



# **Investment Management Process Guidance**

## **June 2016**

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## 1 Executive Summary

The Department of Transportation (DOT) budgets over \$3 billion annually for Information Technology (IT) investments. The efficient and effective management of IT resources requires the Department to implement a common approach to investment management practices to ensure taxpayer dollars are wisely spent. Doing so will ensure DOT's mission priorities and legislative mandates are effectively met, including the Federal Information Technology Acquisition Reform (FITARA) and Clinger-Cohen Acts, Government Performance and Results Act, Federal Acquisition Streamlining Act, and the Paperwork Reduction Act.

The Investment Management Guidance takes an integrated approach to the oversight and management of IT resources, and serves as the mechanism used by the Department to coordinate and manage the compliance of all things IT. The Guidance outlines the DOT's strategy and process steps necessary to enhance the integration, streamlining and maturity of Capital Planning and Investment Control (CPIC) activities for the enterprise management of IT resources. The investment management process centers on the guiding principles of a data-driven, portfolio-based approach and CPIC methodology that allows for an expansive and thorough look across the enterprise of DOT IT assets and resources. This empowers the Department to make evidence-based decisions on the pre-selection, selection, control, and evaluation of new and ongoing IT investments. It also facilitates the identification and elimination of legacy systems no longer required to meet the Department's goals and objectives.

To ensure proper focus is placed on its ability to enhance the Department's mission, this update to the investment management guidance and processes therein leverages a senior executive Governance body (Investment Review Board [IRB]), chaired by the Deputy Secretary and the Departmental Chief Information Officer (DOT CIO). The IRB enables collaboration and communication throughout the DOT, taking into consideration Operating Administrations' (OAs) unique missions and the strategic plans and priorities of the Department. The IRB leverages a number of supporting boards, councils and analysis teams to collect, analyze, and present information and recommendations to support data-driven decisions on the Department's strategic priorities. The supporting groups' focus is primarily on subject matter-related areas, e.g. enterprise architecture, planning, acquisition, and shared services, etc. Their work is critical in the DOT's efforts to promote efficiencies through portfolio rationalization, identification, and elimination of redundant systems, including sound cost management, security, and system integration of IT procurements.

Additionally, the guidance provides direction to the DOT community and capital planning professionals for the preparation of information and supporting documentation, e.g. budget exhibits, enterprise architecture artifacts, and business cases required to comply with applicable laws, policies, and regulations governing the management of IT investments. It also establishes the performance management evaluation criteria used to assess the health and status of the DOT's IT portfolio. The Investment Management Process guidance links the criteria to the Department's revamped system development lifecycle management process (the Enterprise Program Management Review [EPMR]) framework, which is governed by an Enterprise Program Management Board (EPMB). At a minimum, the evaluation criteria incorporates Office of Management and Budget (OMB) and Departmental IT policies and processes to ensure investments provide maximum value to business operations, are meeting established performance measures, achieve expected outcomes, and align with and support the strategic

goals and priorities of the Department. The guidance addresses the processes and requisite activities users take to facilitate the integration of budget, acquisition and program management functions of the Department by senior leaders and key stakeholders through a Departmental Investment Management process.

The IM Process guidance takes advantage of proven IT management practices, such as the use of Functional Sponsors, Portfolio Approval Request (PAR) memos, and automated tools, to instill rigor and accountability in the stewardship of taxpayer resources. Functional Sponsors are business segment owners who have overarching responsibility for their IT service area segments. Functional Sponsors work with the DOT Chief Technology Officer and Chief Architect to define business outcomes, shape the technologies required to carry out the functions for their areas, and design the target environment for their areas.

Additionally, the guidance outlines a number of proven strategies to promote transparency and enhance the integration of IT systems as the Department continues its transition from a fragmented IT investment management approach to a new, more integrated and streamlined process. This strategy puts DOT in the best position to make defensible determinations on IT investments that maximize the use of vital resources in a fiscally strained environment. The IM Process guidance is effective immediately and supersedes the March 2015 Interim Investment Management Guidance.

## **2 Purpose and Scope**

### **2.1 Purpose**

The IM Process guidance defines the DOT's investment management process and outlines steps necessary to implement an integrated CPIC and IRB governance process for the oversight and strategic management of DOT's IT resources. Specifically, it serves as the authoritative guidance document that will be used to operationalize the DOT's enterprise approach to IT governance and meet requirements of OMB Circulars A-11 and A-130. Also the guidance will ensure compliance with laws, policies and regulations governing the management of Federal Information Resources, e.g. the Federal Information Technology Acquisition Reform Act of 2014 and the Clinger-Cohen Act of 1996.

### **2.2 Use**

The IM Process guidance is used to facilitate activities associated with the implementation of a portfolio management-based IT Governance process that is rooted in CPIC methodologies and aligned with DOT Order 1351.27 and DOT Order 1351.39<sup>1</sup>. The IT community and vested stakeholders shall use this guidance in carrying out processes and activities that help them meet the Department's requirements for an integrated and robust IT portfolio management process envisioned in OMBs Circular A-11 and A-130 for the management of Federal Information Resources. Users should also leverage the guidance to ensure compliance with laws, policies, and regulations surrounding the management of Information Resource management, e.g. the

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<sup>1</sup> See [DOT Order 1351.27 \(Enterprise Architecture \[EA\] Policy\) dated April 2013](#) and [DOT Order 1351.39 \(IT Governance Policy\)](#)

Federal Information Technology Acquisition Reform Act of 2014, the Clinger-Cohen Act of 1996, and other related guidance and regulations. The guidance will be updated regularly to reflect lessons learned and changes to Federal statutes and OMB guidelines.

## 2.3 Scope

This guidance applies to all DOT Secretarial Offices and Operating Administrations<sup>2</sup> for the procurement and management of all IT resources, including IT Services or those tied to an OMB exhibit. This guidance is intended to complement policies and orders provided for the planning, budgeting, procurement, security and lifecycle management of IT resources, e.g., the Transportation Acquisition Regulation, Transportation Acquisition Manual, Acquisition Management System, the Enterprise Program Management Review framework, and Federal mandates such as the Federal Information Security Management Act of 2002 (FISMA).

## 3 Governance

Within the investment management process, the Department has established an integrated governance body, the IRB, led by the Deputy Secretary of Transportation and the DOT CIO. The investment management process includes key supporting groups, some of which are chartered by the IRB, to assist in enhancing the Department's ability to better streamline investments, leverage existing capabilities, and meet strategic priorities in a more efficient manner. Table 1 identifies the IRBs membership; other stakeholders may be included in this governance body at the Chair's discretion.

IRB Member Title		
Chair	Deputy Secretary of Transportation	
Co-Chair	DOT Chief Information Officer (CIO)	
Principle Members		
	DOT Chief Financial Officer (CFO)	Operating Administrator for FMCSA
	Senior Procurement Executive (SPE)	Operating Administrator for FRA
	Chief, Human Capital Officer	Operating Administrator for FTA
	Assistant Secretary for Administration <sup>3</sup>	Operating Administrator for MARAD
	Operating Administrator for FAA	Operating Administrator for NHTSA
	Operating Administrator for FHWA	Operating Administrator for PHMSA
Associate Members		
	Operating Administrator for SLSDC	
	Deputy General Counsel	

**Table 1: IRB Member Table**

<sup>2</sup> All recommendations and requirements contained in this guidance are applicable to all Components but only to the extent that such requirements and recommendations are consistent with the expressed language contained in 49 U.S.C 106, 40110, 40121

<sup>3</sup> To include the Assistant Secretary for Research & Technology.





DOT and are compliant with the Clinger-Cohen Act. The IRB assists the CIO in making final determinations on the Department's IT Portfolio by reviewing and evaluating current and proposed investments. The IRB leverages recommendations from a number of supporting groups to make such determinations, which are communicated through CIO issued Investment Decision Recommendations. The IRB generally makes one of three determinations on the DOT portfolio: Approve, Approve with conditions, or Disapprove. The approval of the portfolio communicates that the IRB concurs with the portfolio's content, agrees with the current alignment of investments based on the Enterprise Architecture, agrees that costs are reasonable, and concurs that risks are appropriately managed. More detailed information on IRB roles and responsibilities can be found in the [IRB Charter](#).

## **4.2 Investment Working Group (IWG)**

The IWG is the IRB's principal working group, responsible for assisting the IRB by providing advice, guidance, and cross-functional oversight of the Department's IT initiatives, while assisting OAs in improving operating efficiency by best leveraging IT to support the DOT's mission. Using analysis developed by supporting groups, the IWG makes recommendations to the IRB for each segment portfolio approval request prior to each meeting. For additional information, please see the [Investment Working Group Charter](#).

Members of the IWG include:

- DOT Deputy Assistant Secretary for Budget and Programs
- DOT Deputy Chief Information Officer (CIO)
- DOT Senior Procurement Executive (SPE) designee
- Director, Departmental Office of Human Resource Management

## **4.3 CIO Council (CIOC)**

The CIOC reviews and discusses IT portfolio status and provides leadership and direction for Enterprise Architecture Board (EAB) activities. The CIOC also oversees EAB recommendations on the EA roadmap, target architecture/transition roadmap and segment alignment plans, and submits its analysis and recommendations to the IWG for pre-coordination. By overseeing DOT's infrastructure, the CIOC supports emerging business requirements and is responsive to changing technology trends (e.g., mobility, cloud computing, digital services, Internet Protocol version 6). The CIOC collaborates with business owners and service providers on identifying and approving opportunities for shared services and for identifying other IT-related efficiencies across the Department.<sup>4</sup> For additional information, please see the [CIO Council Charter](#).

## **4.4 Enterprise Architecture Board (EAB)**

The DOT EAB, led by the DOT Chief Architect, is a subordinate group to the IRB. In that role, the EAB provides architecture support to DOT OAs by creating investment awareness for data-driven investment decisions. The EAB, in coordination with the Investment Analysis Team, assesses new and legacy IT investments to ensure alignment with DOT mission capabilities and

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<sup>5</sup> Shared service opportunities include commodity IT, as described in page 2 of OMB Memorandum M11-29: <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-29.pdf>

strategic priorities of the Department, and performs the analysis required to identify opportunities for shared services and collaboration. The EAB is responsible for developing and maintaining the DOT EA and establishes its technical and data standards to support the integration and alignment of information technologies. Additionally, the EAB reviews DOT segment portfolios to determine whether they should be adjusted or revised, groups segments by type (domains), and aids in eliminating IT redundancy and inefficiencies within portfolios. The EAB is the decision-making body that reviews investments and determines their compliance with the EA. EAB decisions and recommendations are documented in IRB issue papers. Preliminary EAB segment recommendations are vetted by the CIOC, while final EAB recommendations are communicated to the CIOC, the IWG, and the IRB using Investment Management Process workflow. For additional information, please see the [EAB Charter](#).

#### **4.5 Investment Analysis Team (IAT)**

The IAT is comprised of analysts from the OCIO's Office of the Associate CIO for IT Policy Oversight (S-81) IT Governance Team, and works with OA CPIC coordinators and other OA representatives to conduct investment data collections and analytical reviews of all IT portfolios. The IAT presents these findings to the IRB on behalf of the supporting boards to enable data-driven decisions. The IAT uses cost and schedule baseline data, performance metrics, and risk assessments provided by the OAs, to generate investment analysis and recommendations for the IRB. Preliminary findings are shared with applicable OAs via Issue Papers to help resolve or clarify perceived discrepancies prior to submission to the IRB supporting boards. Any unresolved issues are presented to the IRB and applicable supporting boards for closure.

#### **4.6 OA IRBs**

The Department's enterprise IT Governance approach is dependent on sharing information and open collaboration on IT initiatives across OAs to help the community understand and manage the IT environment. To support information sharing, each OA shall establish an internal IRB process that cultivates a forum for informed decision-making within its administration and across the DOT. Operating Administration IRBs are not a substitute for the DOT Enterprise IRB. The OA IRBs consist of key stakeholders, selected by the OA Administrator and OA CIO, who are entrusted to inform decisions on their IT portfolio, including investment proposals required to support the mission of the OA. In accordance with the requirements outlined in the FITARA, OA IRBs shall consist of designated representation from the DOT OCIO. The DOT OCIO's representative serves to advise and inform proposed decisions and/or strategies pertaining to the procurement and management of IT resources. However, their representation on OA governing boards does not preclude the need for DOT enterprise oversight/approval of investments via the IRB. Operating Administration IRBs are responsible for executing OMB-mandated select-control-evaluate processes at the OA level by conducting periodic evaluations of IT investments and assessing their ability to effectively meet business and mission needs outlined in the EA and strategic plan. The IRB activities support the DOT investment management process and enterprise IRB by taking actions required to rationalize their portfolios through the elimination of redundant or inefficient IT systems/applications and thoroughly evaluating cost, schedule, and performance parameters, as well as managing program risks. Investment proposals must be approved by OA IRBs before submission to and consideration by the DOT IRB. The investment management guidance does not prescribe business processes for OA IRBs. However, OA IRBs should (to the maximum extent practicable) leverage the Departmental standard operating procedures and business processes used by the enterprise IRB in Departmental process in an

effort to create standardization to help achieve integrated business outcomes.

#### **4.7 Functional Sponsors**

Functional Sponsors are principal level business segment owners who are responsible for defining the target environment, business outcomes, priorities, standards, and measures for the segment (e.g. Human Resource Management, Financial Management, Acquisition, etc.).

Functional Sponsors work with OAs and IRB supporting groups to develop the strategic vision for executing the business line function and provide high-level management planning for applicable IT segments used to inform the EA, as well as the OAs' business strategies. As part of these duties Functional Sponsors shall:

- Assist with developing the segment's target architecture and ensure the development of transition plans to reach that goal
- Review and make recommendations on IT investments within their segment
- Ensure that IT investments within their segments are consistent with the goals and objectives of the DOT as outlined in the DOT Information Resource Management (IRM) Strategic Plan
- Establish performance and capability requirements/measures to ensure information resources achieve expected outcomes

Functional Sponsors have been designated for Human Resources, Financial Management and Procurement segments. Others shall be appointed by the IRB as deemed appropriate.

## 5 Investment Management Process

### 5.1 Overview

The investment management process as outlined below is a data-driven process rooted in CPIC methodology, focused on evaluating, selecting and controlling the performance and assessing the management of IT resources through performance based portfolio reviews. It provides for the selection and funding of IT investments to be made by the executive agency, to ensure the selection of such investments are undertaken to meet the strategic goals and objectives of the Department, and the management of such investments are in accordance with established laws and policies governing IT resources. Within this process, senior OST and OA leaders provide oversight of the Department's IT portfolio of investments using a framework that integrates strategic governance, budgeting, acquisition, EA, and capital planning functions for the effective and efficient management of IT resources.

The investment management process is a continuous improvement effort that commences within the OAs as they apply CPIC best practices across their investment portfolio. The OAs' analysis and presentation of their portfolio to the enterprise IRB for review and decision is coordinated through the Governance section of the OCIO's Associate CIO IT Policy and Oversight organization. The OCIO conveys review timelines and data submission requirements to OA CPIC Coordinators through email correspondence and calendared IRB events. IRB review and data submission dates should ultimately align with the Department's budget process<sup>5</sup>. The CPIC Coordinators work with OA CIOs, program managers and budget personnel to ensure the segment(s) or area(s) under review, and the associated investment data/documents, are ready for submission. The OA requests are formally submitted via the IRB's Portfolio Approval Request (PAR) and must contain the relevant data and/or artifacts for the segments under review<sup>6</sup>. PARs are generated by OA CIOs and generally submitted by the OA CPIC Coordinator using the Corporate Investment Management System (CIMS), a DOT enterprise tool. A PAR is required for all investments within the enterprise architecture service area or segment under review. The receipt of the OA PAR and associated data constitutes the end of the data submission process and signals the beginning of analysis by the IRB support groups.

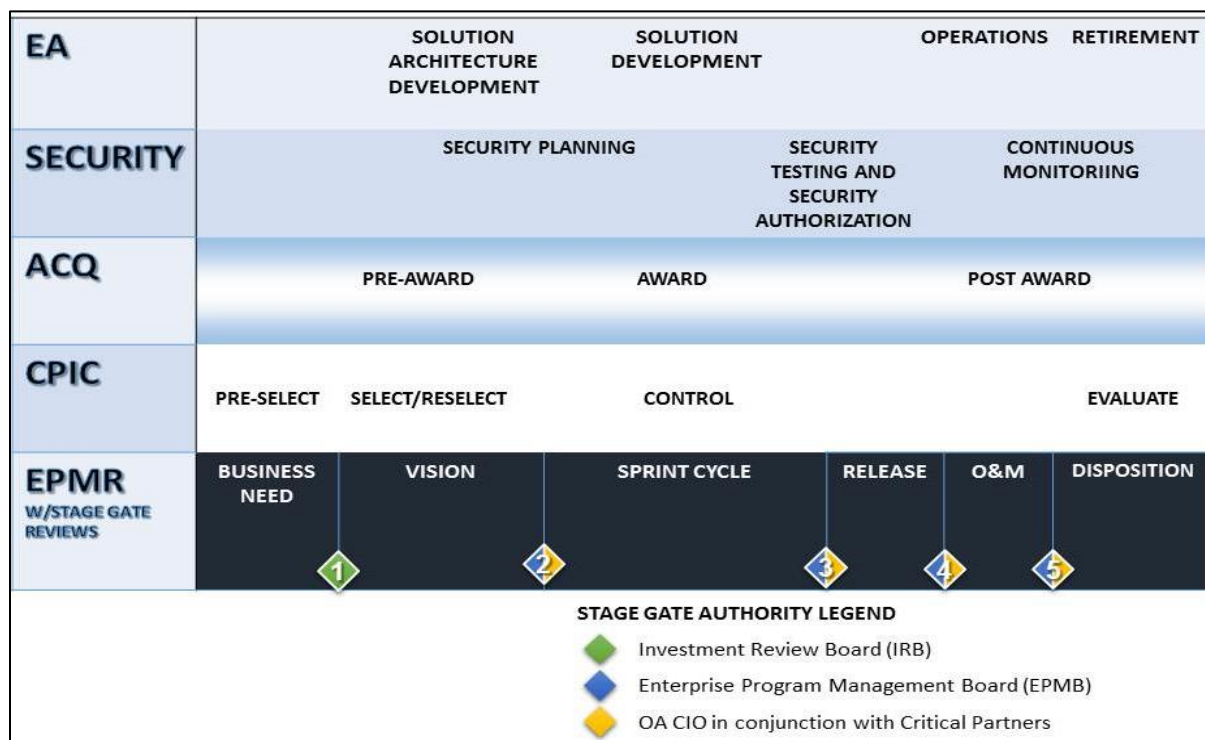
This analysis process leverages investment data, the Enterprise Program Management Review (EPMR) framework artifacts, where necessary, and other program management information that will be highlighted in visualization dashboards and automated tools to enable informed strategic planning and enhanced data-driven decision making. Through phased reviews, segment portfolios are presented for IRB review and approval using established criteria (section 5). The IRB will communicate PAR decisions to OAs via Investment Decision Review (IDR) documents. The signed IDR asserts that the CIO (with the assistance of principle IRB members) has reviewed all cost estimates of IT related costs and ensures all acquisition strategies and acquisition plans that include IT apply adequate incremental development principles. Once the OA receives the IDR they will be instructed to update the applicable investment data reflecting the IRB's decision in CIMS. CIMS data will be used to generate a draft IT Portfolio Summary report, which should correlate with the OA's budget request and be transmitted to the Budget

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<sup>5</sup> Figure 7 Budget Formulation Process

<sup>6</sup> For more information on PARs, see [Appendix C](#)

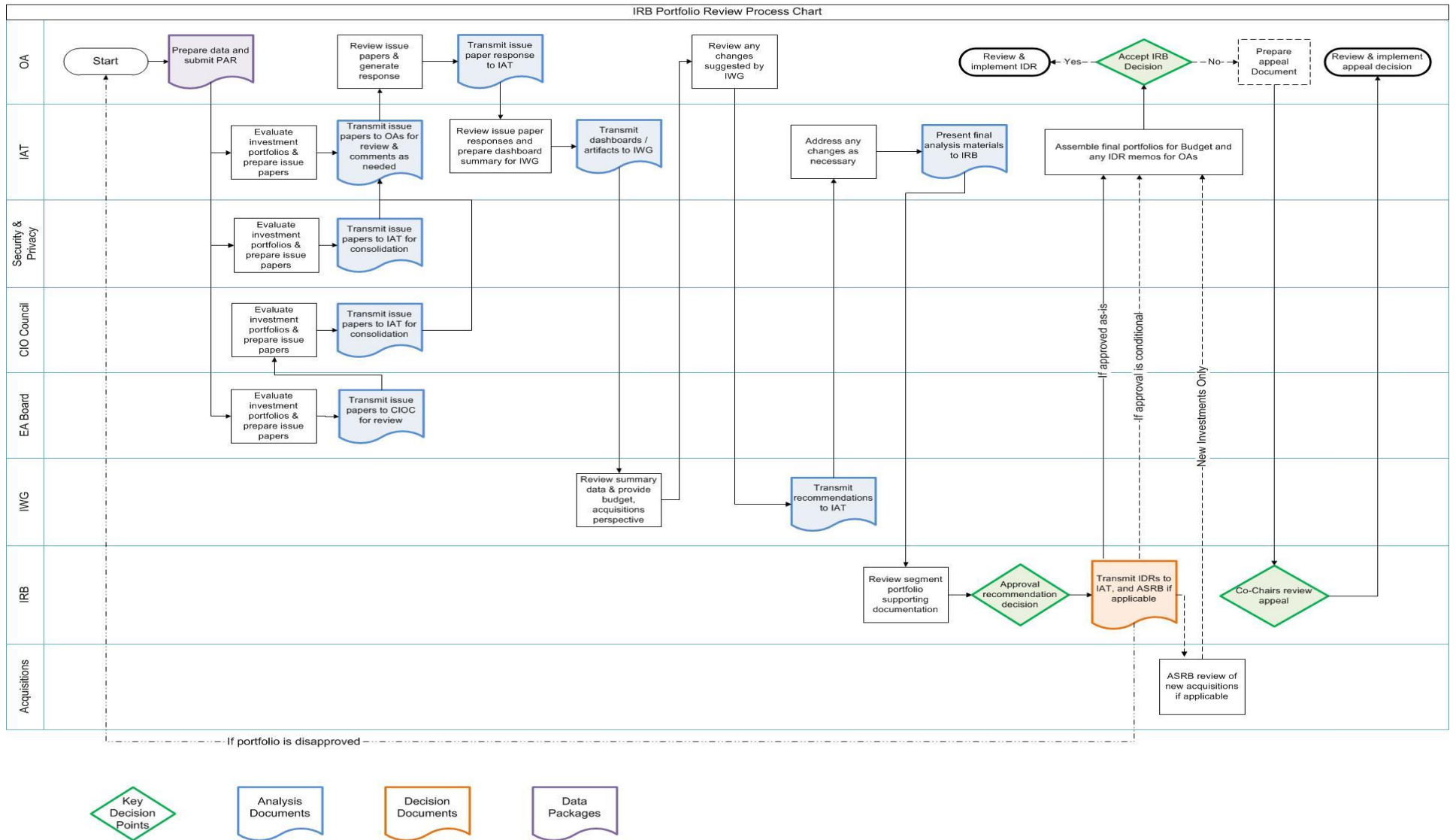
office for assessment. The submission of the exhibits and the issuance of the IDR conclude the IRB process. The approval of the portfolio communicates that the IRB concurs with the portfolio's content, agrees with the current alignment of investments based on the Enterprise Architecture, agrees that costs are reasonable, and concurs that risks are appropriately managed. Figure 3 depicts a high-level overview of the IRB Portfolio Review Process.



**Figure 2: EPMR Alignment with Departmental Functions**

The EPMR is the DOT's integrated approach to overseeing the lifecycle management of investments. The framework helps reinforce and ensure DOT investments successfully align with business needs and meet approved cost, schedule, and performance goals. The EPMR framework is based on Agile methodology and consists of six life cycle phases. Within each phase, there are defined activities, responsibilities, reviews, and deliverables. Exit criteria are established for each phase and Stage Gate reviews are conducted to ensure that the investment's management quality, soundness, and technical feasibility remain adequate, and the investment is ready to move forward to the next phase. EPMR provides guidance to PMs, Business Owners, IT Governance Executives, stakeholders, and critical partners throughout the life of the investment<sup>7</sup>.

<sup>7</sup> <http://our.dot.gov/team/EPMR>



**Figure 3: IRB Portfolio Review Process**



## 5.2 CPIC Process

The CPIC process shown in Figure 4 is a structured, integrated approach to managing IT investments. CPIC processes have varying degrees of integration with IT resource management activities across the Department. It is under this process that all stakeholder communities collaborate to ensure that the CPIC data used by the DOT IRB to monitor and analyze ongoing investments is relevant, accurate, and timely in order to provide a thorough evaluation of new investment proposals, and to ensure each investment within the Department's overarching portfolio supports identified business and mission needs of the agency. DOT will use the three distinct phases of CPIC and add a fourth (Pre-Select) to inform determinations on investment needs, funding, performance, etc. The IRB will leverage the Department's EPMR framework to assess the lifecycle management of new and ongoing IT projects once they enter the Selection Phase. The full lifecycle of phases are Pre-Select, Select, Control and Evaluation.

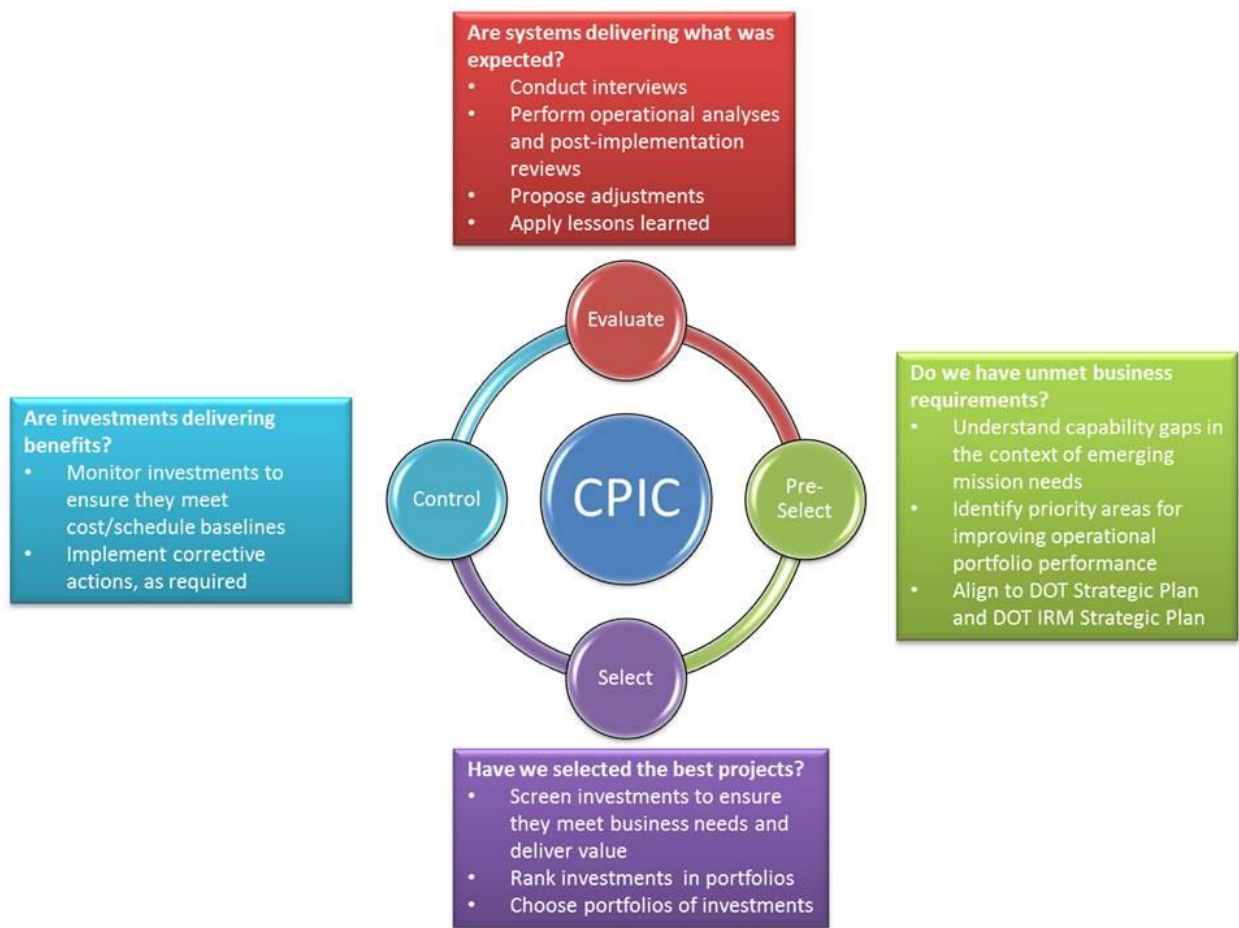


Figure 4: Overview of the CPIC Process

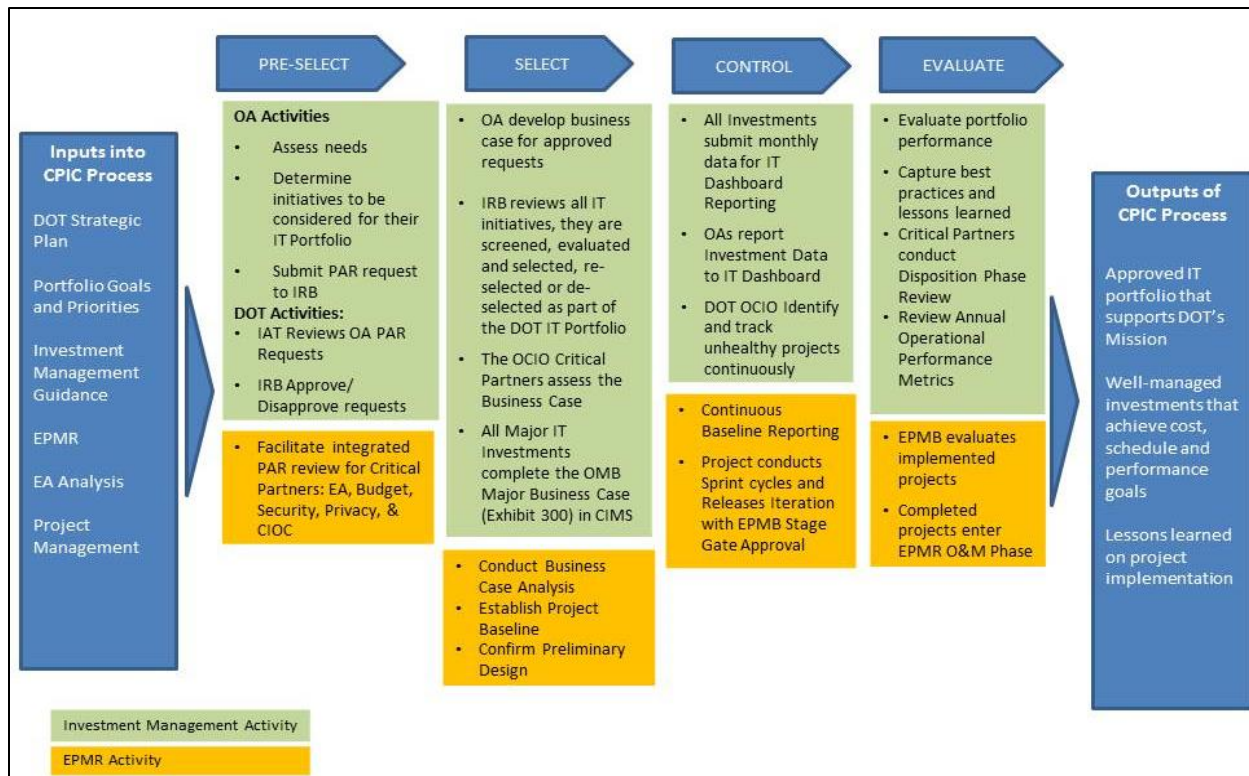


Figure 5: CPIC & EPMR Integrated Phases

### 5.2.1 Pre-Select Phase

The Pre-Select phase provides a method to introduce and garner a decision on a proposed business need. It allows the IRB to assess new IT solutions, modernization proposals, or business process changes. In this phase, IT proposals submitted to IAT through the Department portfolio investment management tool CIMS initiate the Capital Planning process. If the proposal is approved by the IRB, the IT solution will be entered into the Department's IT Portfolio. Investments are managed under a Departmental IT governance structure that enables transparency, enhances strategic sourcing capability, and leverages shared services to rationalize the enterprise portfolio.

All new IT or modernization proposals must enter the process through the Pre-Select Phase. It is during the Pre-Select phase that the business/mission need is identified and relationships to the Department and/or agency strategic planning efforts are validated. New investments are defined as IT solutions or services that are not part of the current inventory and deemed necessary to address a business need or strategic priority of the DOT. IT modernizations are defined as systems or services that reside in the IT inventory and are being enhanced to change the form, fit or function of the investment to deliver improved services. Routine maintenance, e.g. patches, appropriate versioning or minor enhancements do not fall within the context of these definitions. For investments required outside the normal review cycles, please refer to the Ad-hoc reviews, [section 10.2](#). The IRB will ultimately approve or disapprove new or modernization proposals based on established criteria outlined in this guidance. As architecture-driven IT investments are approved and appropriately funded in the Pre-Select phase, they move forward into the Select phase. Requirements and guidance for investments in the select phase are outlined in the



Department's system development lifecycle procedures in the DOT EPMR framework. These key activities, among others, help the Department rationalize the IT portfolio by revealing the potential for new IT needs and addressing performance gaps in business operations.

## 5.2.2 Key Steps/Actions

### 5.2.2.1 DOT

- The OCIO staff and IRB supporting boards will evaluate new or modernization proposals against established criteria. OCIO staff will work with OAs requesting PAR approval to address concerns and adjudicate issues prior to preparing recommendations for IRB PAR consideration.
- The IRB will review IT proposals to see if the proposed IT investments supports the Department's strategic goals and business needs.
- The IAT will coordinate DOT enterprise reviews for OA Portfolios with IRB supporting groups to ensure that, at a minimum:
  - Investments and projects are mapped to mission priorities, appropriate funding levels are budgeted for investments and projects, and risks are being managed/mitigated.
  - Laws, regulations, and policies are being adhered to, and appropriate documentation is prepared (e.g. EA artifacts, Privacy, Security, etc.) for IRB meetings. Figure 1 depicts the integrated IT Governance workflow process.

### 5.2.2.2 OA

- OAs create a preliminary business case for new investments to justify the proposed need(s). The business case should identify the need/ problem being solved, solution alternatives, business/technical risk associated with each alternative, estimated lifecycle costs, planned acquisition approach, business value, contract approach, and how the investment will be used.
  - *Investment Risk Rating – The chosen solution alternative shall be accompanied by an overall risk rating (High, Moderate, Low) derived from the business case analysis. The recommended risk rating will be considered by the DOT CIO to inform a decision on the initial CIO Evaluation rating reported to the OMB IT Dashboard.*
- Proposed business needs are submitted to the OCIO for review by IRB supporting groups as part of the OAs PAR for IRB consideration
- Each OA portfolio submission will be accompanied by a CIO/Functional Sponsor PAR memo (see Appendix C: Sample PAR), which includes:
  - The portfolio's content of investments, lifecycle costs for each investment, how investments are aligned with the EA/SMP<sup>8</sup>, and show compliance with the Clinger-Cohen Act and FITARA requirements.
- Functional Sponsors are responsible for submitting the PAR associated with the business area/segment they oversee, e.g. Human Resources or Financial Management;
- For all other segments, the OA CIOs will develop and submit PARs for their investments within the segment being prepped for the IRB.

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<sup>8</sup> [DOT Information Resources Management Strategic Plan](#)

- Portfolio submissions must be received no later than 30 days prior to the scheduled IRB meeting date to allow for preliminary review and analysis.
- OAs and Functional Sponsors shall present their investment proposals to the IRB supporting boards using sample templates outlined in:
  - Appendix C: Sample OA CIO Portfolio Approval Request (PAR)
  - Appendix F: Roadmap to Target Environment (Transition Diagram) Template
  - These templates assist OAs with reporting requirements and streamline the IRB review process.

### 5.2.2.3 OA Internal Reviews

OA-level reviews should be based on data-driven evaluation criteria similar to those used during DOT IRB reviews. Additionally, reviews should be integrated with the Department's quarterly review schedule to ensure investments within the portfolios are:

- Appropriately aligned with the DOT Strategic Plan and the Enterprise Architecture
- Compliant with DOT and OMB policies, procedures, and applicable statutes, and
- Prepared in time for presentation to the IRB.

A review of OA investments should include, but is not limited to:

- Relevancy of proposed solutions
- Consideration of project durations, including usable capability delivery within 180 days where practicable
- Cost and schedule deviations that may require course correction or risk mitigation strategies
- Status of EVM for major investments as appropriate
- Accuracy of data in authoritative repositories

## 5.3 Select Phase

During the Select Phase, new and existing IT initiatives are screened, evaluated, selected, or de-selected from the DOT IT Portfolio. The DOT IRB review process will affect which projects will be funded. Ongoing investments, where applicable, and those in DME are continuously reviewed against the business case to determine if the selected solution remains a viable alternative to meet the business need, and to evaluate whether or not potential duplication of an initiative exists within the DOT inventory of systems and applications. Individual investments are evaluated for technical sufficiency; compliance with incremental development requirements; EA alignment with other IT systems; projected cost, schedule and performance parameters; business benefit and risk strategy; etc. The development and submission of a comprehensive Business Case is required at this stage for all proposed IT initiatives.

### 5.3.1 Key Steps/Actions

#### 5.3.1.1 OA

- The PM is responsible for providing the information necessary for an IT initiative to be presented for review and consideration in the Select Phase as part of an OA's annual portfolio submission. The PM must also:
  - Develop the final business case for new investments and submit to IAT via the CIMS tool

- Ensure that all investments have a business case and go through the Pre-Select Phase before entering the Select Phase and before receiving a UII
- Additionally, the PM is responsible for working with the OA CIO and Budget representatives to ensure funds are available to support the preliminary activities of this stage.

#### 5.3.1.2 IAT

- The CPIC team coordinates and consolidates all IRB-related IT data, recommendations, and issues for presentation to the IRB for determination.
- The OCIO entities will leverage information in the business case to assess business need(s), relevant costs, proposed acquisition/contract strategy, EA alignment, and risk factors to make data-driven recommendations to the IRB.
- Upon IRB approval of new investments, the OCIO issues the requisite for a Unique Investment Identifier (UII) assigned to the new investment
- Monitor investments against stated objectives, outcomes, established baselines and reported to OMB on a monthly, quarterly, and annual basis as applicable
- Validate that major IT investments implement EVM according to the Department's EVM policy and guidance
- Verify that major IT investments complete and submit a Major Investment Business Case (formerly the Exhibit 300)

## 5.4 Control Phase

The Control Phase is a continuous process management methodology used to oversee the DOT IT portfolio. The purpose of the Control Phase is to ensure that adequate management oversight and quality control processes are in place to increase the probability of success for the Department's IT initiatives. The IRB examines investments in the Control phase to ensure IT initiatives are conducted in a disciplined, well-managed, and consistent manner within DOT through timely oversight, quality control, and executive-level review of investments within a portfolio segment.

The DOT executes this phase using a cradle-to-grave lifecycle management approach that further measures and evaluates cost, schedule, performance, and risk data for ongoing investments throughout their lifecycle against established baselines and projected outcomes. During the Control Phase, the IRB examines investments in Development Modernization and Enhancement (DM&E) as part of performance reviews conducted for the entire DOT portfolio, by segment, to ensure the Department is maximizing value, mitigating risks, ensuring successful results, and taking corrective action where necessary. Investments with cost or schedule variances that indicate negative trends may be proposed as TechStat candidates by the IRB.

### 5.4.1 Key Steps/Actions

#### 5.4.1.1 IAT

- OA investments will be reviewed by IRB supporting groups at least annually as a part of the OA's portfolio segment.
- IRB supporting groups will evaluate investment using the portfolio evaluation criteria from the CPIC process seen in Figure 4.
- Investments undergoing DM&E will receive additional program management scrutiny during this phase, as they will be monitored by the Department's EPMB.

- The EPMR framework will be used to ensure the stated benefits are realized and the investment is on track to meet stated objectives<sup>9</sup>.

#### 5.4.1.2 IRB

- The IRB supporting groups review will focus on CPIC compliance at the Control Stage, while the EPMR review will target adherence to project and performance management practices.
- The CIO assesses IT investment projects (monthly, quarterly and annually) to ensure they are proceeding according to plan.
- Investments that are not meeting expectations include:
  - Investments with cost or schedule variances that exceed 10 percent;
  - Those that fail to meet acquisition baseline targets, i.e. TechStat or managerial reviews to prescribe corrective actions, may receive a recommendation to modify, pause, or terminate the project or initiative

## 5.5 Evaluate Phase

The Evaluate Phase is intended to assess whether or not IT investments within a given portfolio have met their stated outcomes/objectives by delivering the benefits and requirements outlined in the business case. The Evaluate Phase closes the loop on investments that have undergone development and modernization activities by comparing projections against actual estimates in order to assess the initiatives' performance and identify areas where decision-making can be improved. The evaluate phase also feeds the DOT CPIC process, as the portfolio is reviewed against the IRM strategic planning efforts and the DOT EA to form an integrated Strategic Business Management framework aimed at effectively rationalizing the Department's portfolio. As applicable, results from the Evaluate Phase may feed or inform the Pre-Select, Select, and Control Phases by highlighting the need to modernize or replace legacy systems to improve mission support.

The review process in Figure 6 is designed to be a collaborative process that begins with OAs performing internal reviews of their investments within a specific Service area. Following these reviews, OAs will enter portfolio data submissions into CIMS, the authoritative data source for information used by the IRB.

### 5.5.1 Key Steps/Actions

#### 5.5.1.1 OA

- A Post Implementation Review (PIR) should be accomplished for completed investments within 6-12 months of a project's implementation, as feedback may be used to inform future requirements during the Pre-Select phase.
- The Department's EPMB will lead PIRs. Additional information on the PIR can be found in Appendix G.
- An Operational Analysis should be performed within 12 months after an increment has been implemented.

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<sup>9</sup> Major investments will also be reviewed monthly as part of the OMB-mandated ITDB assessment.

- The Operational Analysis measures the investment's performance against established cost, schedule and performance parameters. Additional information on Operational Analysis requirements is outlined in Appendix H.

#### 5.5.1.2 IAT

- The IRB review process workflow uses the investment management process to support a holistic review of OA portfolio investments under the three DOT IT Service area domains: Business, Mission and Enterprise support services.
- IRB support groups (EAB, Security, IWG, and CIOC) will conduct quarterly portfolio reviews to analyze segment portfolios in these domains using CPIC methodology and established criteria.

#### 5.5.1.3 DOT Enterprise Review

The IAT will coordinate the Department's enterprise review of all OA Portfolios with IRB supporting groups to ensure that at a minimum: investments and projects are mapped to mission priorities; appropriate funding levels are budgeted for investments and projects; risks are being managed/mitigated; laws, regulations and policies are being adhered to; and appropriate documentation is prepared (e.g. EA artifacts, Privacy, Security, etc.) for IRB meetings.

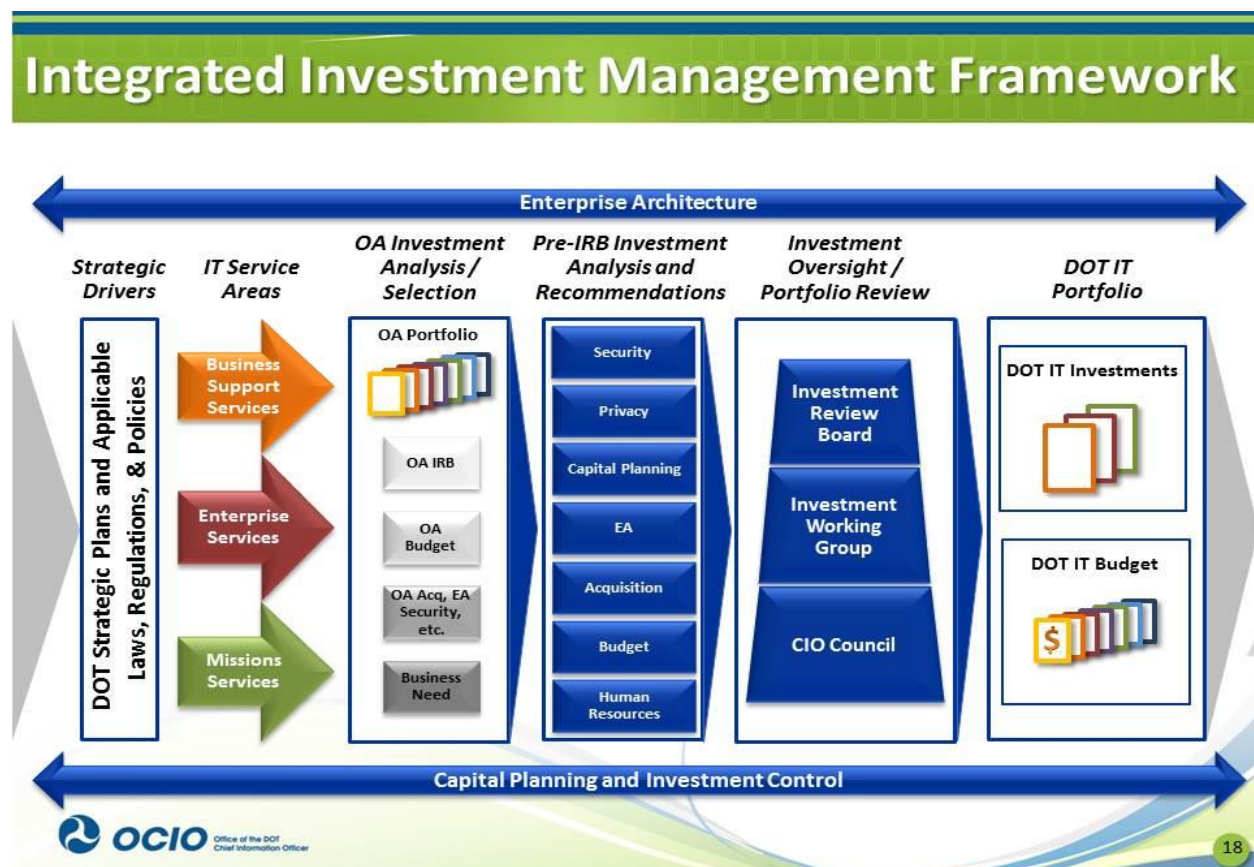


Figure 6: Integrated Governance Framework and Process

## 5.6 Evaluation Criteria

The IRB supporting groups will evaluate segment portfolios using CPIC evaluation criteria, leveraging OA IRB portfolio information and data artifacts.<sup>10</sup> Supporting groups will summarize their findings based on the established evaluation criteria. The IRB supporting group's initial issues/findings will be coordinated by the IAT (see section 4.5) and communicated to OA CPIC coordinators via Issue Papers. Issues/findings that cannot be resolved at the staff or supporting group level are summarized and presented to the IRB via executive-level IRB visualization dashboards that depict the overall health of each portfolio.

The evaluation criteria include, but are not limited to:

- Review of baseline performance measures (cost, schedule, performance and risk management, EVM documentation for major investments);
- Alignment to and compliance with the DOT EA
- Compliance with OMB/DOT policy
- Compliance with GAO or IG findings/recommendations;
- Adherence to Privacy policy
- Risk Management
- Cybersecurity compliance with Cross Agency Performance (CAP) goals
- Timely delivery of capabilities (assertion of the use of Agile methodology (incremental/modular development); and
- Assessment of performance metrics

### 5.6.1 IRB Data

The investment management process relies heavily on the relevance and accuracy of IT investment data to make informed decisions. As such, portfolio information contained in data repositories must be up-to-date, accurate, relevant, and readily available to support the process. IRB supporting groups will examine available program data to evaluate portfolio health and make recommendations to the IRB. The majority of the data required by the IRB currently resides in established repositories, or is a part of associated artifacts, or reporting templates outlined in the criteria below. While the IRB supporting groups will leverage existing data to the maximum extent practicable, additional data may be needed to inform decisions. As such, data that is not readily available or accessible to IRB supporting groups will be collected via data calls. Table 3 provides an overview of typical evaluation criteria, data, and information resources that may contain such data used for segment portfolio reviews.

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<sup>8</sup>The data and evaluation criteria analyzed in the investment management process are compliant with OMB's PortfolioStat exercise to strengthen IT portfolio governance under M-12-10 and M-13-09. Specifically, DOT's investment management process employs baseline analysis, evidence-based reviews, action plan formulation and implementation, and lessons learned. The process utilizes data from OMB's reporting requirements, such as the IRM Strategic Plan, Enterprise Roadmap, and Integrated Data Collection, to inform analysis of strategic alignment, capabilities and duplication in the architecture, and commodity IT dollar amounts, among others. For detailed information on OMB requirements, see [http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-10\\_1.pdf](http://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-10_1.pdf) and <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-09.pdf>.



<b>Evaluation Criteria</b>	<b>Data</b>	<b>Recommended Documentation</b>
<b>Cost/Schedule</b>	Lifecycle cost baseline by year with DME/O&M breakout Actual cost by year with DME/O&M breakout Integrated schedule Cost/schedule performance Cost savings/avoidance	Major IT Business Case (formerly OMB Exhibit 300A) Agency IT Portfolio Summary (formerly OMB Exhibit 53A) Major IT Business Case Detail (formerly OMB Exhibit 300B) Earned Value Management reports Cost savings/avoidance reports/supporting analysis
<b>Program Management</b>	Contract information Business Case Alternatives considered Program management data Operational Analysis Post Implementation Review	Acquisition Strategy/Plan Benefit Cost Analysis Alternatives Analysis Program Management Plan and reports Post Implementation Review Operational Analysis OCIO-designated performance metric template Major IT Business Case Detail (formerly OMB Exhibit 300B)
<b>Risk</b>	Project/operational risks Mitigation strategies & status Security risks	Business Case – Investment Risk Determination Risk Management Plan Risk Register IT Dashboard CIO Evaluations (major investments only) System Security plan Privacy Threshold Assessment or PIA Open Cybersecurity POAMs Inspector General/GAO findings
<b>EA Compliance</b>	EA mapping System concept, configuration, interfaces & interoperability Functional requirements Security controls  Data definitions/modeling EA target and transition plan data	Concept of Operations Concept Overview Diagram Configuration Management Plan Functional Requirements Document High-Level Business Process Diagram EA Impact Assessment System/Application Interface Diagram Security Controls List Verification Requirements Traceability Matrix Technology Standards List High-Level Network Diagram Logical Data Model Network Diagram (detailed) EA Target and Transition Plan
<b>Capability Measurement Area</b>	Investment Purpose Unique Capabilities	Concept Overview Diagram High Level Process Diagram Roadmap to Target Environment (Transition Plan )

**Table 2: Recommended Documentation**

### 5.6.2 Issue Papers

During the portfolio review process, Issues Papers developed by IRB supporting groups will be used to identify key issues or concerns within a portfolio that should inform the IRB's decision. Those issues or concerns will be discussed and, to the maximum extent possible, adjudicated between the appropriate reviewers and the OAs.

Issue Papers will generally focus on details pertaining to specific investments within the portfolio. To improve transparency in the process, OAs will have access to all findings and issues throughout the process workflow. If the OA confirms that there is an anticipated schedule slip or cost overrun, for example, this would be included in the report and presentation to the IRB/EPMB. Issues that are resolved prior to the IRB meeting will not be included in the final Issue Paper. All issues resolutions for each investment will be documented on the DOT Investment Management Process SharePoint site<sup>11</sup>.

### 5.6.3 Presentation

IT investments will be presented to the IRB as part of segment portfolios that align to one of three DOT Service areas. Overall analysis of a portfolio's health, key issues, and recommendations will be presented to the IRB in the form of visualization dashboards and/or briefings. OA functional sponsors may be present during the briefing in the case that any questions or need for further data arise related to their investments within a given portfolio.

### 5.6.4 Decisions

IRB decisions will be rendered based on data-driven analysis as a result of assessment and recommendations from OA IRB reviews and DOT IRB supporting group analysis. The following are potential decision outcomes for a portfolio approval request:

- **Approval:** The portfolio is approved in whole and recommended for integration into the budget cycle.
- **Approval with conditions:** The portfolio is approved in whole or in part with conditions levied by the IRB. Conditions can include, but are not limited to the following:
  - Partial approval, e.g. investment(s) 1, 6, and 12 are not approved
  - Portfolio is approved pending submission of additional documentation on one or more investments
- **Disapproved:** The IRB may identify deficiencies in the segment portfolio that may warrant disapproval or further portfolio assessment before it can recommend for approval and integration into the budget cycle.

The IRB will document the results of its decision(s) in an IDR, which will be transmitted to the functional sponsor, applicable OAs, and the Budget office via the submission of an IDR from each IRB meeting.

Parties may appeal an IRB decision to disapprove or conditionally approve a PAR. Upon receipt of the IDR, an OA has five business days to prepare and submit an appeal. The appeals package must include a memorandum signed by the OA CIO along with supporting documents to justify the appeal. The appeal should include a rationale and the specific elements of the IDR that are being appealed. The IRB Co-Chairs will review the appeal and will render a final decision within fifteen business days of receipt of an appeal.

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<sup>11</sup><http://our.dot.gov/team/itgovernance/SitePages/Home.aspx>



## 6 CPIC and Enterprise Program Management Integration

The S-81 IT Governance section implements the DOT CPIC and EPMR process under the direction of the CIO. While overarching CPIC activities are continuous in nature, the EPMR is a time-phased process that calls for a number of program management activities to take place, dependent upon the lifecycle stage of an investment. The EPMR process is intricately linked to the CPIC process, in that the Pre-Select phase serves as the mechanism for evaluating new IT proposal initiatives, be they major or non-major investments. Once an initiative is approved by the IRB, it becomes an investment and enters the EPMR process at the appropriate lifecycle stage established by the designated Enterprise Program Management Board (EPMB) decision authority. The EPMR process itself is primarily used by program or project managers to manage an investment. The primary distinction between CPIC and EPMR is the level of scrutiny an investment receives. The CPIC process will assess the investment's cost and performance status using OMB and Departmental mandates and established criteria, while EPMR will focus its attention on the overarching program management, e.g. budget formulation, requirements management, modular development, systems integration, testing, and delivery of an investment. Figure 5 provides an overview of the integrated EPMR framework process and CPIC process.

### 6.1 Program/Project Designation

Once a proposed investment has been approved by the IRB to progress beyond the Pre-Select Phase, it becomes a part of the IT inventory and is thus a formal IT program or project. Upon submission and review of the updated Business Case, a determination will be made by the Department's EPMB Chair on its designation, i.e. major or non-major investment, based on OMB criteria and the EPMB assessment of the impact or potential benefit to the Department. A major investment program with a single or multiple projects must complete a Major Investment Business Case and is subject to external oversight via the Federal Information Technology Dashboard.

A program or project initially designated a non-major investment may be reclassified as a major should the breadth and scope dictate. The assessment of investments as part of the annual IT portfolio review will serve to pinpoint those investments that should be reclassified. Investments that are being managed as E-Government investments must be designated major investments in accordance with OMB requirements. Such investments must be reported using OMB guidelines for E-gov initiatives, e.g. OMB designated UIIs and Codes.

## 7 Acquisition Planning

Appropriate acquisition planning is essential to ensuring the Department meets its responsibility for ensuring government procurements are accomplished in the most economical manner. In accordance with part 7 of the Federal Acquisition Regulation guidelines (FAR), information technology procurements (hardware, software, services etc.) must have an Acquisition Strategy/Plan. DOT PMs are responsible for conducting appropriate acquisition planning to comply with all laws, policies, and regulations associated with the acquisition of information technology systems or services, to include structuring plans to ensure useful capability can be delivered incrementally<sup>12</sup>. PMs must conduct and document all required aspects of planning, e.g.

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<sup>12</sup>PMs shall use a SDLC approach, e.g. Agile/Spiral Incremental development that enables useful capability to be

compliance with CPIC requirements in [40 U.S.C. 11312](#) and OMB Circular A-130, security requirements outlined in the Federal Information Security Management Act [44 U.S.C. 3544](#), market research, contracting approach, risks, total lifecycle cost, etc.

All acquisition strategies/plans associated with the procurement will be coordinated through the investment management's CPIC process first, as this initiates the official coordination of strategy/plan. The acquisition strategy/plan will be reviewed and approved by the Department CIO (unless the approval authority is delegated to the OA CIO), prior to contract award. The review and approval of the initial Acquisition Strategy/Plan will take place as part of the CPIC portfolio review process where practicable. Follow-on reviews of the Acquisition Strategy/Plan will be conducted within the Enterprise Program Management Review process as an investment navigates the program management phases. Major changes to these documents are subject to review and approval by the EPMB decision authority. Major changes are those that significantly impact the cost, schedule, or scope of the investment's approved Acquisition Program Baseline parameters. IT procurement contracts in excess of \$20M (\$10M for high-risk acquisitions) will be further evaluated by the Senior Procurement Executive-led Acquisition Strategy Review Board (ASRB). The Department assesses the total lifecycle cost of the proposed investment to determine the contract threshold and whether or not it requires ASRB review and approval.

## **7.1 ASRB Integration**

The OCIO and the Office of the Senior Procurement Executive (SPE) work collectively to ensure contract actions that contain IT are consistent with CIO-approved guidance on acquisition strategies and plans. The ASRB is an integral part of the investment management process for qualifying procurement activities within the Department. The ASRB assists the CIO in this process through its ongoing management oversight and direction of procurement activities for the Department's IT contracts in excess of \$20M over the total lifecycle, high risk acquisitions above \$10M, and those deemed critical to the Department that may be of a smaller dollar amount. The ASRB review of such contracts generally takes place after IRB approval of an IT investment or initiative.

For contracts that potentially have an IT component or impact, and have not been previously coordinated through the investment management process, the SPE further assists the investment management process by identifying such contracts for CIO review and approval via the IRB. By doing so, the SPE ultimately ensures the Department does not initiate contract actions or enter into interagency agreements that include IT unless they are reviewed and approved by the CIO, his or her designee, or are consistent with the acquisition strategy and acquisition plan previously approved by the CIO/IRB. The process used for the review and approval of contract modifications will follow that outlined above for acquisition strategies/plan documents. The SPE and CIO shall ensure that no modifications that make substantial changes to the scope of a significant contract are approved if they are inconsistent with the acquisition strategy and acquisition plan previously approved by the CIO, unless the modification is reviewed and approved by the CIO or his or her designee.

The ASRB also aids the process by ensuring that Earned Value Management (EVM) is properly

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delivered every six (6) months after completing the Select Phase. PMs should structure their Acquisition plan/strategy and Acquisition Program Baseline documents accordingly.

included in new contracts for major IT investments. The FAA's Joint Review Committee (JRC) provides this level of acquisition management oversight of FAA IT investments, to include acquisition strategies/plans and contracts; therefore, such documents are not subject to the ASRB process. However, the Department will leverage similar information derived from the FAA's JRC process to inform IRB decisions for procurements unique to the FAA. It's important to note that planned investment-level procurements that meet these criteria go through the acquisition review process for approval before they can be formally acquired. This facilitates transparency in the integrated process.

## **8 Budget and Planning**

The Budget process is the mechanism by which the Department plans for and requests funding from Congress to meet its mission and business operations requirements. The CIO and CFO have jointly developed and will leverage a comprehensive IT Budget formulation process that enables collaboration across the CIO, SPE, and CFO communities. The DOT's IT Budget formulation process is an integral part of the Department's overall budget process, and brings to bear the coordinated efforts of the CFO, SPE, OAs, and DOT CIO as members of the IRB to execute the planning, programming, and budgeting stages for the effective planning and prioritization of IT resources. The annual CIO-issued Information Technology Portfolio budget guidance outlines the data and artifacts required for DOT an OA's submission of its fiscal year IT budget request. The guidance provides the requirements OAs must meet and highlights the process that will be used by the Department to evaluate and approve OA budget submissions. The budget process will be updated each year to provide IT-specific guidance on developing the artifacts required to comply with budget formulation and planning requirements.

The DOT Budget and Planning process is consistent with OMB Circulars A-130 and A-11, and the Department's CPIC process. The investment management guidance incorporates additional requirements to ensure compliance with responsibilities and authorities outlined in the FITARA. The functions necessary to complete the IT budget planning process are outlined in the following stages:

1. Pre-Budget Planning
2. Budget Formulation Process
3. Budget Visibility of IT Spend
4. Spend Plan Development
5. Disparate Procurements
6. Budget Justification & Approval
7. Annual Submission Process
8. Reprogramming

### **8.1 Pre-Budget Planning**

As outlined in OMB Circulars A-130 and A-11 and the Clinger Cohen Act, the DOT conducts all planning activities necessary to formulate its budget for a given year. Pre-budget planning is a vital part of the process to ensure the IT Portfolio Summary exhibits are populated, requisite artifacts are produced, and CPIC processes include all stages of Capital programming, Budgeting, Procurement, Management, and Assessment of IT needs to inform budget decisions. The DOT pre-budget planning activities provide an opportunity for the CIO, CFO, and SPE to collectively ensure resources requested are targeted toward meeting the goals and objectives

outlined in the DOT Strategic Plan.

The pre-budgeting stage begins with the population of IT Portfolio Summaries (ITPS) by the OAs for all investments in their IT Portfolio. The ITPS are a major part of the pre-budget planning process and are reviewed by segment as part of the Department's quarterly enterprise IRB meetings. Between June and July of each year the CIO, CFO, and SPE will convene joint pre-budget planning review meetings with operating administration CIOs and OA budget personnel. The joint review is focused on, but not limited to: evaluating the reasonableness of cost estimates and benefits provided by the IT solutions sought, the completion of budget artifacts, and a comparison analysis of the ITPS and the IT Spend Plan in order to provide an understanding of the assets in the IT Portfolio. The S-81 IT Governance team will work with the OA CPIC coordinators, PMs, and the OST Budget office to gather artifacts required to facilitate IRB pre-budget planning and CIO-, CFO-, and SPE-led meetings.

## **8.2 IT Budget Formulation Process**

The process is designed to create the level of visibility needed by the CIO, CFO, and SPE to make informed decisions through the use of a structured IT taxonomy that ties systems and applications to investments (Figure 7 and in the BY2017 Budget Guidance). Each investment submitted for budget approval must be broken down into this taxonomy, which uses designated program account, sub account, or line item codes to reflect the total costs of the investment and its associate systems and applications. The second approach taken to improve visibility is the adoption of an automated tool suite that will provide leadership an at-a-glance view into disparate IT procurements and expenditures.

## **8.3 Budget Visibility of IT Spend**

In order to understand and manage the cost of IT, there must be transparency in the budget process. Therefore, in accordance with OMB and departmental policy, IT funds shall be tied to OMB exhibits and linked to approved spend plans. OA CIOs shall ensure IT costs are tracked in a method that enables the traceability of obligations and expenditures for associated investments, systems, or applications. The Department uses a three-pronged approach to improve leadership's visibility of the IT budget, beginning with the IT budget formulation process.

## **8.4 IT Spend Plan Development**

Spend plans are designed to assist the Department in the planning process, and helps ensure adequate resources are available and being targeted toward procuring IT assets required to enable achievement of the DOT goals and objectives. All OA CIOs are responsible for developing and submitting a draft IT spend plan to the CIO for approval no later than August 31 of each fiscal year. The draft plan should align with resources defined in the draft ITPS exhibits and convey how OA budgets will be spent on IT resources if approved. The spend plan shall be updated within 30 days of receiving the OMB pass back funding levels. The spend plans will be helpful in accelerating leadership reviews and approval of the IT portfolio to complete the annual budget submission. OAs may not make any IT purchases that are not part of their spend plan unless approved by the DOT CIO. In cases where the spend plan requires revision, the plan must be reviewed and approved by the DOT CIO prior to funds being obligated against the revised plan.

## **8.5 Disparate Procurements**

Disparate procurements are those made outside the established IRB process. To the maximum extent practical, all IT purchases shall be planned and submitted as part of the OA's IT Portfolio. The Department will plan to use the Information Technology Acquisition Review (ITAR) process or equivalent tool to track and approve disparate IT requests that are outside of the traditional IRB portfolio approval process. For IT purchases that are not part of an OMB exhibit submitted as part of the portfolio, OAs must submit a request for purchase in the ITAR or equivalent tool managed by the OCIO and SPE. Requests must be submitted at least 60 days prior to the expected date of purchase. Once a request is approved, the OA shall work with the DOT Chief Architect and CPIC manager to define its alignment in the enterprise architecture, assignment of the requisite UII, and ensure the investment is added to the IT inventory to complete the process. These procurements should also be imbedded in the OA spend plan.

### **8.5.1 Budget Justification & Approval**

As part of the IT Budget formulation guidance OAs will submit a narrative-based justification document to the OCIO and OCFO that communicates the need for the IT resources requested in their portfolio. While the content of the justification document is not prescriptive, the OAs should follow the format outlined in the guidance. The statements should speak to how OA portfolio investments support mission and strategic goals, and strive to prioritize and defend their needs in a manner that enables the investment to withstand DOT and OMB scrutiny.

### **8.5.2 Approval of Major IT portion of the Budget**

As a part of their joint budget review, the CIO and CFO coordinate on and approve the major IT investment portion of the Department's budget request. A joint CIO and CFO assertion memo drafted and delivered to OMB as part of the initial IT budget package, will serve as the document affirming the CIO has reviewed and approves the major IT investments portion of the budget request. This activity along with the submission of the ITPS and MIBC concludes the submission process. Figure 7 highlights the budget stages of DOT's integrated process.



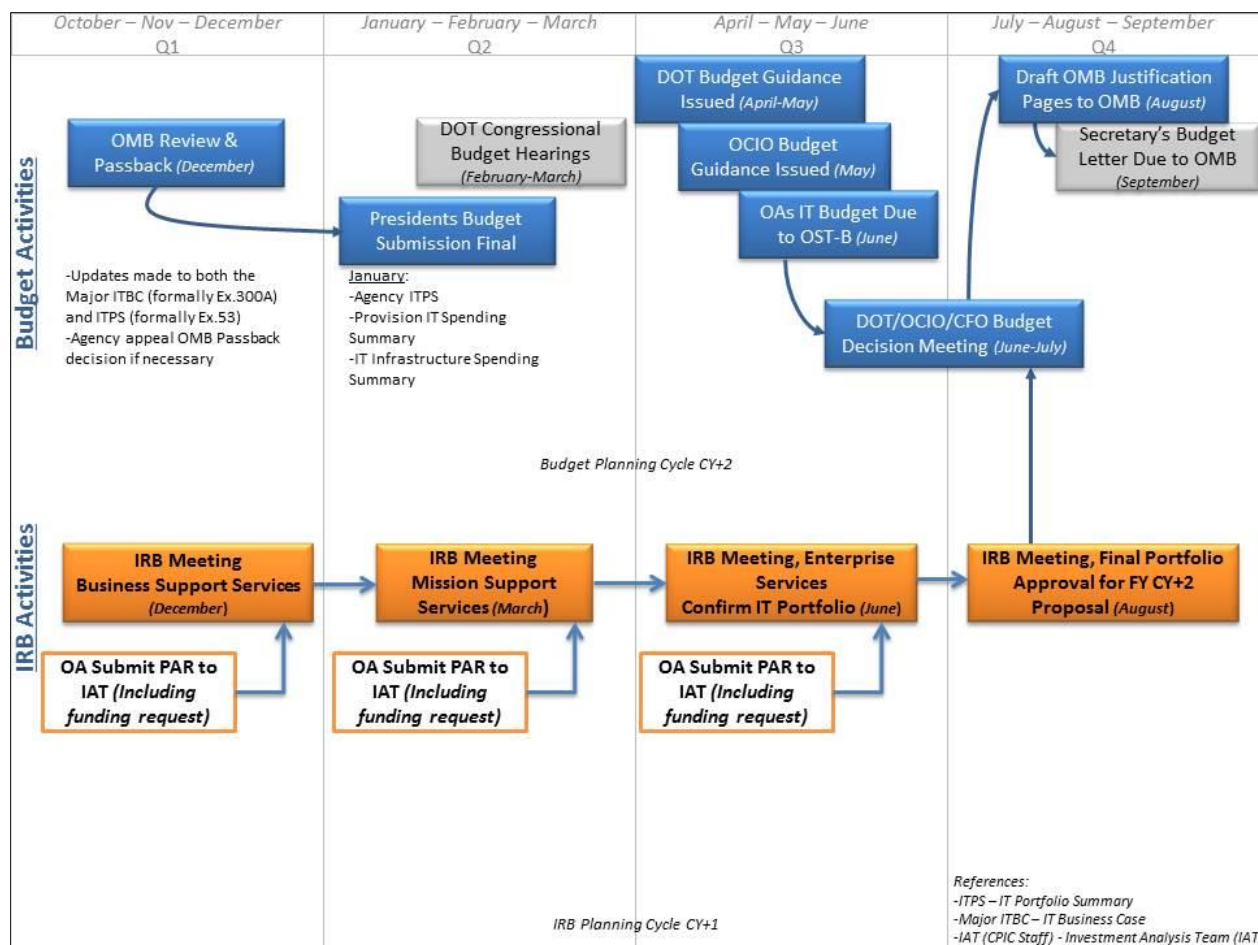


Figure 7: Budget Formulation Stages

## 8.6 Annual IT Budget Submission

The Department will leverage quarterly IRB reviews, the IT budget formulation process, and leadership reviews to prepare and inform the annual budget submission. Each spring, the OST Budget Office (OST/B) initiates the Department's budget submission process. The OCIO executes the IT portion of the process beginning with the issuance of the annual IT budget guidance to the OAs, which identifies CIO focus areas, initiatives, and strategies for procurement and management of IT. The IT Budget formulation exercise is structured to capture and manage the costs of all IT spend and provide transparency and traceability of IT Investments. The process is aligned with the IRB cycle, and the review of IT exhibits is completed by Service area (Business/Mission/Enterprise). OA budget requests and IRB recommendations are made during IRB meetings, which are set to take place once per quarter. The process is designed to achieve the following goals:

- Implement a repeatable and integrated IT budget review/approval process
- Identify cost of IT investments, systems and applications in the Department
- Align the CPIC process with the overarching DOT Budget Submission process
- Ensure compliance with FITARA mandates and OMB policies
- Rationalize the DOT IT portfolio and ensure enterprise optimization strategies are being practiced

The S-81 IT Policy and Oversight's IT Governance team works with OA CPIC coordinators to provide training on the CIMS Portfolio Management tool, on populating budget exhibits to ensure Department plans and strategies are met, and to be compliant with changes in OMB requirements and exhibits.

The annual IT Budget is processed and submitted in two stages, the first stage being the collection and submission of budget data contained in the IT Portfolio Summary (ITPS), formerly the Exhibit 53. The OA CPIC coordinators are the gate keepers of the ITPS data and are responsible for ensuring the data is relevant, accurate, and can pass validation checks in the CIMS and OMB Max tools. The OA CPIC staffs work with the OCIO's IAT to submit the ITPS to OMB within the first two weeks of August each year. The second stage takes place with the population of budget and program management data contained in the OA's Major Investment Business Case (MIBC), formerly the Exhibit 300. The OCIO again works with the same parties to ensure the data meets OMB and Department requirements. The MIBCs are submitted within the last two weeks of August each year.

### **8.6.1 Major Investment Business Case (MIBC) and IT Portfolio Summary (ITPS)**

As a CFO Act Agency,<sup>13</sup> the DOT must submit an IT investment portfolio for major and non-major investments using MIBC and ITPS exhibits. The development and submission of these exhibits assists OMB in the review and evaluation of the Department's IT spending in comparison to other Federal agencies. General guidance for managing the MIBC and ITPS can be found in OMB Circular No. A-11, Section 55, Information Technology Investments<sup>14</sup>. OMB provides updates and modification to this guidance annually, and the OCIO and OCFO will provide instruction on how CPIC coordinators and PMs shall comply with year-to-year requirements. Ultimately, information in these exhibits must be consistent with OMB instructions.

#### **8.6.1.1 Submission and Timelines**

Investment data are documented in the MIBC and ITPS exhibits and are sent to OMB twice a year. To balance workloads and better rationalize the portfolio, departmental submissions are submitted to the OCIO via CIMS tool; timelines may vary. In order to enable proper planning and data-driven decisions by the OCIO, OCFO, and IRB, the submissions will generally coincide with the IRB schedule and slightly precede the OCFO Budget formulation process in order to integrate the two functions. The first submission represents the OAs initial request for funding, indicating the total annual cost expected to be spent on each investment. The second submission is in response to OMB's pass back, and reflects revised funding based on OMB's pass back funding levels. The final submission and/or update reflects the investment's actual spending for the fiscal year.

The ITPS and MIBC serve as baseline management artifacts used to manage and assess

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<sup>13</sup> CFO Act agencies have generally developed processes and assigned responsibilities to meet their requirements under the Single Audit Act (OMB) Circular A-133. Agencies reported that they are using single audits to monitor compliance with administrative and program requirements and the adequacy of recipients' internal controls and for other purposes.

<sup>14</sup> [https://www.whitehouse.gov/sites/default/files/omb/assets/a11\\_current\\_year/s55.pdf](https://www.whitehouse.gov/sites/default/files/omb/assets/a11_current_year/s55.pdf)

the costs and lifecycle program management of investments. As such, changes to these documents must be in accordance with OMB and Departmental policies and processes.

#### **8.6.1.2 ITPS**

All investments require an ITPS. Changes to ITPS exhibits generally take place three times per year to coincide with the Budget process, and to update actual funding spent on an investment. However, changes may be made to exhibit data as needed (e.g. to accommodate legislative mandates, reprogramming of funds, etc.), but should be coordinated with the OCIO's IAT. Any changes that have a major impact on the investment's expected outcome may be subject to IRB review and approval.

#### **8.6.1.3 MIBC Updates**

Investments designated as major investments must have an MIBC. Updates to MIBCs occur more frequently, and are generally updated monthly to reflect the status of the investment prior to submission to the IT Dashboard. Changes to MIBCs may trigger programmatic changes that are highlighted on the Federal IT Dashboard, e.g. rebaselines, replans. Therefore, any changes to MIBC shall be coordinated in advance with the IAT and reviewed and by the CIO.

#### **8.6.1.4 Approval of Major IT portion of the Budget**

As a part of their joint budget review, the CIO and CFO approve the major IT investment portion of the Department's budget request. Much like the IRB-issued IDR serves as the authoritative document that approves the portfolio's content, a joint CIO and CFO assertion memo, drafted and delivered as part of the initial IT budget package, will serve as the document affirming the CIO has reviewed and approves the major IT investments portion of the budget request. This activity, along with the submission of the ITPS and MIBC, concludes the submission process. Table 3 highlights the budget stages of DOT's integrated process.

### **8.7 Reprogramming of IT Funds**

OMB Circular No. A-11 defines a reprogramming or transfer action as the shifting of funds within an appropriation or fund account to use for different purposes than those contemplated at the time of appropriation. The transfer of funds is the shifting funds between appropriation accounts to cover shortfalls or unforeseen events. Should the need arise to reprogram IT Funds to meet emerging needs, such actions require the Operating Agency CIO to notify the DOT CIO and OST/B as soon as the requirement for the reprogramming or transfer action becomes known. The notification shall be documented following the guidelines established by OST/B, and at a minimum shall provide an explanation of the rational for the action, organizational impact(s), and benefit(s) of the proposed action.

#### **8.7.1 Criteria for Reprogramming**

The following list provides information to help OAs determine if a reprogramming action is warranted:

- a) Creates new programs;
- b) Eliminates a Project, Program, or Activity (PPA)
- c) Increases funds or personnel for a PPA where funds have been denied or restricted by Congress



- d) Relocates an office or employees
- e) Reorganizes or renames offices, programs, or activities
- f) Contracts out or privatizes any functions or activities currently performed by federal employees

### **8.7.2 Submitting Request to IRB**

Every OA reprogramming or transfer requests require IRB or the DOT CIO approval prior to submission to the DOT Budget Office. OAs shall submit request to the IRB as part of their PAR. OAs should consult with their budget office to ensure compliance with all reprogramming requirements for the appropriate format and presentation of budget materials.

### **8.7.3 Reprogramming Approval**

Approval of reprogramming request will be documented in the IRB-approved PAR. OAs shall work with OST/B to ensure they complete the appropriate budget materials to submit the request to OMB.

## **9 Program and Project Management for the Acquisition of Capital Assets**

Well-trained and experienced program and project managers are critical to the acquisition process and the successful accomplishment of mission goals. As such, the DOT relies on experienced IT acquisition professionals to lead its major IT programs and projects to ensure they are managed and delivered in a cost effective and timely manner. In accordance with OMB Circular A-11, Part 7, all program managers of major IT investments must be senior level and Federal Acquisition Certification for Program and Project Managers (FAC-P/PM) certified within one year from the date of assignment to the program or project, unless waived by the SPE. Additionally, these personnel shall possess a minimum of two years experience supporting IT programs or projects.

### **9.1 Program Management Training/Certification**

To ensure consistency and adherence across the agency, the OSPE and OCIO will work collectively to administer the FAC-P/PM /program, and jointly serve as the Certification Approval Authority. Both offices will leverage the agency's approach outlined in the Department's Acquisition Human Capital Plan IT Supplement to strengthen the IT workforce through formal and informal training methods and leverage Direct Hire alternatives where applicable to attract and expedite the onboarding of industry experts. The Department will leverage the Office of Federal Procurement Policy sponsored training through the Federal Acquisition Institute Training Application System (FAITAS) to train its PMs. The Department understands the difficulty in acquiring formal training slots, so to help ensure and maintain the proficiency of PMs and their staff, the OCIO will provide recurring supplemental training on fundamental project management principles, e.g. OMB-reported EVM, risk management, CPIC, and Business Case development. Training will be generally held semi-annually based on the needs of the Department. Where appropriate, the Department will use reciprocity in evaluating the potential acceptance of training qualifications received from external certification authorities, i.e. Project Management Professional, Defense Acquisition Workforce Improvement Act (DAWIA), etc.

OA CIOs are responsible for identifying and assigning appropriately trained and certified PMs to

manage IT programs and projects, both major and non-major. The level of PM certification shall be commensurate with the program or project being managed, e.g. consistent with simplified acquisition thresholds outlined in the DOT Acquisition Planning Operational Guide<sup>15</sup>. PMs managing major programs must be reported to the OSPE and OCIO annually, and will be considered as part of the Department's Cadre of qualified IT professionals. Reporting of certification levels will be captured in the CIMS tool and reported in the Annual Acquisition Human Capital Plan.

## **10 Additional Investment Management Activities**

### **10.1 Virtual IRB Process**

Given the limited time available for the IRB to review and approve all segments within a domain, it may not always be feasible for the IRB to review every segment during the quarterly meeting. In order to accommodate the review and approval of the entire portfolio, the IRB may conduct virtual reviews for segments that IRB's supporting groups do not find any major issues. To help inform the IRB's decision, the IWG may recommend that the IRB accept the segment and supporting board recommendations as-is or with minor changes that do not require formal discussion. The IWG issues such recommendations in coordination with the appropriate OA representatives. Approval of such recommendation will take place during normally scheduled IRB meetings.

### **10.2 Ad-Hoc Investment Review Process**

In the event that an investment requires approval outside of the established IRB portfolio review cycle, such an investment may be considered for an ad-hoc review by the IRB. These reviews take place at the Co-Chairs' discretion, and may occur at any regularly scheduled meeting during the year or a specially convened IRB. Ad-hoc reviews are subject to the same CPIC process criteria used during normally scheduled investment portfolio reviews with one addition: ad-hoc investments must be accompanied by an OA justification statement to explain why an out-of-cycle review is necessary. A request for an ad-hoc review and a letter of justification must be sent to the Co-Chairs via the CPIC mail box. All ad-hoc review decisions will be re-examined by the IRB during the fourth quarter IRB meeting as part of the final portfolio selection process.

### **10.3 IT Dashboard Evaluations**

In accordance with OMB guidelines, DOT submits monthly IT Dashboard updates and CIO ratings for all major investments via the CIMS tool. To help provide the public with the most realistic status of our IT projects, OAs will evaluate their major investment and propose CIO rating recommendations for the DOT CIO's consideration based on OMB-issued risk assessment criteria: risk management strategy; requirements management; contract/acquisition strategy; human capital management; performance management; investment visibility/interdependencies; and compliance with laws, regulations, and policies. The OA-proposed ratings will be initially evaluated by the OCIO's IAT for compliance with OMB and DOT policies governing the management of major investments. The IAT will collaborate with OA CPIC coordinators and program managers on the risk assessment criteria selected for the OA investment CIO rating to

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<sup>15</sup>

<http://one10.dot.gov/office/ost/ospe/Shared%20Documents/Acquisition%20Planning%20Operational%20Guide.pdf>

help determine the appropriate rating.

At a minimum, the IAT will evaluate and make recommendations on IT dashboard risk ratings based on risks associated with cost, schedule, and performance against planned goals and objectives of investments. The IAT also evaluates Earned Value Management and project milestones to help manage and mitigate risks that could hinder the probability of success. Feedback from these assessments is provided through issue papers designed to provide better transparency and improved reporting to substantiate the CIO rating sent to OMB. Based on the IAT assessment and feedback received from the OAs the CIO ratings may be revised as necessary. CIO ratings will be submitted to OMB only after the DOT CIO or Deputy formally approves them. The DOT IRB will be informed of IT Dashboard ratings as a part of the IRB meetings. Details on the monthly IT Dashboard updates and quarterly CIO ratings review procedures may be found in the DOT SOP.

As part of the monthly dashboard updates, the IAT and the Associate CIO of IT Policy Oversight will conduct a review of any major investments that require a rebaseline or replan. OAs may initiate either by requesting a rebaseline or a replan 30 days prior to dashboard submission. OAs shall provide rationale and appropriate documentation including:

1. An OA-generated rebaselining request memorandum detailing the justification for the rebaseline and changes to cost, schedule, scope, or performance
2. Updated business case including changes to ROI or business benefit
3. Updated Integrated Master Schedule
4. Updated Acquisition strategy/plan
5. Updated Acquisition Program Baseline

Following the initial request, the IAT will meet with OA representatives as necessary to review the rebaseline proposal. OAs will receive feedback and a decision on the CIO rating presented to OMB within 7-10 business days after meeting with the Deputy CIO or designee. The OCIO may approve of the rebaseline proposal, reject the proposal, or provide feedback detailing any actions necessary to modify the request to support approval. Details on rebaseline review and approval procedures may be found in the DOT Investment Management Process SOP.

Programs that have a negative trend of rebaselines and replans, or are designated as high risk, may be recommended for a DOT CIO-led TechStat review. In accordance with OMB policy and the FITARA implementation plan for all agency-led TechStat reviews of investments, the OCIO will contact OMB at [egov@omb.eop.gov](mailto:egov@omb.eop.gov) with the subject line, “[DOT] TechStat Notification,” a minimum of two weeks ahead of the TechStat session. OMB will determine whether or not they intend to be a part of the review. TechStats will also be reported on via the Quarterly IDC. Generally, investments that have undergone a rebaseline are not rated as Green (a CIO rating of 4 or 5), until they begin to show continuous progress against reestablished program management criteria. Should an investment maintain a high risk rating (Red CIO evaluation rating in the ITDB) for three consecutive months, the Department will comply with OMB requirements to conduct a TechStat session on such investments. These TechStats are time-sensitive and must be held within 30 days of the completion of the third consecutive month. For investments that continue to miss stated outcomes and objectives will remain categorized with a Red CIO evaluation rating for one year following the TechStat review. The DOT CIO may recommend high risk investments to the Deputy Secretary for termination. Additionally, OMB may take



meetings, the IRB will also review any ad-hoc investments that have been placed on the agenda; evaluate the health of the Department IT Portfolio; and discuss strategies, approaches, and initiatives to improve the management of IT resources to enhance operational needs. The IRB will also identify special initiatives or focus areas the IT community needs to address, i.e. deep-dive analysis, Techstat reviews, enterprise initiatives, security posture, etc. The quarterly meetings serve as the forum for the IRB to preliminarily review and make determinations on the OAs' planned IT investments for the budget year and service area in question.

- The fourth quarter meeting is designed for the IRB to review, finalize changes, and make determinations on IT budget requests for the complete IT Portfolio. Changes to a previously approved service area portfolio can be the result of funding, changing business needs, Federal mandates, legislative action, or mission needs. The decisions made during this meeting inform the draft IT Budget, as OAs update the requisite budget artifacts to reflect the IRB's decisions, which will be submitted to OST/B and be used during Budget formulation meetings.

## 12 Appendix A: DOT Segment Architecture

The DOT segment architecture consists of three domain areas: Mission Services, Business Support Services, and Enterprise Services. Each domain contains sub-categories which further compartmentalize investments according to their purpose and function.

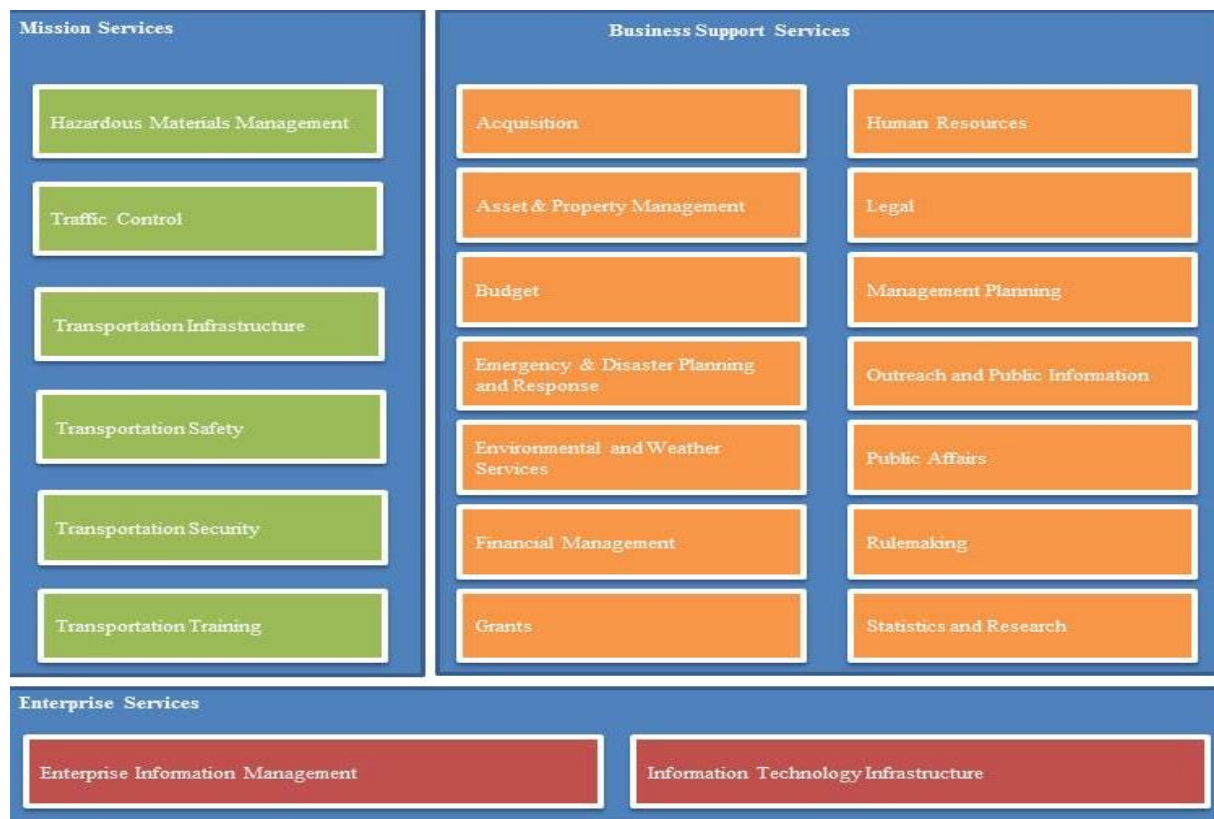


Figure 8: DOT EA Segments and Divisions

- **Mission Services** segments represent those investments relevant to a unique mission service area defined by an Operating Administration, such as air traffic control or pipeline monitoring.
- **Business Support Services** segments include the foundational mechanisms and back-office services used to enable the general operation of the DOT (e.g., project management, human resource management, and financial management systems).
- **Enterprise Services** segments include Enterprise Information Management investments (common policies, frameworks, requirements, and standards developed to be applied enterprise-wide,) and investments that contain infrastructure to support core mission systems and/or support systems.



### 13 Appendix B: Acronym List

The acronyms listed below are commonly used throughout this Investment Management Guidance document.

Acronym	Description	Acronym	Description
<b>ACQ</b>	Acquisition	<b>IRB</b>	Investment Review Board
<b>ASRB</b>	Acquisition Strategy Review Board	<b>IRM</b>	Information Resource Management
<b>CAP</b>	Cross Agency Performance	<b>IT</b>	Information Technology
<b>CFO</b>	Chief Financial Officer	<b>ITPS</b>	Information Technology Portfolio Summary
<b>CIMS</b>	Corporate Information Management System	<b>IWG</b>	Investment Working Group
<b>CIOC</b>	Chief Information Officers' Council	<b>JRC</b>	Joint Review Committee
<b>ConOps</b>	Concept of Operations	<b>MIBC</b>	Major Investment Business Case
<b>CPIC</b>	Capital Planning and Investment Control	<b>OA</b>	Operating Administration
<b>DAWIA</b>	Defense Acquisition Workforce Improvement Act	<b>OCIO</b>	Office of the Chief Information Officer
<b>DM&amp;E</b>	Development, Modernization & Enhancement	<b>OMB</b>	Office of Management and Budget
<b>DOT</b>	U. S. Department of Transportation	<b>PAR</b>	Portfolio Approval Request
<b>EA</b>	Enterprise Architecture	<b>PIA</b>	Privacy Impact Assessment
<b>EAB</b>	Enterprise Architecture Board	<b>PIR</b>	Post-Implementation Review
<b>EPMR</b>	Enterprise Program Management Review	<b>POA&amp;M</b>	Plan of Actions and Milestones
<b>FAR</b>	Federal Acquisition Regulation	<b>PPA</b>	Project, Program, or Activity
<b>FISMA</b>	FAC-COR - Contracting Officers Representative	<b>ROI</b>	Return on Investment
<b>FITARA</b>	Federal Information Technology Acquisition Reform Act	<b>SAR</b>	Security Assessment Report
<b>GAO</b>	Government Accountability Office	<b>SOP</b>	Standard Operating Procedure
<b>IAT</b>	Investment Analysis Team	<b>SPE</b>	Senior Procurement Executive
<b>IDC</b>	Integrated Data Collection	<b>SSP</b>	System Security Plan
<b>IDR</b>	Investment Decision Recommendation	<b>UII</b>	Unique Investment Identifier
<b>IPT</b>	Integrated Project Team		

Table 4: Acronym List

## 14 Appendix C: Sample OA CIO Portfolio Approval Request (PAR)



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### US DOT Investment Review Board **Portfolio Approval Request**

SAMPLE Memorandum for DOT Investment Review Board Chair(s)

Date: February 31, 2014

SUBJECT: OA CIO Portfolio Approval Request (PAR) for the *Financial Management Segment*

As a designated OA CIO, I request approval of the *Financial Management Segment* and authority to obligate \$4.321 billion towards investments outlined in the attached spreadsheet for Fiscal Year (FY) 2015. This funding is required to execute the *Financial Management Segment* capabilities to achieve the department's priorities and goals for FY2015.

I verify that: the investments contained in the *Financial Management Segment* satisfy the capability requirements of this segment; the investments contained in this segment satisfy the mission goals of the Department of Transportation; the information contained in these investment descriptions is accurate and up to date as of *February 31, 2014*; the relevant and required budget data in the Office of Management and Budget (OMB) Exhibit 53 and Exhibit 300 documents for these investments have been completed; and the relevant investment cost, schedule, and performance documentation has been completed for these investments in accordance with the DOT Integrated Program Planning and Management (IPPM) framework.

I have reviewed the investments which fall under the *Financial Management Segment* as required by the guidelines presented in the Clinger-Cohen Act, as applicable. Full descriptions of these investments, required reviews, and corrective actions are included in the attached documents.

I recommend your approval of this request. All required documentation has been forwarded for your review. My point of contact for questions about this submission is *Mr. John Q. Everyman*, who may be reached at 123-456-7891 or emailed at [john.everyman@dot.gov](mailto:john.everyman@dot.gov).

Signed, Jane M. Doe

Attachments:

1. *Financial Management Investment Listing*
2. *Financial Management Condition Status Report & Updates*



**Sample Attachment 1: Financial Management Investment Listing For FY2015**

OA	Investment Name	Fiscal Year (FY)	Program Manager Name	Major Investment (Yes/No)	Does PAR Contain New DM&E (Yes/No)	Request by Fund Type (\$M)		Request Total (\$M)
						O&M	DM&E	
OA 1	Investment A	2015	Suzie Queue	No	Yes	\$0.5	\$3	\$3.5
OA 2	Investment B	2015	Jack R. Terrier	No	Yes	\$2	\$4	\$6
OA 3	Investment C	2015	Clarence Highbrow	Yes	Yes	\$3	\$5	\$8
OA 4	Investment D	2015	Mary Mack	Yes	Yes	\$4	\$6	\$10
OA 5	Investment E	2015	Jeremy Runner	Yes	Yes	\$5	\$7	\$12

**Note:** Fund Types are Operations and Maintenance (O&M) and Development, Modernization and Enhancement (DM&E).

**Sample Attachment 1: Financial Management Condition Status Reports & Updates For FY2015**

Investment	System	FY	Condition	Issued Date	Required Date	Status	Completion Date
Investment A	System A	2015	System A lacks a sunset plan, and must provide this information	Aug. 12, 2012	Sept. 1, 2013	Sunset plan was completed and verified	10/1/2013
Investment B	System B	2015	System B has been modified by H.R. Random Legislation, and should be updated to reflect new performance targets	June 2, 2013	June 25, 2013	Updates to System B are ongoing, including addition of procurement X. Funding issues may delay this project	12/31/2013 (projected)

## 15 Appendix D: Issue Paper Sample



US DOT Investment Review Board

Issue Paper

### Purpose

*The Issue Paper provides a mechanism for two-way communication between Operating Administrations and IRB supporting groups and is used to highlight key issues the Investment Review Board (IRB) should focus on to inform investment decisions. It summarizes potential issues discovered during IRB analysis in an effort to resolve potential issues at the lowest possible level of investment reviews. Those issues that can't be resolved or warrant IRB attention will form the basis for the portfolio discussion during the IRB meeting. These are not an exhaustive list of potential issues; others may be identified during the review process.*

### Issues

#### General

- Evaluation data not submitted or incomplete for 33 percent (or 10 investments) of the portfolio's investments, therefore a comprehensive analysis could not be conducted.
- Investment XX Exhibit-53 denotes there has been a program re-baseline. However, there is no evidence to determine what the original baseline was or the rationale for the change.
- Portfolio contains three investments using COTS products that will become unsupported by the manufacturer within nine months; there's no transition plan or strategy to mitigate this circumstance.
- Investment X does not align with the DOT Strategic Plan.
- Investment Y does not have a functional sponsor.

#### Schedule

- Two investments have estimated capability delivery dates outside OMB's established 90-180 day criteria.
- Four investments are more than six months behind planned schedule.

#### Funding

- Portfolio funding profile includes a \$1.7M request for non IT-related items.
- Four of the twelve investments have funding shortfalls that are in excess of \$2M.
- Investments X and Y are requesting \$750K above total lifecycle cost estimates with no justification for the increase.
- Portfolio request exceeds FY 14 approved amount by \$1.5M

#### Performance and Program Management

- Investment C does not deliver full capability for payroll and travel management.
- Portfolio delivers 60% of intended capabilities.
- Requirements have not been baselined for investments A, C, and D.



### Risk Management

- The risk management plan only includes program risks. Operational risks and dependencies should be identified as well.
- Risk mitigation strategies have not been identified.

### Enterprise Architecture/Target Architecture Alignment

- Enterprise Architecture artifacts (OV-1, OV 6c and SV1) are not available to determine EA alignment. Please provide these artifacts if available.
- There are multiple investments [Financial Management System A within OA 1 and Accounting System B within OA 2] that appear to be providing similar functionality. Has there been cross-communication to determine the possibility for consolidation of efforts?
- The investment publishes data through the DOT website, but the datasets are not published on data.gov. Please provide a rationale as to why.
- Investment X is not leveraging cloud technology, but plans to seek data center space to provide the required capability. Was a cloud solution ever evaluated or considered as an option, if not, why not?

### Cybersecurity and Privacy

- The Privacy Impact Assessment document does not accurately reflect the information that is contained within the system.
- Three investments are behind schedule for PIV implementation. What is the timeline to complete the PIV-enablement?
- Investment X does not route network traffic through a Trusted Internet Connection. What is the plan to address this issue to make the connection TIC v2.0 compliant?

## 16 Appendix E: Investment Decision Recommendation Sample



US DOT Investment Review Board

### Investment Decision Recommendation (IDR) Sample

#### APPROVAL RECOMMENDATION FOR THE FINANCIAL MANAGEMENT SEGMENT

**SUBJECT:** Investment Decision Recommendation, for Financial Management (FM) Segment

#### References:

- (a) DOT Enterprise Architecture Roadmap, dated XX
- (b) Department of Transportation (DOT) Investment Management Interim Guidance, dated XX
- (c) [DOT IT Governance Order 1351.39](#), dated August 2012

**Purpose:** The Operating Administrations (OAs) requested the Investment Review Board (IRB) review and approve 11 FM investments totaling \$25M as identified in the DOT Enterprise Architecture Roadmap in accordance with reference (a). The IRB convened a series of reviews by supporting groups in accordance with reference (b) to assess the FM portfolio in the department and recommended approval; stipulations are outlined under Decisions.

#### Decisions:

- Eight FM investments identified in the attachment are approved in the specific amounts indicated for a total not to exceed \$20M.
- Two FM investments totaling \$5M are currently unfunded and therefore are conditionally approved pending appropriate funding.
- The investment for a new business system will be considered at a future IRB and was not approved.
- The OAs must return to the IRB to request approval for any IT investments not identified in the attachment.
- Approval may be revoked if taskings and actions identified in this IDR are not completed within established timelines.

#### Tasking / Action Items:

- Within 45 days of the date of this IDR applicable OAs or Functional Sponsors must:
  - Document the plan to achieve Enterprise Architecture (EA) compliance for investments currently identified by the Portfolio Approval Request as non-compliant. The plan must be in accordance with references (a) and (c). EA compliance includes compliance with all applicable laws, regulations and policies.
  - Correct misalignment of investment C, D, and E in the OPPM repository and notify the IRB staff upon completion.
- Within 90 days of the date of this IDR applicable OAs or Functional Sponsors must:
  - Determine whether the functionality delivered by investments E, D and F can be consolidated.
  - Provide lifecycle costs estimates in OPPM for Investments E, D, and F.
  - Provide sunset dates for investments C and G.



**Discussion:** The core investments within this Financial Management Portfolio are key to enabling the Department of Transportation to improve the financial management process. Additionally, it is important that all financial feeder systems be appropriately aligned and compliant with the department's enterprise architecture to help identify inefficiencies and redundancies, and help create the most efficient target environment to execute financial management business goals.

**Point of Contact:** The point of contact for investment management actions is XXXX, who may be reached at (202) XXX-XXXX or XXXXXXXX.XXXXXX@dot.gov.

US DOT Chief Information Officer (Name)  
Co-Chair  
Investment Review Board

## 17 Appendix F: Roadmap to Target Environment (Transition Diagram) Template

This template demonstrates a method of viewing all current and planned investments that define the information technology assets used to deliver the required capabilities for a specific mission area. This view of a target environment enhances the governance process by helping pinpoint redundant IT systems, assisting with decisions to retire investments within a segment portfolio, and by allowing CPIC managers, Functional Sponsors, and IRB members to determine if mission area investments are executed in an efficient manner.

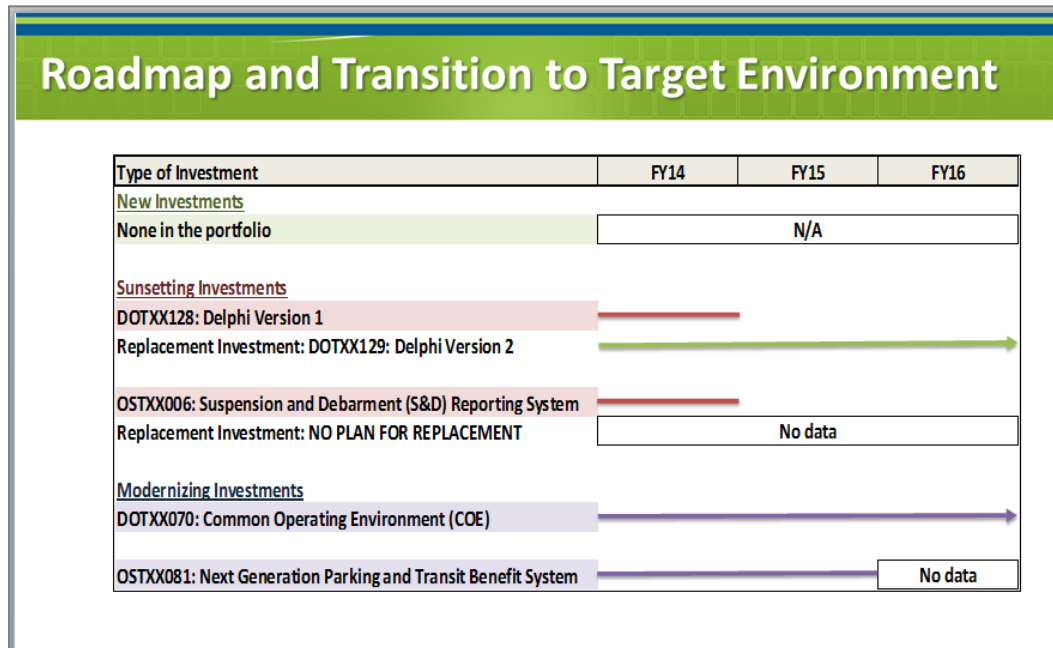


Figure 9: Roadmap To Target Environment



## 18 Appendix G: Post Implementation Review

The process of identifying PIR project candidates begins with the Departmental CPIC staff, in collaboration with the project manager and project sponsor, to identify initiatives and make recommendations to the IRB for upcoming PIR dates. Initiatives are selected to participate in the PIR process based on a number of factors that include, but are not limited to: importance to DOT's mission, system maturity, high development, operating, or maintenance cost, deployment/development of new technology, and realization of benefits.

To complete a PIR, comprehensive program management information must be gathered on an investment. This information will be analyzed and documented in a PIR Summary Report, which will be stored in the Department's CIMS tool. While the same factors may be used to assess all investments, there may be instances where specific information that an investment will be required to report. The Department will leverage the following scoring criteria: Investment scores will be determined based on assessment against investment-specific questions. Each question will be scored on a four-point scale:

- 4 Points – Excellent
- 3 Points - Good
- 2 Points – Satisfactory, but could use improvement
- 1 Point – Needs Significant Improvement
- 0 Point – No information provided

The total points earned and a percentage of total points earned will be calculated.

## 19 Appendix H: Operational Analysis

The operational analysis measures the investment's performance against established cost, schedule and performance parameters. OA CIOs will work with the DOT OCIO to ensure best practices and lessons learned are reported Department-wide to ensure that other investments benefit from the process outcomes. For investments delivering incremental capability to the user, the Operational analysis may begin shortly after an increment has been implemented. DOT-established portfolio evaluation criteria will be coupled with existing Departmental and OMB policies to identify performance gaps, redundancies, and inefficiencies across the enterprise. The results of the operational analysis are reported via the Operational Analysis and Exhibit 300 submissions, and are validated by the OCIO as part of the Department's annual budget submission. The following are some guidelines for conducting an Operational Analysis:

- For major investments, conduct an Operational Analysis on an annual basis to gauge actual performance compared to projections. The analysis will provide valuable insight on determining whether an investment is having the intended impact or delivering the expected outcome. It should also be helpful in helping determine future requirements and developing your transition plan
- Describe the baseline against which you measured the investment's performance, e.g. outcomes, costs, benefits, etc. to determine if projections are being realized. It is important to assess and discuss the continued need for the investment, along with performance metrics for measuring its performance. The performance metrics should have a clear relationship to both the OAs business need(s) and DOT's strategic plan
- Describe the investment's cost, schedule, and performance baseline, and the management techniques you are using to monitor metrics against the baseline
- Ensure the continued strategic fit of the investment with DOT's strategic direction
- Discuss the current performance of the investment. Is performance within limits of variance? If not, what corrective actions are you taking to get the investment on track
- Discuss any effort required to support the Department's target Enterprise Architecture

## 20 Appendix I: IT Portfolio Budget Guidance

Instructions: (See file attachment) and fill out the “BY17 IT Assets Funding” table using the instructions found in the excel file. This table will be used for OST only and will not be submitted to OMB.

### 20.1 Information Technology Portfolio

The Information Technology Portfolio budget guidance outlines the data and artifacts required for DOT’s Operating Administration’s (OAs) submission of their fiscal year (FY) 201X IT budget requests. The guidance provides the requirements OAs must meet, and highlights the process that will be used by the Department to evaluate and approve OA budget submissions. The guidance focuses on ensuring OA budgets report IT resources that align with the strategic goals of the Department, and leverages best practices to document, review, and manage IT spend. Additionally, it uses staggered timelines to enable an integrated review by the Department’s enterprise Investment Review Board (IRB) to ensure the efficient and effective management of our IT resources.

For FY 2017, the Department’s IT budget request and submission will be developed leveraging a methodology that allows the Department to implement the rigor and structure needed to adhere to the goals and objectives for IT spending outlined in the 2014 Federal Information Technology Reform Act (FITARA).

### 20.2 Standardization of Budget Requests

This FY, the Department will begin the standardization of IT budget requests. Standardization enables the DOT Chief Information Officer (CIO) to better define, evaluate, justify and approve IT funding requests for the enterprise, while allowing OAs the flexibility to make adjustments to accommodate emerging needs. OAs’ budget requests will have a designated section that incorporates all planned FY 2017 IT expenditures with appropriate justification(s), (Refer to Appendix A).

OAs’ allocated IT funds shall follow a taxonomy for linking systems and applications to investments through the use of designated program account or sub account codes (Figure 1). IT funds should be tied to OMB exhibits and linked to approved spend plans. IT costs shall be tracked in a method that enables the traceability of obligations and expenditures for associated investments, systems or applications. This process will enable OAs to submit a draft IT Portfolio Summary (ITPS, formerly OMB Exhibit 53) for review by the Department’s Budget Office (OST-B) and the Office of the CIO (OCIO).

Additionally, as the Department works to comply with FITARA increased focus will be placed on the cost and use of Commodity IT across the Department. OAs should likewise increase their focus as it will be required to identify and document Commodity IT assets and their costs within their portfolios.

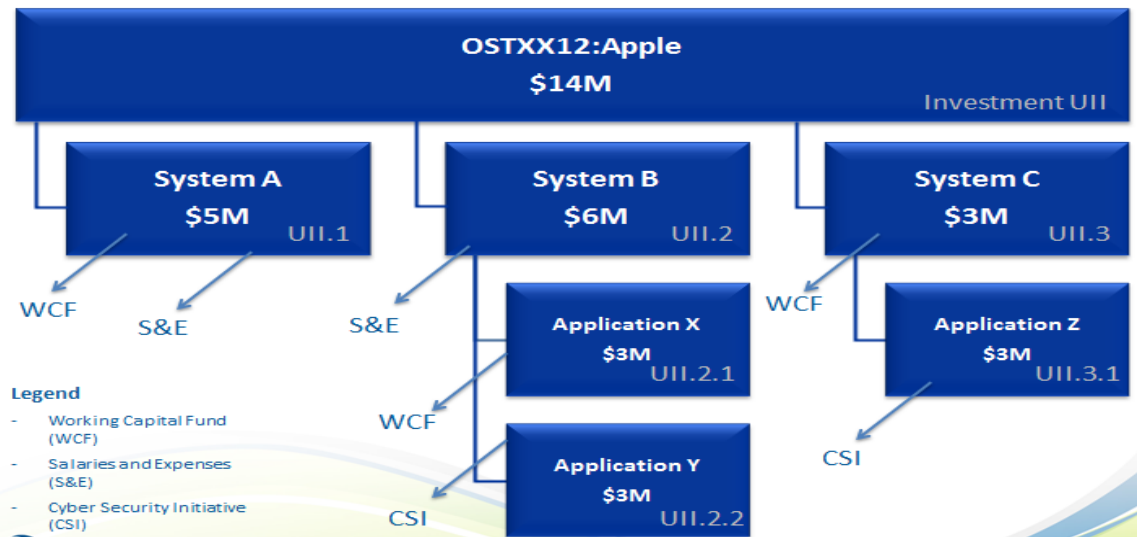


Figure 1

### OMB Submission

The OMB-mandated ITPS documents will be reviewed within the context of the DOT IRB prior to the Department's budget submission. Information provided in the draft ITPS will:

- Identify IT security costs as part of an agency's investment lifecycle, as well as IT security costs for supporting crosscutting or infrastructure related investments under the Federal Information Security Management Act (FISMA);
- Provide a full and accurate accounting of IT investments for the agency as required by the Clinger-Cohen Act of 1996 and FITARA;
- Provide proper accounting of funding sources; and
- Ensure the Department is meeting all statutory, policy, and legislative guidance with respect to enterprise portfolio management, with a focus on reducing duplication to root out inefficiencies and identify capability gaps.

OAs' IT budget submissions should continue to address the procurement and sustainment of emerging and legacy IT requirements for the OA's business mission and target the strategic goals and objectives of the Department. Budget requests shall align to OMB exhibits, conform to DOT's Enterprise Architecture, and demonstrate intent to allocate funds to technologies that address cross-agency goals. Additionally, the budget shall address key areas and initiatives identified by the Secretary, OMB and the DOT CIO to drive value in Federal IT investments, such as the promotion of cloud initiatives, strategic sourcing and continued protection of IT assets.

### 20.3 Portfolio Stat Cost Savings and Avoidance Strategy

OAs will continue the cost savings and avoidance strategy that OMB began with the FY 2014 budget submission. OAs should target potential cost savings and avoidance by evaluating business practices and processes in order to improve the business environment and maximize the benefit of new and existing technologies. The identified savings shall be tied to an ITPS and associated with a comprehensive plan that outlines the timeline and initiative(s) for achieving the objective(s). In addition, OAs must justify any new IT investments and provide supporting

documentation from the OA IRB where the new investment was reviewed and approved. OAs that are reprioritizing IT investments as a result of MAP-21 or other authorizing legislation shall include additional narrative detail with their submission. OAs will address:

- Changes to current modernization plans
- New modernization plans that need funding before FY 2017
- New modernization plans that need funding beginning in FY 2017

### **DOT Investment Review Board**

Modal requests are expected to align with the DOT's quarterly IRB cycles outlined in the interim investment management guidance, which precedes the OST-B budget submission timeline. The staggered timelines allow for a consolidated review and integration of OMB exhibits and synchronization of the Department's budget submission. OAs shall follow the process outlined in the forthcoming [message to CPIC coordinators](#).

Deadlines for providing data are:

- Business Support Services: December
- Mission Services: March
- Enterprise Services: June

The Department will continue to use a data-driven approach to enterprise portfolio management using the Department's Investment Management Guidance. The process enables an enterprise view of Information Technology to drive integrated business decisions that reduce redundant IT services, eliminate high-risk / low value investments and promote shared services across the Department where practicable.

## **20.4 Justification Sample**

The President is requesting \$150 million in FY 201X to invest in information technologies that will help promote and support the safe and efficient operations and maintenance of the nation's transportation infrastructure (bridges and tunnels). The Budget also requests \$20M for XXX number of IT professionals (FTE) to establish an IT Acquisition Workforce designed to oversee the timely procurement and sustainment of the Administration's IT resources. A portion of this \$170M will be used to support the following:

(OA name) is expected to invest \$25M of DME and \$5M in O&M to support development and implementation of (Investment name), which provides XXX?

(OA name) is expected to spend \$35M in DME and \$10M in O&M for the enterprise XXX, which will provide?

The request provides \$10M for 20 additional FTE to build and maintain the administration's disaster recovery site.

An additional \$65M will be used to support the sustainment of our legacy IT initiatives and pay for shared IT services.

### OST Supplementary Table (New) (for OST submission only)

In recent years, many modal administrations have submitted budget requests that focus primarily on increases to baseline funding levels, without supporting detail for base funding expenditures. This has made it difficult for those without an intimate understanding of day-to-day modal operations to develop a comprehensive picture of what modal administrations are requesting in their budget, and for what purpose.

For FY 201X we have simplified the Budgeting from Zero tables from the FY 201X budget. This year's table focuses on the base and the upcoming year's requested increases. Each modal administration will provide data that details estimated base funding / current service expenditures. Each mode will describe its base funding and BY request for each account, by program office and object class, by completing the "Detailed Budget Analysis by Object Class" table.

Instructions: (*See file attachment*) and fill out the "Budgeting from Zero/Detailed Budget Analysis by Object Class" table using the instructions found in the excel file. This table will be used for OST only and will not be submitted to OMB. Please print this table in legal size and submit under separate cover to your B-10 analyst.