



IT PROJECT MANAGEMENT

IT Project Management Best Practices

Project Managers (PMs) must focus on three dimensions of project success: budget, time, and quality. Best practices include:

- ◆ Planning is everything, and is ongoing.
- ◆ PMs must feel, and transmit to their team members, a sense of urgency.
- ◆ Successful projects use a time-tested, proven project life cycle.
- ◆ All project deliverables and all project activities must be visualized and communicated in vivid detail.
- ◆ Deliverables must evolve gradually.
- ◆ Projects require clear approvals and sign-off by sponsors.
- ◆ Project success is correlated with a thorough analysis of the need for project deliverables.
- ◆ PMs must fight for time to do things right...the first time.
- ◆ PM responsibility must be matched by equivalent authority.
- ◆ Project sponsors and stakeholders must be active participants, not passive customers.
- ◆ Projects typically must be sold, and resold.
- ◆ PMs should acquire the best people they can and then do whatever it takes to keep obstacles out of their way.
- ◆ Top management must actively set priorities.



DOL IT Project Management Guidance Documents

- ◆ **DOL Systems Development and Life Cycle Management Manual (SDLCMM):** *the mechanism to assure that developing, modifying, or enhancing systems meet established user requirements and support DOL critical success factors.*
- ◆ **IT Capital Planning Process Overview:** *a process overview reference guide for IT Capital Planning.*
- ◆ **Guide to IT Capital Investment Management:** *a practical reference for Department and agency managers and staff.*
- ◆ **Executive Guide to IT Capital Investment Management:** *an overview of how DOL implements its process for making investments in IT.*
- ◆ **DOL Computer Security Handbook:** *covers security and privacy aspects for IT investments.*

The activities necessary to ensure that an IT project progresses toward the achievement of its objectives in accordance with planned or revised cost, schedule, and technical baselines, as well as performance outcomes.

Why is Sound IT Project Management Important?

IT projects are especially difficult to manage, often explaining why so many IT projects in both the public and private sectors are over budget or behind schedule. The benefits of focusing on IT project management include:

- ✓ Improved ability to make IT investment decisions
- ✓ Efficient planning and control of IT projects
- ✓ Responsiveness to federal oversight entities and compliance with applicable laws and regulations
- ✓ On-schedule, on-cost projects that provide the functionality required to support the accomplishment of the Department's strategic objectives.

CONTENTS

Framework	Page 2
Security & Privacy Requirements IT Capital Investment Management	
Roadmap	Page 3
Type of Project Level of Project	
Documentation	Page 4
Project Management Plan Large System Effort Work Pattern	
Review Process	Page 5
Investment Review Board Structure Review Criteria	
Investment Portfolio System	Page 6
I-TIPS Training More Information	



FRAMEWORK

What is the Project Management Framework?

Figure 1 provides an overview of the Department of Labor Project Management Framework. The Framework introduces the concept of managing a project throughout its life cycle; in other words, there are specific phases of a project from the beginning (Conceptual Planning) to the end (Disposition). Each one of the phases has its own set of activities and documentation requirements to ensure that the project is well-managed. The Department has outlined specific phases for both systems development and non-systems development IT projects. The Framework also associates each of these phases with the IT capital investment management process and demonstrates that IT security & privacy considerations are integrated into each phase of the project life cycle.

DOL Project Management Framework

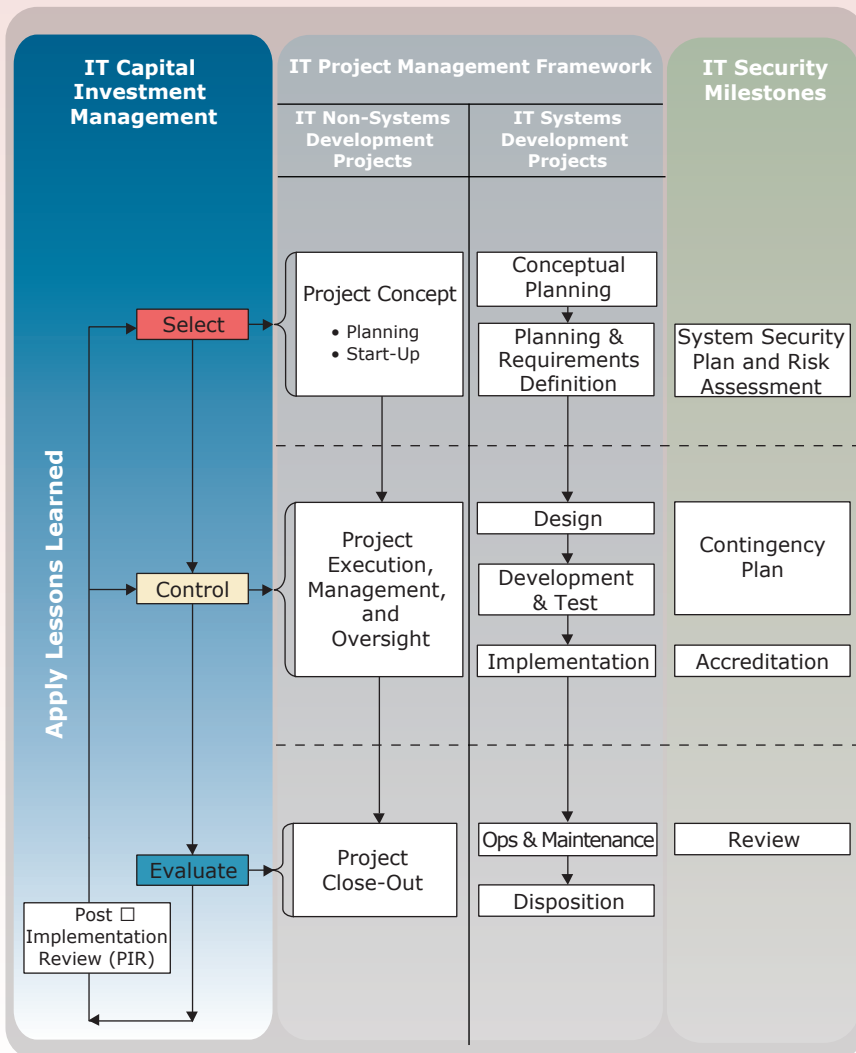


Figure 1

What Should I Know About Security & Privacy Requirements?

Project Managers (PMs) are responsible for ensuring that privacy, confidentiality, integrity, and availability are addressed throughout the life cycle of an IT project. That means PMs need to think through the security & privacy implications of every system in the early stages of project development, and then update security & privacy plans throughout each phase of the system. For more information on ensuring the integrity of the data on your system and protecting the privacy of individuals, consult the Department's Computer Security Handbook, the SDLCMM, and high-level guidance such as the Clinger-Cohen Act (P.L. 104-106 Division E), the Computer Security Act of 1987, or OMB Circular No. A-130, Appendix III.

What is IT Capital Investment Management?

IT capital investment management is a process designed to ensure that IT projects are implemented at acceptable costs, within reasonable and expected time frames, and contribute to tangible, observable improvements in mission performance. There are three main phases to IT capital investment management:

SELECT

The process for determining priorities and making decisions about which projects will be funded during the year.

CONTROL

The activities necessary to ensure that projects operate within acceptable cost, schedule, and technical performance parameters.

EVALUATE

Once projects have been fully implemented, actual versus expected results are evaluated and lessons learned are incorporated back into the overall process.

ROADMAP

Using the IT Project Management Framework as a reference, the following IT Project Management Roadmap is designed to help Project Managers get started on their IT projects.

What Type of Project Am I Managing?

There are two types of IT projects. Once you have determined the type of project that you are managing, you can determine the correct steps to take. The two types of IT projects are:

Systems Development: Projects that require the creation, modification, or enhancement of an information system through the use of software application programming, or hardware and equipment configurations.

Non-Systems Development: Projects that entail activities and resources supporting the use of IT which do not require hardware or software development, modification, or enhancement.

What Level of Project Am I Managing?

The Department has identified four project levels or "thresholds." Projects at higher thresholds require greater detail in their documentation and undergo more intensive reviews. Each threshold level also requires I-TIPS action.

Threshold 1: Initiatives that cost less than \$100,000 per year.

Threshold 2: Initiatives that cost between \$100,000 and \$5M per year.

Threshold 3i: Initiatives that involve modification to the existing IT infrastructure with no new technology.

Threshold 3: Initiatives that cost more than \$5M per year, OR impact more than one DOL agency, OR involve highly visible/sensitive systems, OR set a new technological direction, OR impact a financial system.

IT Project Management Roadmap

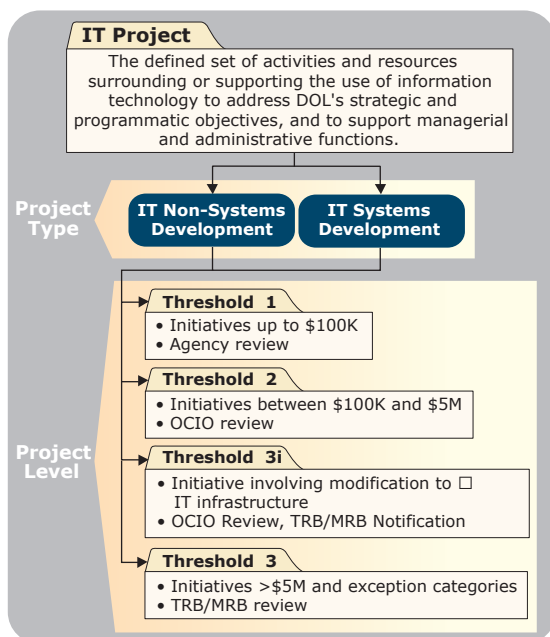


Figure 2

What Steps Will I Go Through to Manage My Project?

Once a Project Manager has determined the type and level of project to be managed, it can be determined what steps should be taken to manage the project. For example, the major phases of a systems development project are:

Conceptual Planning: During this phase, the need to develop or significantly enhance a system is identified, feasibility and costs are assessed, and risk and project-planning approaches are defined.

Planning and Requirements Definition: There are two key aspects of this phase: (1) planning and (2) defining the functional requirements that the system will need to address.

Design: During this phase, functional requirements are translated into preliminary and detailed designs. Decisions are made to address how the system will meet functional, physical, interface, and data requirements.

Development and Testing: The system is validated through a sequence of unit, integration, system, and acceptance test activities. The objective is to ensure that the system functions as expected and user requirements are satisfied.

Implementation: During this phase, the new or enhanced system is installed in the production environment, users are trained, data is converted (as needed), and the system is turned over to the user.

Operations and Maintenance: The emphasis of this phase is to ensure that user needs continue to be met and that the system continues to perform according to specifications. Routine hardware and software maintenance and upgrades are performed to ensure effective system operations.

Disposition: This phase represents the end of the system's life cycle. It provides for the systematic termination of a system to ensure that vital information is preserved for potential future access and/or reactivation.

I-TIPS Action: Each of these phases must be performed regardless of the level (or threshold) of the project. More detailed planning, however, is required for higher threshold projects. (See page 6 for more information on I-TIPS.)

Per the Department's IT Project Management Framework, *non-systems development* projects go through similar steps, as those of system development. They are condensed into project concept, project execution, and project close-out.

DOCUMENTATION

What Documents Will I Produce During Each Phase of My Project?

Each phase of a project life cycle has certain documentation requirements. In some phases, the documents are created for the first time. In other phases, new documents are developed while existing documents are updated. *Figure 3* provides an overview of the documentation requirements for a major system (Threshold 3).

Large System Effort Work Pattern

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7
RITS/Statement of Concept	C						
Cost Benefit Analysis	C	U	U				
Risk Management Plan	C	U	U	U	U	U	
Project Management Plan	C	U	U	U	U		
Feasibility Study	O						
Acquisition Strategy/Plan	O	O	C	U	U		
Work Breakdown Structure	O	O	C	U	U		
SOW	O						
Functional Requirements Document		C					
Project Risk Assessment		C	U	U	U	U	
System Security Plan/Security Risk Assessment		C	U	U	U	U	
Test Plans			O	O	C		
CM Plan			O	C	U	U	
Legacy Data Plan			O				
Detailed Design				C			
Contingency Plan				O			
Implementation Plan				O	C		
Acceptance Test Plan					C		
Acceptance Test Report					C		
Acceptance Test Approval					C		
Training Plan					C		
Delivered System					C		
System Manuals					C	U	U
User Manuals					C	U	U
System Fielding Authorization					O		
Agency Computer Security Certification						C	
Security Accreditation Letter						C	
Implemented System						C	
Trained Personnel						C	
Implementation Certification Statement						C	
Disposition Plan							C
Archived System							C

Legend

- Phase 1 - Conceptual Planning Phase
- Phase 2 - Planning & Requirements Definition Phase
- Phase 3 - Design Phase
- Phase 4 - Development & Test Phase
- Phase 5 - Implementation Phase
- Phase 6 - Operations & Maintenance Phase
- Phase 7 - Disposition Phase
- C - Core
- O - Optional
- U - Updated

Figure 3

What is a Project Management Plan?

Every project should have a complete Project Management Plan (PMP). The PMP provides a vehicle for documenting project scope, tasks, schedule, allocated resources, and interrelationships with other projects. The PMP is updated at the end of each phase. The PMP Template describes the elements of a PMP and is based on guidance provided in the Systems Development and Life Cycle Management Manual.

Project Management Plan Template

1. Introduction
 - 1.1 Project Description
 - 1.2 Project Background
 - 1.2.1 Project Development Strategy
 - 1.2.2 Organization of the Project Management Plan
 - 1.3 Points of Contact
 - 1.4 Project Reference Points
 - 1.5 Glossary
2. Organization and Responsibilities
3. Project Description, Schedule, and Resources
 - 3.1 Project Work Breakdown Structure
 - 3.1.1 Summary of Work Breakdown Structure
 - 3.1.2 Project Work Breakdown Structure
 - 3.2 Resource Estimates
 - 3.3 Schedule
 - 3.4 Resource Acquisition Plan
 - 3.5 Communication Plan
 - 3.6 Project Standards and Procedures
 - 3.7 Risk Management
 - 3.8 Security and Privacy
 - 3.8.1 Privacy Issues
 - 3.8.2 Computer Security Activities

<http://www.labornet.dol.gov/assets/documents/systemslifecycle.pdf>
<http://www.dol.gov/dol/cio/public/programs/it/itmain.htm>

Figure 4

What Data Should I Monitor to Ensure My Project is Well-Managed?

To ensure that your project is well managed, focus on three project management performance measures: cost, schedule, and technical performance. No more than a 10% variance should be allowed from the approved baseline for any of these three measures. By watching for trends across these three categories, as seen in *Figure 5*, you will be able to monitor the direction of your project.

IT Project Management Data

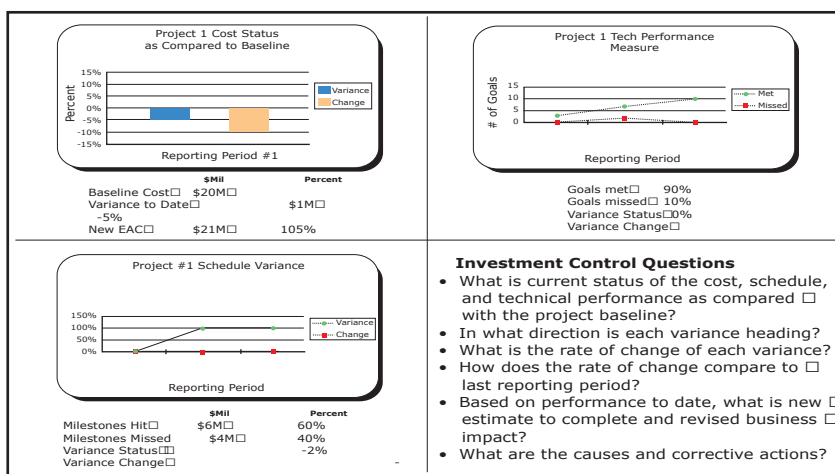


Figure 5

U.S. DEPARTMENT OF LABOR

REVIEW PROCESS

Who Will Review My Project?

The Department has established an IT investment review and approval hierarchy that is based on project size and scope. The review and approval process uses an Investment Review Board structure to support decisions on IT investments. Threshold 1 initiatives are approved at the agency level. Higher threshold projects are reviewed by the following investment review board entities:

U.S. Department of Labor Investment Review Board Structure

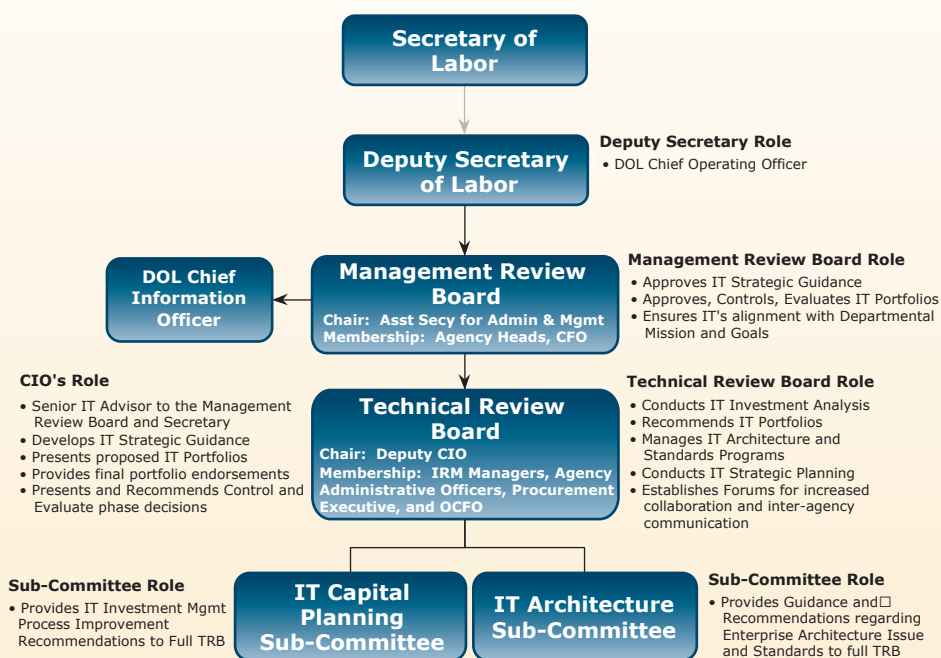


Figure 6

Office of the Chief Information Officer (OCIO):

In addition to establishing the Departmental IT capital investment process, the OCIO reviews and approves all Threshold 2 IT initiatives. The OCIO also reviews Threshold 3i initiatives and informs the TRB of the disposition of Threshold 3i initiatives.

Technical Review Board (TRB): The TRB serves as the Department's first-tier investment review board for Threshold 3 IT projects and as a forum to identify and resolve Department-wide IT-related issues. The TRB makes recommendations on the appropriate disposition of Threshold 3 initiatives to the Management Review Board. The TRB is also comprised of two permanent sub-committees: the IT Capital Planning Sub-Committee and the IT Architecture Sub-Committee.

Management Review Board (MRB): The MRB approves IT strategic guidance; approves, controls, and evaluates Departmental IT portfolios; approves Threshold 3 initiatives; and ensures alignment between IT investments and the mission, goals, and objectives of the Department.

What is the Review Criteria?

Regardless of whether an IT project is Threshold 2 or 3, it is reviewed when it is first proposed for funding (selection) and then throughout the project life cycle before implementation (control). Provided below is the type of information reviewed:

Review Criteria

Selection Information

- ♦ Functional and Technical Requirements
- ♦ Baseline Cost and Schedule Information
- ♦ Selection Screening and Scoring Information
 - Mission Alignment Risk
 - Technical Risk
 - Cost and Schedule Risk
- ♦ Issues and Next Steps

Control Information

- ♦ Cost, Schedule, and Performance Baseline and Actual Information
- ♦ Control Screening and Scoring Information
 - Mission Alignment Risk
 - Technical Risk
 - Cost and Schedule Risk
- ♦ Issues and Next Steps

INVESTMENT PORTFOLIO SYSTEM

What is I-TIPS?

I-TIPS is the "Information Technology Investment Portfolio System." I-TIPS brings consistency to IT planning, budget formulation, and management processes and provides ready access to the information that is required to prioritize, select, monitor, and evaluate IT projects. All major IT projects must be entered into I-TIPS before they can be approved. I-TIPS is located at <http://asitips01.dol.gov>. To establish an I-TIPS user account, please call the Help Desk at (202) 693-4444.

I-TIPS

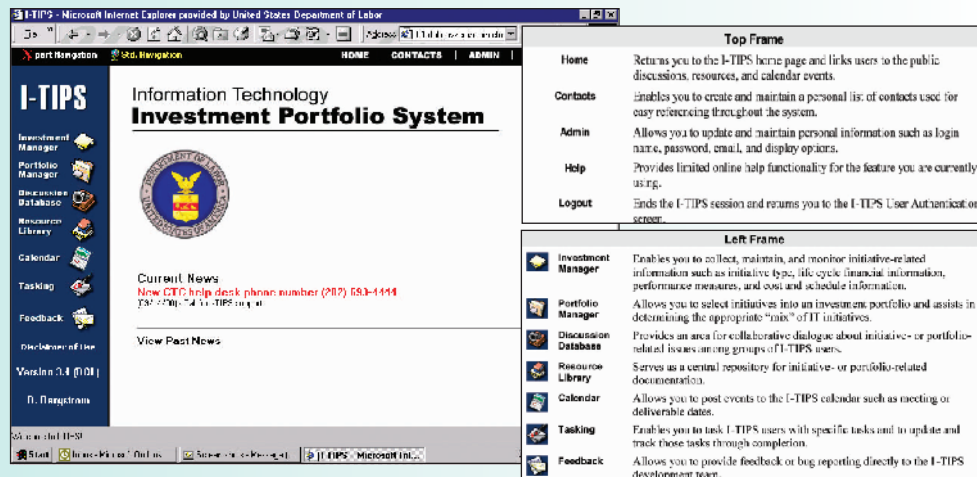


Figure 7

What IT Project Management Information is Captured in I-TIPS?

I-TIPS captures a wealth of information to help Project Managers develop, monitor, and control their projects. *Figure 8* provides an overview of the information required by OMB Circular A-130, Management of Federal Information Resources, as it is captured in I-TIPS.

Is I-TIPS Training Available?

Yes, I-TIPS training is available and offered several times throughout the year at DOL. I-TIPS was designed to be intuitive with built-in features for ease of use, but the training sessions cover details on how to add, edit, delete initiatives; collect, manage, and add documents; screen and score an initiative; assign an initiative to an investment pool; and use the system's collaborative and administrative features.

IT Project Management Information is Captured in I-TIPS

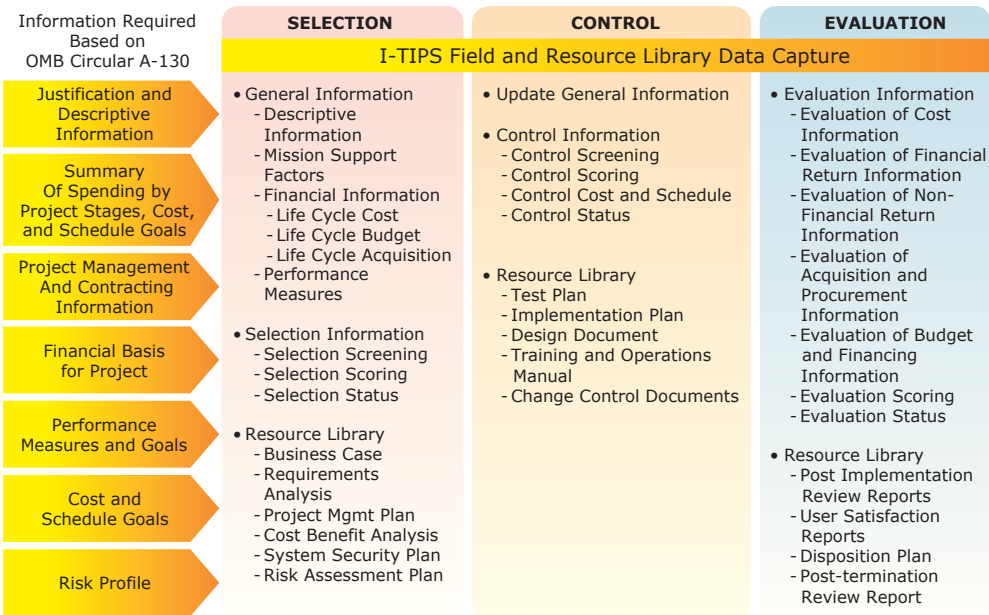


Figure 8

Where Can I Get More Information?

To get more information on IT Project Management contact the Department's Office of the Chief Information Officer at: 200 Constitution Ave., N.W., Room N1301 Washington, DC 20210 (202) 693-4567