

Defining Project Management

Lecture 1

What is project management
Project management evolution
What is project and project types



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Project Management

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Office hours: Wednesday 10-11.30

How the lecture will be conducted?



1. The lecture is divided into **three blocks**, where each block introduces an issue
 2. After each block there is a quiz for feedback on whether you have understood everything.
 3. The class is supplemented with **quizzes in vevox**, the link is always in the presentation.
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Organization of the semester



1. You need to complete an assignment (seminar paper) for max. of 30 points (30% of final grade). The due date is **15.12.2024** (midnight). Upload (doc/pdf file) to Information System (homework vaults)
 2. You need to present your assignment (seminar paper) for max. of 5 points (5% of final grade) during the last lecture on **18.12.2024**. It will be a 10-15 minutes presentation in last seminar.
 3. There will be a half-term exam for max. of 10 points (10% of your final grade). The date is **6. 11. 2024**. I will be held during our lecture.
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Organization of the semester



4. **Final examination** will start from 2. 1. 2025. You can get max. of 55 points (55% of final grade). The dates of the test and supplementary questions will be announced during the last week of the semester. The form of the final exam will be online in IS on the premise of University.

Individual marking guide is as follows (max 100 points):

1. Seminar paper: 30 points
 2. Presentation of seminar paper: 5 points
 3. Half-term Exam: 10 points
 4. Final Exam: 55 points
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Organization of the semester

- The final grade is the sum of all parts (seminar paper, presentation of seminar paper, half-term exam, and exam).
- Marking guide:

Grade	Points
A	100-92
B	91-84
C	83-76
D	75-68
E	67-60
F	59-0

Contents



1. PART (20 min.)

- What is project management
- Who is a project manager and their role

2. PART (20 min.)

- Project management evolution

3. PART (40 min.)

- What is a project
 - Types of projects
 - The main elements of a project
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Learning objectives



On the end of this lecture you should be able to understand and explain:

- What is a project and project management,
 - The main elements of a project,
 - The project types,
 - The main evolution stages of project management,
 - Who is project manager and their role.
-

Key readings

You can find support in the following sources:

Chapter 1. Overview

Kerzner, H. (2017). Project Management: A Systems Approach to Planning, Scheduling, and Controlling. Hoboken, New Jersey: John Wiley & Sons, Inc. ISBN 978-1-119-16535-4.

Chapter 1. An overview of project management

Haegney, J. (2016). Fundamentals of project management. AMACOM

Chapter 1 & 2 & 3

Grit, R. (2021). Project management : A practical approach. Taylor & Francis Group.

PART 1

Definition of a project management

The following would be an overview definition of project management:

Project management is the planning, organizing, directing, and controlling of company resources for a relatively short-term objective that has been established to complete specific goals and objectives.

Furthermore, project management utilizes the systems approach to management by having functional personnel (the vertical hierarchy) assigned to a specific project (the horizontal hierarchy).



Definition of a project management



- Project management is designed to make better use of existing resources by getting work to flow horizontally as well as vertically within the company.
 - This approach does not really destroy the vertical, bureaucratic flow of work but simply requires that line organizations talk to one another horizontally so work will be accomplished more smoothly throughout the organization.
 - The vertical flow of work is still the responsibility of the line managers.
 - The horizontal flow of work is the responsibility of the project managers, and their primary effort is to communicate and coordinate activities horizontally between the line organizations.
-

Project management versus management

Project management is a simply management of change.

(Lester, 2021)



Management means running a functional business as a continuum or ‘business-as-usual’.

The benefits of a project management



- **Identification of functional responsibilities to ensure that all activities are accounted for**, regardless of personnel turnover
 - **Minimizing the need for continuous reporting**
 - **Identification of time limits for scheduling**
 - Identification of a methodology for trade-off analysis
 - **Measurement of accomplishment against plans**
 - **Early identification of problems so that corrective action may follow**
 - Improved estimating capability for future planning
 - Knowing when objectives cannot be met or will be exceeded
-

Some obstacles of a project management



- Project complexity
 - Customer's special requirements and scope changes
 - Organizational restructuring
 - Project risks
 - Changes in technology
 - Forward planning and pricing
-

Why projects fail?



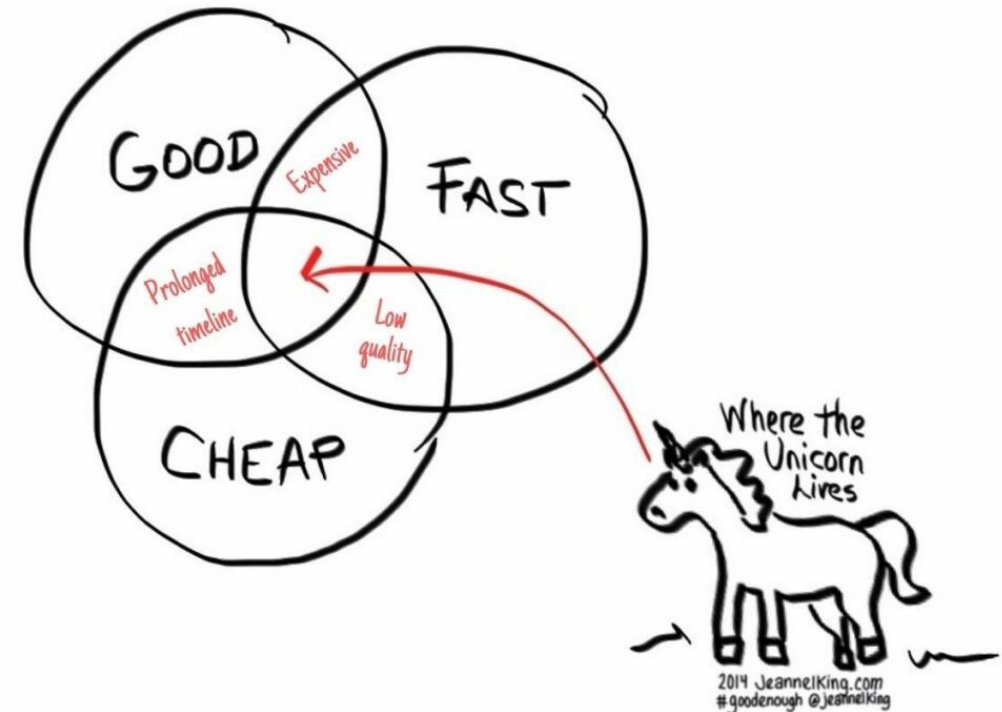
- **Poor planning**
 - **Too optimistic planning**
 - Failure to track progress
 - **Starting an activity too late**
 - **Project members are not competent enough**
 - Project members have much ‘on their mind’
 - Project workers aiming at too much perfection
 - Stakeholders are insufficiently involved
 - **Little delays all add up**
 - **Late delivery of purchased materials**
 - No provision for rectifying mistakes
 - Ignoring preliminary and finishing off activities
 - **Calamities**
 - **Unclear objectives**
 - The changing world
 - Interest costs
-

The success of the project



A successful project satisfies the sponsor, and it is project that meet following:

- Has achieved its **objectives (delivered the project result)** and is of the **desired quality,**
- **Is concluded on time,**
- **Did not cost more than was agreed on.**

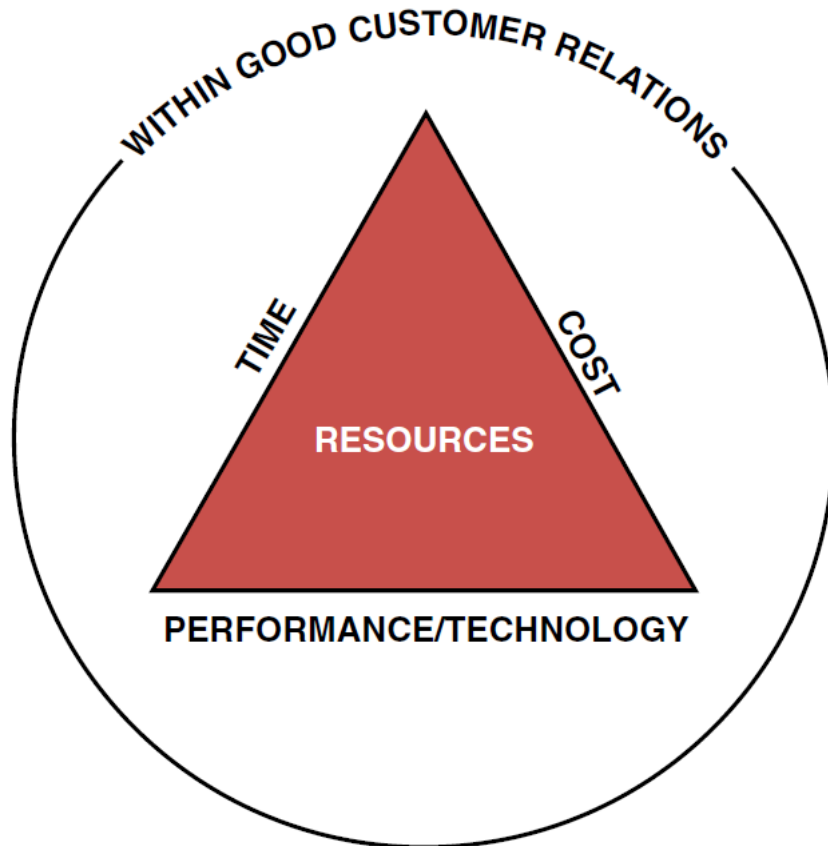


Project triangle



These criteria can be presented as triangle imperative also known as project triangle.

A pictorial representation of project management



- the figure shows that project management is designed to manage or control company resources on a given activity, within time, within cost, and within performance.
- time, cost, and performance are the constraints on the project. If the project is to be accomplished for an outside customer, then the project has a fourth constraint: good customer relations.

What type of operations are suitable for a project management?

Project organisation

- Building a house
- Designing a car
- Organising a party
- Setting up a filing system
- Setting up retail cash points
- Building a process plant
- Introducing a new computer system



Functional/line organisation

- Manufacturing bricks
- Mass-producing cars
- Serving the drinks
- Doing the filing
- Selling goods & operating tills
- Producing sausages
- Operating credit control procedures

Project management techniques are equally suitable for moving a house as for moving a government department!

Who is a project manager?



- a project manager is the temporary boss of his project team.
 - to be an effective project manager, he or she requires a good number of competences.
 - A competence is a combination of the knowledge, skills, attitudes and behavior needed to be able to function well in a particular professional situation.
 - In addition to general management skills, a project manager must be able:
 - to work in a systematic and result-oriented fashion.
 - to be stress-resistant and have a good understanding of company policy.
 - Capabilities needed:
 - leadership abilities,
 - a result-oriented working style
 - abilities to negotiate, to formulate a project plan, to monitor quality, to manage finances etc.
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Project manager versus manager



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Project manager is **proactive** to change.



Line manager is **reactive** to change and does not like
disruption.

Defining the project manager's role



- Project managers may have high responsibility, but very little authority. This lack of authority can force them to “negotiate” with upper-level management as well as functional management for control of company resources.
 - Although the project organisation is a specialized, task-oriented entity, it cannot exist apart from the traditional structure of the organization.
 - The project manager, therefore, must walk the fence between the two organizations. The term interface management is often used for this role, which can be described as managing relationships:
 - Within the project team
 - Between the project team and the functional organizations
 - Between the project team and senior management
 - Between the project team and the customer's organization, whether an internal or external organization
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Vevox questions



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PART 2

Project management evolution

What do you consider the greatest projects in humans' history?



Project management evolution



- Phase – informal method of managing projects (1917 - 1964)
- 1917 - Gantt chart developed,
- Author is Henry Gantt,
- It is scheduling diagram
- Used in project management today.

Website Development Process

Gantt Chart

PROCESS	QUARTER 1				QUARTER 2				QUARTER 3			
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Planning	█	█										
Wireframing			█	█								
Design Process			█	█	█							
Front-end development							█	█	█	█		
Back-end development					█	█	█	█				
Deployment											█	█

Project management evolution



1. Phase – informal method of managing projects (1917 - 1964)

- 1957 - The Critical Path Method (CPM) Invented by the Dupont Corporation
 - It is a technique that allows you to identify the tasks required to complete a project and to allow for some flexibility in the schedule.
 - The critical path method is used to identify the most important tasks in the project schedule, detect task dependencies, and estimate task durations.
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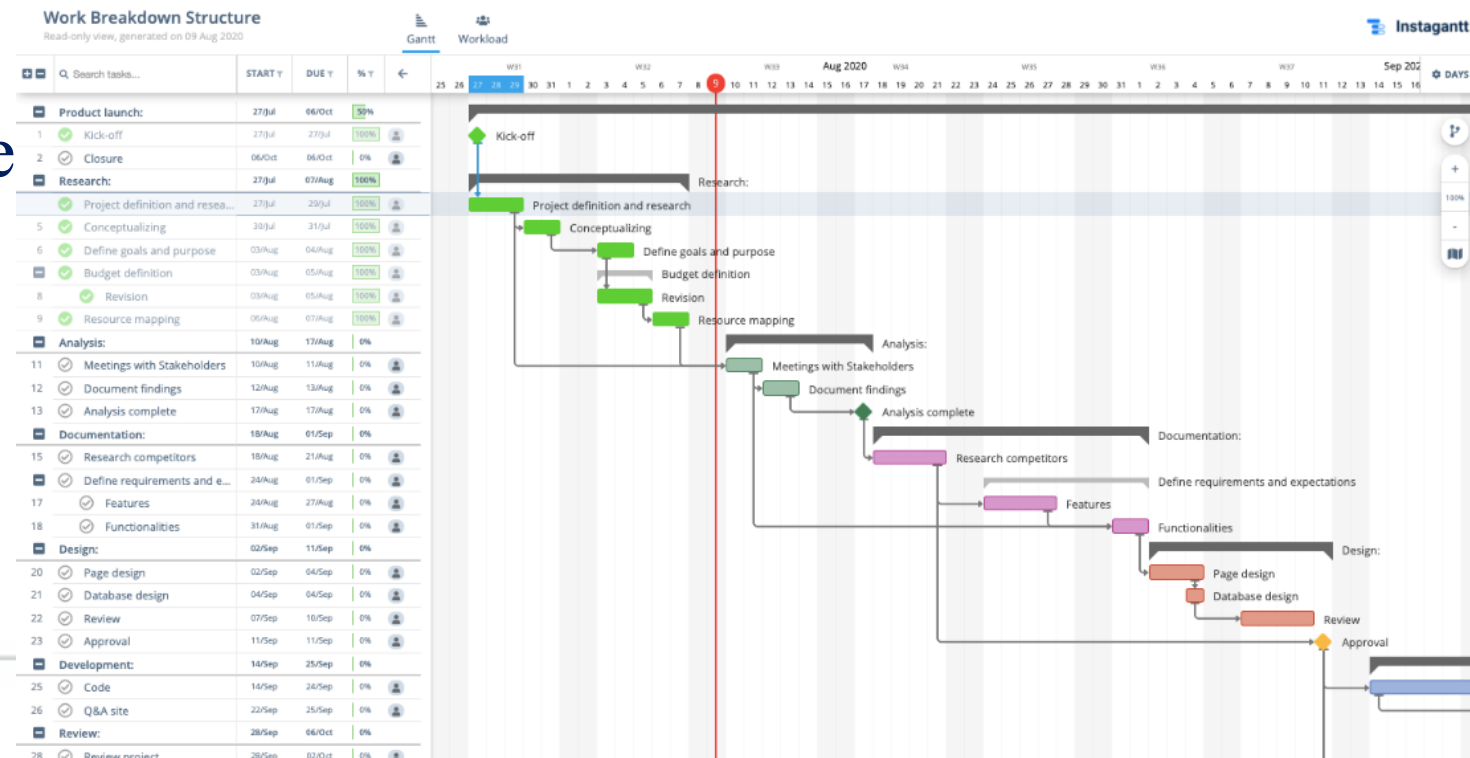
Project management evolution



1. Phase – informal method of managing projects (1917 - 1964)

1962 - United States Department of Defense Mandate the Work Breakdown Structure (WBS) Approach

- hierarchical tree structure of tasks that need to be performed to complete a project.
- the most common and valuable project management tool.



Project management evolution



2. Phase – project management (1965 – today)

- 1965 - The International Project Management Association (IPMA) Founded.
 - the world's first project management association, started in Vienna by a group as a forum for project managers to network and share information.
-

Project management evolution

2. Phase – project management (1965 – today)

1969 - Project Management Institute (PMI) Launched to Promote the Project Management Profession (USA)

- non-profit professional organisation dedicated to advancing project management practice, science, and profession.
 - the publisher of 'A Guide to the Project Management Body of Knowledge (PMBOK)' first published in 1987
 - <https://www.pmi.org/>
-

Project management evolution



2. Phase – project management (1965 – today)

- 1989 - PRINCE Method Developed From PROMPTII
 - Published by the UK Government agency CCTA, PRojects IN Controlled Environments (PRINCE) became the UK standard for all government information systems projects.
 - 1996 - PRINCE2 Published by CCTA
 - <https://www.prince2.com/eur>
-

Project management evolution

2. Phase – project management (1965 – today)

- 1998 - PMBOK Becomes an ANSI Standard
 - The American National Standards Institute (ANSI) recognised PMBOK as a standard
 - 2001 - The Agile Manifesto Written
 - the Manifesto for Agile Software Development to define the approach now known by the same name
 - <https://www.scrum.org/>
 - 2012 - ISO 21500:2012 Guidance on Project Management
-

Project management evolution



2. Phase – project management (1965 – today)

- 2021 - ISO 21500:2021 Project, programme and portfolio management — Context and concepts
 - designed for any organisation. These include public, private or community groups and any project, regardless of complexity, size and duration.
-

Project management evolution

2. Phase – project management (1965 – today)

2017 - PRINCE2 Second Major Revision by AXELOS

2018 - PRINCE2 Agile

2021 - 7th Edition of PMBOK Guide Released

2023 - PRINCE2 7 was released in September

<https://www.prince2.com/eur>

<https://www.pmi.org/>

What will be next?


Project management evolution

What will be next?

- The Challenges of globalisation:
 - Projects become larger, more complex and challenging to manage.
 - Teams are more diverse and spread across the world.
 - Cost pressures push work offshore to low-cost countries, which itself presents several issues.
 - The world is changing, and project management will need to change with it -> HOW?
 - Possibility of new techniques and better practices will arise.
-




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WHAT DO YOU
CONSIDER THE...

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PART 3

What is a project?

“A unique process, consisting of a set of co-ordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including constraints of a time, cost and resources.”
(Lester, 2021)



Type of activities taking place in the organisation



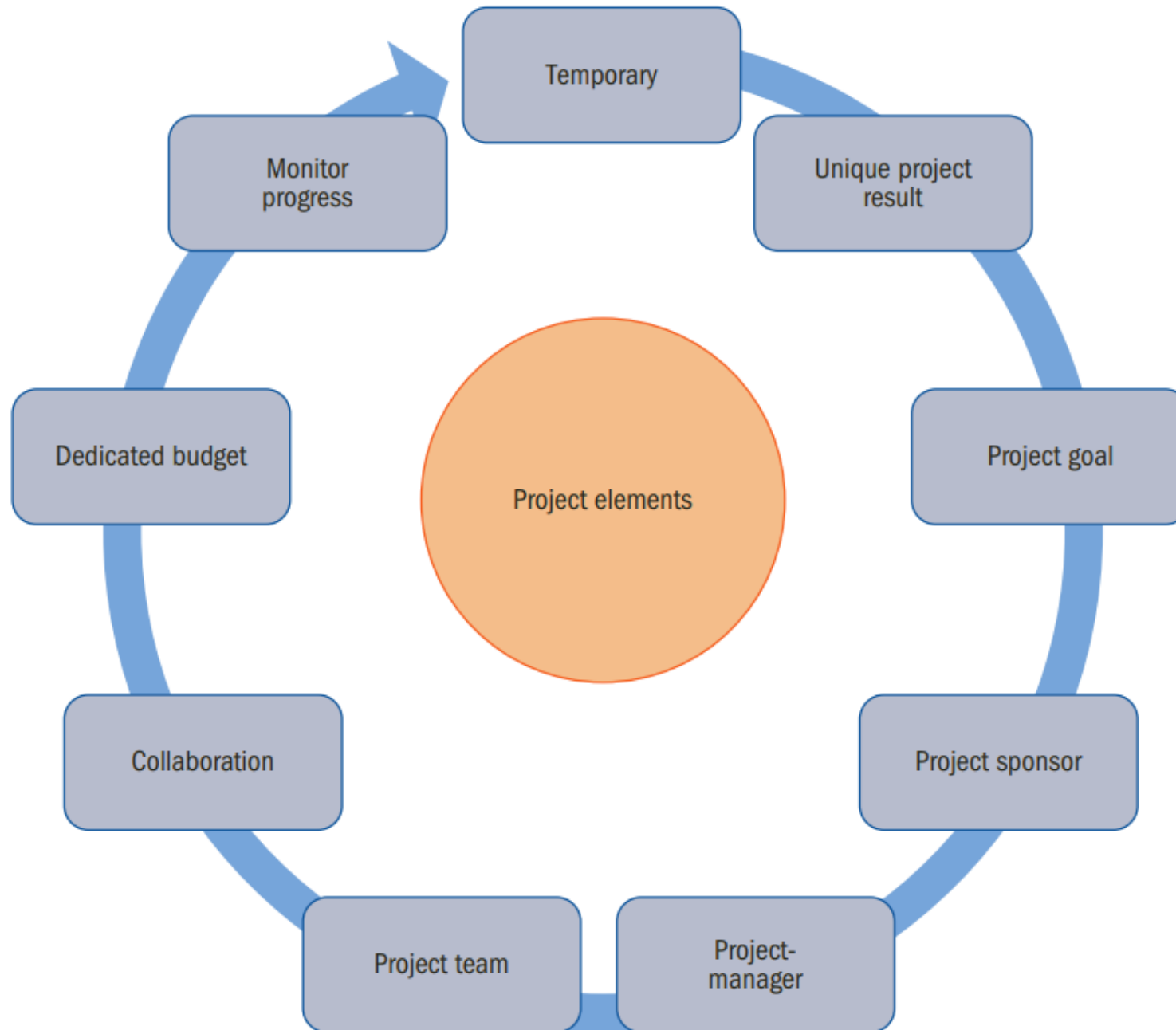
TABLE 1.2 Types of activities

	Improvisation	Project-based	Routine-based
When?	Ad hoc (sudden), respond quickly	To be anticipated, once-only	Recurring
Result?	Unsure	Reasonably sure	Definite and efficient
Familiarity?	New, sudden	New, plan-based	Familiar
Freedom?	Great level of freedom, flexibility required	Thought through in advance	Barely any freedom
Method?	Chaotic, not according to procedure	According to procedure, fixed procedure	Clear, fixed procedure

Project Elements



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The most important elements of a project



- specific objective to be completed within certain specifications
 - defined start and end dates
 - funding limits (if applicable)
 - Consume human and nonhuman resources (i.e., money, people, equipment)
 - multifunctional (i.e., cut across several functional lines)
-

What does the project deliver?



- A **unique product** that can be either a component of another item, an enhancement or correction to an item, or a new end item in itself (e.g., the correction of a defect in an end item);
 - A **unique service** or a capability to perform a service (e.g., a business function that supports production or distribution);
 - A **unique result**, such as an outcome or document (e.g., a research project that develops knowledge that can be used to determine whether a trend exists or a new process will benefit society); and
 - A **unique combination of one or more products, services, or results** (e.g., a software application, its associated documentation, and help desk services).
-

Temporary view of a project



- Temporary endeavour → a project has a definite beginning and end.
 - The end of the project is reached when one or more of the following is true:
 - The project's objectives have been achieved;
 - The objectives will not or cannot be met;
 - Funding is exhausted or no longer available for allocation to the project;
 - The need for the project no longer exists (e.g., the customer no longer wants the project completed, a change in strategy or priority ends the project, the organizational management provides direction to end the project);
 - The human or physical resources are no longer available; or
 - The project is terminated for legal cause or convenience
-

How long does the project takes?



What is meant by a “relatively” short-term project?

- Not all industries have the same definition for a short-term project.
 - In engineering, the project might be for six months to two years; in construction, three to five years; in nuclear components, ten years; and in insurance, two weeks.
 - Long-term projects, which consume resources full-time, are usually set up as a separate division (if large enough) or simply as a line organization.
-

Types of project



- Technical projects
- Social projects
- Commercial projects
- Mixed projects
- Events

Other ways how to categorize projects are according to content (internal sponsor vs external sponsor), or providing a service (course, event) or product (building, bridge).

Types of project



Technical projects

- aim is to effect some change in technology or to come up with a new product.
- Usually easy to plan.
- Also known as ‘hard’ projects.
- End result is obvious.

Examples: construction of a building, a bridge, a road, a pipeline, a railway line

Types of project



Social projects

- Outcome is not that obvious.
- The aim is to change the corporate culture or organisational structure of a company.
- They deal with the way people work together.
- Known as ‘soft’ projects.
- More difficult to execute as people tend to resist to change

Examples: reorganisation of a firm, adaptation of work procedures.

Types of project



Commercial projects

➤ **The goal is to earn money.**

Examples: conducting marketing research, developing a new product or introducing a new product on the market.

Types of project



Mixed projects

- combine some aspects of the both technical and social projects.

Example: the design, programming, and installation of an extensive computer program is an example of a mixed project.

- complicated since the project team members come from variety of areas of expertise and do not always use the ‘same language’.
-

Types of project



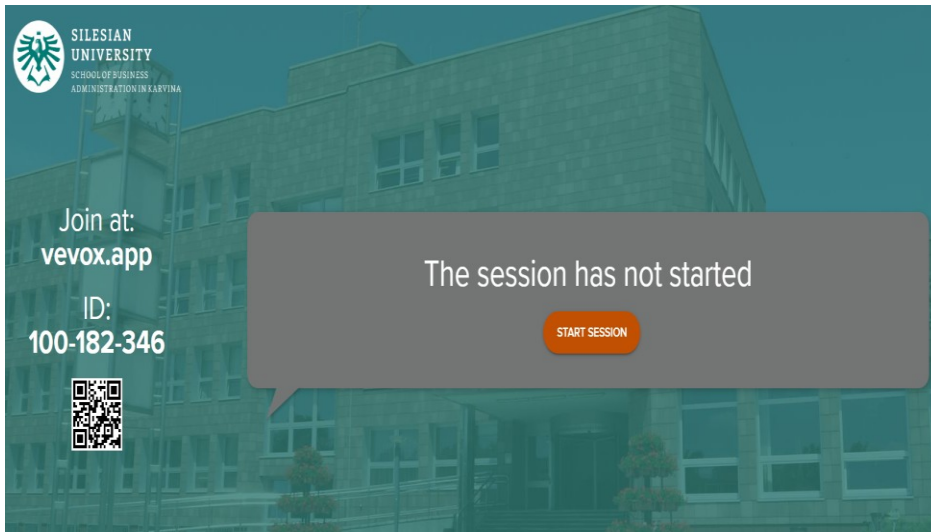
Events

- special kind of projects.
- the end result only appears at a certain point in time.

Example: a computer fair, pop festival, car show.




Vevox questions



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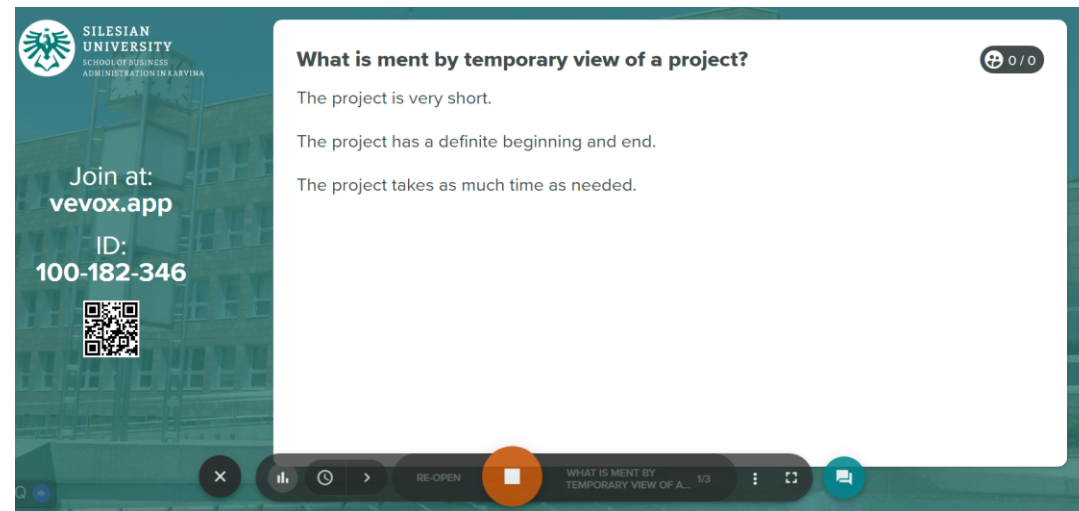
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What is ment by temporary view of a project? 0/0

- The project is very short.
- The project has a definite beginning and end.
- The project takes as much time as needed.

RE-OPEN

WHAT IS MENT BY
TEMPORARY VIEW OF A... 1/3

References



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- **Grit, R. (2021). Project management : A practical approach. Taylor & Francis Group.**
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 - **<https://www.projectsart.co.uk/history-of-project-management/brief-history-of-project-management.php>**
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