IT Project management

62FIT2PRM . LECTURE 1. Introduction to Project Management

S2024#PRM

I am an experienced **Lecturer** with a demonstrated history of working in the education and marketing industry.

Strong media and communication professional with a Master's degree focused in **Media and Communication**.

Demonstrated reputation as a marketing executive, media planner, and university lecturer.

CONTACT DETAIL – PRM – Class A

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TUTORIAL ACTIVITIES

- Reviewing the knowledge in the Lecture class

- Main activities of the Tutorial

  ❏ 03 Exercises

  ❏ 01 Game (Crossword/Flashcard)

  ❏ Homework → Review things we learned for the chapter.

ASSESSMENT

- Attendance: Attend at least **80%** (Absence at most 03 lectures **and** 03 tutorials)
    - ❑ Attendance Mark **(10%)**
    - ❑ Midterm Test **(30%)**
    - ❑ Final exam **(60%)**: online test / paper-based test

PASS CRITERIA

- To get a **PASS** students MUST

  - ❑ Final mark ≥ 5

- Relearn the course:

  - ❑ Final Mark < 5

  - ❑ **OR** Misses $\geq 20\%$ of classes

INTRODUCTION

- **Many organizations today have an interest in PM**

- **Technology and the use of interdisciplinary and global work teams have radically changed the work environment**

- **The U.S. spends $2.3 trillion on projects every year**

❑ One-quarter of its gross domestic product

❑ The world as a whole spends nearly $10 trillion of its $40.7 gross product on projects of all kinds.

❑ More than 16 million people regard project management as their profession

PROJECT MANAGEMENT STATISTICS

- The Project Portfolio Management Market worldwide size was worth approximately **$4.8 billion** in 2023. It is expected to grow at an effective Compound Annual Growth Rate (CAGR) of 5.5% from 2023 to 2028. The revenue forecast for 2028 is set to enjoy a valuation of **$6.3 billion**.

- According to the Project Management Institute, the global economy will require **87.7 million** project management roles by 2027.

- Companies are expected to invest more in project management. The global project management software market is expected to reach **$15.08 billion**, growing at a CAGR of 10.68% by 2030 (Zion Market Research)

WHY STUDY PM?

- Salaries in project management can vary widely depending on the individual's experience, industry, and the country they are working in. However, as a benchmark, PMI's Earning Power Salary Survey (2021) reported that the median salary for project management professionals in the United States was **$116,000 per year**.

- According to PMI's most recent Talent Gap report, by 2030, an estimated annual requirement of **2.3 million individuals** will arise to fulfill the anticipated demand for project management roles

WHY STUDY PM?

- Effective budget planning is linked to project success. Organizations that invest in project management **save 28 times more money**.

- The undervaluation of project management leads to **67%** of projects failing.

- In 2015, only **29% of projects were successfully** completed on time and on budget, with **19%** of projects **failing outright**.

- Effective project management is essential as it enables organizations to execute strategic plans, achieve goals within budget and on time, ensure a structured approach, improve communication and collaboration, and provide transparency and accountability, safeguarding against wasted resources, project delays, and strategic failures

ADVANTAGES OF USING FORMAL PM

- Better control of financial, physical, and human resources
- Improved customer relations
- Shorter development times
- Lower costs and improved productivity
- Higher quality and increased reliability
- Higher profit margins
- Better internal coordination
- Positive impact on meeting strategic goals
- Higher worker morale

▶ **Organize, Track, Execute work within a Project / Plan, Manage, and Execute your work / Meet your project's requirements on time.**

A project is "a temporary endeavor undertaken to create a unique product, service, or result"*

*PMI, A Guide to the Project Management Body of Knowledge (PMBOK® Guide) (2004), p. 5.

- Operations is work done to sustain the business
- Projects end when their objectives have been reached or the project has been terminated

DEFINITIONS

TEMPORARY
– implies not just a beginning and end, but also a defined scope and resources.

UNIQUE
– implies that a project is not a routine operation. A project has a set of operations that are designed to achieve a specific goal/s.

enabling the creation of **QUANTIFIABLE BENEFITS** (also referred to as "business value"), and it is **INITIATED BY LEADERS** of the organization.

CAMBRIDGE DICTIONARY

a piece of planned work or an activity that is finished over a period of time and intended to achieve a particular purpose

BUSINESS DICTIONARY

a planned set of interrelated tasks to be executed over a fixed period and within certain costs and other limitations.

David Allen (Getting Things Done)

any and all those things that need to get done within the next few weeks or months that require more than one action step to complete.

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EXAMPLES of Project

#Example 1
Constructing a building

Building construction is the process of adding structure to real property. The vast majority of building construction projects are small renovations, such as the addition of a room, or renovation of a bathroom. Often, the owner of the property acts as a laborer, paymaster, and design team for the entire project

#Example 2
Developing a Software Project

A software development project is a complex undertaking by two or more persons within the boundaries of time, budget, and staff resources that produce new or enhanced computer code that adds significant business value to a new or existing business process

#Example 3
Create a web page

The web page could be part of a campaign that communicates a unified message for a product launch. Additional projects within that campaign could be an email, a social media message, and a press release

Example of ITPM

- A technician replaces ten laptops for a small department

- A small software development team adds a new feature to an internal software application for the finance department

- A team of students creates a smartphone application and sells it online

- A government group develops a system to track child immunizations

- A global bank acquires other financial institutions and needs to consolidate systems and procedures

WHAT DOESN'T CONSTITUTE A PROJECT?

Activities that are **not temporary** and **not unique**.

❑ Best example: Any Operations activities

❑ Constructing a factory is a project

❑ Producing 100 items every day in that factory is **NOT** a project. It is operations. Operations are activities that are routinely carried out to support the business.

PROJECT ATTRIBUTES (1)

A project is a set of tasks, carried out by a **group**, to achieve an expected **result**, within a scheduled **time**, with a scheduled **budget**.

❑ Must estimate the implementation team (human resources)

❑ Must have a start date and an end date

❑ Must have at least a number, representing the budget allowed to carry out the work

❑ Must clearly describe the results (output) of the work. After finishing the work, what must be obtained, with what characteristics, what is the value, and how effective is it?

❑ There must be an amount of money allocated for the project to implement. The person (or organization) who sponsors the money is called the investor

PROJECT ATTRIBUTES(2)

A project

❑ has a unique purpose

❑ is temporary

❑ drives change and enable value creation

❑ 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 managers work with project sponsors, teams, and other people involved in a project to achieve project goals

THE TRIPLE CONSTRAINTS OF PM

TIME - 6 months

is the duration or amount of time (usually expressed in the number of hours) required or allocated to complete the project or tasks within the project.

COST - $500,000

refers to the resources — financial and otherwise — required for project execution. Costs might include labor, hardware, software, and other charges.

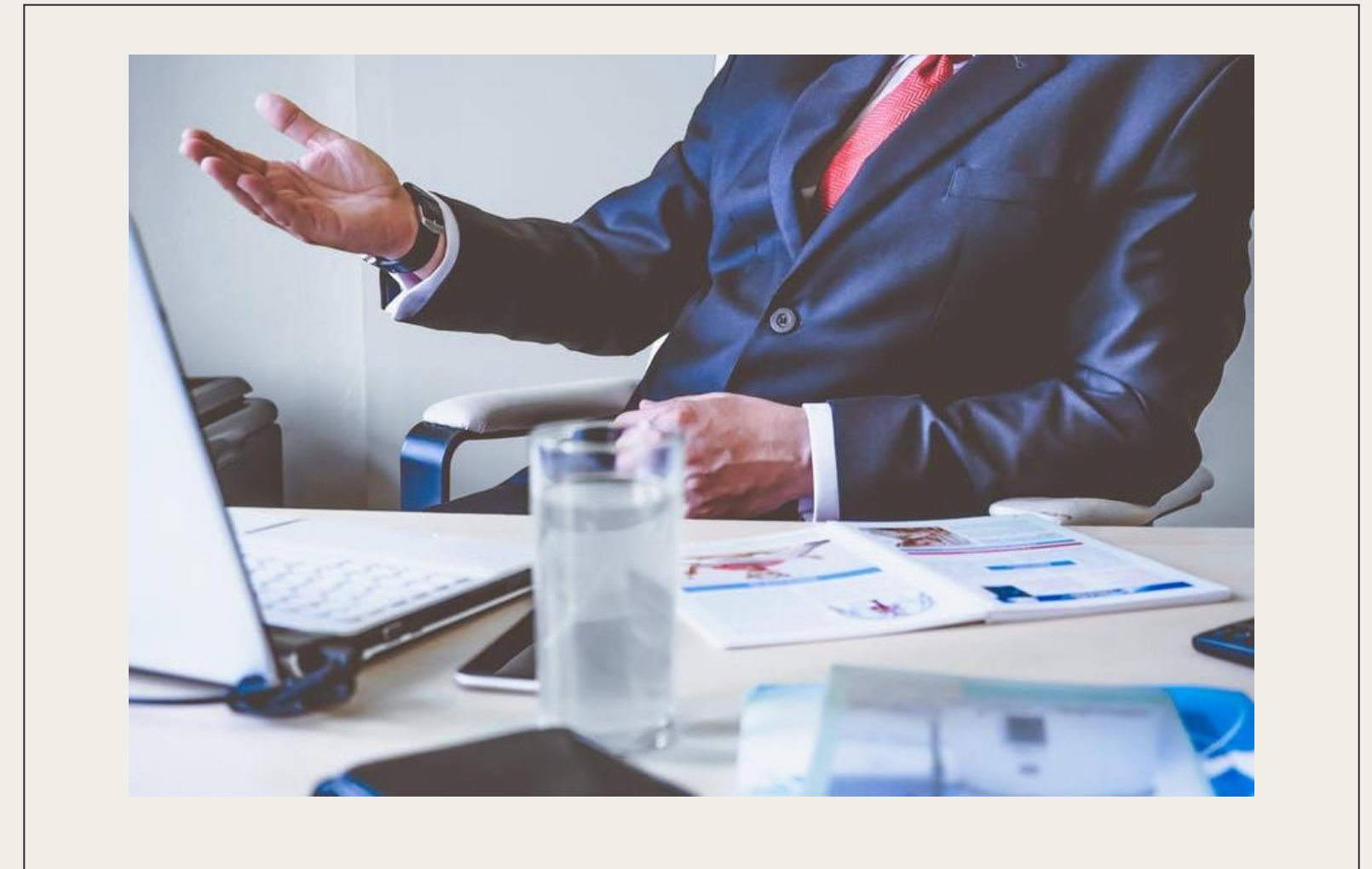### SCOPE - eCommerce website

refers to what's being delivered: the extent, range, breadth, reach, confines, dimension, realm, gamut, spectrum, or spread of the work that's to be done on a project.

What is Project Management?

❑ Project management is "the application of knowledge, skills, tools and techniques to project activities to meet project requirements"

❑ 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
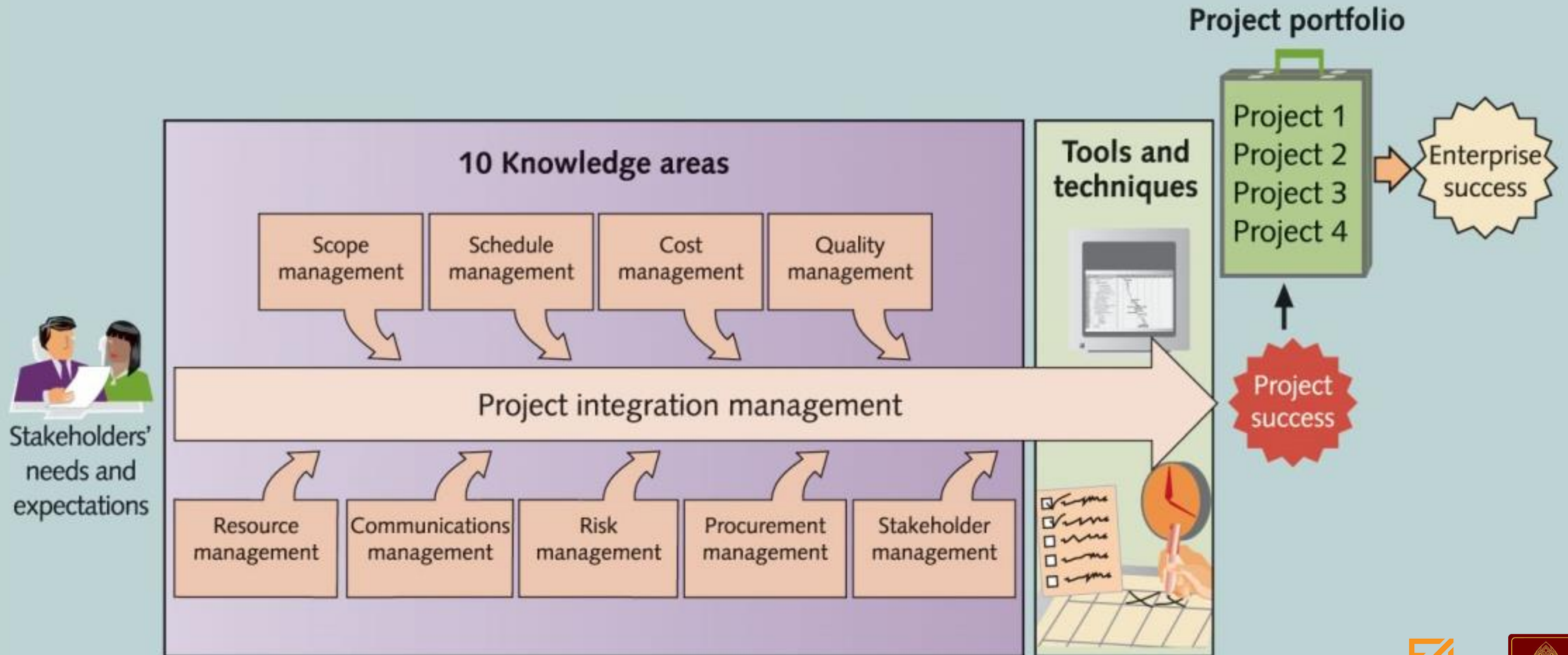
Planning / Organizing / Managing

(PMBOK® Guide, Sixth Edition, 2017)

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PM Framework

SLIDE 22
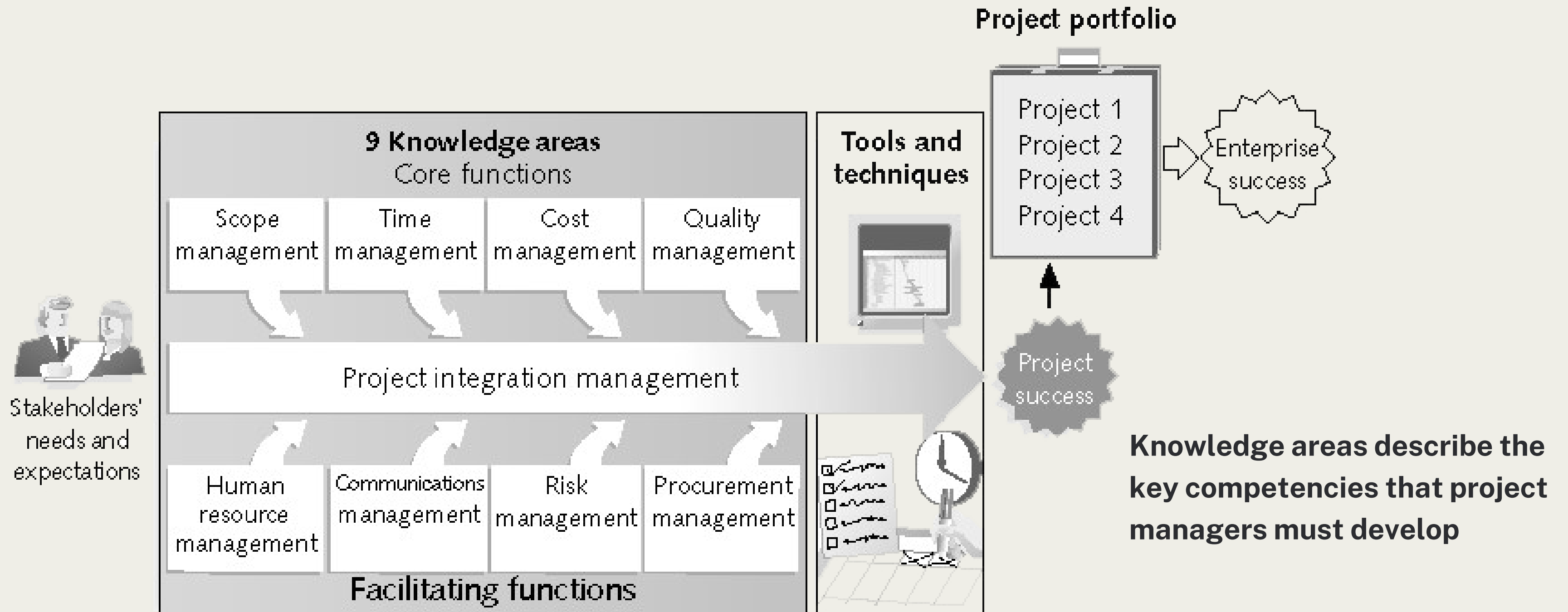
PM Framework

PROJECT STAKEHOLDERS

❖ Stakeholders are the people involved in or affected by project activities

❖ Stakeholders include:

- the project sponsor
- banks and other financial institutions
- the project team
- opponents of the project

- project manager
- support staff
- suppliers

Stakeholders' needs and expectations

10 PM KNOWLEDGE AREAS

05 core knowledge areas describe the key competencies that project managers must develop

- scope
- schedule
- cost
- quality

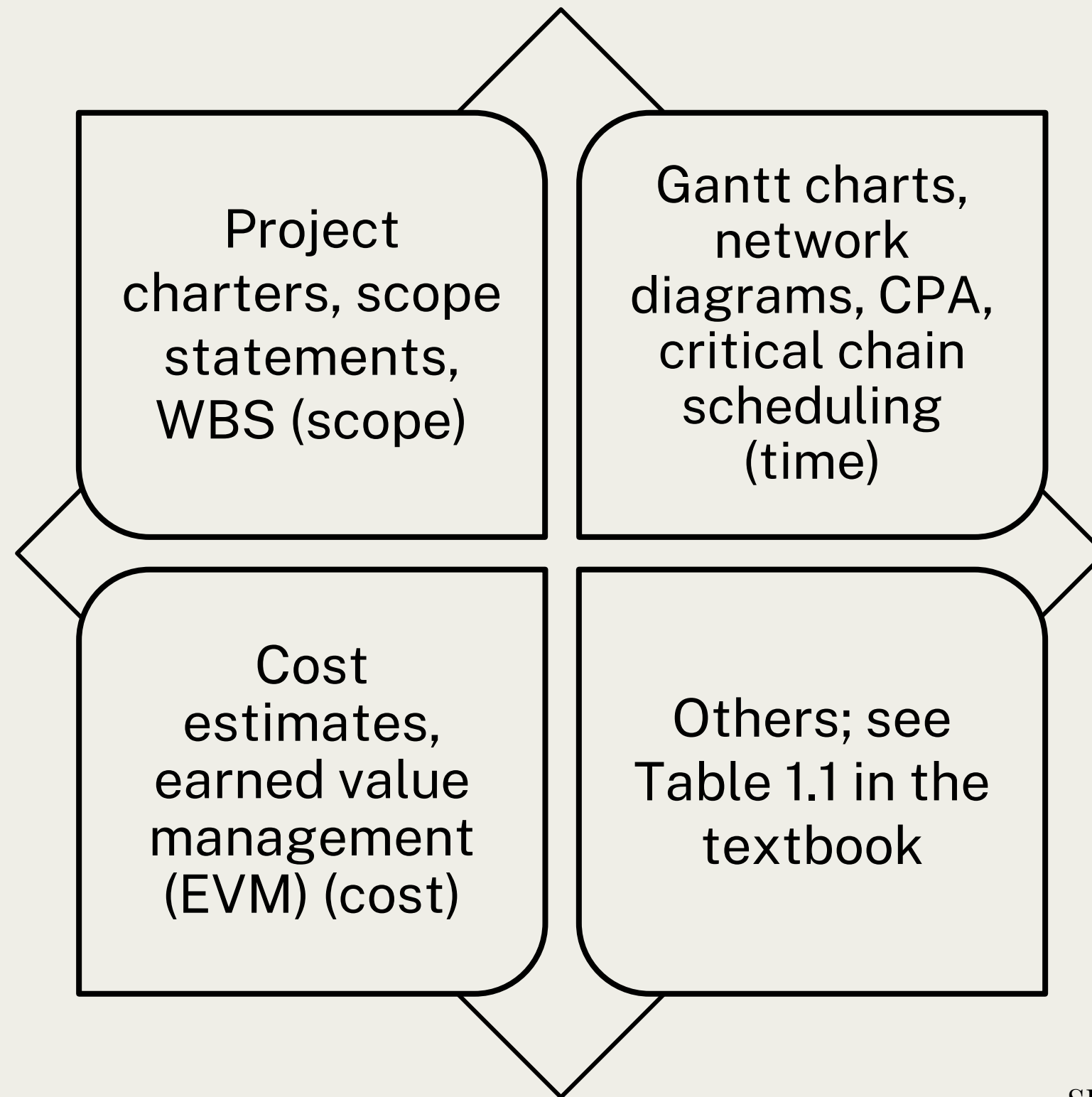**04 facilitating knowledge areas are the means through which the project objectives are achieved**

- human resources
- communication
- risk management
- procurement management
- stakeholder management

01 knowledge area affects and is affected by all of the other knowledge areas

- project integration management

PM TOOLS AND TECHNIQUES

Project charters, scope statements, WBS (scope)

Gantt charts, network diagrams, CPA, critical chain scheduling (time)

Cost estimates, earned value management (EVM) (cost)

Others; see Table 1.1 in the textbook

Assist project managers and their teams in various aspects of project management

Specific tools and techniques include:

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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

SOME SUCCESS FACTORS

Hussain, A., Mkpojiogu, E. O., & Kamal, F. M. (2016). The Role of Requirements in the Success or Failure of Software Projects. *International Review of Management and Marketing, 6*(7S), 306–311. Retrieved from https://econjournals.com/index.php/irmm/article/view/3272
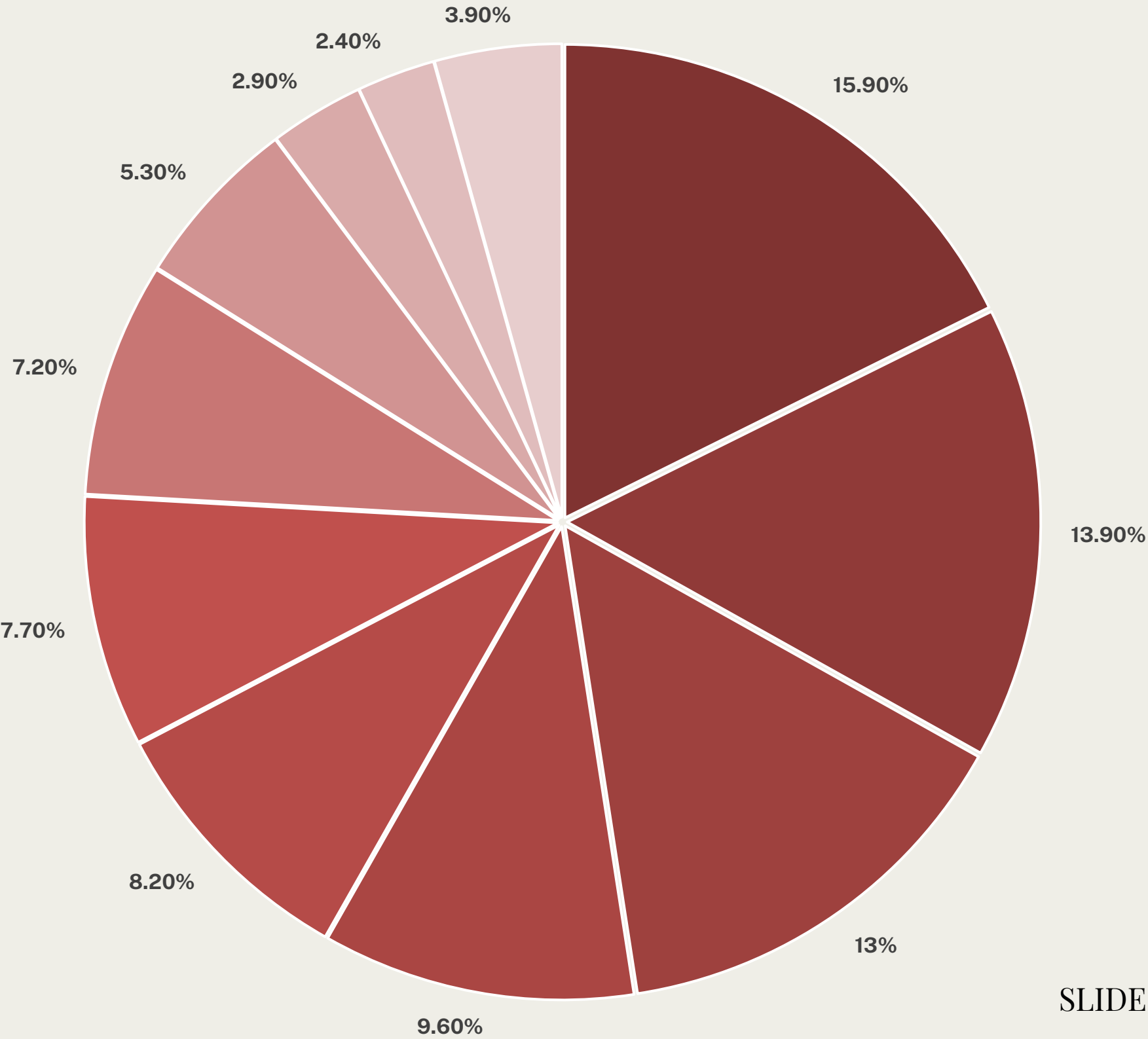
- User involvement
- Executive management support
- Clear statement of requirements
- Proper planning
- Realistic expectations
- Smaller project milestones
- Competent staff
- Ownership
- Clear vision & objectives
- Hard-working, focused staff
- Others

SLIDE 28

SOME SUCCESS FACTORS

Factors of Success	Points
Executive sponsorship	15
Emotional maturity	15
User involvement	15
Optimization	15
Skilled resources	10
Agile processes	7
Modest execution	6
Project management expertise	5
Clear business objectives	4

Table 1-2 What Helps Projects Succeed?

PROJECT SUCCESS

▪ **Research findings show that companies that excel in project delivery capability:**

❑ Use an integrated toolbox

❑ Grow project leaders

❑ Develop a streamlined project delivery process

❑ Measure project health using metrics, like customer satisfaction or return on investment

Program and Project Portfolio Management

- **About one-quarter of the world's gross domestic product is spent on projects**

- **Two important concepts that help projects meet enterprise goals:**

  - ❑ Use of programs

  - ❑ Project portfolio management

Program and Project Portfolio Management

- **A program** is "a group of related projects managed in a coordinated manner to obtain benefits and control not available from managing them individually" (PMBOK® Guide — Sixth Edition, 2017)

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

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

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

Strategic goals

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?

Tactical goals

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

- **Organizational project management**

  ❑ Framework in which portfolio, program, and project management are integrated with organizational enablers to achieve strategic objectives

Figure 1-4. Sample project portfolio approach
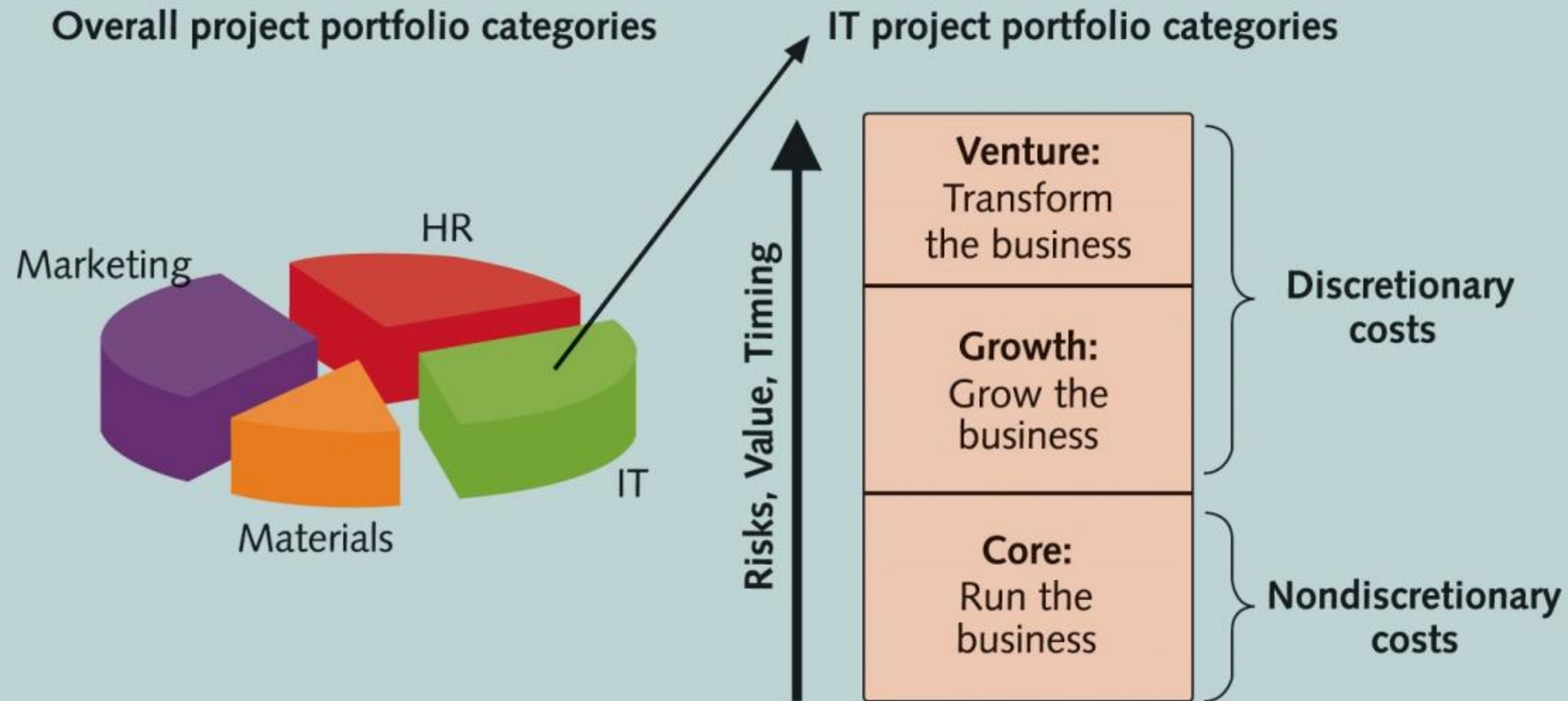
- **Project managers need a wide variety of skills**

- **They should:**

  – Be comfortable with change

  – Understand the organizations they work in and with

  – Be able to lead teams to accomplish project goals

- Project managers must work closely with the other stakeholders on a project, especially the sponsor and project team

- They are also more effective if they are familiar with the 10 project management knowledge areas

  ❑ And the various tools and techniques related to project management

PROJECT MANAGER JOB DESCRIPTION

- Job descriptions vary, but most include responsibilities like planning, scheduling, coordinating, and working with people to achieve project goals

- Project management is a skill needed in every major IT field, from database administrator to network specialist to technical writer

ADVICE FOR YOUNG PROFESSIONALS

- **A few questions to ask yourself to know if you would be a good project manager**

  ❑ Do you get frustrated by bad bosses? Do you think you could do a better job?

  ❑ Are you interested in understanding the big picture of how organizations work and how your individual work or your project fits in?

  ❑ Have you had other leadership roles, such as being a team captain, president of a club, or entrepreneur of a small business? Did you enjoy it? Did others think you did a good job?

  ❑ Are you good at mentoring others? Do people ask you for help in developing their skills or your advice on what to do?

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

SUGGESTED SKILLS FOR PROJECT MANAGERS

- **Six traits of highly effective project managers as follows:**

  ❑ Be a strategic business partner

  ❑ Encourage and recognize valuable contributions

  ❑ Respect and motivate stakeholders

  ❑ Be fully vested in success

  ❑ Stress integrity and accountability

  ❑ Work in the gray/Be able to deal with ambiguity

- **The talent triangle includes:**

  ❑ Technical project management skills

  ❑ Strategic and business management skills

  ❑ Leadership skills

- **Leadership styles include:**

  ❑ Laissez-faire

  ❑ Transactional

  ❑ Servant leader

  ❑ Transformational

  ❑ Charismatic

  ❑ Interactional

Skills that PM Need

- **Soft skills**
  – Comfortable with change

  – Leadership

  – Communication

  – Organization

  – Team building

- **Hard skills**
  – Product knowledge

  – Knowledge of PM tools

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 the most important

- 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
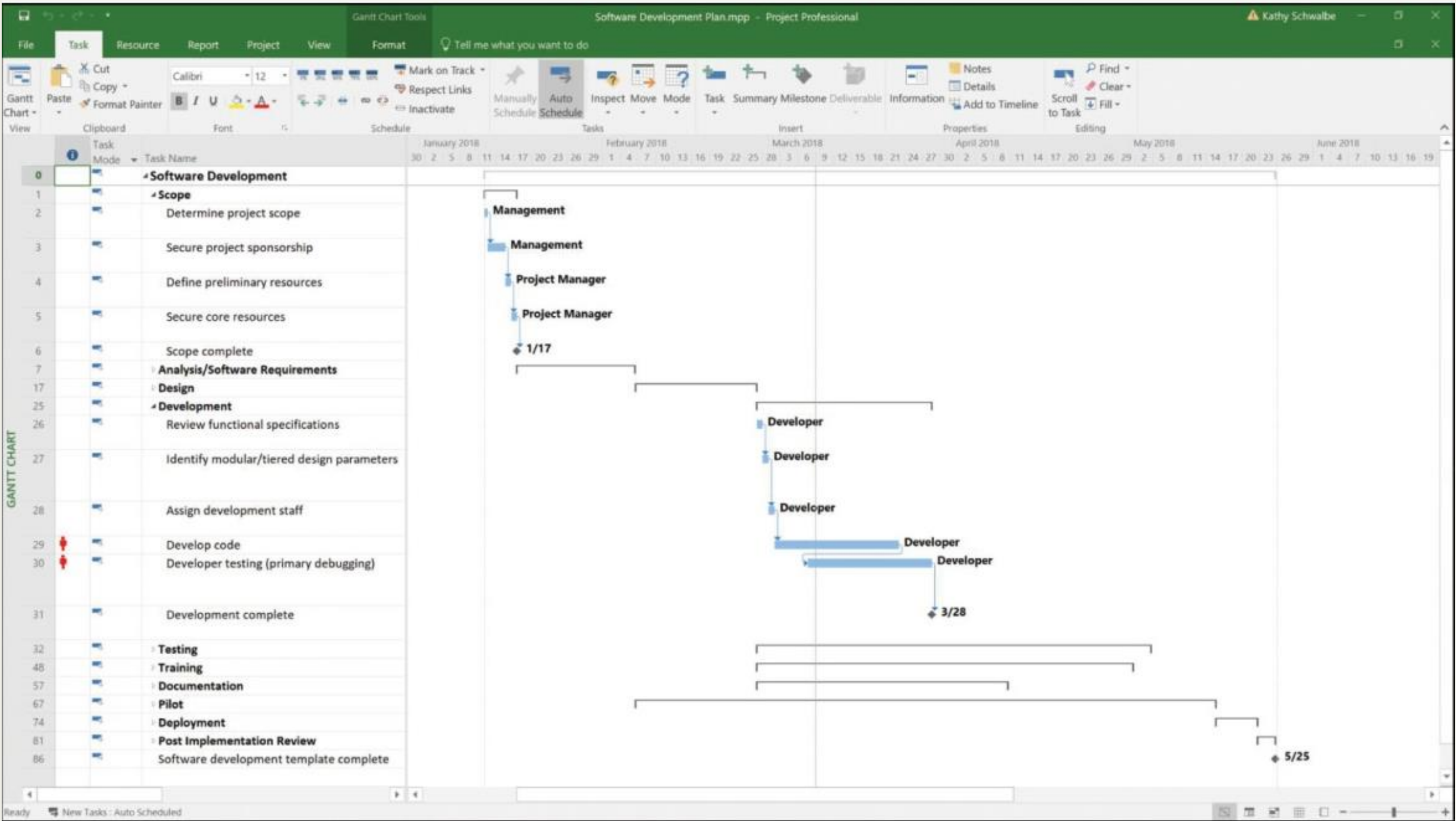
History of Project Management

- 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

Figure 1 – 5 Sample Gantt chart from Project 2016 software development plan template
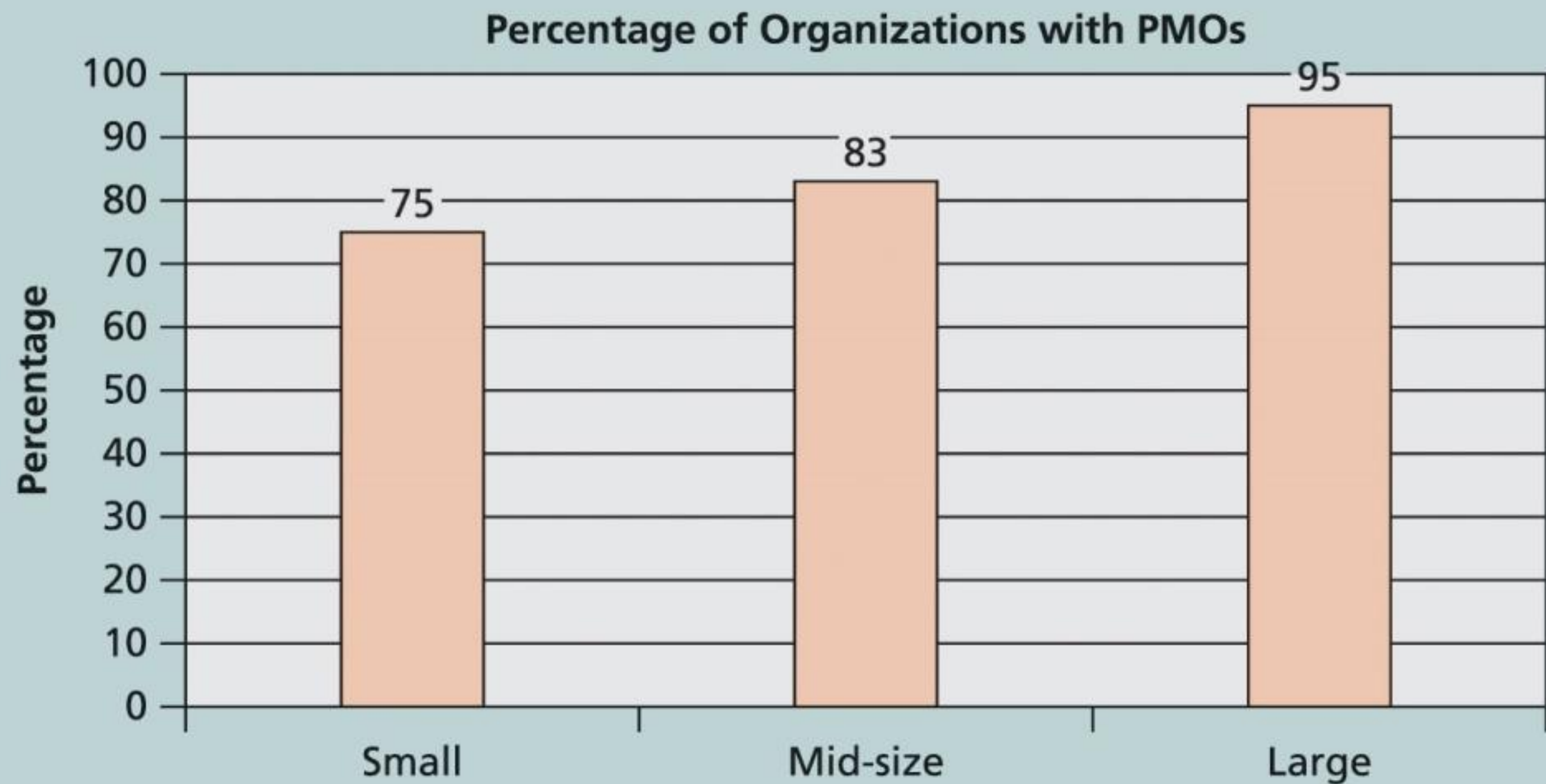
History of Project Management

- 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 1-6. Sample project portfolio approach

Percentage of Organizations with PMOs

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 500,000 members worldwide by late 2017

- 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

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

- Students can join PMI at a reduced fee and earn the Certified Associate in Project Management (CAPM) certification (see PMI 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

- 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 $200-600 per user, Project 2007 most popular

  - **High-end tools**: also called enterprise project management software, often licensed on a per-user basis, like VPMi Enterprise Online (www.vcsonline.com) – see front cover for trial version information

- See the Project Management Center Web site or Top Ten Reviews for links to many companies that provide project management software

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

Thank you!

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