

# **Introduction to Project Management**

# What is a Project?

- Project Defined

- A complex, nonroutine, **one-time effort** limited by **time, budget, resources**, and performance specifications designed to meet customer needs.

- Major Characteristics of a Project

- Has an established objective.
  - Has a defined life span with a beginning and an end.
  - Requires across-the-organizational participation.
  - Involves doing something never been done before.
  - Has specific time, cost, and performance requirements.

# Programs versus Projects

- Program Defined

- A series of coordinated, related, multiple projects that continue over an extended time and are intended to achieve a goal.
- A higher level group of projects targeted at a common goal.
- Example:
  - Project: completion of a required course in project management.
  - Program: completion of all courses required for a business major.

# Comparison of Routine Work with Projects

## **Routine, Repetitive Work**

Taking class notes

Daily entering sales receipts into the accounting ledger

Responding to a supply-chain request

Practicing scales on the piano

Routine manufacture of an Apple iPod

Attaching tags on a manufactured product

## **Projects**

Writing a term paper

Setting up a sales kiosk for a professional accounting meeting

Developing a supply-chain information system

Writing a new piano piece

Designing an iPod that is approximately 2 X 4 inches, interfaces with PC, and stores 10,000 songs

Wire-tag projects for GE and Wal-Mart

# Stakeholders of a Project

- Project Sponsor
  - Provides executive support
- Project Manager
  - Leads and manages the project
- Project Team Members
  - Provide technical and support expertise
- Organization Employees
  - Those that are directly or indirectly affected by the proposed project
- Community
  - Competitors and business partners impacted by the project outcome

# Project Manager

A person with a diverse set of skills – *management, leadership, technical, conflict management, and customer relationship* – who is responsible for initiating, planning, executing, controlling, monitoring, and closing down a project.

# Top Five Causes of Project Failure

- Lack of attention to human and organizational factors
- Poor project management
- Poor articulation of user requirements
- Inadequate attention to business needs and goals
- Failure to involve users appropriately

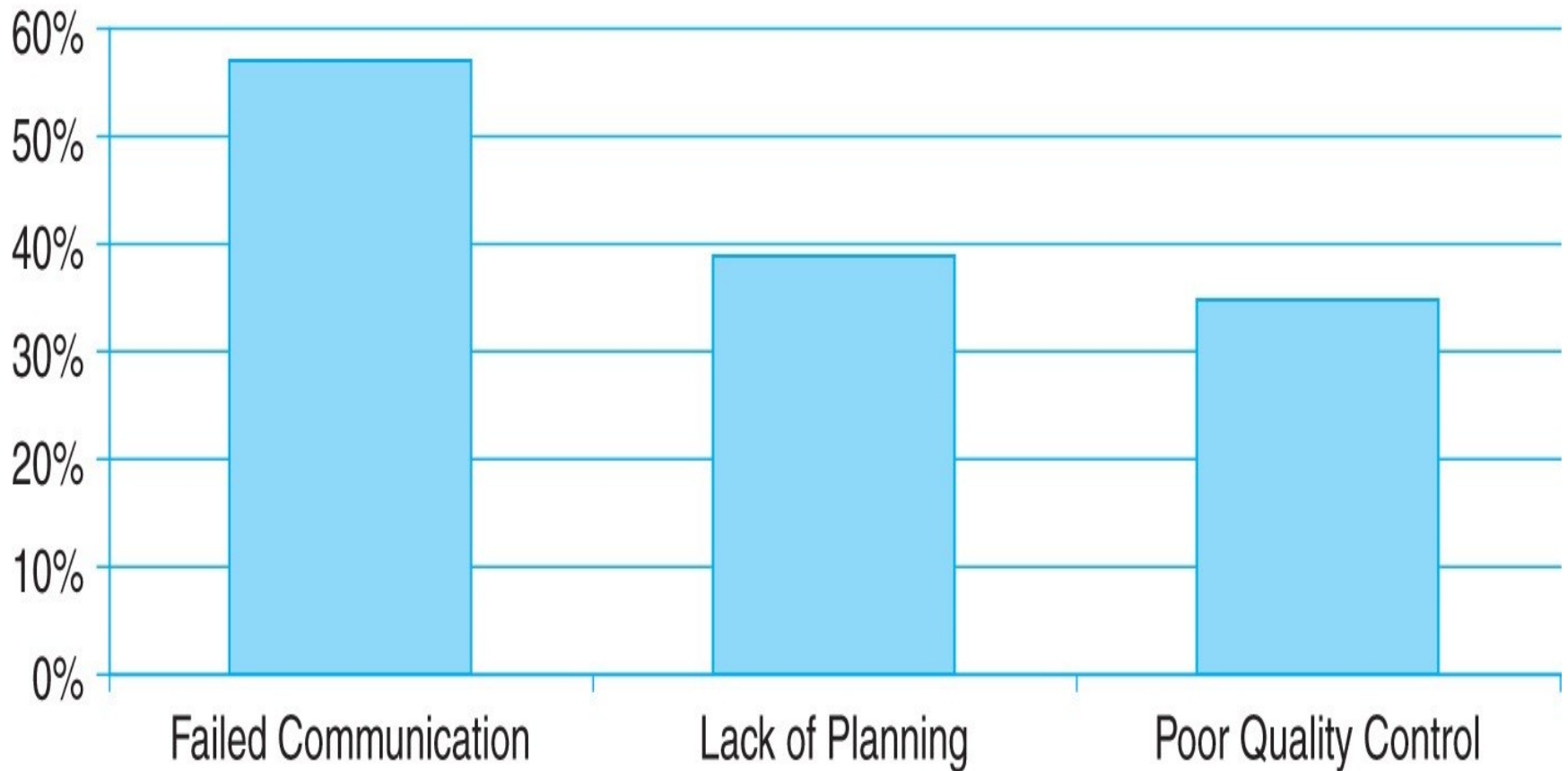
# 2004 Study by Wallace & Keil

- Lack of executive support
- Lack of user involvement
- Inexperienced project manager
- Inexperienced team members
- Unclear business objectives
- Unreliable estimates
- Lack of effective project management methodology
- New software infrastructure
- Unstable organizational environment
- Unreliable outside suppliers

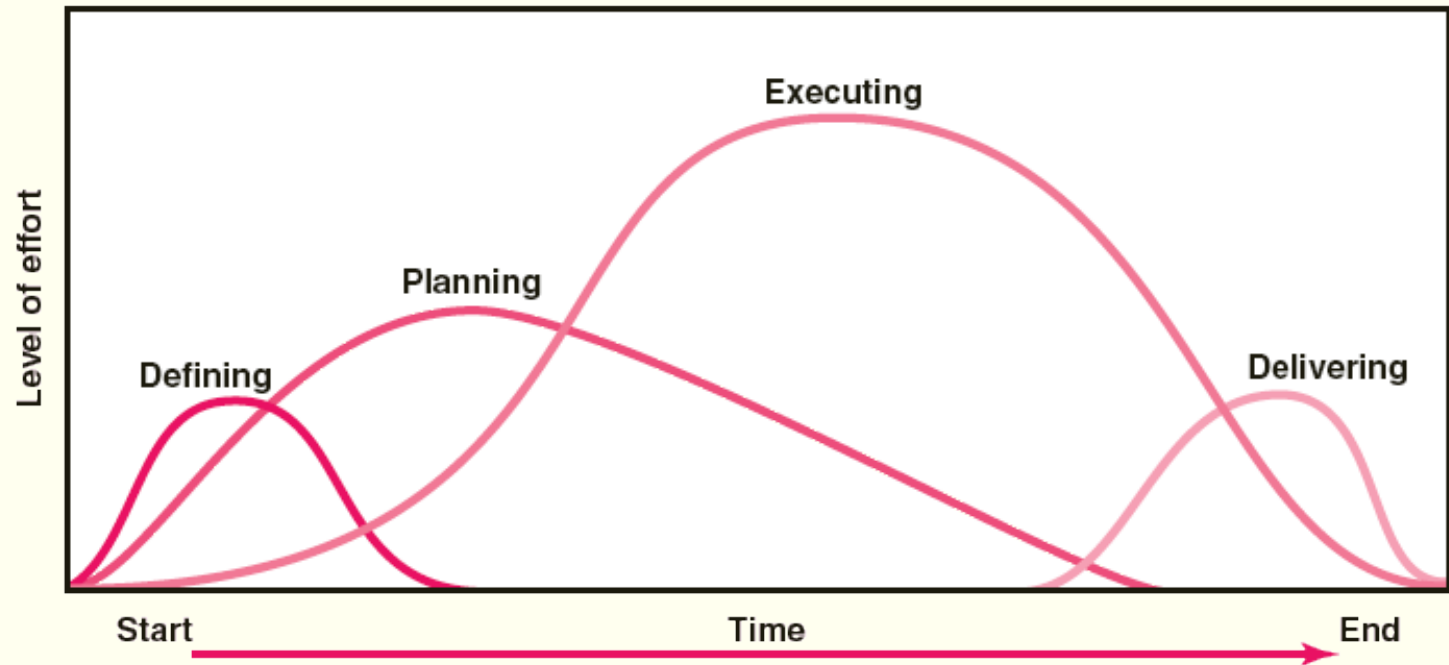


# Project Failure (French Study)

## Causes of Project Failure as Reported by Top 100 Managers



# Project Life Cycle



## Defining

1. Goals
2. Specifications
3. Tasks
4. Responsibilities

## Planning

1. Schedules
2. Budgets
3. Resources
4. Risks
5. Staffing

## Executing

1. Status reports
2. Changes
3. Quality
4. Forecasts

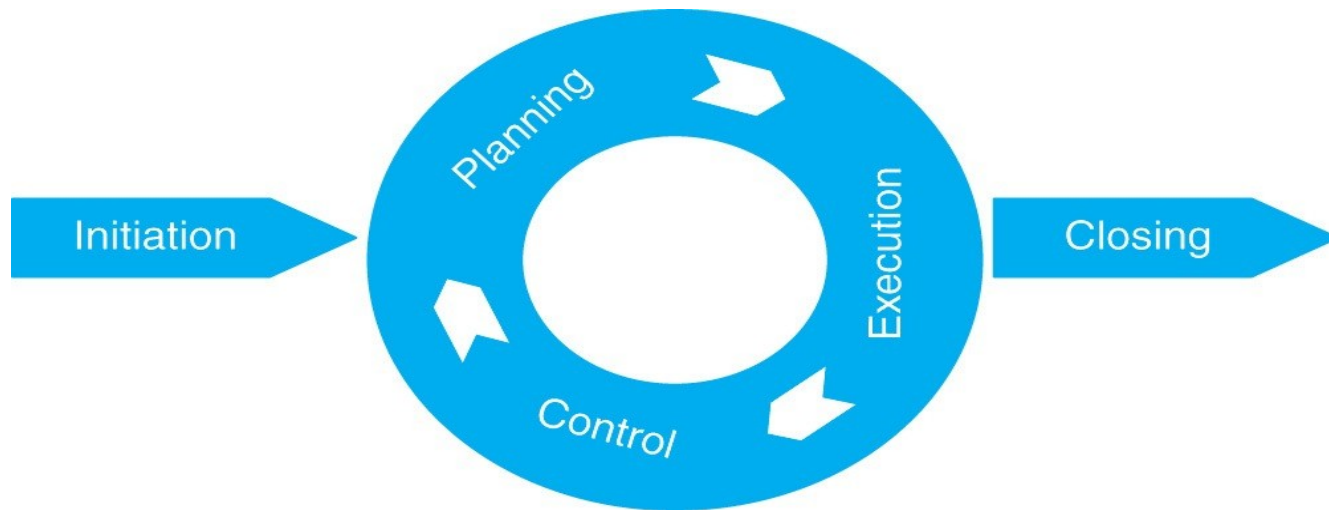
## Delivering

1. Train customer
2. Transfer documents
3. Release resources
4. Release staff
5. Lessons learned

FIGURE 1.1

# What is Project Management?

- The application of *knowledge, skills, tools, and techniques* to project activities in order to meet project requirements.
- Involves five process groups:

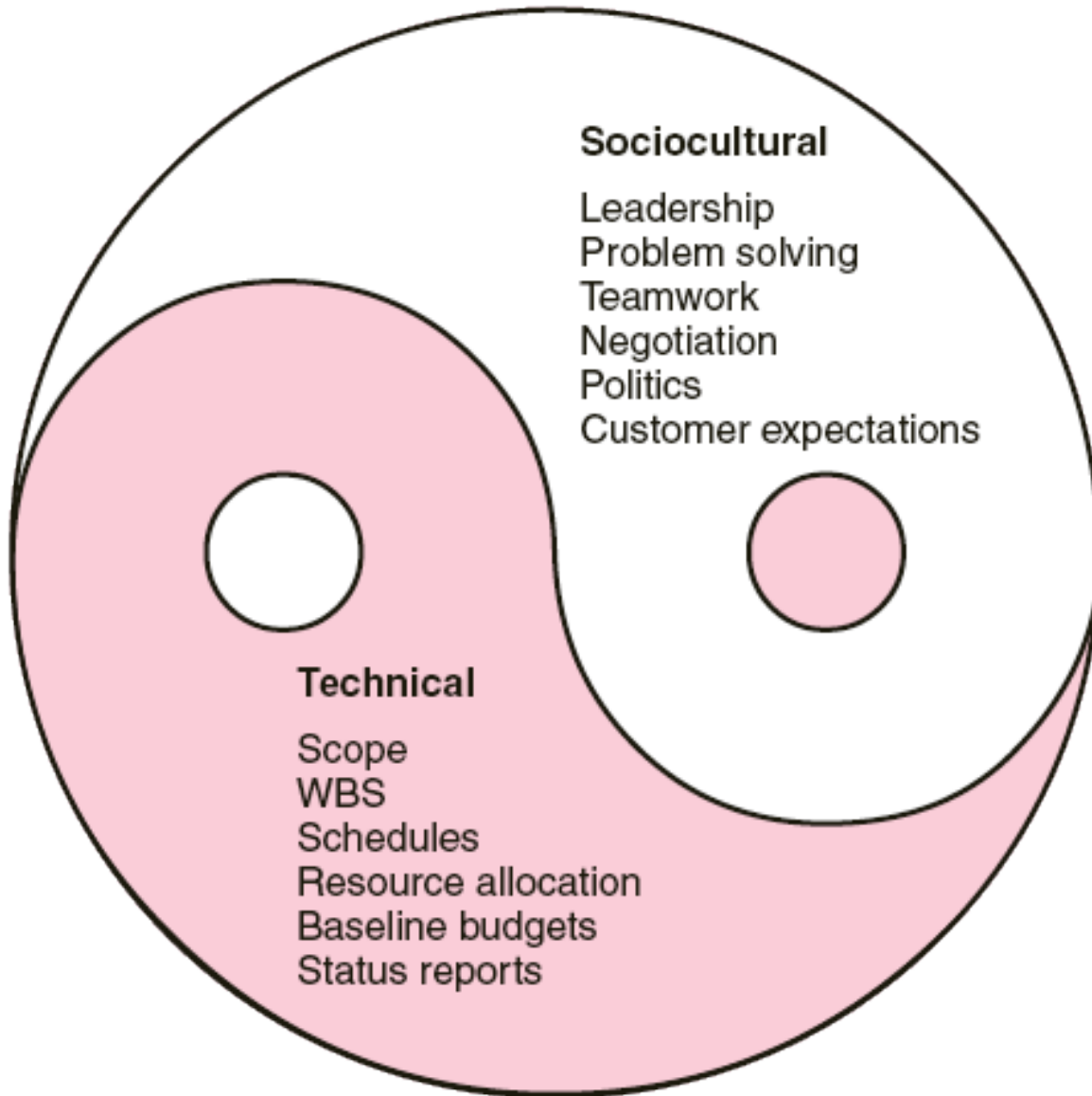


# Project Management Life Cycle

- Initiate – potential projects are identified and evaluated in terms of importance to the organization
- Plan – scope, time, cost and risk management planning takes place
- Execute – project plan is followed
- Control – project performance is measured against the project plan
- Close – final paper work completed and sign off by all stakeholders

# The Approach to Learning Project Management

- Process Focus
- Team Focus
- Technology Focus
- PM Software
- Group Support Technologies
- Knowledge Management and Organizational Memory Systems
- Global Focus
- PM Professional Focus



## The Technical and Sociocultural Dimensions of the Project Management Process

FIGURE 1.3

# The Challenge of Project Management

- The Project Manager

- Manages temporary, non-repetitive activities and frequently acts independently of the formal organization.
  - Marshals resources for the project.
  - Is linked directly to the customer interface.
  - Provides direction, coordination, and integration to the project team.
  - Is responsible for performance and success of the project.
- Must induce the right people at the right time to address the right issues and make the right decisions.

# The Importance of Project Management

- Factors leading to the increased use of project management:
  - Compression of the product life cycle
  - Global competition
  - Knowledge explosion
  - Corporate downsizing
  - Increased customer focus
  - Rapid development of Third World and closed economies
  - Small projects that represent big problems





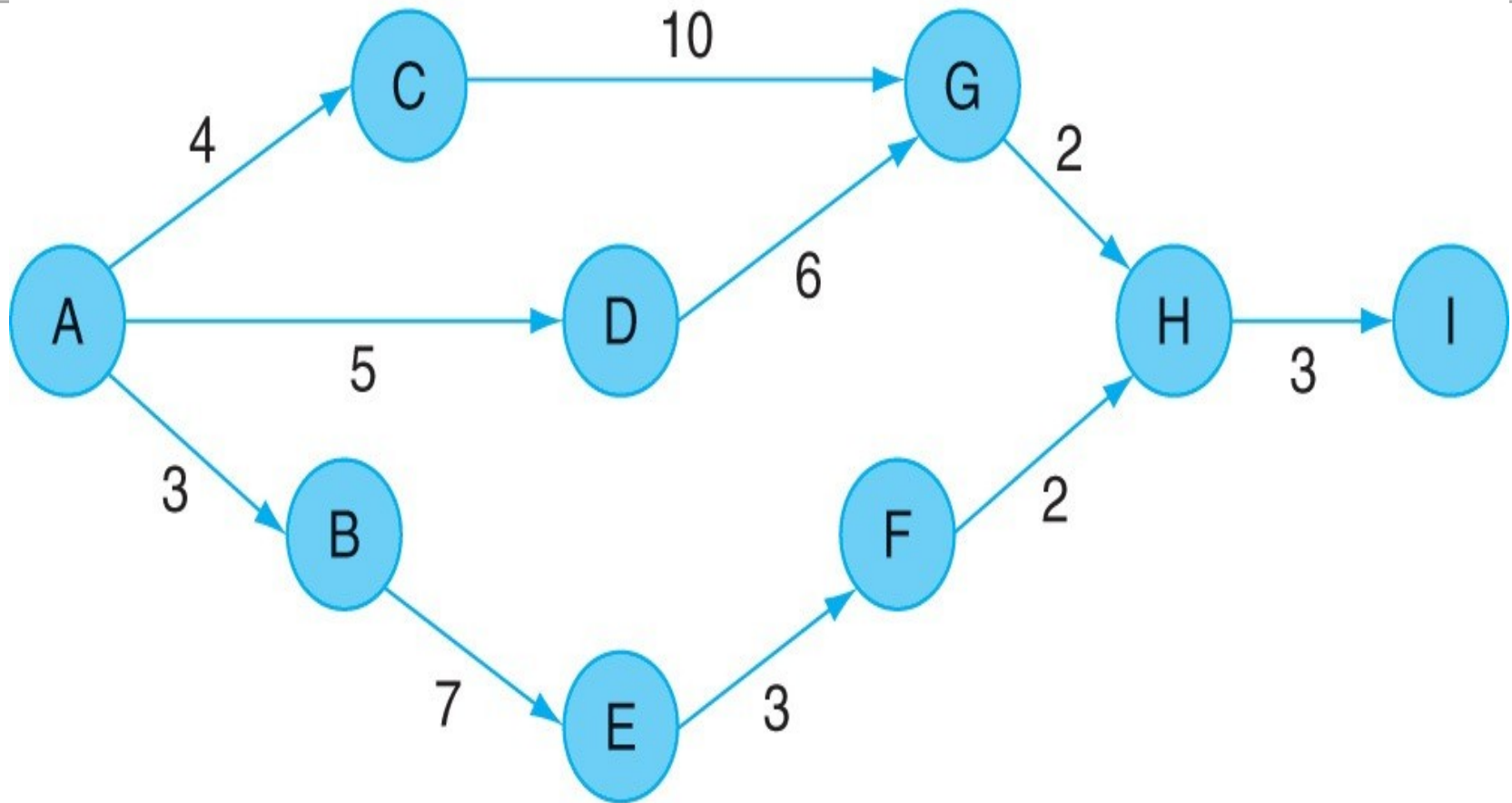
# Integrated Project Management Systems

- Problems resulting from the use of piecemeal project management systems:
  - Do not tie together the overall strategies of the firm.
  - Fail to prioritize selection of projects by their importance of their contribution to the firm.
  - Are not integrated throughout the project life cycle.
  - Do not match project planning and controls with organizational culture to make appropriate adjustments in support of project endeavors.

# Various Project Management Tools/Techniques

- Gantt Chart
  - Tool that can be used to plan and track project activities
- Critical Path Method (CPM)
  - A method used for determining the sequence of task activities that directly affect the completion of a project
- Program Evaluation and Review Technique (PERT)
  - A technique that uses optimistic, pessimistic, and realistic time to calculate the expected time for a particular task
- Microsoft Project
  - Most widely used project management software
  - <http://office.microsoft.com/en-us/project/default.aspx>
- Application Service Provider (ASP) software
  - Web hosted project management software
- Industry-Specific software
  - Software which addresses a specific industry or environment

# CPM & PERT



Critical Path = ACGHI (19 days)

# Industry Specific Software

<b>Industry</b>	<b>Software Package</b>
General Purpose	Microsoft Project
Detailers and Fabricators	AbacusPM
Audio/Visual/Multimedia Production	AlterMedia
Construction	Hard Hat Manager
Small Business	4aBetterBusiness
Software Development	DOVICO Track-IT
Manufacturing and Mining	Crest Soft

# Project Management Institute (PMI)

- An association designed to bring together project management professionals and systematically capture project management knowledge
- Publishes the Project Management Body of Knowledge (PMBOK)
  - The PMBOK is a collection of processes and knowledge areas generally accepted as best practice within the project management discipline

# Project Management Institute (PMI)

- Professional organization for project managers
- Over 214,000 members from 159 countries (2006)
- Provides professional literature on project management
- Develops and maintains the PMBOK
- Sponsors the PMP Certification
- **[www.pmi.org](http://www.pmi.org)**

# PMBOK

- Project Management Body of Knowledge
- A repository of the key project management knowledge areas

# PMBOK Knowledge Areas

<p align="center"><b>Project Integration Management</b></p>	<p align="center"><b>Project Scope Management</b></p>	<p align="center"><b>Project Time Management</b></p>
<ul style="list-style-type: none"> <li>• Project plan development</li> <li>• Project plan execution</li> <li>• Integrated change control</li> </ul>	<ul style="list-style-type: none"> <li>• Initiation</li> <li>• Scope planning</li> <li>• Scope definition</li> <li>• Scope Verification</li> <li>• Scope Change Control</li> </ul>	<ul style="list-style-type: none"> <li>• Activity definition</li> <li>• Activity sequencing</li> <li>• Activity duration estimating</li> <li>• Schedule development</li> <li>• Schedule control</li> </ul>
<p align="center"><b>Project Cost Management</b></p>	<p align="center"><b>Project Quality Management</b></p>	<p align="center"><b>Project Human Resource Management</b></p>
<ul style="list-style-type: none"> <li>• Resource planning</li> <li>• Cost estimating</li> <li>• Cost budgeting</li> <li>• Cost control</li> </ul>	<ul style="list-style-type: none"> <li>• Quality planning</li> <li>• Quality assurance</li> <li>• Quality control</li> </ul>	<ul style="list-style-type: none"> <li>• Organizational planning</li> <li>• Staff acquisition</li> <li>• Team development</li> </ul>
<p align="center"><b>Project Communications Management</b></p>	<p align="center"><b>Project Risk Management</b></p>	<p align="center"><b>Project Procurement Management</b></p>
<ul style="list-style-type: none"> <li>• Communications planning</li> <li>• Information distribution</li> <li>• Performance reporting</li> <li>• Administrative closure</li> </ul>	<ul style="list-style-type: none"> <li>• Risk management planning</li> <li>• Risk identification</li> <li>• Qualitative risk analysis</li> <li>• Quantitative risk analysis</li> <li>• Risk response planning</li> <li>• Risk monitoring and control</li> </ul>	<ul style="list-style-type: none"> <li>• Procurement planning</li> <li>• Solicitation planning</li> <li>• Solicitation</li> <li>• Source selection</li> <li>• Contract administration</li> <li>• Contract closeout</li> </ul>

