



GSOE9820 – Engineering Project Management

Corey Martin

Never Stand Still

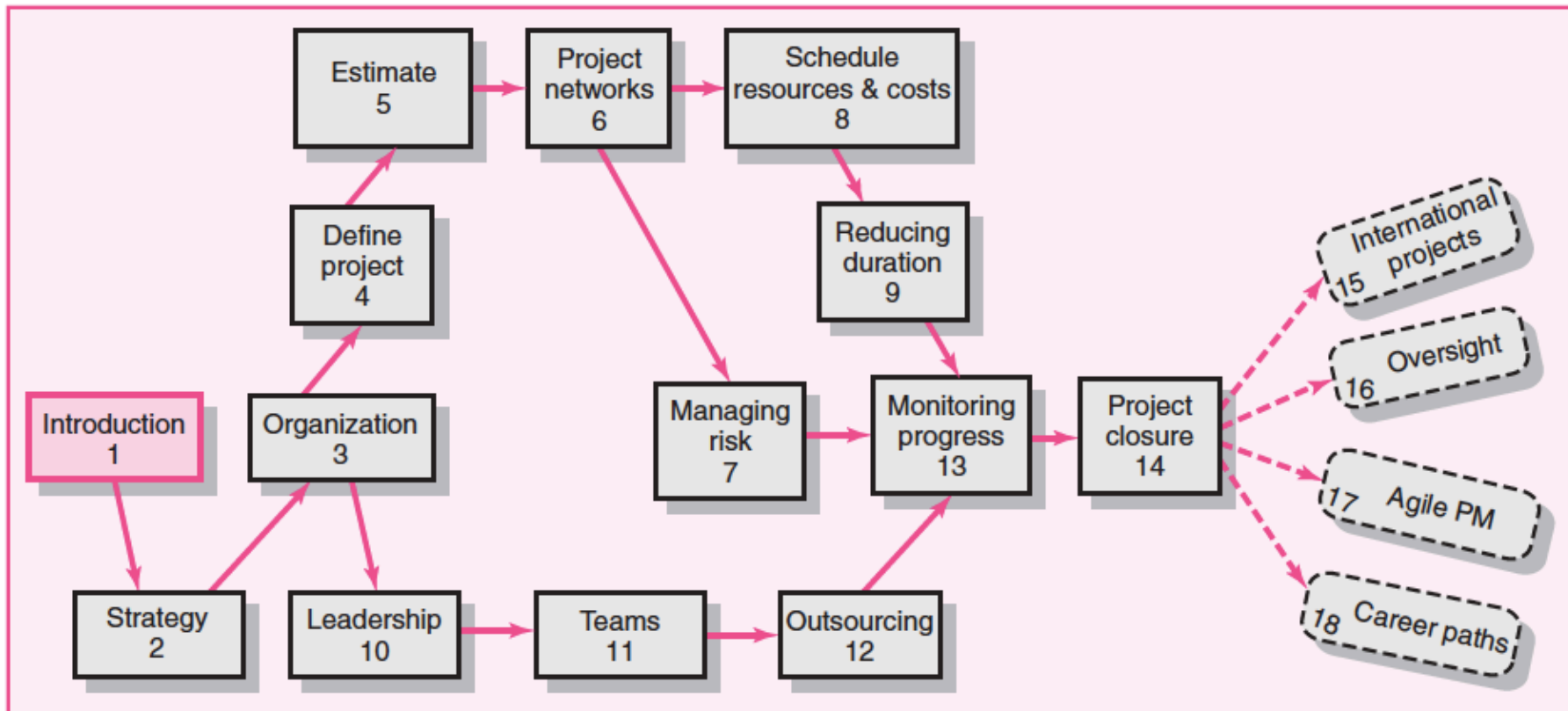
Faculty of Engineering

School of Mechanical and Manufacturing Engineering

Week 1

Introduction to modern project management

Course Road Map



Reference: Project management – the managerial process 5th ed.

Origins of “project”

Project

Projectum

Pro-icere = “before an action”

Pro = “precedence”

Icere = “to do”

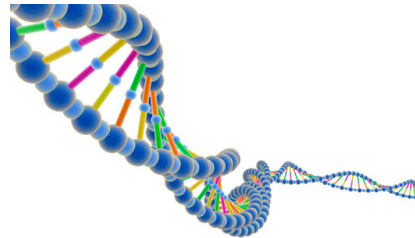
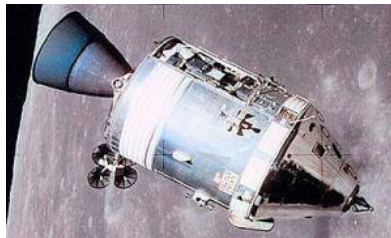
A project is ...

a temporary endeavour undertaken to create a unique product, service or result.

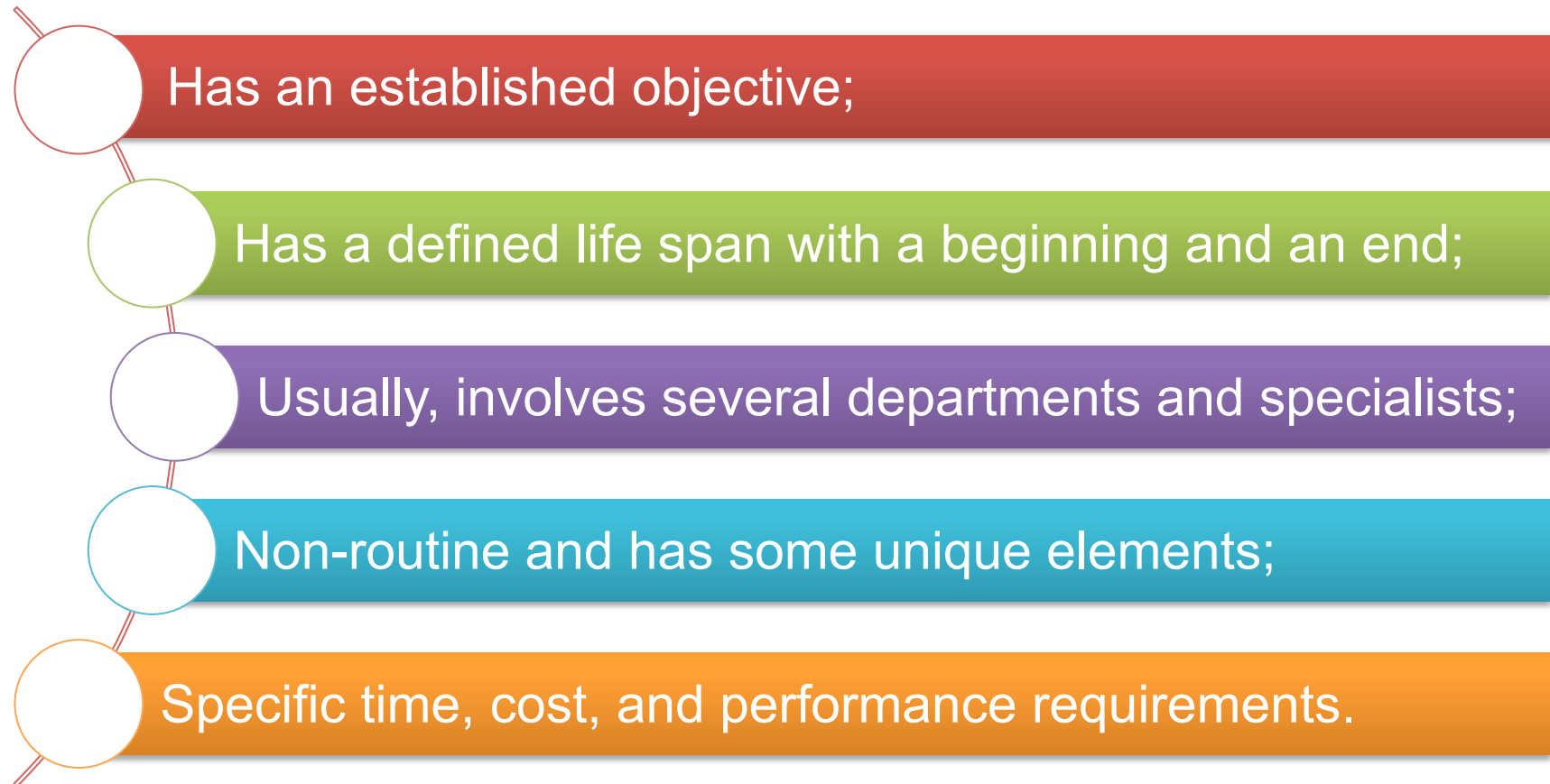


Some examples of projects

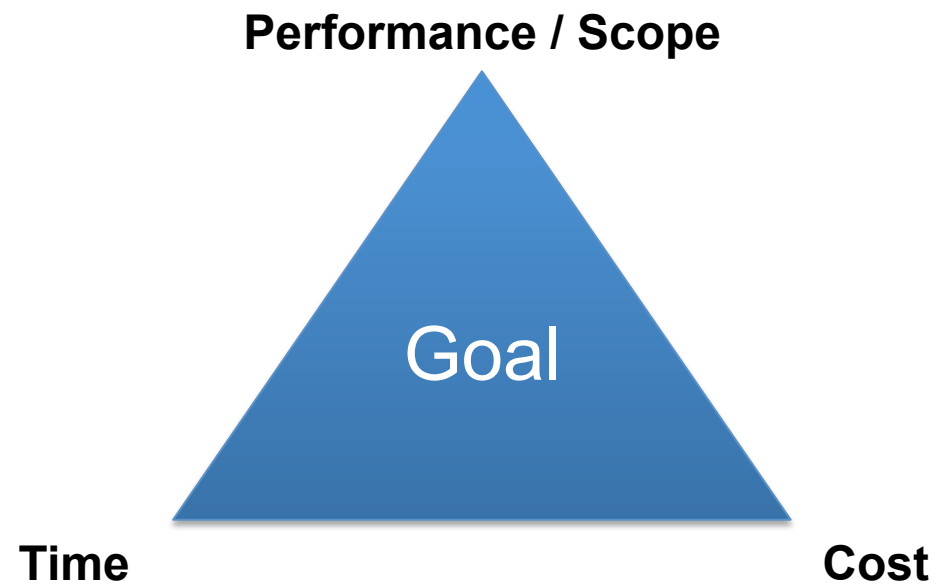
- Building The Great Pyramid of Giza (2580–2560 BC)
- Apollo Project (1961–1975)
- Human Genome Project (1984-2003)
- Release of the movie : Penguins of Madagascar (2011-2014)



Characteristics of a project



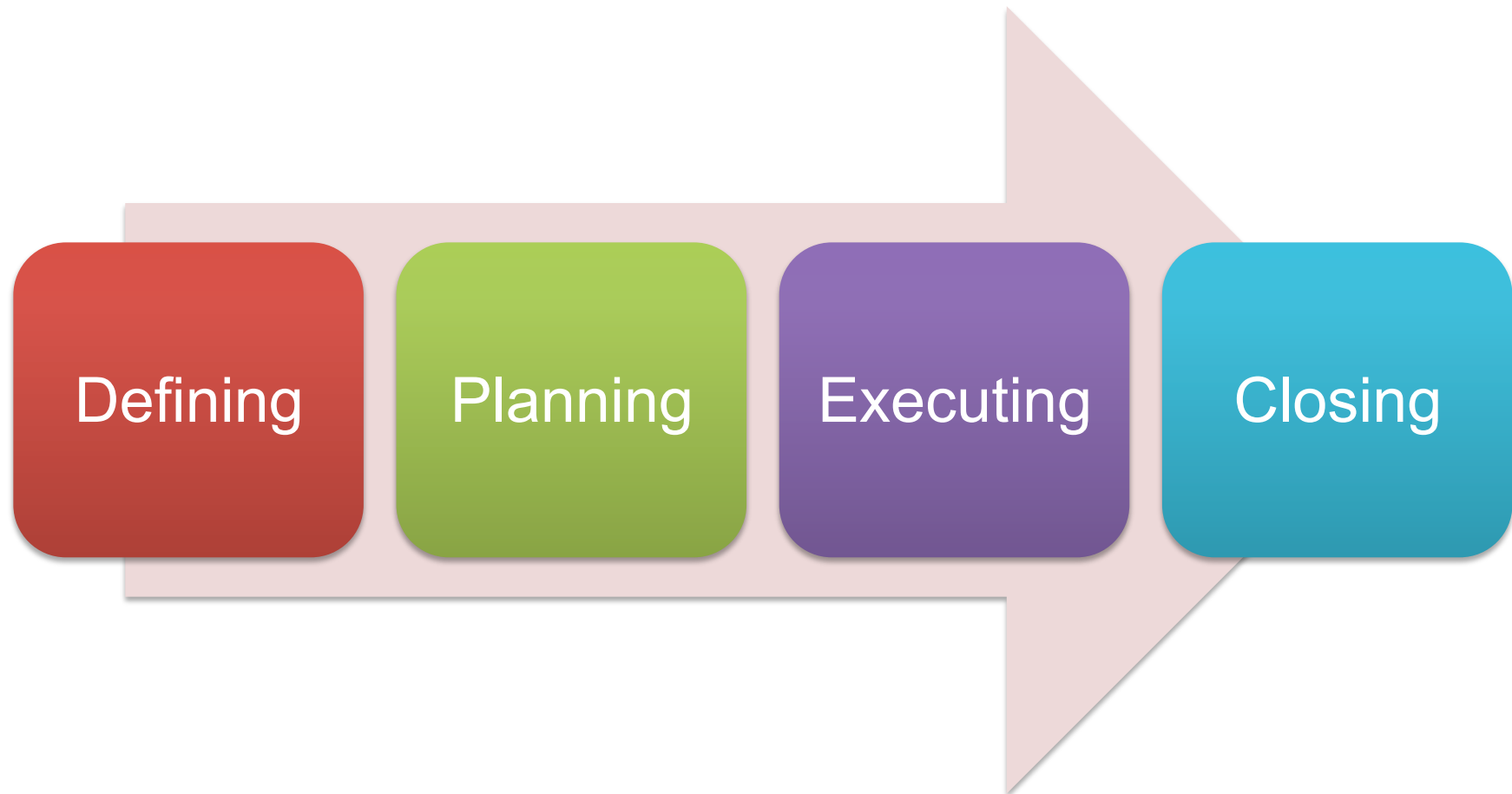
Triple Constraint Model

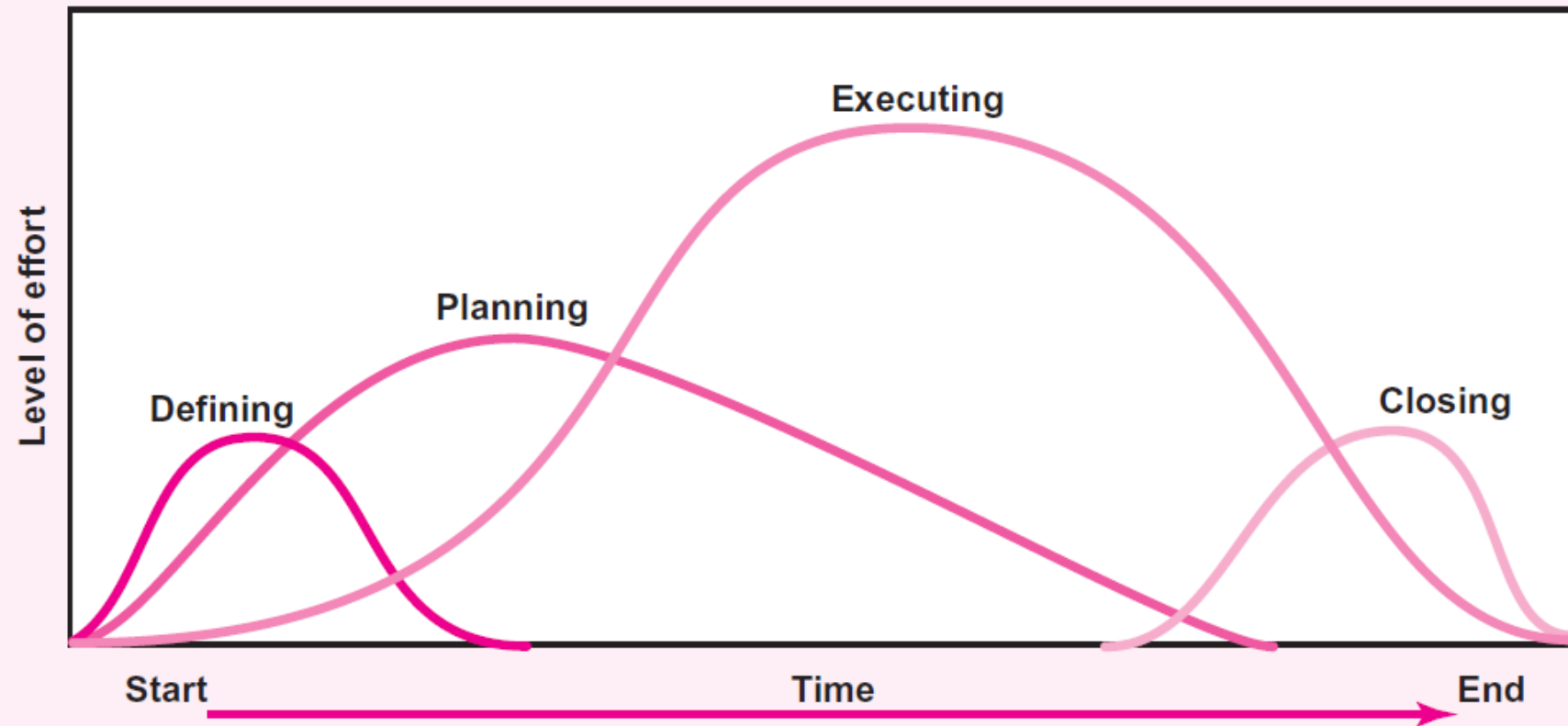


Examples of project vs. routine work

Routine, Repetitive work	Project
Taking class notes	Completing an assignment
Daily entering sales receipts into the accounting ledger	Setting up a sales kiosk for a professional accounting meeting
Responding to a supply-chain request	Developing a supply-chain information system
Practicing scales on the piano	Writing a new piano piece
Routine manufacture of an Apple iPod	Designing an iPod that interfaces with a PC, and stores 10,000 songs

Generic project life cycle model





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

Closing

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

What is Project Management?

The complete set of tasks, techniques, tools applied during the project life-cycle.



Importance of project management

Compression of the Product Life Cycle

- A rule of thumb in the world of high-tech product development is that a six-month project delay can result in a 33% loss in product revenue share.

Knowledge Explosion

- Product complexity has increased the need to integrate divergent technologies.

Triple Bottom Line (planet, people, profit)

- Businesses can no longer simply focus on maximizing profit to the detriment of the environment and society.

Importance of project management

Corporate Downsizing

- Project management is replacing middle management as a way of ensuring that things get done.

Increased Customer Focus & knowledge

- Customers no longer simply settle for generic products and services. They want customised products and services that cater to their specific needs.

Increasing speed of change and increase in the number of small projects running concurrently

- Small projects can represent hidden costs and inefficiencies

Multi-project challenges

- Not able to align with the overall strategies of the organisation
- Failure to prioritize the 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 the organizational culture to make appropriate adjustments in support of project endeavors.

Projects in an organisation

Recall, what is the purpose of a project?

Answer

To satisfy a customer's need.

How does this fit within an organisation?

Answer

A project needs to align with the organisations goals and objectives.

Benefits of the integrative approach to project management

- An overview of all project management activities;
- A big picture of how organizational resources are used;
- A risk assessment of their portfolio of projects
- A rough metric of the firm's improvement in managing projects relative to others in the industry;
- Linkages of senior management with actual project execution management.

The 3 “P’s”

Project

Program

Portfolio

Program management

Is the process of managing multiple ongoing inter-dependent projects.

Program management allows for the projects to be coordinated, often over an extended period of time and are intended to achieve a specific goal.

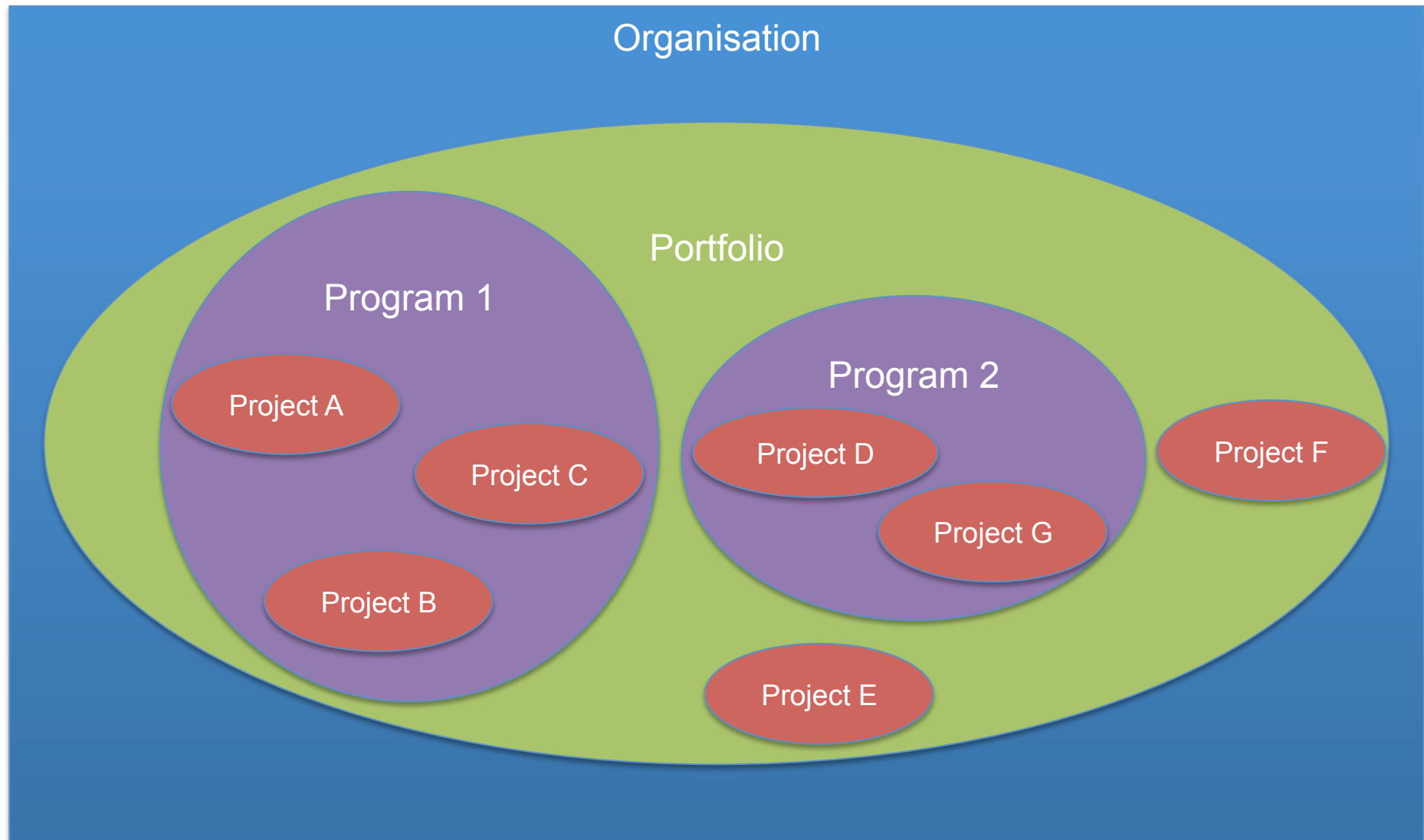
Example

- **Project:** completion of a required course in project management.
- **Program:** completion of all courses required for an engineering degree.

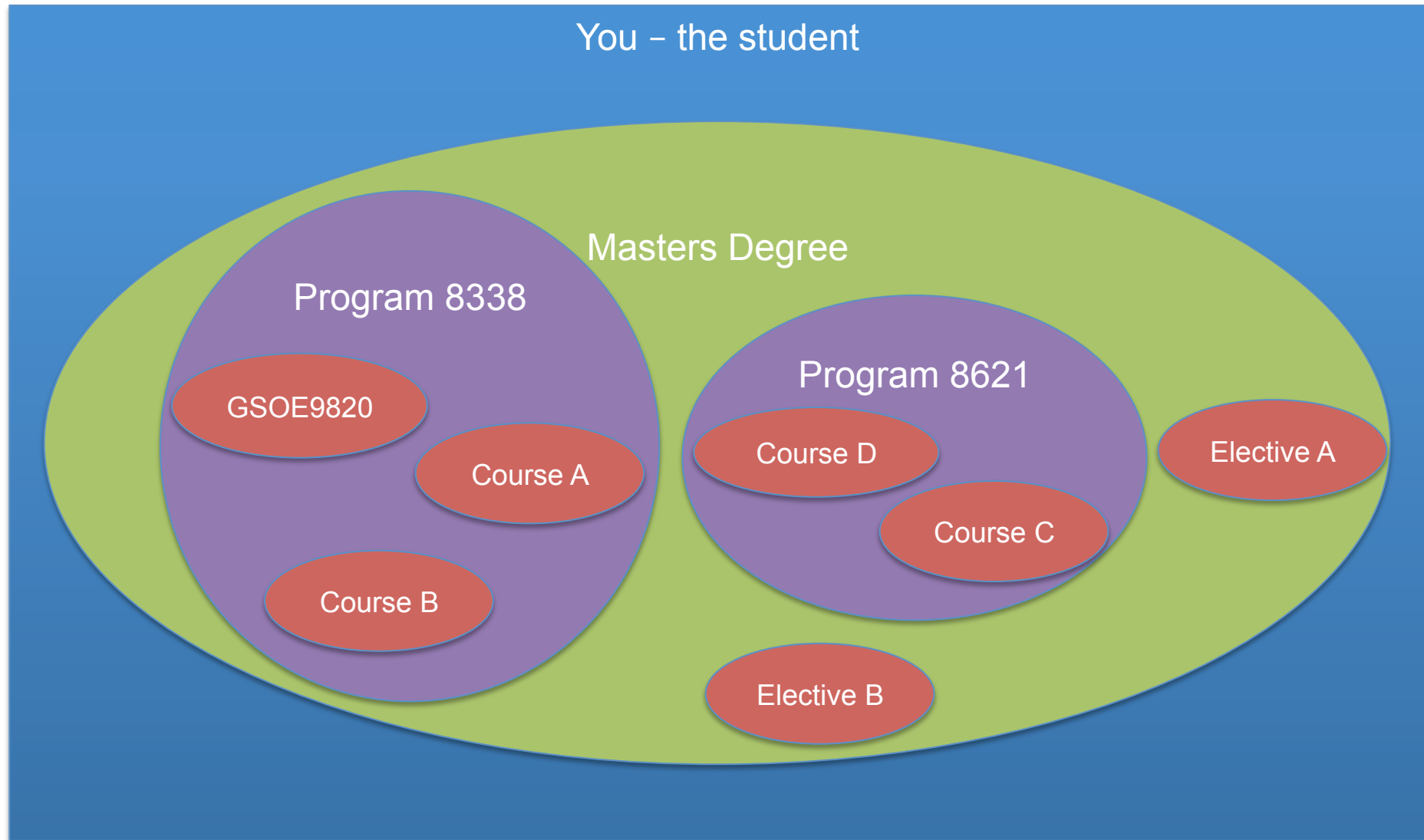
Portfolio management

Major functions of portfolio management:

- Oversee project selection;
- Monitor aggregate resource levels and skills;
- Encourage use of best practices;
- Balance projects in the portfolio in order to represent a risk level appropriate to the organisation;
- Improve communication among all stakeholders;
- Create a total organisation perspective that goes beyond silo thinking;
- Improve the overall management of projects over time



You – the student



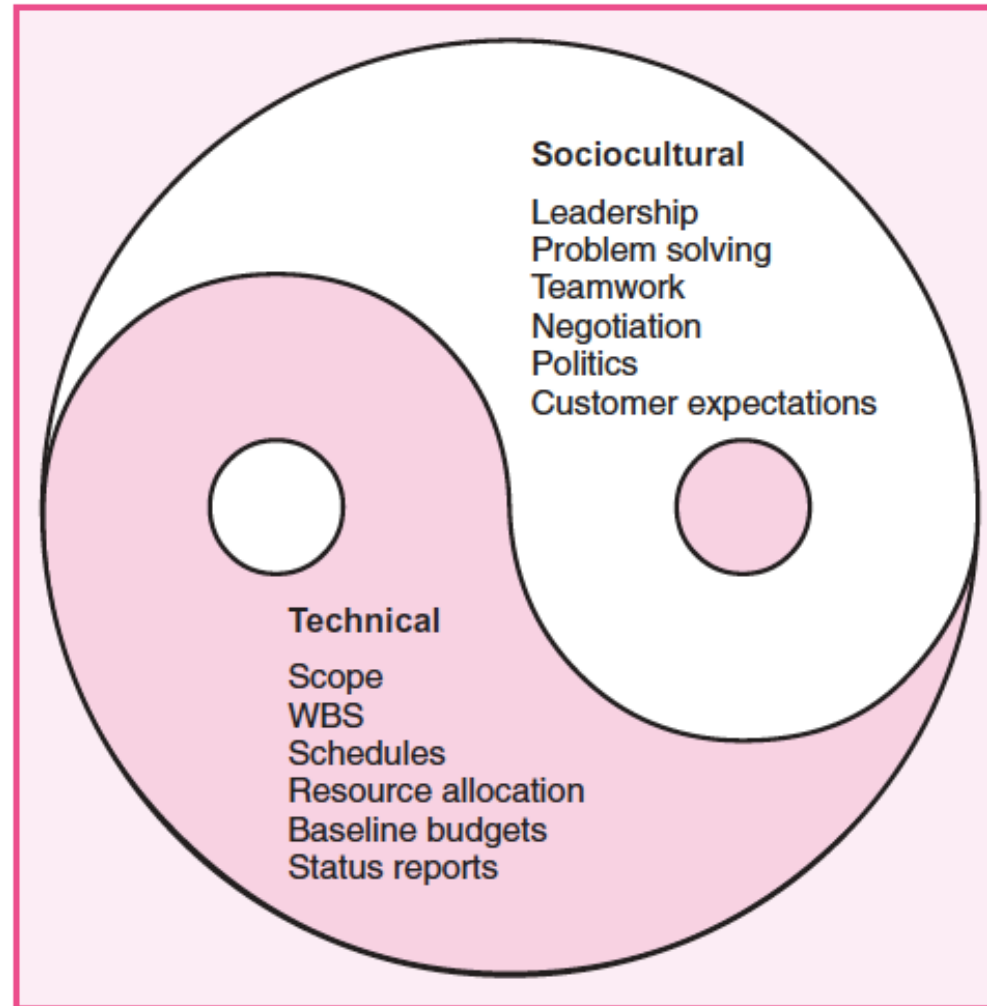
Introducing the Project Manager



Roles of the project manager

- Manages temporary, non-repetitive activities;
- 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.

Dimensions of project management



Next week ...

Organisational strategy and project selection

