

Chapter 1: Introduction to Project Management

**Information Technology Project
Management, Seventh Edition**



Information Technology
PROJECT MANAGEMENT | 7e

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Note: See the text itself for full citations.

What Is a Project?

- ▶ A **project** is “a temporary endeavor undertaken to create a unique product, service, or result” (PMBOK® Guide, Fifth Edition, 2012)
- ▶ Operations is work done to sustain the business
- ▶ Projects end when their objectives have been reached or the project has been terminated
- ▶ Projects can be large or small and take a short or long time to complete

Examples of IT Projects

- ▶ A team of students creates a smartphone application and sells it online
- ▶ A company develops a driverless car
- ▶ A small software development team adds a new feature to an internal software application for the finance department
- ▶ A college upgrades its technology infrastructure to provide wireless Internet access across the whole campus

Top Strategic Technologies for 2012 (Gartner)

- ▶ Media tablets and beyond
- ▶ Mobile-centric applications and interfaces
- ▶ Contextual and social user experience
- ▶ Internet of things
- ▶ Cloud computing

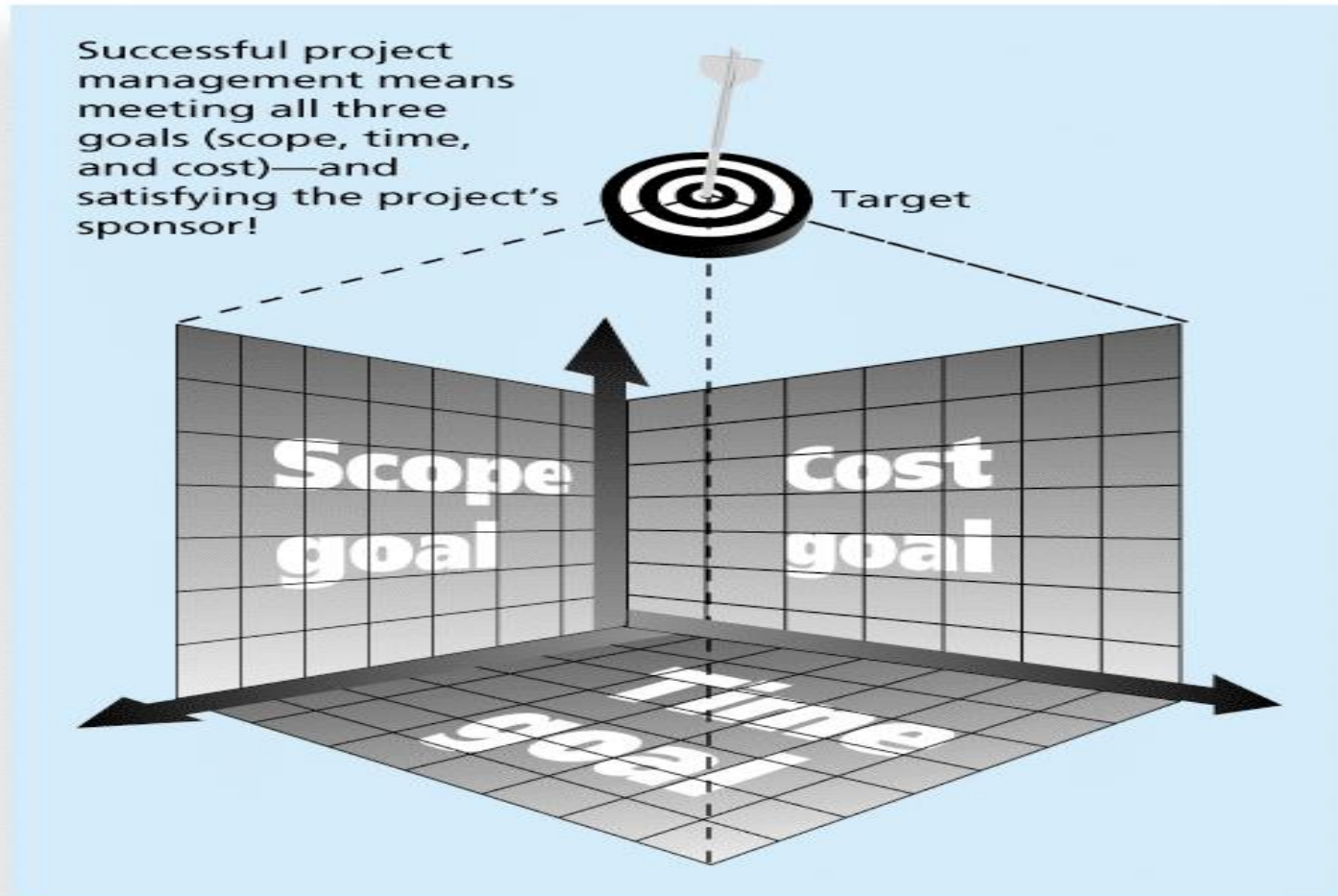
Project Attributes

- ▶ A project
 - has a unique purpose
 - is temporary
 - is developed using progressive elaboration
 - requires resources, often from various areas
 - should have a primary customer or sponsor
 - The **project sponsor** usually provides the direction and funding for the project
 - involves uncertainty

Project and Program Managers

- ▶ **Project managers** work with project sponsors, project team, and other people involved in a project to meet project goals
- ▶ **Program:** group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually (PMBOK® Guide, Fifth Edition, 2012)
- ▶ Program managers oversee programs; often act as bosses for project managers

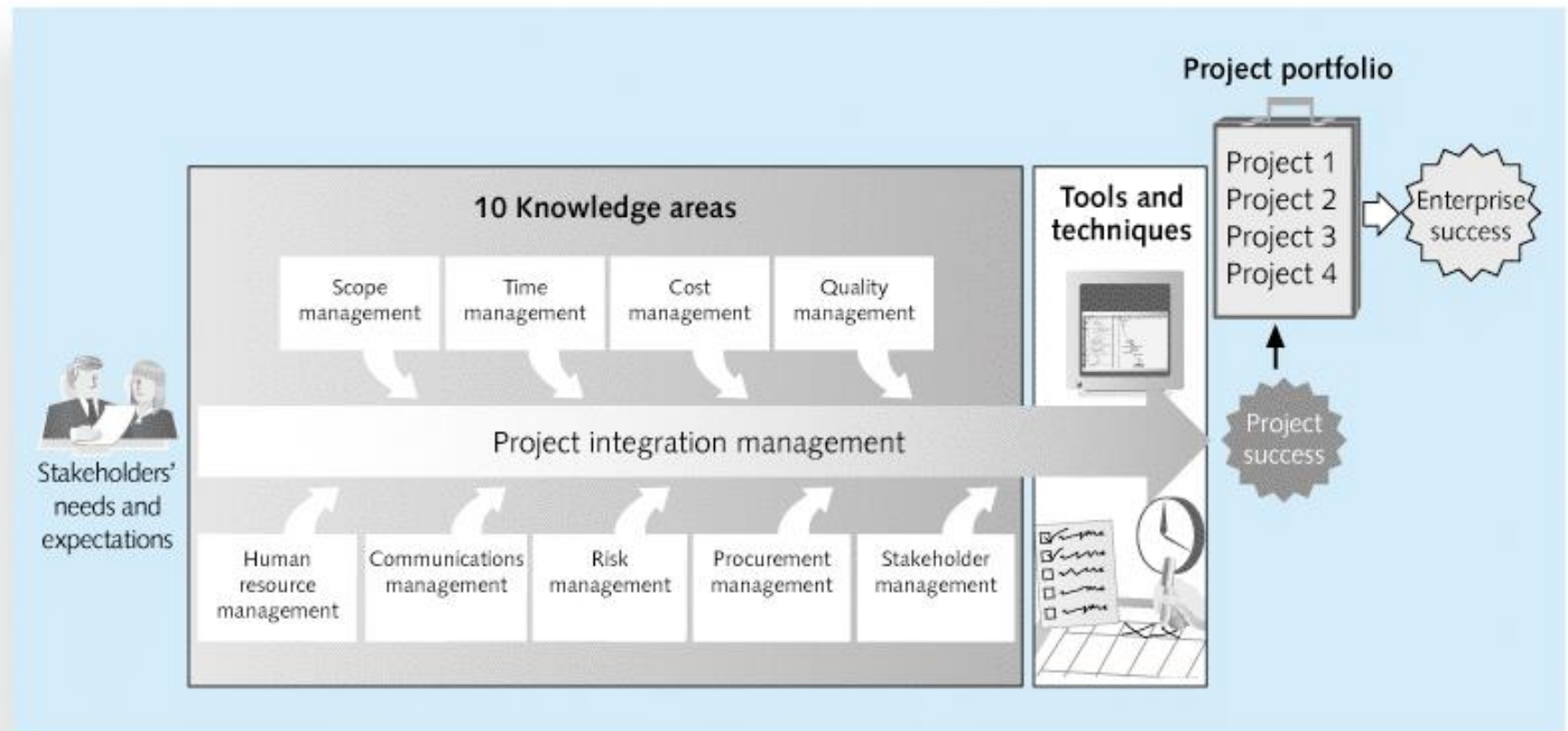
Figure 1-1 The Triple Constraint of Project Management



What is Project Management?

- ▶ **Project management** is “the application of knowledge, skills, tools and techniques to project activities to meet project requirements” (PMBOK® Guide, Fourth Edition, 2012)
- ▶ Project managers strive to meet the **triple constraint** (project scope, time, and cost goals) and also facilitate the entire process to meet the needs and expectations of project stakeholders

Figure 1-2 Project Management Framework



Project Stakeholders

- ▶ **Stakeholders** are the people involved in or affected by project activities
- ▶ Stakeholders include
 - the project sponsor
 - the project manager
 - the project team
 - support staff
 - customers
 - users
 - suppliers
 - opponents to the project

10 Project Management Knowledge Areas

- ▶ **Knowledge areas** describe the key competencies that project managers must develop
- ▶ Project managers must have knowledge and skills in all 10 knowledge areas
 - (project integration, scope, time, cost, quality, human resource, communications, risk, procurement, and stakeholder management)
- ▶ This text includes an entire chapter on each knowledge area

Project Management Tools and Techniques

▶ **Project management tools and techniques**

- assist project managers and their teams in various aspects of project management
- ▶ Some specific ones include
 - Project charter, scope statement, and WBS (scope)
 - Gantt charts, network diagrams, critical path analysis, critical chain scheduling (time)
 - Cost estimates and earned value management (cost)
 - See Table 1-1 for many more

Super Tools

- ▶ **“Super tools”** are those tools that have high use and high potential for improving project success, such as:
 - Software for task scheduling (such as project management software)
 - Scope statements
 - Requirements analyses
 - Lessons-learned reports
- ▶ Tools already extensively used that have been found to improve project importance include:
 - Progress reports
 - Kick-off meetings
 - Gantt charts
 - Change requests

Project Success

- ▶ There are several ways to define project success:
 - The project met scope, time, and cost goals
 - The project satisfied the customer/sponsor
 - The results of the project met its main objective, such as making or saving a certain amount of money, providing a good return on investment, or simply making the sponsors happy

Table 1-2: What Helps Projects Succeed?*

1. User involvement
2. Executive support
3. Clear business objectives
4. Emotional maturity
5. Optimizing scope
6. Agile process
7. Project management expertise
8. Skilled resources
9. Execution
10. Tools and infrastructure

*The Standish Group, “CHAOS Activity News” (August 2011).

Program and Project Portfolio Management

▶ A program

- is “a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually” (PMBOK® Guide, Fifth Edition, 2012)

▶ A program manager

- provides leadership and direction for the project managers heading the projects within the program

▶ Examples of common programs in the IT field include infrastructure, applications development, and user support

Project Portfolio Management

- ▶ As part of **project portfolio management**,
 - organizations group and manage projects and programs as a portfolio of investments that contribute to the entire enterprise's success
- ▶ Portfolio managers
 - help their organizations make wise investment decisions by helping to select and analyze projects from a strategic perspective

Figure 1-3. *Project Management Compared to Project Portfolio Management*



Project portfolio management

- Are we working on the right projects?
- Are we investing in the right areas?
- Do we have the right resources to be competitive?

Project management

- Are we carrying out projects well?
- Are projects on time and on budget?
- Do project stakeholders know what they should be doing?

Figure 1-4. Sample Project Portfolio Approach

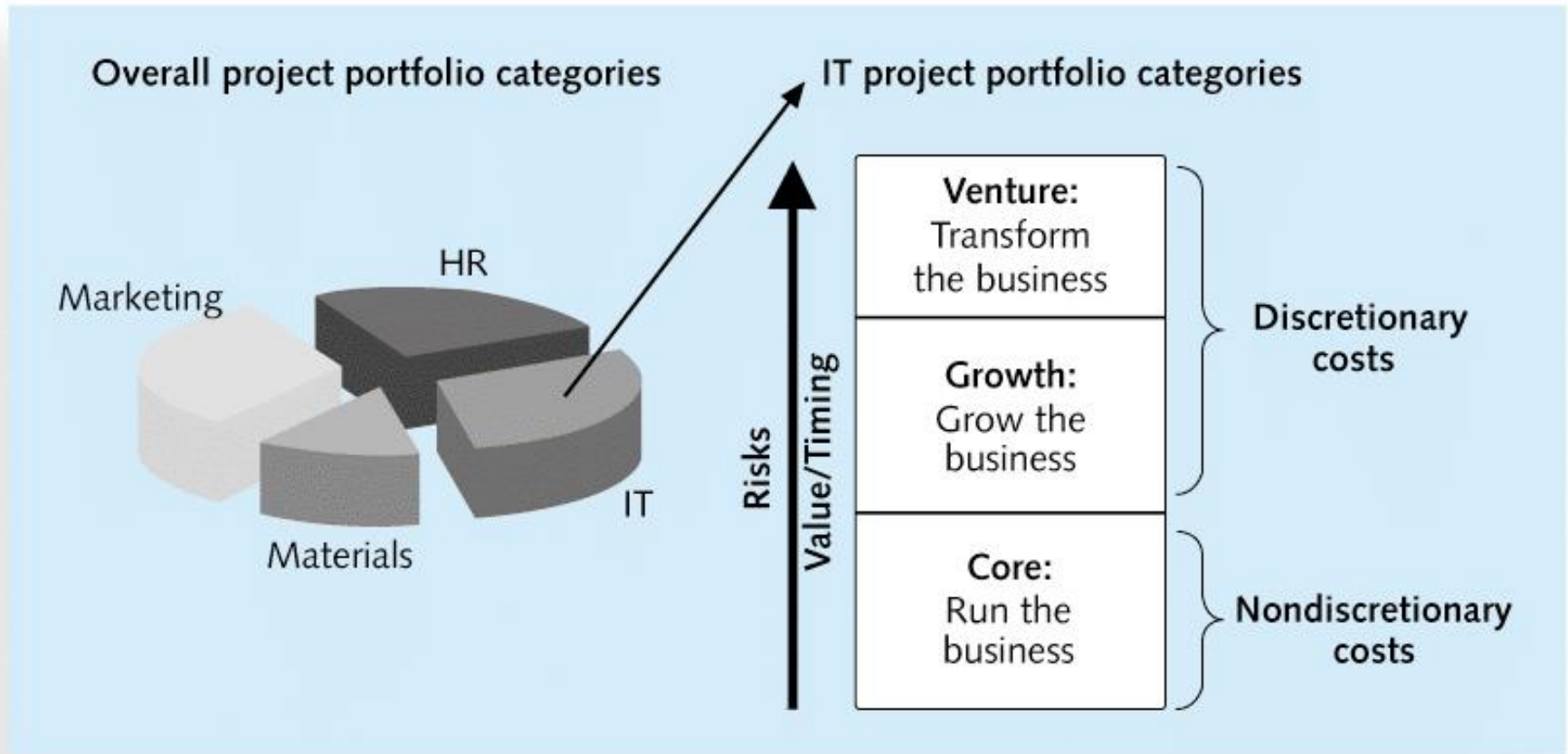
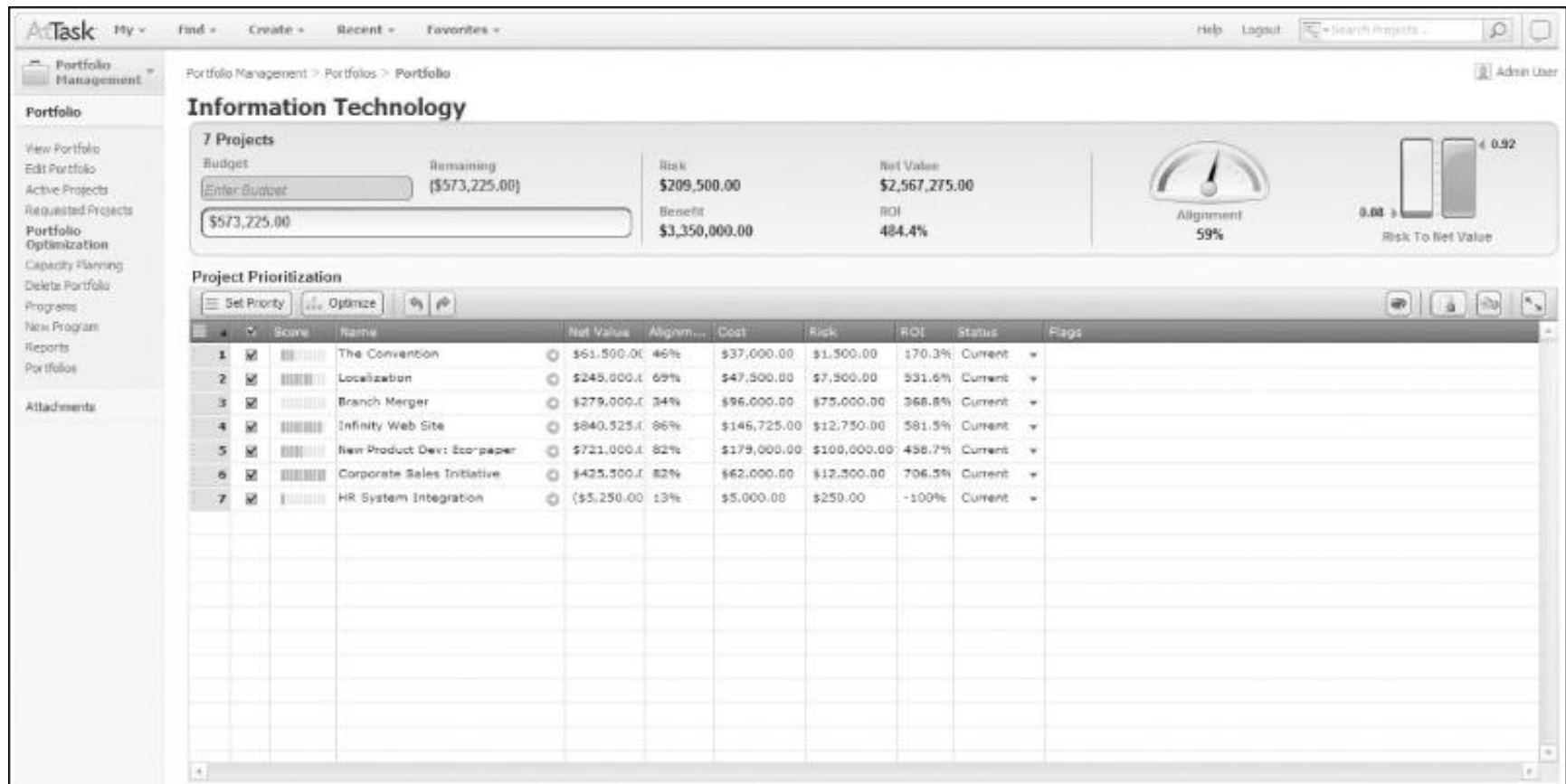


Figure 1-5. Sample Project Portfolio Management Screen Showing Portfolio Optimization



The Role of the Project Manager

- ▶ Job descriptions vary, but most include responsibilities like
 - planning, scheduling, coordinating, and working with people to achieve project goals
- ▶ Remember that 97% of successful projects were led by experienced project managers, who can often help influence success factors

Suggested Skills for Project Managers

- ▶ The Project Management Body of Knowledge
- ▶ Application area knowledge, standards, and regulations
- ▶ Project environment knowledge
- ▶ General management knowledge and skills
- ▶ Soft skills or human relations skills

Table 1-3 Ten Most Important Skills and Competencies for Project Managers

1. People skills
2. Leadership
3. Listening
4. Integrity, ethical behavior, consistent
5. Strong at building trust
6. Verbal communication
7. Strong at building teams
8. Conflict resolution, conflict management
9. Critical thinking, problem solving
10. Understands, balances priorities

Different Skills Needed in Different Situations

- ▶ Large projects:
 - Leadership, relevant prior experience, planning, people skills, verbal communication, and team-building skills were most important
- ▶ High uncertainty projects:
 - Risk management, expectation management, leadership, people skills, and planning skills were most important
- ▶ Very novel projects:
 - Leadership, people skills, having vision and goals, self confidence, expectations management, and listening skills were most important

Importance of Leadership Skills

- ▶ Effective project managers provide leadership by example
- ▶ **A leader**
 - focuses on long-term goals and big-picture objectives while inspiring people to reach those goals
- ▶ **A manager**
 - deals with the day-to-day details of meeting specific goals
- ▶ Project managers often take on the role of both leader and manager

Careers for IT Project Managers

- ▶ In a 2011 survey, IT executives listed the “nine hottest skills” they planned to hire for in 2012
- ▶ Project management was second only to programming and application development

Table 1-4. Nine Hottest Skills*

Skill	Percentage of Respondents
Programming and application development	60%
Project management	44%
Help desk/technical support	35%
Networking	35%
Business intelligence	23%
Data center	18%
Web 2.0	18%
Security	17%
Telecommunications	9%

*Source: Rick Saia, “9 Hot IT Skills for 2012,”
Computerworld, September 26, 2011.

The Project Management Profession

- ▶ The profession of project management is growing at a very rapid pace
- ▶ It is helpful to understand
 - the history of the field,
 - the role of professional societies like the Project Management Institute, and
 - the growth in project management software

Figure 1-6. Sample Gantt Chart Created with Project 2010

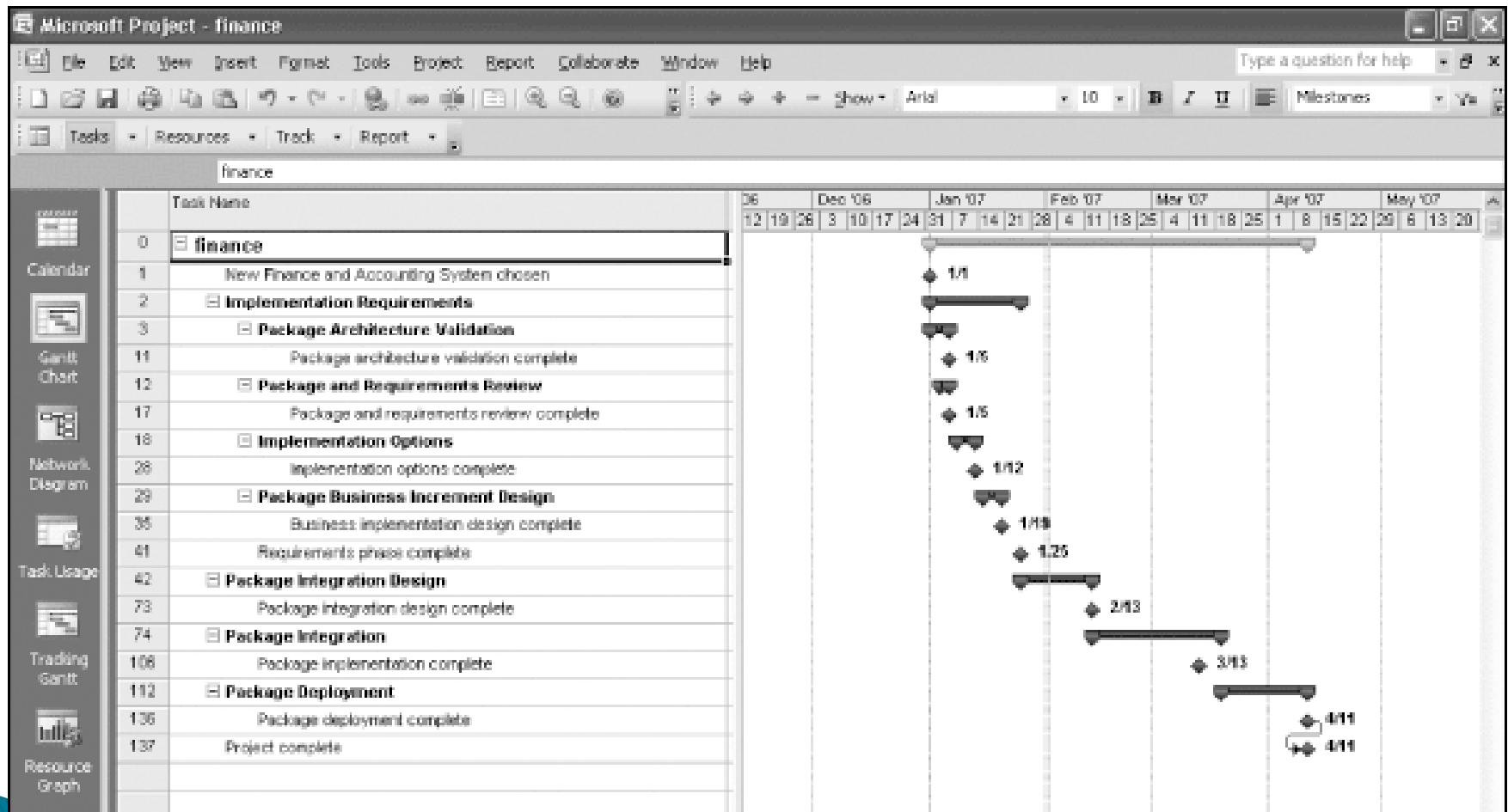
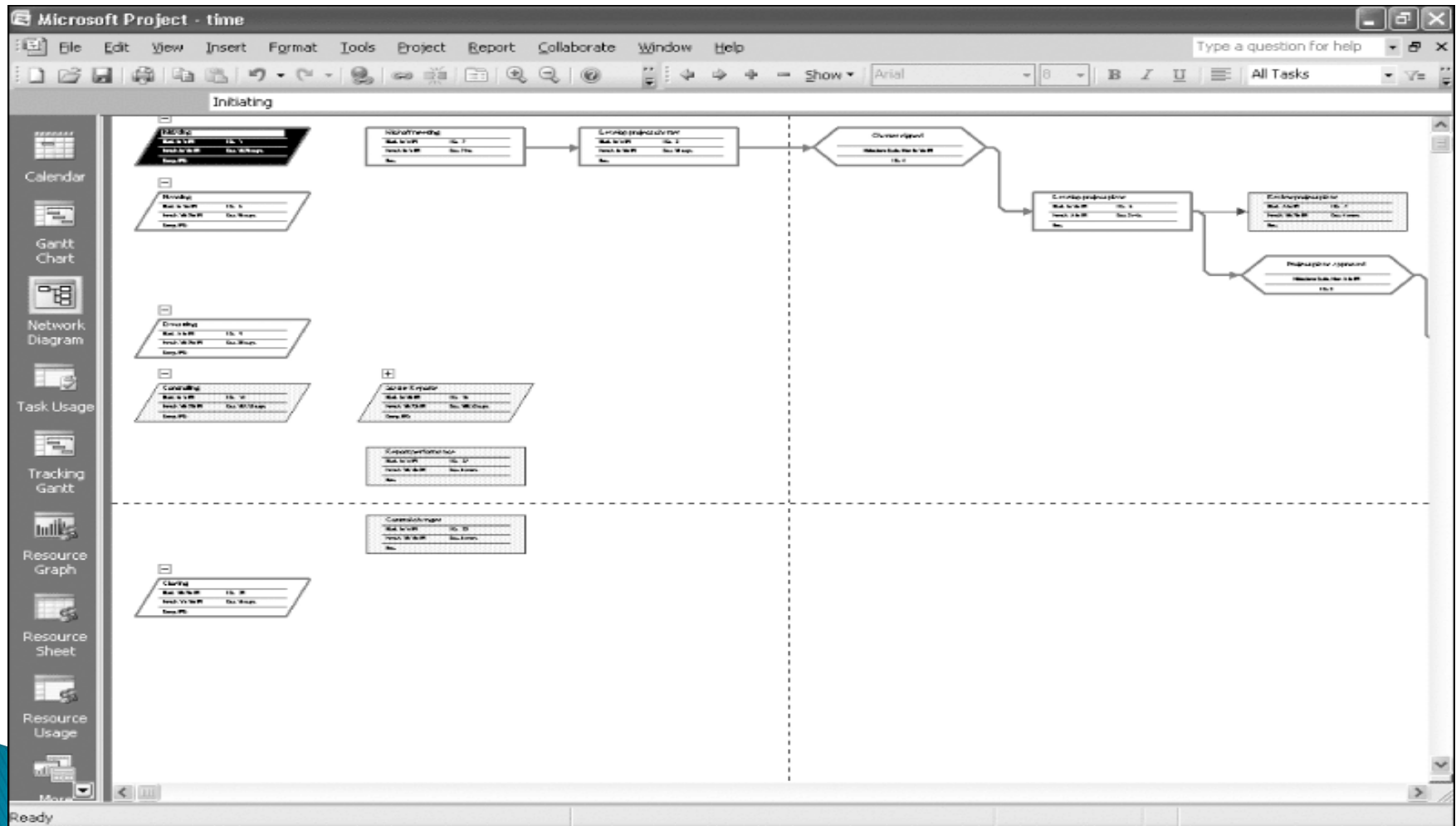


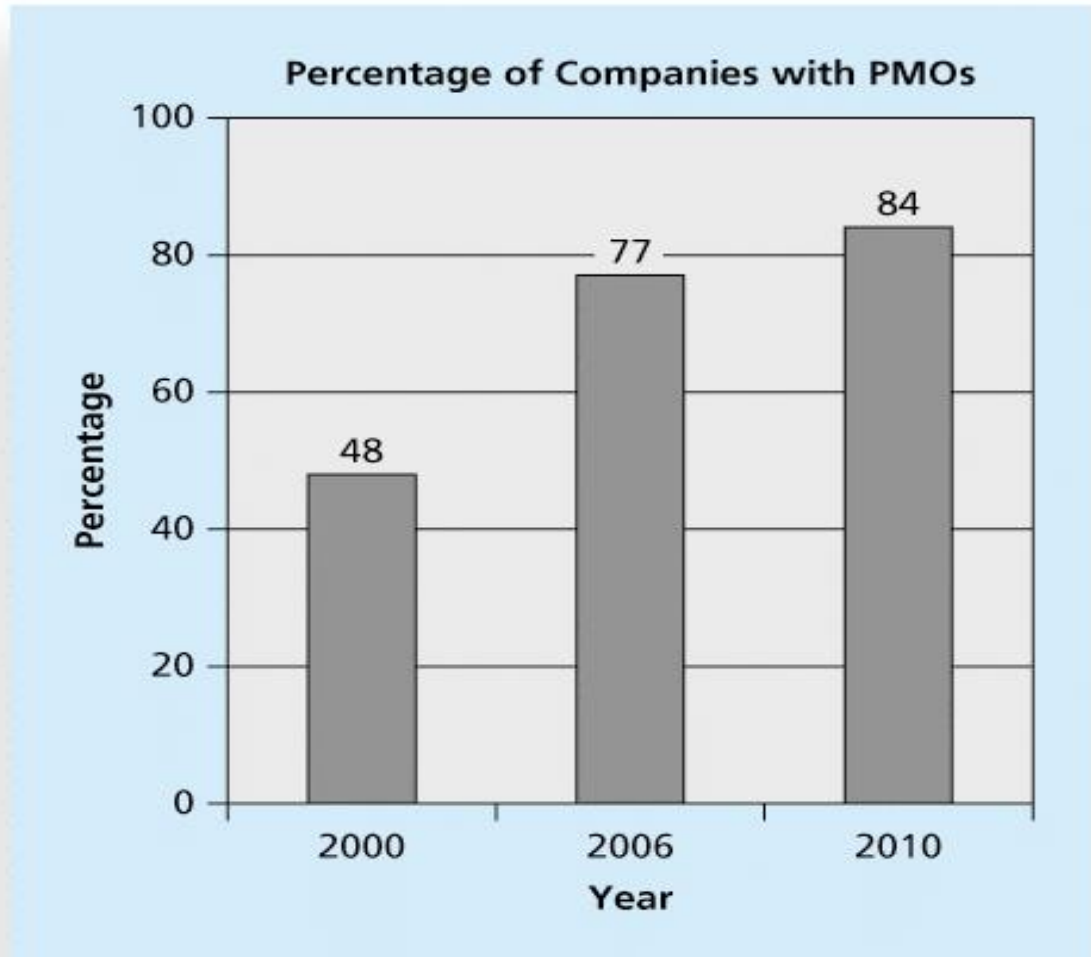
Figure 1-7. Sample Network Diagram Created with Project 2010



Project Management Offices

- ▶ In the 1990s, many companies began creating PMOs to help them handle the increasing number and complexity of projects
- ▶ **A Project Management Office (PMO)**
 - is an organizational group responsible for coordinating the project management function throughout an organization

Figure 1-8. Growth in the Number of Project Management Offices



Global Issues

- ▶ Several global dynamics are forcing organizations to rethink their practices:
 - Talent development for project and program managers is a top concern
 - Good project portfolio management is crucial in tight economic conditions
 - Basic project management techniques are core competencies
 - Organizations want to use more agile approaches to project management
 - Benefits realization of projects is a key metric

The Project Management Institute

- ▶ The Project Management Institute (PMI) is an international professional society for project managers founded in 1969
- ▶ PMI has continued to attract and retain members, reporting more than 380,000 members worldwide by 2012
- ▶ There are communities of practices in many areas, like information systems, financial services, and health care
- ▶ Project management research and certification programs continue to grow
- ▶ Students can join PMI at a reduced fee and earn the Certified Associate in Project Management (CAPM) certification(see www.pmi.org for details)

Ethics in Project Management

- ▶ **Ethics**, loosely defined, is a set of principles that guide our decision making based on personal values of what is “right” and “wrong”
- ▶ Project managers often face ethical dilemmas
- ▶ In order to earn PMP certification, applicants must agree to PMI’s Code of Ethics and Professional Conduct
- ▶ Several questions on the PMP exam are related to professional responsibility, including ethics

Project Management Software

- ▶ There are hundreds of different products to assist in performing project management
- ▶ Three main categories of tools:
 - Low-end tools:
 - Handle single or smaller projects well, cost under \$200 per user
 - Midrange tools:
 - Handle multiple projects and users, cost \$200-\$1,000 per user, Project 2010 most popular
 - High-end tools:
 - Also called enterprise project management software, often licensed on a per-user basis, like Microsoft Enterprise Project Management solution

Chapter Summary

- ▶ A project is a temporary endeavor undertaken to create a unique product, service, or result
- ▶ Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements
- ▶ A program is a group of related projects managed in a coordinated way
- ▶ Project portfolio management involves organizing and managing projects and programs as a portfolio of investments
- ▶ Project managers play a key role in helping projects and organizations succeed
- ▶ The project management profession continues to grow and mature