

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.

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




Motivation for Studying Information Technology (IT) Project Management

- ▶ IT Projects have a terrible track record, as described in the What Went Wrong?
- ▶ A 1995 Standish Group study (CHAOS) found that only 16.2% of IT projects were successful in meeting scope, time, and cost goals; over 31% of IT projects were canceled before completion
- ▶ A PricewaterhouseCoopers study found that overall half of all projects fail and only 2.5% of corporations consistently meet their targets for scope, time, and cost goals for all types of project.

لكي نفهم الحاجة المتزايدة لتحسين إدارة المشاريع وبصورة خاصة إدارة مشاريع تقنية المعلومات نورد بعض الإحصائيات للسنوات الأخيرة الماضية:

- ❑ بحسب مجلة (Harvard Business Review) واحد من كل ستة مشاريع تقنية معلومات لدية معدل تجاوز تكلفة 200%، ومعدل تجاوز للجدول الزمني بنسبة 70%.
- ❑ حوالي 45% من الشركات يعترفون أن الأهداف التجارية لمشاريع تقنية المعلومات غير واضحة بالنسبة لهم.
- ❑ وفقاً لدراسة IBM، حوالي 40% من المشاريع فقط تنفذ في إطار القيود المفروضة وهي الميزانية والجدول الزمني والنطاق.
- ❑ حوالي 75% من المدراء التنفيذيين لتكنولوجيا المعلومات يتوقعون فشل المشاريع البرمجية الخاصة بهم. (Geneca)

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)
- ▶ 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

لماذا تبدأ المشاريع؟

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تبدأ المشاريع للأسباب التالية:

- طلب السوق
- الحاجة التجارية أو الاستراتيجية
- طلب العميل
- التقدم التكنولوجي
- متطلبات قانونية

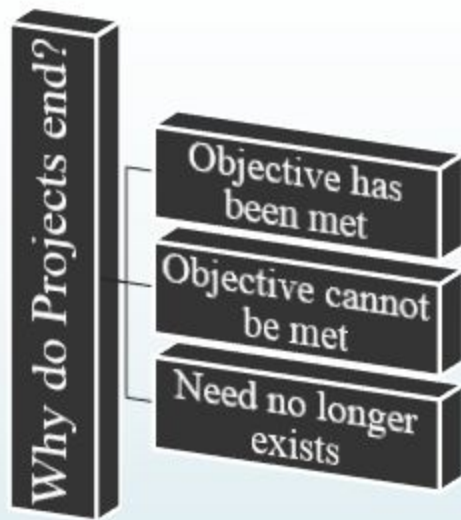


لماذا تنتهي المشاريع؟

9

ينتهي المشروع في الحالات التالية:

- عند تحقيق أهداف المشروع
- صعوبة تحقيق أهداف المشروع
- زوال الحاجة إلى المشروع



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 

Figure 1-1 The Triple Constraint of Project Management



What is Project Management?


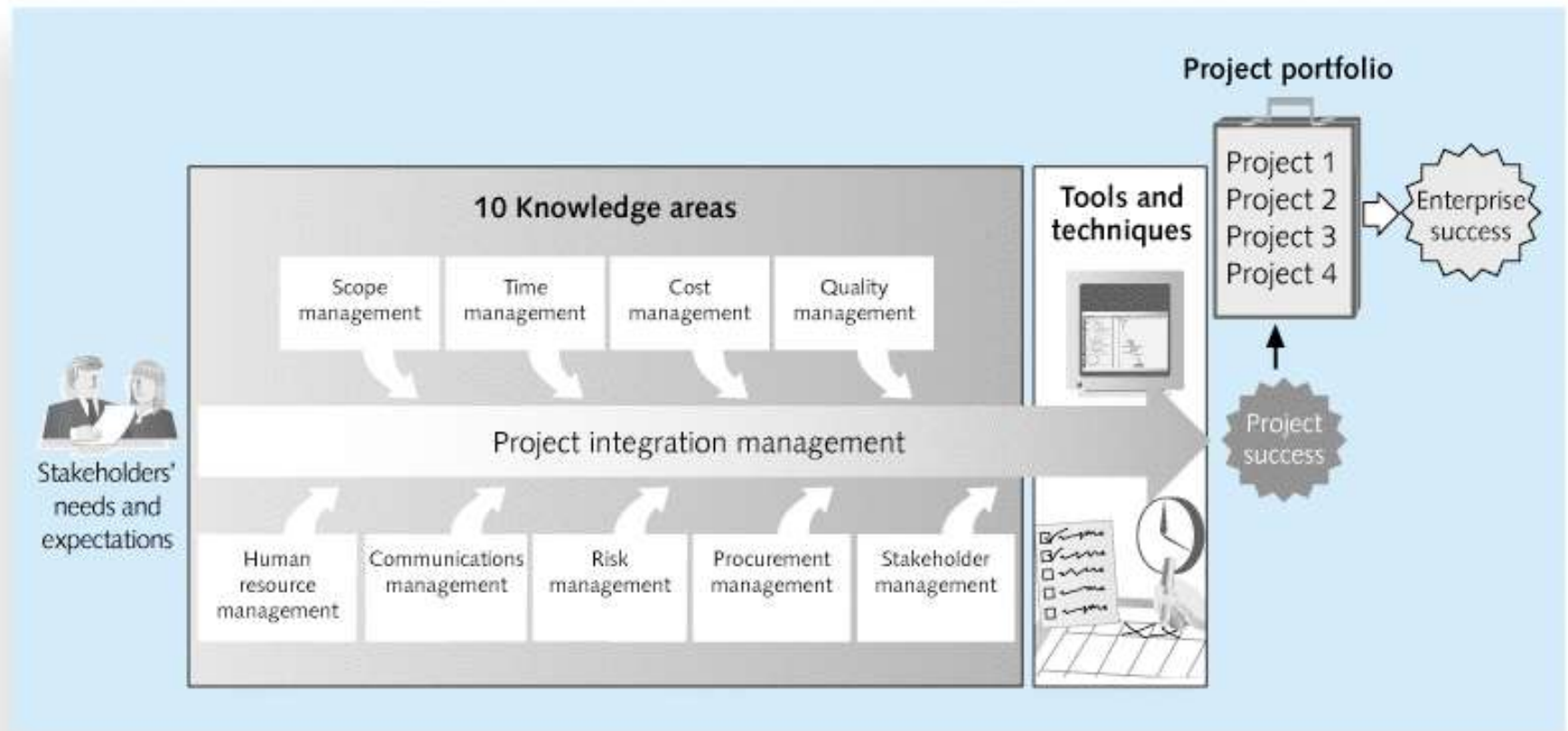

- ▶ **Project management** is “the application of knowledge, skills, tools and techniques to project activities to meet project requirements” (PMBOK® Guide, Fourth Edition, 2012)
- ▶ Project managers strive to meet the **triple constraint** (project scope, time, and cost goals) and also facilitate the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

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

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