



**Healthcare Project
Management**

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Chapter 1:

An Introduction to

Project, Program, and

Portfolio Management in

Healthcare

Note: See the text itself for full citations.

Text Web site is www.healthcarepm.com.

Learning Objectives

- ▶ Understand the growing need for better project, program, and portfolio management in the healthcare industry
- ▶ Investigate the context of healthcare projects, including a brief history of the U.S. healthcare industry, the nature of healthcare projects, characteristics of project team members, and recent trends in healthcare that can affect project management
- ▶ Explain what a project is, provide examples of healthcare projects, list various attributes of projects, and describe project constraints

Learning Objectives (continued)

- ▶ 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 factors
- ▶ Discuss the relationship between project, program, and portfolio management and their contribution to enterprise success
- ▶ Describe the project management profession, including suggested skills for project, program, and portfolio managers, the role of professional organizations like the Project Management Institute, the importance of certification and ethics, and the growth of project and portfolio management software

Introduction

- Many organizations today have a new or renewed interest in project management (PM)
 - In 2011, the average annual salary for someone in the PM profession was **\$160,409** in Switzerland (the highest-paid country), \$139,497 in Australia, \$105,000 in the United States, and \$23,207 in China (the lowest-paid country)
 - CareerBuilder.com found that 44% of U.S. employers listed PM as a skill they looked for in new college graduates, behind only communication and technical skills
 - Project management certification continues to be one of the most popular certifications throughout the world, and pay is often higher for project managers who hold PMI's Project Management Professional (PMP) certification

More Motivation to Study PM

- ▶ The U.S. spends \$2.3 trillion on projects every year, and the world as a whole spends nearly \$10 trillion on projects of all kinds. Projects, therefore, account for about **one fourth** of the U.S. and the world's gross domestic product (GDP)
- ▶ Projects in the healthcare industry continue to grow, and the global healthcare market for just information technology (IT) projects is expected to reach \$162.2 billion by 2015, growing at a compound annual rate of over ten percent from 2010 to 2015
- ▶ Project management is also a vital skill for personal success

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 Went Wrong?

- ▶ A 2010 the American Health Information Management Association (AHIMA) worked with the American Medical Informatics Association to publish “H.I.T or Miss: Lessons Learned from Health Information Technology Implementations,” stressing the need to use sound PM principles
- ▶ A 1995 Standish Group study (The CHAOS Report) found that only **16.2** percent of information technology (IT) application development projects were successful in meeting scope, time, and cost goals. **Over 31 percent of the projects were canceled** before completion, costing over \$81 billion in the U.S. alone
- ▶ A 2004 PriceWATERhouse Coopers study of 200 companies from 30 different countries found that **over half of all projects fail**

Video Highlights

- ▶ Barbara Spurrier, Administrative Director at the Mayo Clinic's Center of Innovation, describes how much project management has taken off at Mayo. They prepare project charters, status reports, and other documents to help manage projects and improve communications. Dan O'Neil, a project manager, explains that project managers are part of a triad with designers and physicians to develop realistic plans that guide the execution of projects.
- ▶ See www.healthcarepm.com for links to this and other videos. Additionally, the history of project management is available a series of videos on youtube.com by Mark Kozak-Holland, author of a book on the subject.

The Healthcare Project Management Context

- ▶ Projects are not run in isolation. It is important to understand basic information about:
 - the history of the U.S. healthcare industry
 - healthcare costs
 - the nature of healthcare projects
 - recent trends in healthcare that can impact project management

Brief History of U.S. Healthcare Industry

- ▶ The mother-as-caregiver health model gradually dissipated with the rise of the American physician, which was based on the English model
- ▶ The model for the current, expansive healthcare industry was partially the result of one hospital's reaction to declining revenue during the Great Depression in 1929
- ▶ Baylor's plan grew into Blue Cross, which merged with Blue Shield in 1983
- ▶ Medicare and Medicaid signed into law in 1965

Affordable Care Act (ACA)

- ▶ President Obama signed ACA in 2010
- ▶ Has resulted in incentives and enablers for the implementation of EHRs, associated meaningful use, resultant procedural changes, and Health Information Exchanges
- ▶ ACA plus movements to patient-centered care, evidence-based medicine, centers of excellence, and other forces bearing down on the healthcare industry have spawned a current climate of what may be an **unsurpassed number** of healthcare projects going on within the US and globally

Healthcare Costs

- ▶ Today, due primarily to Medicare and Medicaid, government spending in U.S. healthcare accounts for almost 45% of total expenses
- ▶ Compared to other Organisation for Economic Co-operation and Development (OECD) countries, the U.S. spends 48% more on healthcare compared to the next highest country, Switzerland
- ▶ Hospital care (\$814 billion) and physician/clinical services (\$515.5 billion) are the top two categories of healthcare expenditures in the U.S.

The Nature of Healthcare Projects

- ▶ Care quality, cost containment, and external review are key characteristics
- ▶ Quality of care for the patient is crucial
- ▶ Government and regulatory agencies often plays a big role
- ▶ Finances are complex
- ▶ Healthcare is very personal
- ▶ Healthcare mistakes historically have increased revenue
- ▶ Deliverables and metrics are different
- ▶ Projects are becoming ever more complex
- ▶ Collaboration across entities is required

Media Snapshot

- ▶ Barbara Streisand appeared on Katie Couric's new talk show, Katie, on September 25, 2012. Viewers may have been expecting to hear a lot of singing, but Barbara and Katie spent most of the time talking about the new Barbara Streisand Women's Heart Center at the Cedars-Sinai Heart Institute in Los Angeles, California. Barbara is passionate about her latest project – leading the revolution in women's heart health.
- ▶ She was shocked when she discovered that *heart disease kills more women than all cancers combined*. Heart disease kills 30% of the population in the United States, and starting in 1984, more women than men died of heart disease.
- ▶ Barbara and her colleagues at the Women's Heart Center are on a mission to reverse the gender discrimination in research about women's heart disease. Additional information about this project is available at www.streisandwomensheartcenter.org.

Recent Trends in Healthcare

- ▶ The new generation wants choices and lower costs, and safety and quality will be a commodity like it is for the airline industry.
- ▶ Important strategies for success include an optimal care environment, brand loyalty, collaborative care models, and partnerships,
- ▶ Healthcare must be more preventive and proactive and embrace new technologies for a different type of customer.

Healthcare Perspective

- ▶ Berwick, Nolan, and Whittington asserted in a HealthAffairs article that improving the U.S. health care system requires simultaneous pursuit of **three aims:**
 1. improving the experience of care
 2. improving the health of populations
 3. reducing per capita costs of health care

What Is a Project?

- ▶ A **project** is “a temporary endeavor undertaken to create a unique product, service, or result”*
- ▶ Operations is work done to sustain the business
- ▶ Projects end when their objectives have been reached, or the project has been terminated

*Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide, Fifth Edition)* (2013).

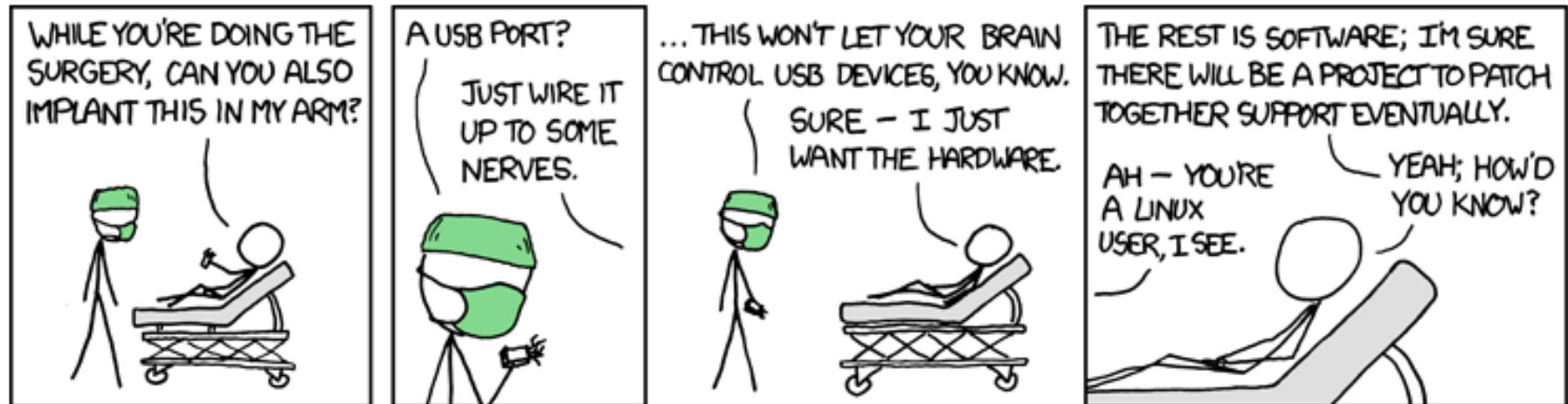
Examples of Projects

- ▶ A physician's office implements an electronic health record (EHR) system
- ▶ A university hospital designs and constructs a new neurology clinic or develops a program to reduce readmission rates by identifying and monitoring high-risk patient discharges
- ▶ A collection of healthcare providers form an accountable care organization
- ▶ A team of medical researchers conducts a clinical trial of a new medical device
- ▶ A developing country's health department launches a maternal and child wellness program

Project Attributes

- ▶ A project:
 - Has a unique purpose
 - Is temporary
 - Is developed using progressive elaboration or in an iterative fashion
 - 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 managers** work with the project sponsors, the project team, and the other people involved in a project to define, communicate, and meet project goals.

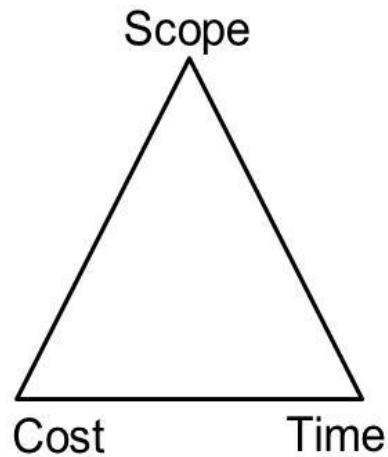
Figure 1-1. Surgery Won't Help (xkcd.com)



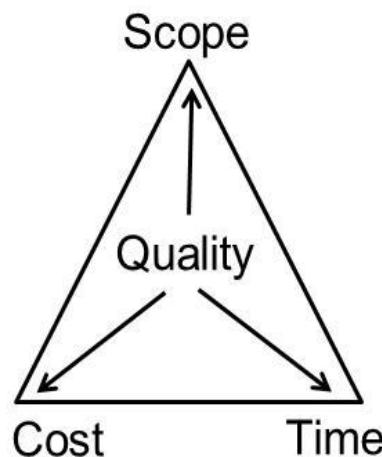
Project Constraints

- ▶ Every project is constrained in different ways. Some project managers focus on the **triple constraint** (meeting scope, time, and cost goals)
 - *Scope*: What work will be done as part of the project? What unique product, service, or result does the customer or sponsor expect from the project?
 - *Time*: How long should it take to complete the project? What is the project's schedule?
 - *Cost*: What should it cost to complete the project? What is the project's budget? What resources are needed?
- ▶ Other constraints include quality, risk, and resources

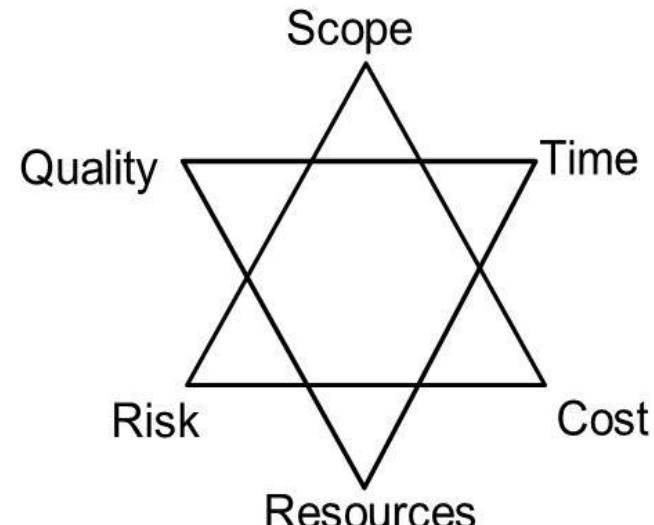
Figure 1-2. Growing Number of Project Constraints



**Triple
Constraint**



**Quadruple
Constraint**



**Six Pointed
Star**

What is Project Management?

- ▶ **Project management** is “the application of knowledge, skills, tools and techniques to project activities to meet project requirements.”*

*Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide, Fifth Edition)* (2013).

Figure 1-3. 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
 - Suppliers
 - Opponents to the project

What Went Right?

- ▶ The Center for Disease Control's (CDC's) Biosense project was jokingly referred to as Biononsense in some public health circles. Introduced in 2003, the CDC did not hold the first project stakeholder meeting until 2005.
- ▶ The Center revisited the struggling effort in 2010 and incorporated concepts from project management to promote open collaboration between stakeholders with the ultimate goal of delivering a more useful product.
- ▶ Stakeholder engagement involving input from federal, state, and local public health officials at the outset clarified what pertinent changes were required to add value for all stakeholders.

Characteristic of Healthcare Project Team Members

- ▶ A designer/idea generator provides ideas to improve current processes, address a requirement, or seize an opportunity. In some cases, the designer/ idea generator (particularly if in a management position) may evolve to become the project sponsor.
- ▶ A project manager works with all of the various stakeholders to develop a realistic scope, schedule, and budget for the project and facilitates its completion. May share the leadership role with a medical expert.
- ▶ A physician, nurse, therapist, technician, or other medical expert is required on many healthcare projects to make sure the project follows sound medical practices and will not cause harm to patients. It is up to the project sponsor and project manager to make a clear connection and case for patient and/or physician benefit and the importance of physician involvement in the project process.

Best Practice

- ▶ The Center for Innovation (CFI), established in 2008, serves a liaison between medical practice and human-centered design thinking. CFI uses a design thinking model inspired by the IDEO design consultancy firm philosophies.
- ▶ A major challenge for healthcare projects is ensuring the team operates as a cohesive unit to achieve its stated goal. The Center's interdisciplinary teams exemplify a design thinking (or creative problem solving) task force where team members come together to connect, prototype, adapt, explore, and solve in a Design Research Studio.

Project Management Knowledge Areas

- ▶ Project integration management is an overarching function that coordinates the work of all other knowledge areas. It affects and is affected by all of the other knowledge areas.
- ▶ Project scope management involves working with all appropriate stakeholders to define, gain written agreement for, and manage all the work required to complete the project successfully.
- ▶ Project time management includes estimating how long it will take to complete the work, developing an acceptable project schedule given cost-effective use of available resources, and ensuring timely completion of the project.
- ▶ Project cost management consists of preparing and managing the project budget.
- ▶ Project quality management ensures that the project will satisfy the stated or implied needs for which it was undertaken.

Project Management Knowledge Areas (continued)

- ▶ Project human resource management is concerned with making effective use of the people involved with the project.
- ▶ Project communications management involves generating, collecting, disseminating, and storing project information.
- ▶ Project risk management includes identifying, analyzing, and responding to risks related to the project.
- ▶ Project procurement management involves acquiring or procuring goods and services for a project from outside the performing organization.
- ▶ Project stakeholder management focuses on identifying project stakeholders, understanding their needs and expectations, and engaging them appropriately throughout the project. Note that PMI added stakeholder management as a tenth knowledge area to the *PMBOK® Guide, Fifth Edition* in 2013.

Project Management Tools and Techniques

- ▶ Project management tools and techniques assist project managers and their teams in various aspects of project management.
- ▶ Note that a tool or technique is more than just a software package.
- ▶ Specific tools and techniques include:
 - Project charters, scope statements, and WBS (scope)
 - Gantt charts, network diagrams, critical path analyses (time)
 - Net present value, cost estimates, and earned value management (cost)

Figure 1-4. Common Project Management Tools and Techniques by Knowledge Areas

Knowledge Area/Category	Tools and Techniques
Integration management	Project selection methods, project management methodologies, project charters, project management plans, project management software , change requests , change control boards, project review meetings, lessons-learned reports
Scope management	Scope statements , work breakdown structures , mind maps, statements of work, requirements analyses , scope management plans, scope verification techniques, and scope change controls
Time management	Gantt charts , project network diagrams, critical-path analyses, crashing, fast tracking, schedule performance measurements
Cost management	Net present value, return on investment, payback analyses, earned value management, project portfolio management, cost estimates, cost management plans, cost baselines
Quality management	Quality metrics, checklists, quality control charts, Pareto diagrams, fishbone diagrams, maturity models, statistical methods
Human resource management	Motivation techniques, empathic listening, responsibility assignment matrices, project organizational charts, resource histograms, team building exercises
Communications management	Communications management plans, kickoff meetings , conflict management, communications media selection, status and progress reports , virtual communications, templates, project Web sites
Risk management	Risk management plans, risk registers, probability/impact matrices, risk rankings
Procurement management	Make-or-buy analyses, contracts, requests for proposals or quotes, source selections, supplier evaluation matrices
Stakeholder management	Stakeholder registers, stakeholder analyses, issue logs, interpersonal skills, reporting systems

Super Tools

- ▶ “**Super tools**” are those tools that have high use and high potential for improving project success
- ▶ They include:
 - project management software
 - scope statements
 - work breakdown structures
 - requirement analyses
 - lessons-learned reports
 - status and progress reports
 - well-planned kick-off meetings
 - Gantt charts
 - change requests

Project Success

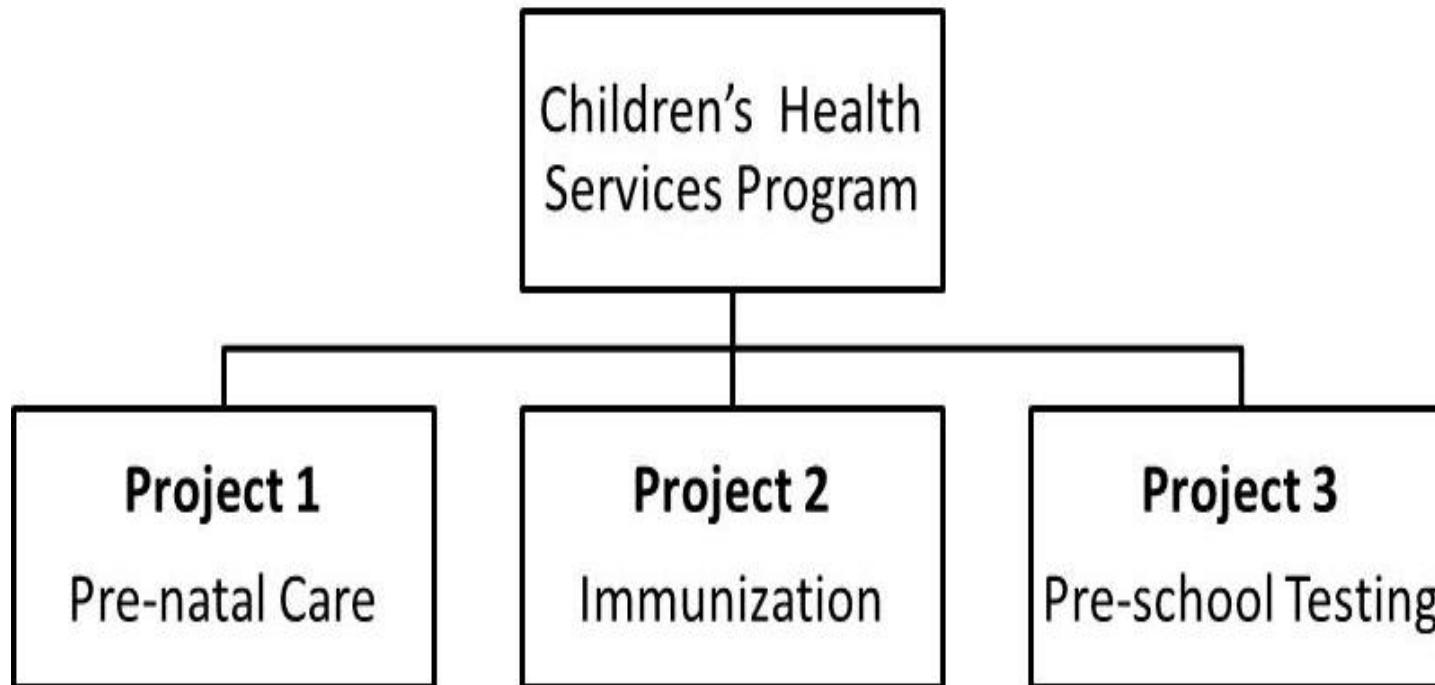
- ▶ There are different ways to define project success:
 - The project met scope, time, and cost goals.
 - The project satisfied the customer/sponsor.
 - The results of the project met its main business or clinical objective.

What is a Program?

- A **program** is:
 - “a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually”*
 - A **program manager** provides leadership and direction for the project managers heading the projects within the program

*Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide, Fifth Edition)* (2013)

Figure 1-5. Example Programs



Project Portfolio Management

- ▶ **Project portfolio management** is an emerging business strategy in which organizations group and manage projects and programs as a portfolio of investments that contribute to the entire enterprise's success.
- ▶ Pacific Edge Software's product manager, Eric Burke, defines project portfolio management as “the continuous process of selecting and managing the optimum set of project initiatives that deliver maximum business value.”

Project and Program Management Compared to Project Portfolio Management

- ▶ Project and program management address questions like:
 - Are we carrying out projects well?
 - Are projects on time and budget?
 - Do project stakeholders know what they should be doing?
- ▶ Portfolio management addresses questions like:
 - Are we working on the right projects?
 - Are we investing in the right areas?
 - Do we have the right resources to be competitive?

The Project Management Profession

- ▶ Project, program, and portfolio managers need to develop specific skills
- ▶ Certification is available for project managers
- ▶ There are many software tools to assist in project, program, and portfolio management

Suggested Skills for Project Managers

Knowledge of the following:

- ▶ All ten project management knowledge areas
- ▶ The application area (domain, industry, market, etc.)
- ▶ The project environment (politics, culture, change management, etc.)
- ▶ General management (financial management, strategic planning, etc.)
- ▶ Human relations (leadership, motivation, negotiations, etc.)

Figure 1-6. Most Significant Characteristics of Effective and Ineffective Project Managers*

EFFECTIVE PROJECT MANAGERS	INEFFECTIVE PROJECT MANAGERS
Lead by example	Set bad examples
Are visionaries	Are not self-assured
Are technically competent	Lack technical expertise
Are decisive	Avoid or delay making decisions
Are good communicators	Are poor communicators
Are good motivators	Are poor motivators

*Zimmerer, Thomas W. and Mahmoud M. Yasin, "A Leadership Profile of American Project Managers," Project Management Journal (March 1998), 31-38.

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

Additional Skills for Program and Portfolio Managers

- ▶ Program managers normally have experience as project managers. They often rely on their past experience, strong business knowledge, leadership capability, and communication skills to manage programs
- ▶ Portfolio managers must have strong financial and analytical skills and understand how projects and programs can contribute to meeting strategic goals

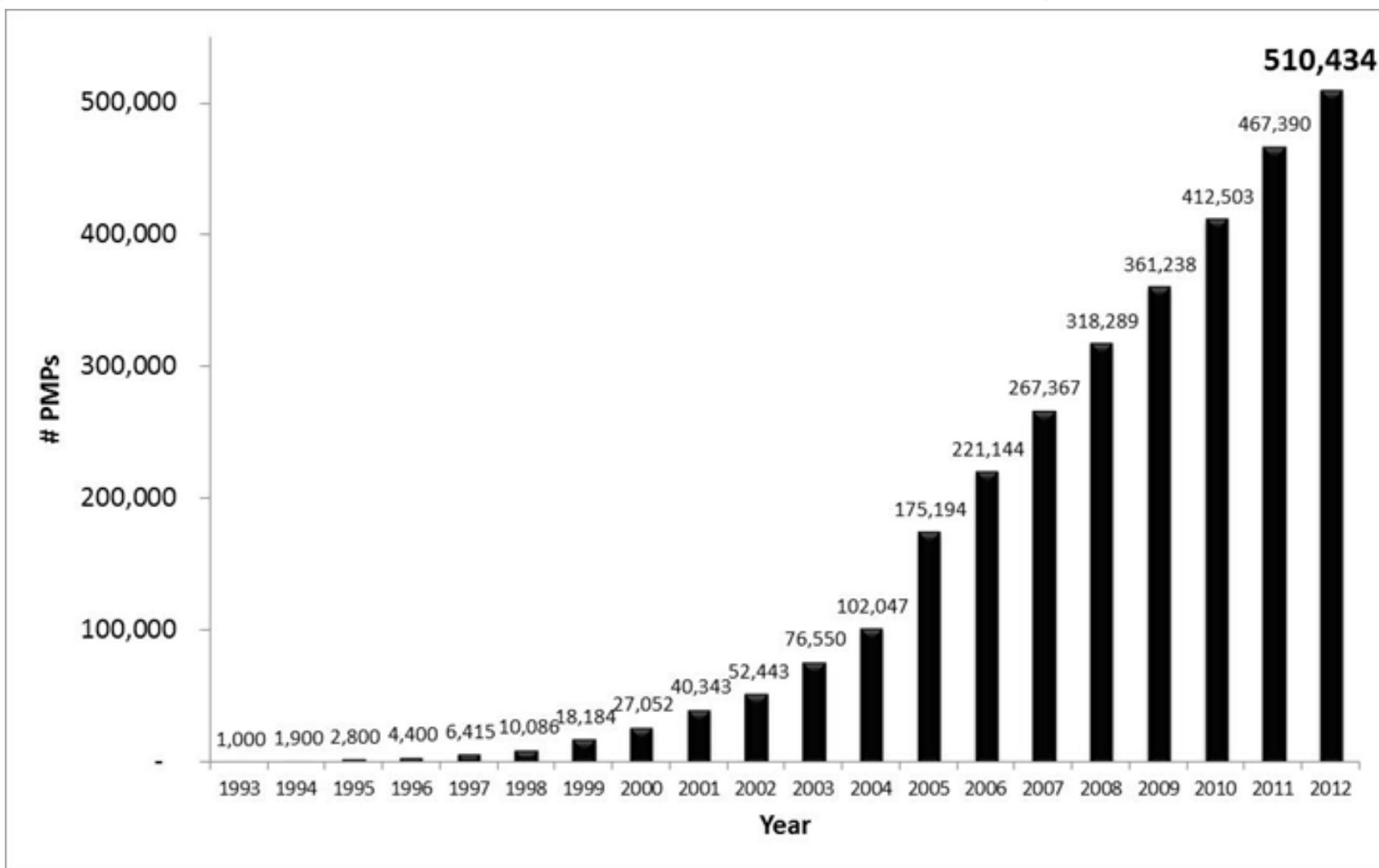
Ethics in Project Management

- ▶ **Ethics** — a set of principles that guide our decision making based on personal values of what is “right” and “wrong” — is an important part of all professions
- ▶ Project managers often face ethical dilemmas.
- ▶ In order to earn PMP certification, applicants must agree to the PMP code of ethics and professional conduct
- ▶ Several questions on the PMP exam are related to professional responsibility, including ethics

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

Figure 1-8. Growth in PMP Certification, 1993-2012



PMI Student Membership and Certification Information

- ▶ As a student, you can join PMI for a reduced fee (\$40 vs. \$129 in 2013)
- ▶ Also consider earning the Certified Associate in Project Management (CAPM) credential from PMI or the Project+ certification from CompTIA
- ▶ See the link under Resources on www.healthcarepm.com for more info
- ▶ If you complete a bachelor's degree, you do not need any work experience to earn these two certifications.

Project Management Software

- ▶ There are hundreds of different products available today.
- ▶ Gartner estimates the size of the project and portfolio management (PPM) solutions market to be about \$1 billion, and they created a magic quadrant showing cloud-based PPM providers categorized as leaders, visionaries, niche players, and challengers. For example, they list Innotas, Instantis, AtTask, Daptiv, and PowerSteering as market leaders.
- ▶ TopTen Reviews ranked Clarizen as #1 for online tools
- ▶ Microsoft Project is the most widely used PM software

Figure 1-9. Top Ten Online Project Management Product Comparisons

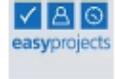
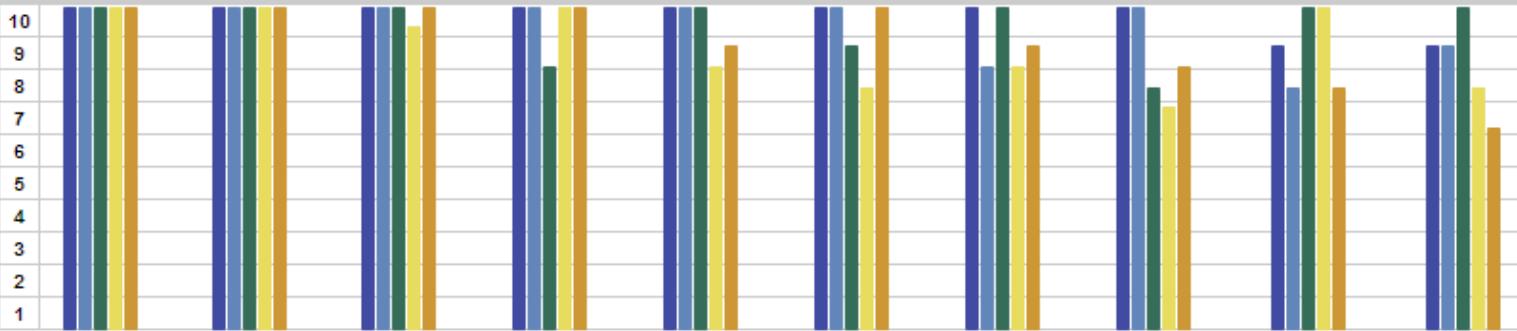
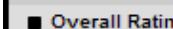
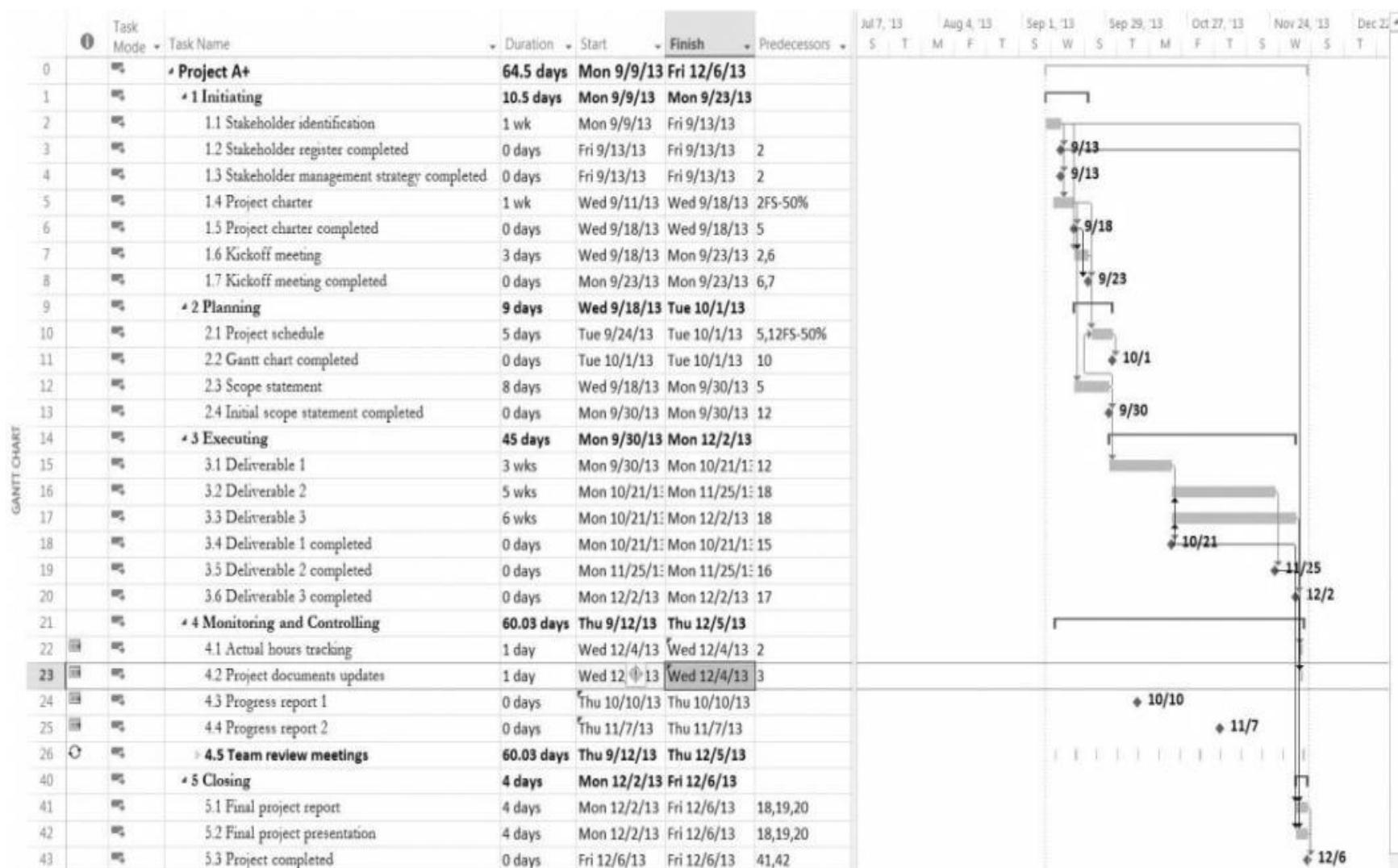
2013 Best Online Project Management Comparisons										Displaying 1 to 10 of 14		« Previous 10 Next 10 »	
Rank	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10			
10-9 Excellent	Clarizen	Genius Project	Daptiv PPM	Tenrox	Celixis	Project Insight	AtTask	EPM Live	LiquidPlanner	Easy Projects			
8-6 Good													
5-4 Average													
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Figure 1-10. Gantt Chart Created in Microsoft Project 2013



Free Trials and Information on Using Project 2013

- ▶ A 60-day evaluation copy of Microsoft Project is available from Microsoft's Web site at www.microsoft.com/project
- ▶ See Appendix A of this text, Brief Guide to Microsoft Project 2013, for more information so you can develop hands-on skills using this popular product

Chapter Summary

- ▶ There are many reasons to study project, program, and portfolio management, especially in the healthcare field, and the context is unique
- ▶ 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 to obtain benefits and control not available from managing them individually
- ▶ Project portfolio management involves organizing and managing projects and programs as a portfolio of investments that contribute to the entire enterprise's success
- ▶ The project management profession continues to grow and mature