Information Technology Project Management, Seventh Edition

Learning Objectives

- Understand the importance of project schedules and good project time management
- Discuss th

Learning Objectives

- Use a Gantt chart for planning and tracking schedule information, find the critical path for a projec

Importance of Project Schedules

Managers often cite delivering projects on time as one of their biggest challenges ■ Time has the

Individual Work Styles and Cultural Differences Cause Schedule Conflicts

One dimension of the Myers-Briggs Type Indicator focuses on people's attitudes toward structur

1 ISTJ ISFJ INFJ INTJ

Media Snapshot

In contrast to the 2002 Salt Lake City Winter Olympic Games (see Chapter 4’s Media Snapshot),

Project Time Management Processes

Planning schedule management: determining the policies, procedures, and documentation that w

Figure 6-1. Project Time Management Summary

Planning Schedule Management

The project team uses expert judgment, analytical techniques, and meetings to develop the sche

Definition Activity

An activity or task is an element of work normally found on the work breakdown structure (WBS)

Activity List and Attributes

An activity list is a tabulation of activities to be included on a project schedule that includes■the a

Milestones

A milestone is a significant event that normally has no duration■It often takes several activities a [illegible] Federal Bureau of Investigation (FBI), [illegible] FBI [illegible] deployment [illegible]

Sequencing Activities

Involves reviewing activities and determining dependencies

■ A dependency or relationship is the

Three types of Dependencies

Mandatory dependencies: inherent in the nature of the work being performed on a project, somet

Network Diagrams

- Network diagrams are the preferred technique for showing activity sequencing
- A network diagra

Figure 6-2. Network Diagram for Project X

Arrow Diagramming Method (ADM)

Also called activity-on-arrow (AOA) network diagrams

■ Activities are represented by arrows

■ Nod

Process for Creating AOA Diagrams

Find all of the activities that start at node 1. Draw their finish nodes and draw arrows between

Precedence Diagramming Method (PDM)

- Activities are represented by boxes
- Arrows show relationships between activities
- More popular

Figure 6-3. Task Dependency Types

Figure 6-4. Sample PDM Network Diagram

Estimating Activity Resources

Before estimating activity durations, you must have a good idea of the quantity and type of resou

Activity Duration Estimating

- Duration includes the actual amount of time worked on an activity plus elapsed time
- Effort is the

Three-Point Estimates

Instead of providing activity estimates as a discrete number, such as four weeks, it’s often helpfu

32

Developing the Schedule

uses results of the other time management processes to determine the start and end date of the

33 PEST■■■

Gantt Charts

Gantt charts provide a standard format for displaying project schedule information by listing proje

Figure 6-5. Gantt Chart for Project X

Figure 6-6. Gantt Chart for Software Launch Project

Adding Milestones to Gantt Charts

Many people like to focus on meeting milestones, especially for large projects ■ Milestones empha

SMART Criteria

Milestones should be

- Specific
- Measurable
- Assignable
- Realistic
- Time-framed

Security risk is inherent in the development of complex systems. Luc Richard, the founder of ww

Figure 6-7. Sample Tracking Gantt Chart

Critical Path Method (CPM)

CPM is a network diagramming technique used to predict total project duration

A critical path for

Calculating the Critical Path

First develop a good network diagram

■ Add the duration estimates for all activities on each path

Figure 6-8. Determining the Critical Path for Project X

Work on the Critical Path

A project team at Apple computer put a stuffed gorilla on the top of the cubicle of the person curre

Free slack or free float is the amount of time an activity can be delayed without delaying the early

Figure 6-9. Calculating Early and Late Start and Finish Dates

Table 6-1. Free and Total Float or Slack for Project X

Using the Critical Path to Shorten a Project Schedule

Three main techniques for shortening project schedules

- Shortening durations of critical activities/tasks

Importance of Updating Critical Path Data

It's important to update project schedule information to meet time goals for a project.■The critica

Critical Chain Scheduling ■ a method of scheduling that considers limited resources when creating

Figures 6-10.a and b. Multitasking Example

A buffer is additional time to complete a task■Murphy’s Law states that if something can go wron

[redacted]

[redacted]

Figure 6-11. Example of Critical Chain Scheduling

Program Evaluation and Review Technique (PERT)

PERT is a network analysis technique used to estimate project duration when there is a high deg

PERT Formula and Example

weighted average = ■optimistic time + 4X most likely time + pessimistic time■■■■■■6■

Schedule Control Suggestions

- Perform reality checks on schedules
- Allow for contingencies
- Don’t plan for everyone to work at

Controlling the Schedule:

Goals are to know the status of the schedule, influence factors that cause schedule changes, det

First review the draft schedule or estimated completion date in the project charter ■ Prepare a mo

Strong leadership helps projects succeed more than good PERT charts ■ Project managers shoul

Mittal Steel Poland earned Poland’s Project Excellence Award in 2007 for implementing a SAP sy

Software to facilitate communications helps people exchange schedule-related information■De

What Went Right?

Microsoft lists dozens of examples of how customers benefit from using Project 2010. One such

Words of Caution on Using Project Management Software

Many people misuse project management software because they don’t understand important con

Chapter Summary

Project time management is often cited as the main source of conflict on projects, and most IT pr