Project Integration Management

Information Technology Project Management, Eighth Edition

Note: See the text itself for full citations.

Agenda

- What is project integration management
- Project selection
- Develop project charter
- Develop project management plan
- Manage project knowledge
- Monitor and control project work
- Perform integrated change control
- Close project

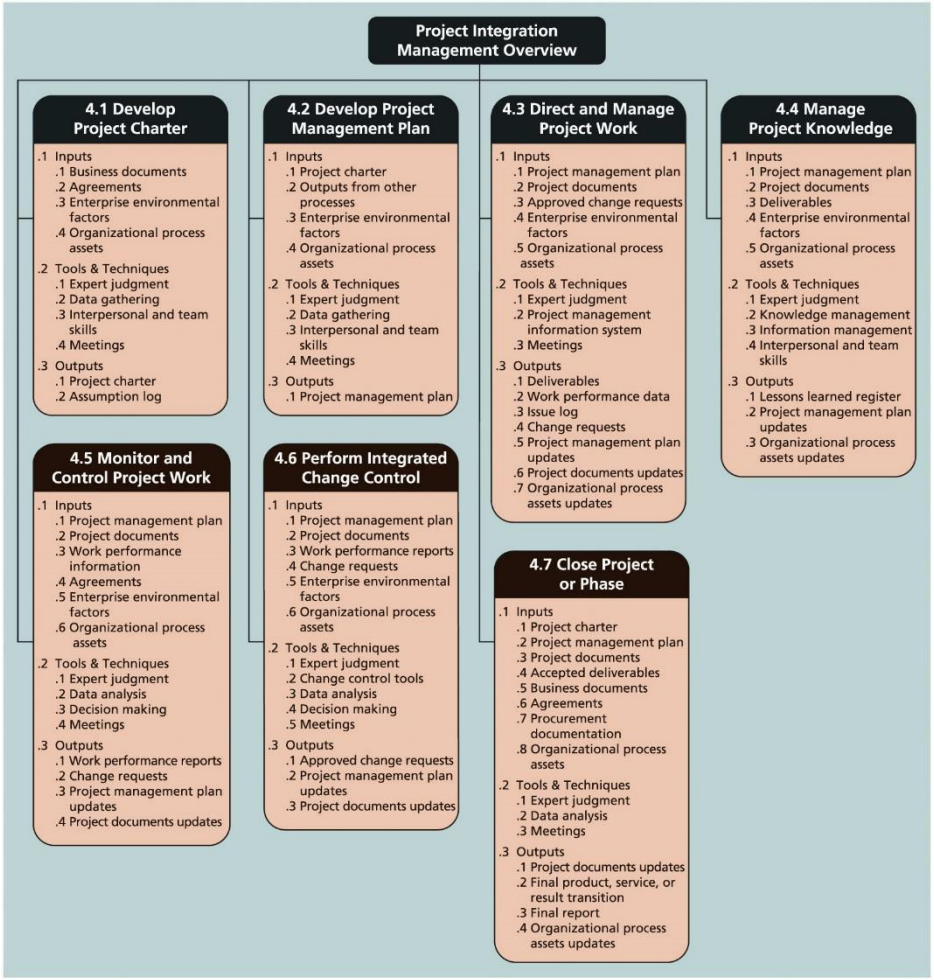
What is Project Integration Management? (1 of 3)

- Project managers must coordinate all of the other knowledge areas throughout a project's life cycle
- Many new project managers have trouble looking at the "big picture" and want to focus on too many details
- Project integration management is not the same thing as software integration

What is Project Integration Management? (2 of 3)

- Main processes
  - Developing the project charter
  - Developing the project management plan
  - Directing and managing project work
  - Monitoring and controlling project work
  - Performing integrated change control
  - Closing the project or phase

What is Project Integration Management? (3 of 3)



Source: Project Management Institute, Inc. *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) – Sixth Edition* (2017), Figure 4-1, Page 71.

FIGURE 4-1 Project integration management summary

Strategic Planning and Project Selection (1 of 3)

- Strategic planning involves determining long-term objectives
  - Analyzing the strengths and weaknesses of an organization
  - Studying opportunities and threats in the business environment
  - Predicting future trends
  - Projecting the need for new products and services
- SWOT analysis
  - Strengths, Weaknesses, Opportunities, and Threats
- Identifying potential projects
  - Start of project initiation
- Aligning IT with business strategy
  - Organization must develop a strategy for using IT to define how it will support the organization's objectives

Developing a Project Charter (1 of 2)

- After deciding what project to work on, it is important to let the rest of the organization know
  - A project charter is a document that formally recognizes the existence of a project and provides direction on the project's objectives and management
- Key project stakeholders should sign a project charter to acknowledge agreement on the need and intent of the project
  - A project charter is a key output of the initiation process

Developing a Project Charter (2 of 2)

- Inputs for developing a project charter
  - Business case
  - Benefits management plan
  - Agreements
  - Enterprise environmental factors
  - Organizational process assets

Developing a Project Management Plan

- Document used to coordinate all project planning documents and help guide a project's execution and control
  - Plans created in the other knowledge areas are subsidiary parts of the overall project management plan
- Common elements of a project management plan
  - Introduction/overview of the project
  - Description of how the project is organized
  - Management and technical processes used on the project
  - Work to be done
  - Schedule and budget information
  - References to other project planning documents

Using Guidelines to Create Project Management Plans

Major Section Headings	Section Topics
Overview	Purpose, scope, and objectives; assumptions and constraints; project deliverables; schedule and budget summary; evolution of the plan
Project Organization	External interfaces; internal structure; roles and responsibilities
Managerial Process Plan	Start-up plans (estimation, staffing, resource acquisition, and project staff training plans); work plan (work activities, schedule, resource, and budget allocation); control plan; risk management plan; closeout plan
Technical Process Plans	Process model; methods, tools, and techniques; infrastructure plan; product acceptance plan
Supporting Process Plans	Configuration management plan; verification and validation plan; documentation plan; quality assurance plan; reviews and audits; problem resolution plan; subcontractor management plan; process improvement plan

Source: IEEE Standard 1058–1998

Sample contents for the IEEE software project management plan (SPMP)

Directing and Managing Project Work

- Involves managing and performing the work described in the project management plan
  - The majority of time and money is usually spent on execution
- The application area of the project directly affects project execution
  - Products of the project are produced during the execution phase
- The project manager needs to focus on leading the project team and managing stakeholder relationships to execute the project management plan successfully
  - Project resource management, communications management, and stakeholder management are crucial to a project's success

Coordinating Planning and Execution

- Project planning and execution are intertwined and inseparable activities
  - The main function of creating a project management plan is to guide project execution
- Those who will do the work should help to plan the work
  - All project personnel need to develop both planning and executing skills, and they need experience in these areas

Providing Strong Leadership and a Supportive Culture

- Project managers must lead by example
  - Demonstrate the importance of creating and then following good project plans and following them in project execution
- Organizational culture can help project execution
  - Providing guidelines and templates
  - Tracking performance based on plans
- Project managers may still need to break the rules to meet project goals
  - Senior managers must support those actions

Capitalizing on Product, Business, and Application Area Knowledge

- It is often helpful for IT project managers to have prior technical experience
  - Small projects: the project manager may be required to perform some of the technical work or mentor team members to complete the projects
  - Large projects: the project manager must understand the business and application area of the project

Project Execution Tools and Techniques

- Project managers can use specific tools and techniques to perform activities that are part of execution processes
  - Expert judgment
  - Meetings
  - Project management information systems

Managing Project Knowledge

- Basic types of knowledge
  - Explicit knowledge: easily explained using words, pictures, or numbers and is easy to communicate, store, and distribute
  - Tacit knowledge: difficult to express and highly personal
- Knowledge management should be done before, during, and after projects are completed
  - Often very difficult to accomplish

Advice for Young Professionals

- Many college students excel in this area based on their experiences doing rigorous coursework
  - To stand out in your job, consider volunteering to be in charge of creating your project team's lessons-learned register

Monitoring and Controlling Project Work

- Changes are inevitable on most projects, so it's important to develop and follow a process to monitor and control changes
  - Monitoring project work includes collecting, measuring, and disseminating performance information
  - The project management plan provides the baseline for identifying and controlling project changes
    - A baseline is a starting point, a measurement, or an observation that is documented so that it can be used for future comparison.

Performing Integrated Change Control

- Main objectives
  - Influencing the factors that create changes to ensure that changes are beneficial
  - Determining that a change has occurred
  - Managing actual changes as they occur

Change Control on IT Projects

- Former view: the project team should strive to do exactly what was planned on time and within budget
- Problem: project teams could rarely meet original project goals
- Modern view: project management is a process of constant communication and negotiation
- Solution: changes are often beneficial and the project team should plan for them

Change Control System (1 of 3)

- Formal, documented process that describes when and how official project documents and work may be changed
  - Describes who is authorized to make changes, paperwork required for these changes, and any automated or manual tracking systems the project will use
- Change control board (CCB) is a formal group of people responsible for approving or rejecting changes on a project
  - Provide guidelines for preparing change requests, evaluate change requests, and manage the implementation of approved changes
- Some CCBs only meet occasionally, so it may take too long for changes to occur
  - Some organizations have policies in place for time-sensitive changes

Change Control System (2 of 3)

- Configuration management ensures that the descriptions of the project's products are correct and complete
  - Involves identifying and controlling the functional and physical design characteristics of products and their support documentation
  - Configuration management specialists identify and document configuration requirements, control changes, record and report changes, and audit the products to verify conformance to requirements

Change Control System (3 of 3)

View project management as a process of constant communication and negotiation.
Plan for change.
Establish a formal change control system, including a change control board (CCB) and IT steering committee.
Use effective configuration management.
Define procedures for making timely decisions about smaller changes.
Use written and oral performance reports to help identify and manage change.
Use project management software and other software to help manage and communicate changes.
Focus on leading the project team and meeting overall project goals and expectations.

suggestions for performing integrated change control

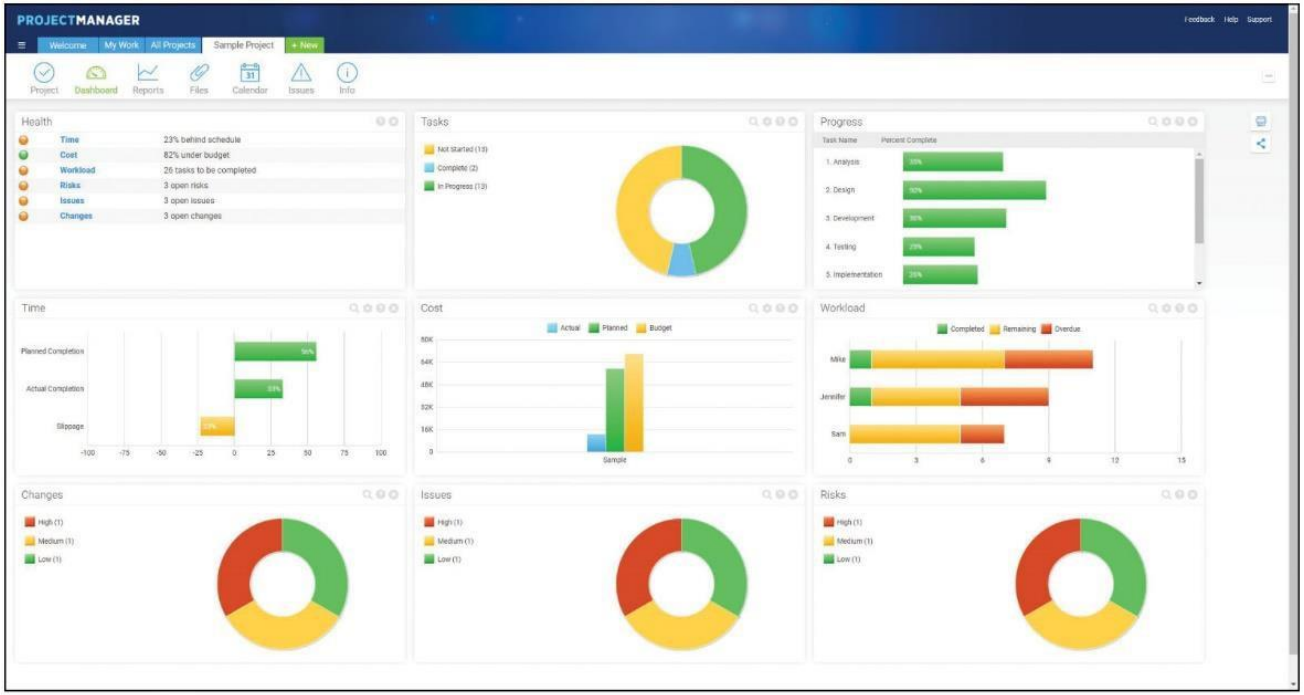
Closing Projects or Phases

- To close a project or phase, you must finalize all activities and transfer the completed or cancelled work to the appropriate people
  - Main inputs are the project charter, project management plan, project documents, accepted deliverables, business documents, agreements, procurement documentation, and organizational process assets
  - Main tools and techniques are expert judgment, data analysis, and meetings

Using Software to Assist in Project Integration Management (1 of 2)

- Several types of software can be used to assist in project integration management
  - Documents can be created with word processing software
  - Presentations are created with presentation software
  - Tracking can be done with spreadsheets or databases
  - Communication software can facilitate communications
  - Project management software can pull everything together and show detailed and summarized information

Using Software to Assist in Project Integration Management (2 of 2)



Source: www.projectmanager.com

FIGURE 4-8 Sample portfolio management software screens

Considerations for Agile/Adaptive Environments

- Iterative and agile approaches promote the engagement of team members
- Expectations of the project manager do not change in an adaptive environment, but control of the detailed product planning and delivery is delegated to the team
- Project managers using any product life cycle should focus on creating a collaborative decision-making environment and providing opportunities for team members to develop additional skills

Breakout Activity

- Map each of the Project integration processes to their respective process groups
- List all the inputs, tool and outputs for each process

Chapter Summary

- Project integration management ties together all the other areas of project management
  - Primary focus should be on project integration management
- Main processes
  - Develop the project charter
  - Create an assumption log
  - Develop the project management plan
  - Direct and manage project execution
  - Manage project knowledge
  - Monitor and control project work
  - Perform integrated change control
  - Close the project or phase