



**Project management (business  
planning, funding, marketing,  
performance)**

scheduling and estimation

# Content

- Introduction to scheduling and estimation
- Budget estimation,
- Methods of time management,
- Schedules - Gantt chart.

# Introduction

- The aim of effective project management is to successfully end the project within the specified time and schedule.
- The schedule should include:
  - project milestones,
  - Activities,
  - deliverables.
- Those items are often estimated in terms of resource allocation, budget and duration.

# Budget estimation

There are two ways to create a budget for a project:

1. bottom-up down (to estimate the costs of each components/task and then to add all partial costs together)
2. top-down (to estimate total project costs and then divide it in the appropriate ratios among the components).

# Budget estimation

During the creation of project budget one can find useful to:

- Find a past project that was similar in type or scope to the current one, and use it a model.
- Start from estimating the core costs of the project (they often include team members, equipment, software, travel, etc.) Then compare those core costs to the total budget.
- Prepare to change budget estimates.

# Budget estimation

During the creation of project budget one can find useful to:

- Monitor resources availability.
- The budget should be transparent and the team should be informed of the evolving budget forecasts.
- Manage the scope of the project to avoid unplanned work that leads to cost overruns; monitoring the changes.

# Methods of time management

Estimating project duration is a key function of scheduling. To estimate project duration it is important:

- To understand the aim and to divide it into smaller parts – if a particular activity takes up more than 10 percent of the scheduled time it should be broken down.
- To prioritize all activities and tasks.
- To estimate resource and personnell availability
- To estimate duration of the particular activities, as it affects the project timetable – a very effective way of estimating activity duration is to use historical data.

## Useful tools: Gantt chart

- Gantt chart is one of the most popular ways of presenting a project schedule.
- It is a type of bar chart, developed by Henry Gantt in the 1910s. It illustrates the starting and final dates referring to the particular events, periods or tasks within the project as well as to the project taken as a whole.
- It can also contain additional information such as: current project progress or milestones.



# Useful tools: Gantt chart

	1th year				2nd year				3d year			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
<b>Task 1.</b>	Active	Active	Active	Active	Idle	Idle	Idle	Idle	Idle	Idle	Idle	Idle
<b>Task 2.</b>	Idle	Idle	Active	Active	Active	Active	Idle	Idle	Idle	Idle	Idle	Idle
<b>Task 3.</b>	Idle	Idle	Idle	Idle	Active	Active	Active	Active	Idle	Idle	Idle	Idle
<b>Task 4.</b>	Idle	Idle	Idle	Idle	Idle	Idle	Idle	Active	Active	Active	Idle	Idle
<b>Task 5.</b>	Idle	Idle	Idle	Idle	Idle	Idle	Idle	Idle	Idle	Active	Active	Active

## Budget and time estimation - exercise

Try to estimate cost for your project.

- Think about resources do you need.
- Monitor resources availability.
- Cost estimation.
- What about unplanned costs?
- Plan the time.
- Do Gantt chart.

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