

Chapter 1: Introduction to Project Management

Information Technology Project
Management, Seventh Edition



Information Technology
PROJECT MANAGEMENT | 7e

Kathy Schwalbe

ĐẶNG THỊ THU HÀ – SE
dtthuha79@gmail.com
<https://lms.iuh.edu.vn>

Learning Objectives

- ▶ Understand the growing need for better project management, especially for information technology (IT) projects
- ▶ Explain what a project is, provide examples of IT projects, list various attributes of projects, and describe the triple constraint of project management
- ▶ Describe project management and discuss key elements of the project management framework, including project stakeholders, the project management knowledge areas, common tools and techniques, and project success

Learning Objectives

- ▶ Discuss the relationship between project, program, and portfolio management and the contributions each makes to enterprise success
- ▶ Understand the role of project managers by describing what they do, what skills they need, and career opportunities for IT project managers
- ▶ Describe the project management profession, including its history, the role of professional organizations like the Project Management Institute (PMI), the importance of certification and ethics, and the advancement of project management software

Introduction

- ▶ Many organizations today have a new or renewed interest in project management
- ▶ Computer hardware, software, networks, and the use of interdisciplinary and global work teams have radically changed the work environment
- ▶ The world as a whole spends nearly \$10 trillion of its \$40.7 trillion gross product on projects of all kinds
- ▶ More than 16 million people regard project management as their profession

Advantages of Using Formal Project Management

- ▶ Better control of financial, physical, and human resources
- ▶ Improved customer relations
- ▶ Shorter development times
- ▶ Lower costs
- ▶ Higher quality and increased reliability
- ▶ Higher profit margins
- ▶ Improved productivity
- ▶ Better internal coordination
- ▶ Higher worker morale

What Is a Project?

- ▶ A **project** is “a temporary endeavor undertaken to create a unique product, service, or result” (PMBOK® Guide, Fifth Edition, 2012)
- ▶ 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

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

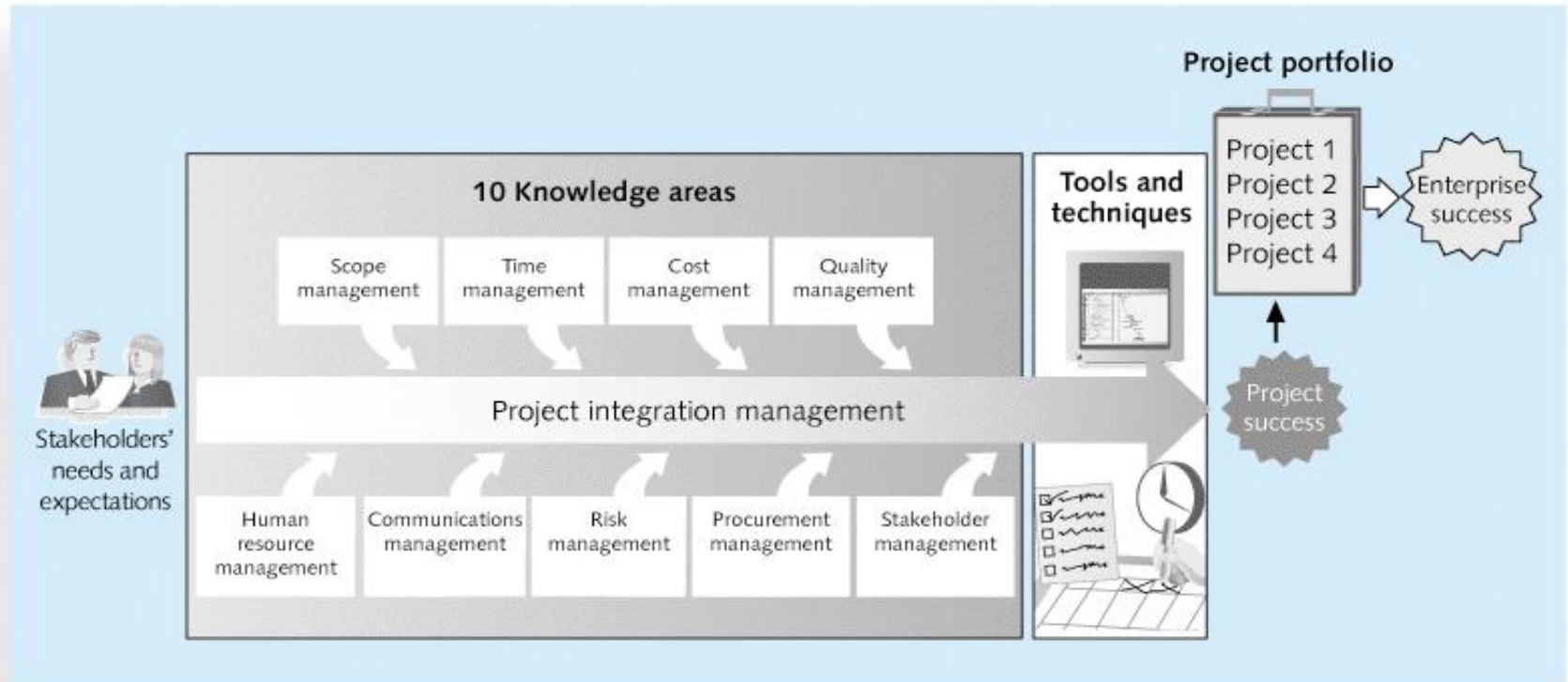
Figure 1-1 The Triple Constraint of Project Management



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

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

What Went Right? Improved Project Performance

The Standish Group's CHAOS studies show improvements in IT projects in the past decade:

- ▶ The number of successful IT projects has more than doubled, from 16 percent in 1994 to 37 percent in 2010
- ▶ The number of failed projects decreased from 31 percent in 1994 to 21 percent in 2010
- ▶ Success rates were the highest ever in the most recent CHAOS study

Why the Improvements?

"The reasons for the increase in successful projects vary. First, the average cost of a project has been more than cut in half. Better tools have been created to monitor and control progress and **better skilled project managers with better management processes** are being used. The fact that there are processes is significant in itself."*

*Standish Group, "CHAOS 2001: A Recipe for Success" (2001).

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).

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

History of Project Management

- ▶ Some people argue that building the Egyptian pyramids was a project, as was building the Great Wall of China
- ▶ Most people consider the ***Manhattan Project*** to be the first project to use “modern” project management
- ▶ This three-year, \$2 billion (in 1946 dollars) project had a separate project manager and a technical manager

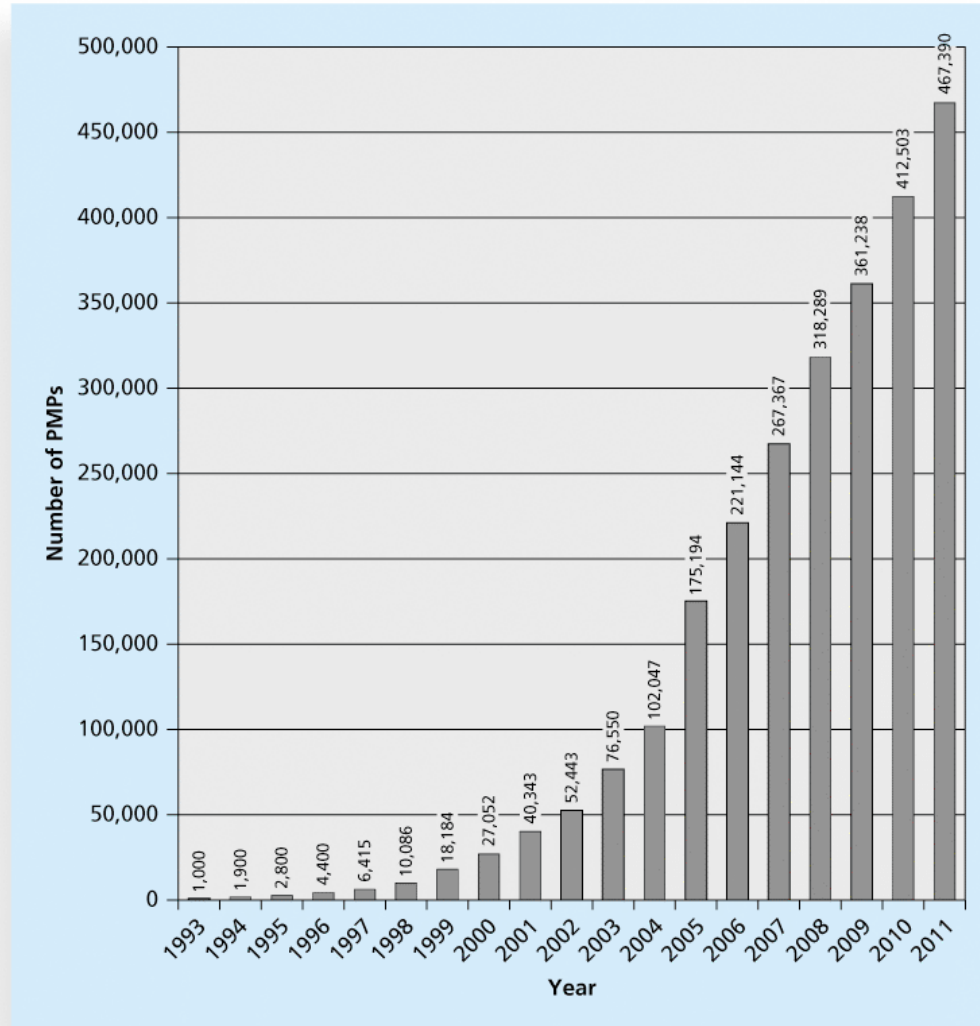
The Project Management Institute

- ▶ 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)

Project Management Certification

- ▶ PMI provides certification as a **Project Management Professional (PMP)**
- ▶ A PMP has documented sufficient project experience, agreed to follow a code of ethics, and passed the PMP exam
- ▶ The number of people earning PMP certification is increasing quickly
- ▶ PMI and other organizations offer additional certification programs (see Appendix B)

Figure 1-9 Growth in PMP Certification, 1993-2011



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

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 managers play a key role in helping projects and organizations succeed
- ▶ The project management profession continues to grow and mature