testing, inventory, contractor and FAA depot maintenance, and hazardous and waste management.</i></p> <p><i>First and second level repair: Activities to define and obtain the resources, processes, and procedures for on-site and second-level engineering support for both hardware and software.</i></p> <p><i>Packaging, handling, storage, and transportation: Activities to acquire the resources and methods to ensure systems, equipment, and support items are preserved, packaged, stored, and transported safely.</i></p>	
--	--

**Implementation Strategy and Planning:
Deployment .**

Work Activities	Program Events
<p><i>Activities to field the products of this program and put them into operational use including: deployment planning, installation and checkout, contractor acceptance and inspection, joint acceptance and inspection, site integration and field familiarization, and dual operations.</i></p> <p><i>Activities to dismantle, demolish, and remove replaced assets and restore the site to the original or acceptable condition including actions to revert real</i></p>	<p><i>ISR checklist tailored</i></p> <p><i>Installation and checkout complete</i></p> <p><i>Contractor acceptance and inspection</i></p> <p><i>In-service decision</i></p> <p><i>Initial operational capability</i></p>

<i>estate to the owner and close the project.</i>	<i>Full operational capability</i> <i>Joint acceptance inspection complete</i> <i>First Operational Readiness Date</i> <i>First commissioning</i> <i>Last Operational Readiness Date</i> <i>Last commissioning</i>
---	---

**Implementation Strategy and Planning:
In-Service Management .**

Work Activities	Program Events
<p><i>Activities to verify the benefits of this investment program are being achieved. Be sure to include activities by parties outside the direct control of the service organization (e.g., equipage by the aviation industry, regulatory action).</i></p> <p><i>Activities to monitor, evaluate, and optimize the performance of fielded products and services.</i></p> <p><i>Activities to sustain and extend the useful service life of fielded products and services within constraints of available sustainment funding</i></p> <p><i>Activities to evaluate the capability of fielded products and services to satisfy projected demand.</i></p> <p><i>Activities associated with preventive maintenance of hardware and software including periodic inspections, condition monitoring, critical item replacements, the loading of software updates, and calibration and certification.</i></p> <p><i>Activities associated with corrective maintenance of software and hardware including failure identification, localization and isolation, disassembly, item removal and replacement or repair in-place, reassembly, checkout, and condition verification.</i></p> <p><i>Activities associated with preventive and corrective maintenance of FAA Academy training systems.</i></p> <p><i>Activities associated with modification to in-service hardware and software.</i></p> <p><i>Activities associated with investigation and resolution of technical issues related to system</i></p>	<p><i>Post implementation review(s)</i></p> <p><i>Operational evaluations</i></p>

performance.

Activities associated with planning, authorizing, and managing actions related to operation and maintenance of the solution.

Activities associated with sustaining supply support, replenishment spares, repair, logistics support services, maintenance of support equipment, technical data, maintenance support facilities, commercial depot logistics service contracts in-service training, and packaging, handling, storage, and transportation.

Activities associated with second-level engineering including planning support, technical support to all NAS facilities in for field support and restoration, hardware and software engineering support, configuration management, process improvement, quality assurance, and information system security.

Activities associated with maintenance, operations, and security of leased and owned buildings, structures, grounds, roads, and support vehicles.

Activities associated with hazardous materials, pollution prevention, environmental permitting and auditing, energy audits, safety evaluations, and hazard abatement.

Activities to routinely maintain, modernize, and relocate buildings, structures, roads, grounds, and support equipment including the recurring costs of utilities.

Activities to maintain, upgrade, or modify operational and administrative communications services including leases and other recurring costs.

Activities to manage FAA-owned or leased properties.

Activities to provide physical security for a facility or system including security guards, fencing, and cipher locks.

Activities associated with in-service inspections and the development and revalidation of standard instrument approach procedures including flight certification.

Activities to assess equipment and system performance and trends including data collection

and trend analysis.

Activities associated with operating or monitoring the solution including computer operations, system administration, and controller operations.

Implementation Strategy and Planning:
PART 2: PROGRAM ACTION PLAN .

*Part 2 of Implementation Strategy and Planning is the real-time action plan by which you will manage the phase of the program approved by the Joint Resources Council at the investment decision. Develop a program action plan that is a logical networking of the work activities you will execute to achieve program objectives and goals. The program action plan integrates **all** activities (both government and contractor) into a single comprehensive network plan that represents the service organization's "road map for implementation" for the phase approved by the JRC. Include standard program milestones and show critical interrelationships between work activities. Use standard program management software such as MS Project Manager, Primavera, or Artemis. The program action plan must cover everything that must be done. Use Appendix 1, the standard lifecycle work breakdown structure, and the in-service review checklist as references. Organize the program action plan using the same structure as part I of the Implementation Strategy and Planning attachment.*

Implementation Strategy and Planning:
Section 22 : OPERATIONAL ANALYSIS.

AMS policy and OMB Circular A-11 require a yearly analysis of the performance and condition of all operational assets. The intent is to determine whether existing assets are providing intended safety and cost and performance benefits, whether action is needed to solve existing or emerging support problems, whether upgrade or replacement are needed to satisfy current or emerging customer demand, and whether there is a better and more cost-efficient way to meet customer needs. Refer to the operational analysis report template in FAST ([link](#)) to determine exactly what must be done. Explain here how you will collect performance and support data on operational assets and how you will factor results into service-area analysis and report results at semi-annual JRC service-area reviews and in the OMB Exhibit 300.

Implementation Strategy and Planning:
Section 21 : IN-SERVICE MANAGEMENT .

Explain how the products or services supplied by this investment program will be operated and maintained throughout in-service management. This may include preventive and corrective maintenance, modifications to software and hardware, resolution of technical problems, supply support, replenishment spares, repair, maintenance of support equipment, maintenance of technical data, training and training support, second-level engineering, infrastructure support, and flight inspections and SIAP development. Also explain your strategy for periodically modernizing key elements of the product or service so as to sustain or improve service delivery. See Section 5.0 In-Service Management of the FAA Standard WBS for detailed work activities.

Implementation Strategy and Planning:
Section 20 : POST IMPLEMENTATION REVIEW.

Implementation Strategy and Planning:
Section 20.1 : Purpose.

{State the purpose of this Post-Implementation Review as follows:}

The Post-Implementation Review for the [*insert program name*] will assess actual program results against baseline expectations to determine whether:

- The investment program is achieving performance and benefit targets;
- The investment program is meeting the service needs of customers; and
- The original business case is still valid.

Specifically, the review will assess actual investment costs, schedules, benefits, performance, and mission outcomes against appropriate measures of effectiveness.

The answers the following questions:

- Did the FAA get what it asked for?
- Is the investment program providing what the customer needs?
- Are there any lessons learned about the acquisition management process?

Implementation Strategy and Planning:

Section 20.2 : Approach.

{Identify the site(s) at which the review will be conducted. State when the review is expected to occur. Define any limiting conditions affecting the review. For example, use this section to discuss the need to conduct several reviews due to phased implementations of additional capabilities or to visit multiple sites due to site-specific configurations.}

Implementation Strategy and Planning:

Section 20.3 : Measures of Effectiveness.

{Define the specific performance and benefit measures the team will evaluate for the following:

1. *Strategic, mission, and business goals*
2. *Customer, user, and stakeholder assessment*
3. *Technical performance*
4. *Cost, schedule, and benefits performance*

These measures of effectiveness may include, but are not limited to, those established in the Exhibit 300 Program Baseline and its attachments, the FAA Flight Plan, and the Line of Business Plan. Additional measures related to customer satisfaction and technical performance may need to be developed.

Effective performance measures should meet the following criteria:

1. *Focus on specific measures that have an impact on the following areas:*
 - a. *Strategic, mission, and business goals*
 - b. *Customer, user, and stakeholder assessment*
 - c. *Technical performance*
 - d. *Cost, schedule, and benefits performance*

2. *Provide a clear and complete view of:*
 - a. *Strategic, mission, and business goals*
 - b. *Customer, user, and stakeholder assessment*
 - c. *Technical performance*
 - d. *Cost, schedule, and benefits (internal and external) performance*
 - e. *Whether the investment is meeting the service needs of its customers*

Implementation Strategy and Planning:
Section 20.4 : Data Collection and Analysis.

{Use the following table format for each measure of effectiveness category to:

1. *Identify the data to be collected*
2. *Explain how data will be analyzed*
3. *Identify the source of the data*

NOTE: *This information is preliminary and will be refined and finalized during PIR planning.}*

<i>Measure of Effectiveness</i>	<i>Data to be Collected</i>	<i>Analysis Method</i>	<i>Data Source</i>

Implementation Strategy and Planning:
Section 20.5 : Products.

{Define the products of the review. A plan and report with findings and action plan(s) are required.}

Implementation Strategy and Planning:
Section 20.6 : Participating Organizations and Responsibilities .

{Identify the organizations that will participate and define their responsibilities using the following table format. Remember that the size and scope of the must be proportional to the size and complexity of your investment program. The entries in

the table are suggestions.}

Title	Responsible Organization	Responsibilities
Team Leader	<i>[Insert organization]</i>	Establishes the team; ensures planning occurs and is recorded in investment decision-making documents; ensures effectiveness that will be evaluated during the review; collects, and analyzes operational data; provides recommendations; briefs key stakeholder on the review; leader in planning and executing actions to
Quality Officer	ATO-Acquisition/ Investment Planning Group	Assists the team in planning the review; assists in the review process and supporting guidance; maintains trends across multiple reviews as a basis for investment planning and control processes.
Site Operations Specialist	<i>[Insert organization]</i>	Gathers and supplies operational data to the team to determine whether operational performance targets for the review are achieved.
Site Technical Support Specialist	<i>[Insert organization]</i>	Gathers and supplies maintenance data to the team to determine whether maintenance and support cost targets are achieved.
Service Team Business Manager	<i>[Insert organization]</i>	Gathers and supplies cost and schedule data to the team to determine if investment cost and schedule targets are being achieved.
RMA Specialist	<i>[Insert organization]</i>	Gathers and supplies operational and technical data to the team to determine if performance targets are being achieved.
Human Factors Specialist	<i>[Insert organization]</i>	Brings to the PIR the human-system integration issues, performance measures, the means of data collection, the human-to-system interface for performance measurement, development of surveys and interview instruments, and validity. Lends experimental design and statistical analysis efforts.
Safety Engineer	<i>[Insert organization]</i>	Gathers and supplies safety performance data to the team to determine if safety performance targets are being achieved.
Benefits Specialist	<i>[Insert organization]</i>	Brings the benefits history. Large programs
Financial Analyst	<i>[Insert organization]</i>	Provides independent fiduciary responsibility for the review programs.
Independent Budget Representative	<i>[Insert organization]</i>	Provides independent fiduciary responsibility for the review the ATO.
IOT&E Representative	<i>[Insert organization]</i>	Brings history and issues from IOT&E. Develops
OT&E Representative	<i>[Insert organization]</i>	Brings history and issues from OT&E. Large programs
Service Team Logistics Manager	<i>[Insert organization]</i>	Evaluates cost, maintenance, and performance to ensure strategy is optimal.

**Implementation Strategy and Planning:
Section 20.7 : Resources.**

{Estimate the resources needed to conduct and report on the review, including labor hours, travel costs, facilities, and tools. Include funding requirements in the funding section of the Exhibit 300 Program Baseline.}

Implementation Strategy and Planning:

Section 19 : DEPLOYMENT .

Define the strategy for fielding and bringing the new capability into operational use. This typically involves deployment planning, implementation contract(s) award and administration, site engineering and physical integration, installation and checkout, system shakedown, dual operations, joint acceptance and inspection, commissioning, and the removal and disposal of replaced systems, equipment, land, facilities, and other items. Explain whether the in-service review process will be applied, including the use of the In-Service Review Checklist. Identify whether shipment to sites other than the key site is planned before the in-service decision. Explain how service will be maintained during transition from the current capability to the new capability. Explain how you intend to identify and obtain tools, resources, and support needed to field this product.

Implementation Strategy and Planning:

Section 18 : INTEGRATED LOGISTICS SUPPORT .

Implementation Strategy and Planning:

Section 18.1 : Staffing .

Define the strategy for obtaining person work-hours required to perform operational, maintenance, and support actions.

Implementation Strategy and Planning:

Section 18.2 : Supply Support .

Define the strategy for determining and obtaining, cataloging, receiving, storing, and issuing items of supply including initial spares and repair parts.

Implementation Strategy and Planning:

Section 18.3 : Support Facilities and Equipment .

Define the strategy for determining, obtaining support facilities, tools, and equipment needed to install, operate, maintain, and support the facility, system, or equipment throughout its lifecycle. This includes support equipment and software for training, testing, depot maintenance, and hazardous waste management.

Implementation Strategy and Planning:

Section 18.4 : Technical Data .

Define the strategy for producing, delivering, managing, and reviewing recorded information such as manuals, specifications, drawings, and operational testing procedures. This includes acquiring, writing, assembling, reproducing, packaging, shipping the data, as well as converting data from contractor format into government format.

Implementation Strategy and Planning:

Section 18.5 : Training and Training Support .

Define the strategy for obtaining the processes, procedures, course material, and skills necessary to train personnel to install, operate, and maintain a facility, system, or equipment.

Implementation Strategy and Planning:

Section 18.6 : First and Second Level Repair .

Define the strategy for obtaining the resources, processes, and procedures for on-site and second-level engineering support for both hardware and software.

Implementation Strategy and Planning:

Section 18.7 : Packaging, Handling, Storage, and Transportation .

Define the strategy for obtaining the resources and methods to ensure systems, equipment, and support items are preserved, packaged, stored, and transported safely.

Implementation Strategy and Planning:

Section 17 : HUMAN INTEGRATION .

Implementation Strategy and Planning:

Section 17.1 : Human/Product Integration .

Define the strategy related to manpower factors that impact product design; broad cognitive, physical, and sensory requirements for operators, maintainers, and support personnel that contribute to performance; and requirements related to an effective human-system interfaces.

Implementation Strategy and Planning:

Section 17.2 : Employee Health and Safety .

Define the strategy for satisfying requirements related to Occupational Safety and Health Administration, the National Fire Protection Association, and other safety and health regulations, as well as for avoiding conditions that degrade performance.

Define the strategy for achieving operating environment requirements associated with such factors as light, temperature, noise, fire protection, stairs, and ladders. Specify how you will update the Occupant Emergency Plan when implementation will affect facility egress routes or fire safety.

Implementation Strategy and Planning:

Section 17.3 : Specialized Skills and Capabilities .

Define how requirements will be achieved related to cognitive, physical, sensory, and performance for operators, maintainers, or support personnel; human performance thresholds and criteria; and constraints, limitations, and specialized requirements related to training, staffing levels, and personnel skills.

Implementation Strategy and Planning:

Section 16 : FUNCTIONAL INTEGRATION .

Implementation Strategy and Planning:

Section 16.1 : Integration With other National Airspace System and non-National Airspace System Elements .

Define the strategy for implementing interface requirements with other systems, subsystems, networks, facilities, and organizations, including all states and modes of operation (e.g., primary and back-up). Include remote maintenance monitoring and operational command and control requirements.

Implementation Strategy and Planning:

Section 16.2 : Software Integration .

Define the strategy for achieving software integration.

Implementation Strategy and Planning:

Section 16.3 : Spectrum Management .

Define the strategy for satisfying spectrum management requirements for this program and ensuring spectrum compatibility with other National Airspace System elements.

Implementation Strategy and Planning:

Section 16.4 : Standardization .

Define the strategy for satisfying requirements associated with using standard products already in use in the National Airspace System, as well as any standardization requirement to facilitate functional and physical integration. Define the strategy for achieving any ICAO, ISO, space management, or other standard to ensure ease of training, logistics, workforce mobility, architecture and engineering, or compliance with international, national, state, and local codes and laws.

Implementation Strategy and Planning:

Section 15 : PHYSICAL INTEGRATION .

Physical integration concerns the integration of a solution into the physical environment. Define how physical integration will be achieved for each element listed below when applicable to your investment program.

Implementation Strategy and Planning:

Section 15.1 : Real Property .

Real property includes owned and leased land and space and other structures under FAA control. Define the strategy for acquiring needed land, including completion of the National Environmental Protection Act process, appropriate Environmental Due Diligence Audits, and any other applicable environmental law before agreement to acquire property. This includes initial analysis, market search, identifying and analyzing candidates sites, appraisals, title searches, and acquisition. Be aware the lead-time for acquisition of real estate can be very long and should begin soon after the investment decision and in close coordination with the appropriate region or center that will acquire the real estate. If existing land is being replaced, an Environmental Due Diligence Audit needs to be completed prior to disposal of property.

Implementation Strategy and Planning:

Section 15.2 : Environmental Requirements .

Define the strategy for achieving environmental requirements for this program or its products that minimize lifecycle environmental impact of systems, facilities, and equipment. This may involve Environmental Impact Statements, Assessments, and Due Diligence Audits.

Implementation Strategy and Planning:

Section 15.3 : Energy Conservation .

Define the strategy for complying with mandates of the National Energy Conservation Policy Act.

Implementation Strategy and Planning:

Section 15.4 : Heating, Ventilation, Air Conditioning .

Define the strategy for achieving heating, ventilation, and air-conditioning requirements both for end-state operations and during transition to the new capability.

Implementation Strategy and Planning:

Section 15.5 : Grounding, Bonding, Shielding, and Lightning Protection .

Define the strategy for achieving grounding, bonding, shielding, and lightning protection requirements both for end-state operations and during transition to the new capability.

Implementation Strategy and Planning:
Section 15.6 : Cables .

Define the strategy for achieving cable, cable routing, and raised-floor requirements both for end-state operations and during transition to the new capability.

Implementation Strategy and Planning:
Section 15.7 : Hazardous Materials .

Define the strategy for achieving requirements associated with hazardous materials both for end-state operations and during transition to the new capability.

Implementation Strategy and Planning:
Section 15.8 : Power Systems and Commercial Power .

Define the strategy for satisfying power system and commercial power requirements both for end-state operations and during transition to the new capability.

Implementation Strategy and Planning:
Section 15.9 : Telecommunications .

Define the strategy for achieving telecommunications requirements both for end-state operations and during transition to the new capability.

Implementation Strategy and Planning:
Section 15.10 : Special Considerations .

Define the strategy for achieving unique requirements related to such considerations as fiber optics, water and sewer, roadway, and access both for end-state operations and during transition to the new capability.

Implementation Strategy and Planning:
Section 14 : FACILITIES .

Define the strategy for acquiring the physical space needed to accommodate systems, auxiliary equipment, and personnel both for end-state operations and during transition to the new capability. Acquisition times vary depending on need and complexity. Coordinate with responsible acquiring organizations at the earliest possible time. Include architectural, civil, electrical, mechanical, and industrial engineering, as well as construction at each site. Include construction and modification of research test facilities and the supporting infrastructure.

See physical infrastructure for related activities such as space, lighting, heating, cooling, telecommunications, shielding, bonding, and lightning protection.

Implementation Strategy and Planning:
Section 13 : PRODUCTION .

Define the strategy for taking a developmental product to full production including production process development and documentation. Include in the strategy how testing will be conducted on each end item to verify conformance with applicable specifications and absence of manufacturing defects. Define contractor and FAA roles and responsibilities.

Implementation Strategy and Planning:
Section 12 : TEST AND EVALUATION .

Implementation Strategy and Planning:
Section 12.1 : Test Strategy Overview .

Define the test strategy for each program stage (e.g., capability demonstration, prototype development, full-scale development, production, deployment, as appropriate). If this program is a commercial or non-developmental acquisition, describe the use of commercial product testing or historical usage data in place of government testing. Identify any completed testing including operational capability tests and demonstrations. Identify any other test streamlining approaches that will be used (e.g., Operational Capability Demonstration as an element of source selection). Explain why this test strategy is appropriate for the risk associated with the products or capability to be provided. Identify critical operational issues and explain how the test strategy will mitigate risk. State whether a Verification Requirements Traceability Matrix will be used to trace critical performance parameters and critical operational issues from the program requirements in Exhibit 300 Attachment 1 to test activities throughout solution implementation. Identify whether the Chief Operating Officer designated the program for Independent Operational Test & Evaluation, thereby requiring an Independent Operational Test Readiness Declaration.

Implementation Strategy and Planning:

Section 12.2 : System Test .

Describe the system test strategy for this program. If developmental testing is required, define the objectives of developmental testing. Identify criteria for starting operational testing. Explain how Critical Operational Issues will be used to establish test objectives for each stage. Differentiate between contractor testing and FAA testing. Explain how you intend to obtain needed test plans, procedures, and reports; as well as test personnel, tools, training, and other test resources for both government and contractor personnel. Identify whether independent software verification and validation will be used. If so, explain how it will be implemented and managed.

Implementation Strategy and Planning:

Section 12.3 : Independent Operational Test and Evaluation (IOT&E) .

If the Chief Operating Officer designates the program for IOT&E, the ATO Test Team will develop the IOT&E test strategy section of this attachment. Describe the IOT&E approach; how Critical Operational Issues will be resolved; and prerequisites for starting IOT&E. Identify the criteria for selecting the site for IOT&E. Identify how all plans, procedures, resources, and reports will be developed.

Implementation Strategy and Planning:

Section 12.4 : Field Familiarization Test .

Explain how Critical Operational Issues will be used to establish test objectives for field familiarization testing. Explain how you intend to identify, plan, and execute tests to accomplish these objectives. Explain how you intend to obtain needed test plans, procedures, and reports, as well as test personnel, tools, training, and other test resources for both government and contractor personnel.

Implementation Strategy and Planning:

Section 11 : HARDWARE AND SOFTWARE DEVELOPMENT .

Define the strategy for the design, development, fabrication, assembly, and check out of hardware and software configuration items. Typically these activities are performed by the contractor and managed by the service organization. Define contractor and FAA roles and responsibilities. Use the standard lifecycle work

breakdown structure as a guide.

Implementation Strategy and Planning:

Section 10 : SECURITY AND PRIVACY .

Implementation Strategy and Planning:

Section 10.1 : Physical Security .

Explain how requirements will be satisfied related to security of the physical plant both for end-state operations and during transition to the new capability.

Implementation Strategy and Planning:

Section 10.2 : Information Security .

OMB requires information technology security planning to proceed in parallel with solution planning. All information technology investments must have an up-to-date security plan that meets OMB policy and NIST guidelines and must be fully certified and accredited before becoming operational. Program planning must ensure requests for IT security funding is adequate. This includes a security characterization per NIST FIPS PUB 199 for confidentiality, integrity, and availability. You must identify: (1) current information security costs; (2) IT security performance gaps; and (3) show how requested funding will close performance gaps. Refer to information system security guidance in FAST for a complete discussion of what must be done. With the above in mind, define your strategy for obtaining information security throughout the lifecycle of this investment program.

Implementation Strategy and Planning:

Section 10.3 : Personnel Security .

Explain how requirements will be satisfied related to personnel, security clearances, security training, and access control.

Implementation Strategy and Planning:

Section 10.4 : Privacy .

OMB requires agency's to comply with Section 208 of the E-government Act. If applicable, your planning must include a privacy impact assessment that evaluates privacy risks, alternatives, and protective measures at each stage of the information lifecycle.

Implementation Strategy and Planning:

Section 9 : CONFIGURATION MANAGEMENT .

Define how the configuration of hardware, software, data documentation, interfaces, and tools will be managed throughout their lifecycle. This includes the establishment, monitoring, and administration of change control procedures, establishment and administration of change control boards, and formal audits to compare product to documentation. The approach will vary based on the product to be procured (e.g., commercial, non-developmental, or development). Typically, the following configuration baselines should be established and managed: a functional baseline of decomposed requirements, an allocated baseline of configuration items, and a product baseline. Software configuration management should cover source code, source-code-level programming instructions of programmable firmware devices, test procedures, and test cases. Identify tools that will be used to accomplish configuration management. Refer to configuration management guidance in FAST to determine what must be done.

Implementation Strategy and Planning:

Section 8 : SYSTEMS ENGINEERING .

Define how systems engineering will be applied to this investment program. For example, explain how program requirements will be allocated to different solution providers and how they will be transformed into specifications for prime contractor(s). Explain how value engineering; supportability, reliability, and maintenance engineering; and specialty engineering such as electromagnetic interference and compatibility will be factored into the solution.

Implementation Strategy and Planning:

Section 7 : BENEFITS AND PERFORMANCE .

Define how benefits and performance in the Exhibit 300 Program Baseline will be tracked and verified during the solution implementation and in-service management of this investment program. Discuss your plans for conducting post implementation reviews and operational evaluations and factoring resultant data into service area analysis and reporting at service area reviews. When the realization of benefits is outside the control of the service organization (e.g., changes to regulations, actions by the airlines), describe how you will ensure necessary actions are taken (e.g., a responsible person from AVR could be made a member of the implementation team).

Implementation Strategy and Planning:

Section 6 : PROCUREMENT STRATEGY .

Provide the information required in the following sub-sections for each contract you will let to implement this program. Identify what streamlining actions will be used (e.g., release of draft information to industry for comment, use of oral proposals, pre-qualification of contractors, etc.).

Implementation Strategy and Planning:

Section 6.1 : Sources .

Identify prospective sources that can satisfy the need as identified by market research and other means. State whether a Qualified Bidders List will be used. Discuss how small and small disadvantaged businesses will participate.

Implementation Strategy and Planning:

Section 6.2 : Source Selection .

Identify the source selection official. Define the primary source selection factors that will be used. For software-intensive procurements, the results of evaluations using Capability Maturity Model instruments can be used as a source selection factor to ensure the successful offeror has mature software acquisition, development, and maintenance processes in place. State whether past performance and vendor process capability and process improvement will be used as selection criteria. State whether open architecture and modular design will be required or scored during source selection to facilitate modernization and supportability of fielded products.

Implementation Strategy and Planning:

Section 6.3 : Competition .

Identify whether competition will be sought, and if so, how it will be achieved. FAA policy encourages competition in every phase of product lifecycle to encourage innovation and control costs. For developmental programs, state whether you intend to award multiple competitive contracts as a means for reducing risk and selecting a most advantageous design.

Implementation Strategy and Planning:

Section 6.4 : Contract Type .

Identify the contract type you will use. OMB requires you to employ a procurement strategy that mitigates risk to the Government, accommodates Section 508 as needed, and uses performance-based contracts and statements of work. If you do not use performance-based, fixed-price contracts, clearly define the reasons that prompted use of other types of contracts. Discuss whether cost-sharing or incentive contracts will be used to achieve key program goals such as performance, quality, and cost and schedule control.

Implementation Strategy and Planning:

Section 6.5 : Government-Furnished Property and Information .

Identify what property or information the FAA must provide to the contractor.

Implementation Strategy and Planning:

Section 6.6 : Warranties and Data Rights .

State whether warranties or data rights will be obtained.

Implementation Strategy and Planning:

Section 5 : MANAGEMENT STRATEGY .

Implementation Strategy and Planning:

Section 5.1 : Management Team .

Use table format to define the roles and responsibilities of key individuals and organizations that will implement this program. Include all relevant functions and disciplines such as program and contract management; facility design, modification, and construction; systems, human factors, and telecommunications engineering; test and evaluation; in-service operations and support; physical and functional integration; fielding and deployment; configuration management; quality assurance; and security. Include the name, office symbol, telephone number, and email address of team members. Identify points of contact with other programs and organizations that interface with or will have an impact on your program. Be sure key participants are involved in preparing this plan so that support will be there when needed.

Implementation Strategy and Planning:

Section 5.2 : Quality Assurance .

Identify quality assurance controls that will be applied to both contractor and government activity (e.g., contractor status reporting, performance management, in-plant Quality Reliability Officers, peer reviews, independent verification and validation). If government standards are invoked, explain why they are required in lieu of commercial standards. Identify any automated tools that will be employed to manage and communicate quality assurance actions and activities. Define how the quality of a vendor's software processes will be monitored when those processes are evaluated and scored as a part of source selection.

Implementation Strategy and Planning:

Section 5.3 : Contract Management .

Explain how prime and support contractors will be managed. Include contract administration and contractor process capability evaluation and appraisal. Identify what kind of cost/schedule/performance tracking will be used to monitor contractor status and progress. OMB requires use of an Earned Value Management System (EVMS) that meets ANSI/EIA Standard 748, for both government and contractor costs, for those parts of the total investment that require development (e.g., prototypes and testing in the planning phase and development efforts in the

acquisition phase). For investments in the operation or steady-state phase, describe how contractor costs will be audited during performance and at completion.

Implementation Strategy and Planning:

Section 5.4 : Requirements Management .

Describe how requirements will be baselined and controlled throughout the life of this program. Explain how site-specific requirements will be determined, controlled, and managed. Explain how data will be gathered and assessed to ensure requirements are being met during solution implementation in support of annual service area reviews.

Implementation Strategy and Planning:

Section 5.5 : System Safety Management .

Explain your strategy for ensuring an appropriate system safety program will be implemented by both the service organization and system contractor(s). Identify the target level of safety for the service, system, or program and explain how it was derived. Identify the risk acceptance and safety risk management documentation approval process as planned or practiced by the program. Describe the Safety Risk Management (SRM) program and how it will be used to identify, assesses, mitigate, and track hazards. Explain how the SRM complies with FAA Order 8040.4, Safety Risk Management and how you intend to implement the SRM program in accordance with the ATO Safety Service Unit's Safety Management System (SMS) and the System Safety Management Program (SSMP). Identify staffing issues and how you intend to develop and direct your own Integrated Safety Plan and the contractor's System Safety Program Plan. Identify key milestones of each. Refer to system safety management program guidance in FAST and the Safety Management System (SMS) Manual to find out the details on what must be done.

Implementation Strategy and Planning:

Section 5.6 : Program Control.

Describe how program schedule and cost performance will be managed and reported for all resources supporting the program.

Explain how program activity will be planned, measured, reported, evaluated, and revised. Explain how program activity will be coordinated and reported (e.g., monthly status reviews, quarterly regional reviews, annual service area reviews).

- *For program efforts supporting development, modernization, or enhancement (DME), identify cost/schedule/performance metrics and tracking that will be used to monitor program status and progress. AMS, Section 4.16, Earned Value Management, requires use of an Earned Value Management System (EVMS) that meets American National Standard ANSI/EIA Standard 748, for both government and contractor costs, for those parts of the total investment that require DME (e.g., prototypes and testing in the planning phase and development efforts in the acquisition phase).*
- *For investments in the operation or steady-state phase, describe how costs (government and contractor) will be measured during performance and at completion. AMS, Section 4.5, **Post Implementation Review**, requires reporting and review for program actual investment costs, schedules, benefits, performance, mission outcomes, and baseline measures in the Exhibit 300 Program Baseline or equivalent baseline.*

Implementation Strategy and Planning:
Section 4 : PROGRAM STRATEGY .

Describe the overall strategy for obtaining the capability specified in the Exhibit 300 Program Baseline and Attachment 1: Program Requirements. Define the strategy for each key element of the program identified in Section 2.3 Key Elements (e.g., systems/equipment/software elements, facility elements, infrastructure elements, services elements, etc.). For example, developmental activity is planned for hardware/software versus COTS/NDI equipment; new facility will be designed and constructed versus modification of existing facilities, degree to which the physical infrastructure (e.g., roads, telecommunications, power, space, HVAC) will be modified. Include within your discussion your strategy for the following, as applicable: the strategy for transforming performance requirements into specifications and a solution configuration; analysis, design, test, and integration of the solution; value engineering; supportability, maintainability, and reliability engineering; hardware and software design, development, and test; production engineering; and full-scale production. Refer to Section 3 of the FAA Standard Work Breakdown Structure for complete planning details related to solution development.

Implementation Strategy and Planning:
Section 3 : INTEGRATED PROGRAM SCHEDULE .

Display program schedule by fiscal year for key program events and milestone. Be consistent with the Exhibit 300 Program Baseline. Appendix 1 contains representative planning elements and events that may be applicable. So does the standard lifecycle work breakdown structure. Tailor the integrated schedule to your program using the program baseline work breakdown structure.

Implementation Strategy and Planning:
Section 2 : OVERVIEW .

Implementation Strategy and Planning:
Section 2.1 : Description .

Briefly describe this investment program and its status. Describe how it relates to the overall NAS or Enterprise Architecture and other interfacing systems or products.

Implementation Strategy and Planning:
Section 2.2 : Objectives and Capabilities .

Summarize primary objectives and capabilities this program is intended to provide.

Implementation Strategy and Planning:
Section 2.3 : Key Elements .

Identify key elements of this program and briefly explain how they shape your implementation strategy (e.g., development of hardware or software, procurement of systems or equipment, modification or construction of facilities, changes in the physical infrastructure, development of functional interfaces, procurement of installation or support services).

Implementation Strategy and Planning:
Section 2.4 : Deliverables .

Identify and describe briefly the key outputs of this investment.

Implementation Strategy and Planning:
Section 1 : BACKGROUND .

Implementation Strategy and Planning:

Section 1.1 : Mission Need .

Cite the service-level mission need statement and other high-level agency document(s) (e.g., FAA Strategic Plan) that are the basis for this program. Briefly characterize the mission or service need this program is intended to satisfy.

Implementation Strategy and Planning:

Section 1.2 : Status .

State whether this is the initial implementations strategy and planning attachment or a revision. If this is a revision, briefly characterize how the program has changed. Cite any top-level management direction since the last approval that influences this revision

Implementation Strategy and Planning:

PART I: LIFECYCLE MANAGEMENT STRATEGY .

Implementation Strategy and Planning:

Signature Page .

EXHIBIT 300

ATTACHMENT 3

IMPLEMENTATION STRATEGY AND PLANNING

(Program Name)

Version #

Approved by: **Signature** **Date:**
Vice President or Director of the performing service organization

Approved by: **Signature** **Date:**
Vice President or Director of the operating service organization(s) (if different from the performing service organization)

Submitted by: **Signature** **Date:**
Appropriate preparing organization

Service Organization Focal Point

Name

Code and organization

Phone Number

FAX Number

Operating Organization Focal Point

Name

Code and organization

Phone Number

FAX Number

Email Address

Email Address

**Federal Aviation Administration
800 Independence Avenue
Washington, D.C. 20591**

**Implementation Strategy and Planning:
Cover Page .**

Template for Attachment 3 of the Exhibit 300

Implementation Strategy and Planning

(Revised 04/2006)

This template guides the service organization when preparing Attachment 3: Implementation Strategy and Planning of the Exhibit 300. Part 1 of the attachment defines the overall implementation strategy the service organization will execute to achieve performance and benefits within the cost and schedule specified in the Exhibit 300 Program Baseline. Part 2 is the detailed project management work plan built from the program baseline work breakdown structure for the current phase of the investment program. Italicized text in the template identifies issues and questions you should consider as you plan your strategy for implementing and supporting the investment over its full lifecycle. Un-italicized text defines the format and structure (e.g., title page, table of contents, section heads and numbers) of the attachment. Not all sections and questions apply to every investment program. Use the information in the template to tailor your implementation strategy and planning for your investment program. Refer to the standard lifecycle work breakdown structure for additional information concerning activities that may need to be planned and implemented when developing the attachment.