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|  |  | ***Acquisition Management System Guidance*** | |
| **Business Case Template for**  **Non-Materiel Investment**    **July 2017** | | |  |

Federal Aviation Administration

800 Independence Avenue SW

Washington, DC 20591

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| --- | --- | --- | --- |
|  |  | **Federal Aviation**  **Administration** | |
|  |  |  | |
|  |  | (Date) | |
| **Final Business Case for**  **(Name of Proposed Non-Materiel Investment)** | | |  |

Enterprise Architecture Roadmap Statement #

Approved by: Date:

Vice President (ATO) or Director (Non-ATO) of

Sponsoring Service Organization or Line of Business

Contact Point

*Name*

*Organizational Code*

*Phone Number*

*FAX Number*

Federal Aviation Administration

800 Independence Avenue SW

Washington, DC 20591

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**APPENDICES**

Appendix A: Business Case Analysis Team Members

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**SUPPORTING DOCUMENTS**

Shortfall Analysis Report

Acquisition Program Baseline

Life Cycle Cost Estimate

Cost Basis of Estimate

*The business case for a Non-Materiel investment initiative is developed during final investment analysis using this template which may be tailored by the IP&A Business Case Review group. Requests for tailoring should be made very early in final investment analysis.*

*All guidance documents cited in this template can be found on the IP&A website at* [*www.ipa.faa.gov*](http://www.ipa.faa.gov) *or the FAA Acquisition System Toolset website at* [*http://fast.faa.gov*](http://fast.faa.gov)

**EXECUTIVE SUMMARY**

*Summarize the key information in this document, highlighting those elements that should be most relevant to the Joint Resources Council when making a final investment decision. Include the following at a minimum: A brief summary of the operational shortfall or opportunity; a brief description of the proposed investment; a summary of the business case cost, schedule, and risk analyses; and the impact on FAA operational capability if the investment is delayed or not funde*d.

# INVESTMENT DESCRIPTION

*Briefly describe the proposed Non-Materiel investment initiative. Identify and briefly describe each project or activity comprising the initiative.*

*Examples of typical Non-Materiel projects or activities include:*

* *Engineering studies and analyses*
* *Procedures development*
* *Airspace changes*
* *Prototypes/demonstrations*
* *Standards or avionics development*
* *Process reengineering*
* *Intellectual property development*

*A Non-Materiel initiative is typically not associated with the acquisition any system or equipment although this investment type may be used for early developmental activity associated with the future acquisition of a system or equipment such as some Concept Maturity and Technology Demonstration programs.*

# Problem Statement

*Briefly describe the operational shortfall or technical opportunity this initiative is intended to address. This section should be an updated version of Section 1 of the Final Shortfall Analysis Report produced during concept and requirements definition.*

*Identify the key drivers for this investment and support each with technical, operational, or legislative requirements. This is the basis for your analysis in Section 8, Impact if not Funded or Delayed.*

# ****Assumptions****

*List the key assumptions and conditions having major influence on this business case analysis and its conclusions. The list should include at a minimum:*

* The assumed remaining service life and disposition date of the existing capability
* The assumed required implementation date for the proposed investment
* The assumed service life of the proposed investment
* The future operational environment

*See “Business Case Analysis Guidance, Appendix B” found at* [*http://ipa.faa.gov*](http://ipa.faa.gov) *for a definition of assumptions, constraints, and ground rules.*

# Business Case Analysis

***See Business Case Analysis Guidance, Appendix A, Table A-1 for analysis requirements by ACAT.***

## Cost Analysis

*Summarize the risk-adjusted then-year lifecycle costs for this investment initiative using the following table or similar variation. Breakdown costs by individual project or activity identified in Section 1. Briefly summarize the cost analysis conducted to generate high-confidence lifecycle cost estimates. Summarize the sensitivity analysis performed on key cost drivers and the effect of technical, schedule, and cost risk on cost estimates. Reference the Life Cycle Cost Estimate and cost Basis of Estimates for the proposed Non-Material initiative.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Alternative** | **Total F&E Cost**  RATY $ | **Total OPS Cost**  **RATY $** | **Total Cost**  **RATY $** |
| Project/Activity 1 Descriptor |  |  |  |
| Project/Activity 2 Descriptor |  |  |  |
| Project/Activity Descriptor |  |  |  |

Total F&E cost includes all development, procurement, deployment, support, and infrastructure costs.

Total OPS cost includes all operational and support costs over the intended service life.

RATY – Risk-Adjusted Then Year

*This section should also include a budget summary chart for the Non-Materiel initiative specifying both acquisition (F&E) and operational (OPS) costs.*

*Further information on the development of cost estimates, risk and uncertainty analysis, or the budget summary can be found in the “Guide to Conducting Business Case Cost Evaluations” found at http://www.ipa.faa.gov.*

## Schedule Analysis

*Provide a risk-adjusted implementation schedule and key milestones for the proposed initiative in chart, table, or graph format. Briefly explain the assumptions and analysis on which the schedule is based.*

*See “Guide To Conducting Business Case Schedule Evaluations” found on the IP&A website at* [***http://www.ipa.faa.gov***](http://www.ipa.faa.gov)*.*

## Risk and Sensitivity Analysis

### Risk Analysis

*Risk analysis is an objective evaluation to determine the probability of an undesirable event occurring during implementation and the significance of the consequence of the occurrence. It is a process in which a group of programmatic, technical, and analytical specialists review the cost and benefits estimates for the initiative, as well as supporting ground rules, assumptions, and basis of the estimates. If the analysis indicates an undesirable event may arise, the potential impact(s) resulting from such an occurrence is evaluated. At a minimum, the areas of risk to be analyzed are: costs, benefits, schedule, and technical*.

*Summarize the risks associated with implementing the investment initiative. Include the overall risk rating supported by a 5 X 5 risk matrix. Identify and evaluate major risks and summarize the mitigation strategy for each. Reference the Risk Mitigation Plan for the initiative.*

See “*Guidelines for Conducting Business Case Risk Assessment*” found at http://www.ipa.faa.gov

### Issues and Opportunities

*Summarize the major issues that have been identified, analyzed, and incorporated into the business case, as well as any opportunities that would have a positive impact on the initiative and agency service delivery. For ATO initiatives, reference the PMO Risk, Issues, and Opportunities Management Plan.*

### Sensitivity Analysis

*Sensitivity analysis involves changing key parameters in the cost model to test their effect on cost. In order for sensitivity analysis to reveal how the cost estimate is affected by a change in a single assumption, the cost estimator must examine the effect of changing one assumption or cost driver at a time while holding all other variables constant. Perform a sensitivity analysis on key design cost-drivers to determine their impact on cost. Sensitivity analysis includes:*

* *Testing the sensitivity of cost elements to changes in input values and key assumptions*
* *Determining the effect of changing quantities or schedule on the overall estimate*
* *Determining which assumptions are key cost drivers and which cost elements are affected most by changes*

*Use the following table to identify the key cost-drivers on which a sensitivity analysis was performed and summarize their impact on cost.*

|  |  |
| --- | --- |
| **Key Cost-Driver** | **Cost Impact** |
|  |  |
|  |  |

# Affordability Analysis

*Send the lifecycle cost estimate for this Non-Materiel initiative to FAA Finance. This office will assess the budget impact and relative contribution of this initiative to FAA goals against other proposed and ongoing investment programs in the FAA financial baseline. When a solution cannot be funded within the capital investment baseline, FAA Finance may propose offsets from lower priority programs. The budget impact assessment shapes subsequent deliberations of the business case analysis team*.

*Summarize findings and recommendations of the affordability assessment here.*

# Related Assessments

*Depending on the nature of the investment, all or some of the following assessments may be appropriate:*

* *Human Engineering and Operability Assessment*
* *Information and System Security Assessment (See AMS Policy Section 4.11)*
* *Environment and Occupational Safety and Health Assessment*
* *Other Specialty Engineering Assessments*

*Summarize findings here.*

*See the IP&A website (*[*http://www.ipa.faa.gov*](http://www.ipa.faa.gov)*) for information on these assessments.*

# Recommendation

*Describe the recommendation for this investment initiative and supporting rationale (i.e. affordability, capability, schedule, risk, etc.). Provide a table prioritizing initiative projects based on operational impact, criticality, immediacy and cost. This strategy will allow decision-makers to consider different funding trade-offs, assess how differing levels of funding may impact overall effectiveness, and ultimately balance the cost of the initiative against annual budget threshold limitation.*

# Impact if Not Funded or Delayed

*Explain why this investment must be approved now. Briefly state what will happen if the effort is delayed or not funded (Reference the Shortfall Analysis Report). Summarize the impact on other initiatives and operational assets dependent on this initiative*

# Procurement Strategy

*Identify the recommended contracting approach, if any, and summarize the rationale for the recommendation.*

**APPENDICES**

**Appendix A: Business Case Analysis Team Members**

*Identify the organization and define the role of each business case team member in the following table.*

|  |  |  |
| --- | --- | --- |
| **Name** | **Organization** | **Role** |
|  |  |  |
|  |  |  |

**Appendix B: References**

*Use the following table to list references and documents used in this business case analysis. Examples include the Basis of Estimate for Lifecycle Costs and documentation of related assessments. Each reference should include the title, originating organization, and approval date.*

|  |  |  |
| --- | --- | --- |
| **Document Title** | **Originating Organization** | **Approval Date** |
|  |  |  |
|  |  |  |

**SUPPORTING DOCUMENTS**

**Shortfall Analysis Report**

**Acquisition Program Baseline**

**Life Cycle Cost Estimate**

**Cost Basis of Estimate**