



Research Project Writing - “Absolute Beginners”

PROJECT MANAGEMENT

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Part 4 – 25/06/2019



Tuesday **11 June**, 09:00-10:00 – **Scientific Proposal - Excellence**

- *How to structure the excellence part of the proposal*
- *How to define Objectives*
- *State of Art and beyond*
- *Methodology and Approach*

Thursday **13 June**, 09:00-10:00 – **Impact**

- *Scientific, economic and societal Impact*
- *Dissemination & Communication (open access, data management, outreach)*
- *Exploitation of research results, IPR and Technology Transfer*

Tuesday **18 June**, 14:00-15:00 – **Implementation**

- *Definition of Work Packages*
- *Deliverables and Milestones*
- *Graphical representation of project activities*

Tuesday **25 June**, 14:00-15:00 – **Project Management**

- *Temporal assessment of project activities (e.g Gantt Chart)*
- *Project Management Structure*
- *Risk Analysis*



Project Management

- ✓ Temporal assessment
- ✓ Project Management
- ✓ Risk Analysis



For the **proposal**:

- to visualize **project timelines**
- to visualize the **time it takes to perform** the particular task

For **project management**:

- to plan **use of resources**
- **to monitor** the advancement of execution
- **to assess** the achievements of the project

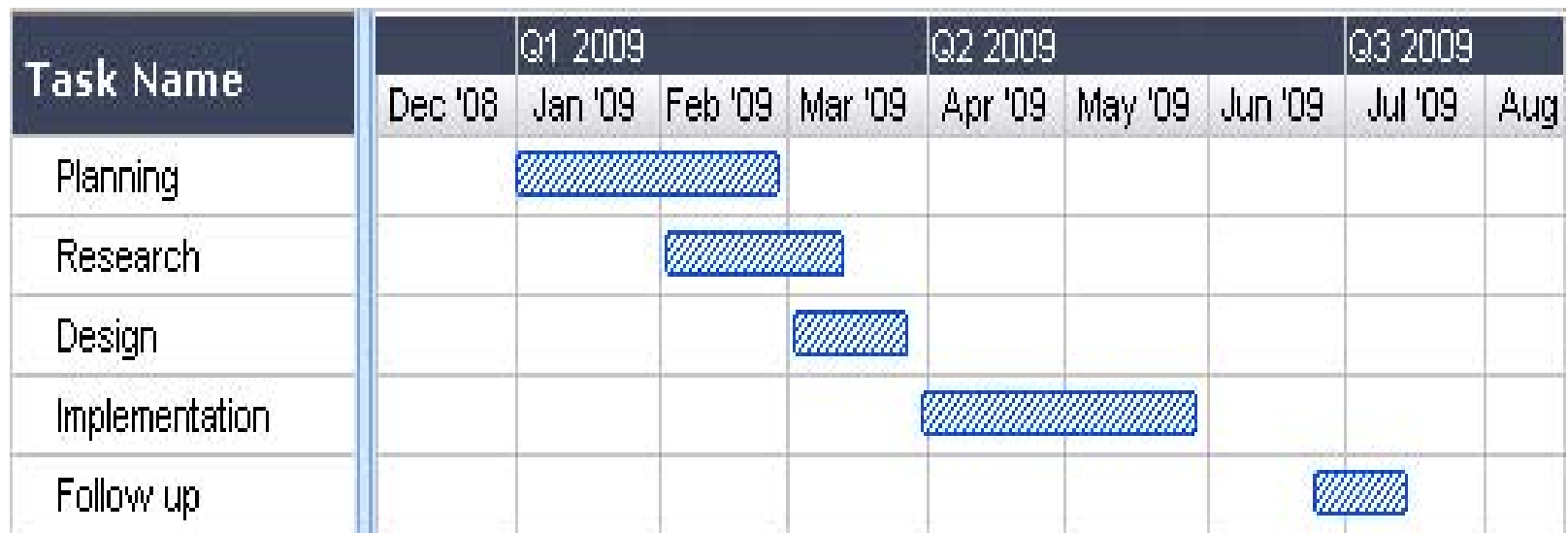
A **Gantt chart**, commonly used in project management, is one of the most popular and useful ways of showing **activities** (tasks or events) displayed **against time**.

On the left of the chart is a list of the activities and along the top is a suitable time scale. Each activity is represented by a bar; the **position and length of the bar** reflects the **start date, duration and end date** of the activity.

This allows you to see at a glance:

- What the various activities are
- When each activity begins and ends
- How long each activity is scheduled to last
- Where activities overlap with other activities, and by how much
- The start and end date of the whole project

To summarize, a Gantt chart shows you **what has to be done** (the activities) and **when** (the schedule).



A **bar graph** → is used to illustrate a **project schedule**.

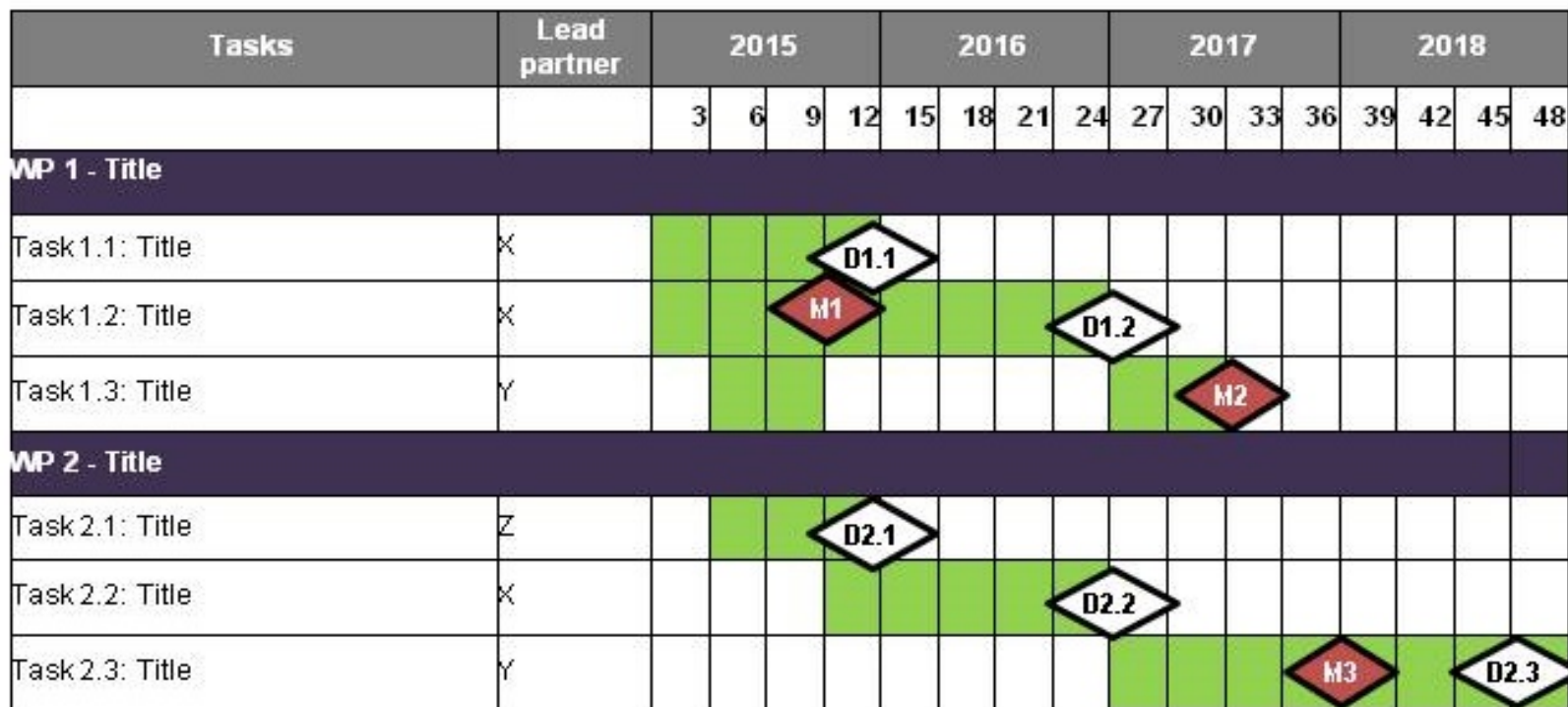
Shows the **start dates, end dates** and individually breaks down the project into smaller tasks.

The chart shows a **horizontal bar** which represents the **task**, while the **length** of the bar shows the **time** required to complete the task.

On an x-y axis, the **x axis** represents the **time for project completion**.

A Gantt Chart should list the following

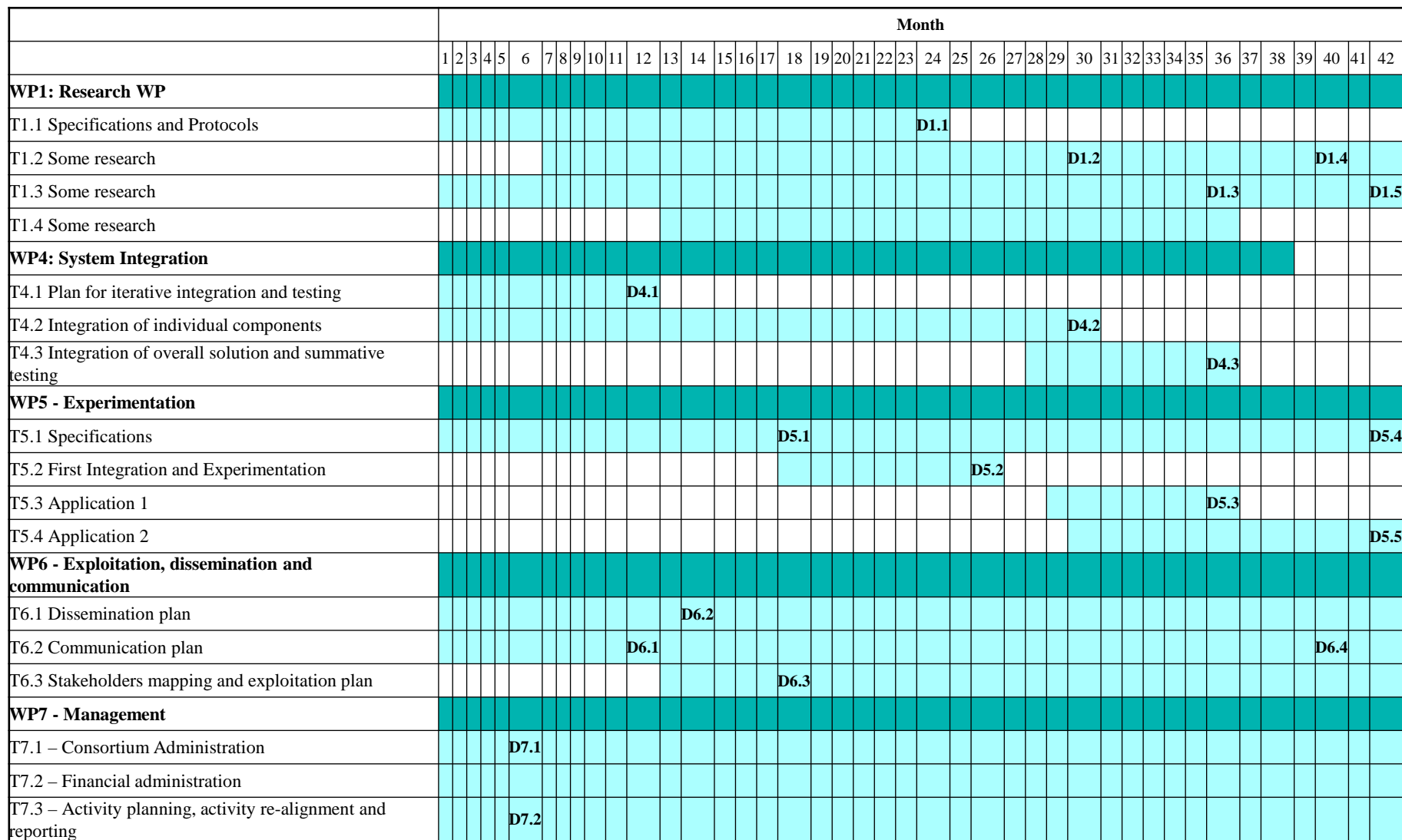
- **Work Packages**
- List of major **deliverables**
- List of major **milestones**



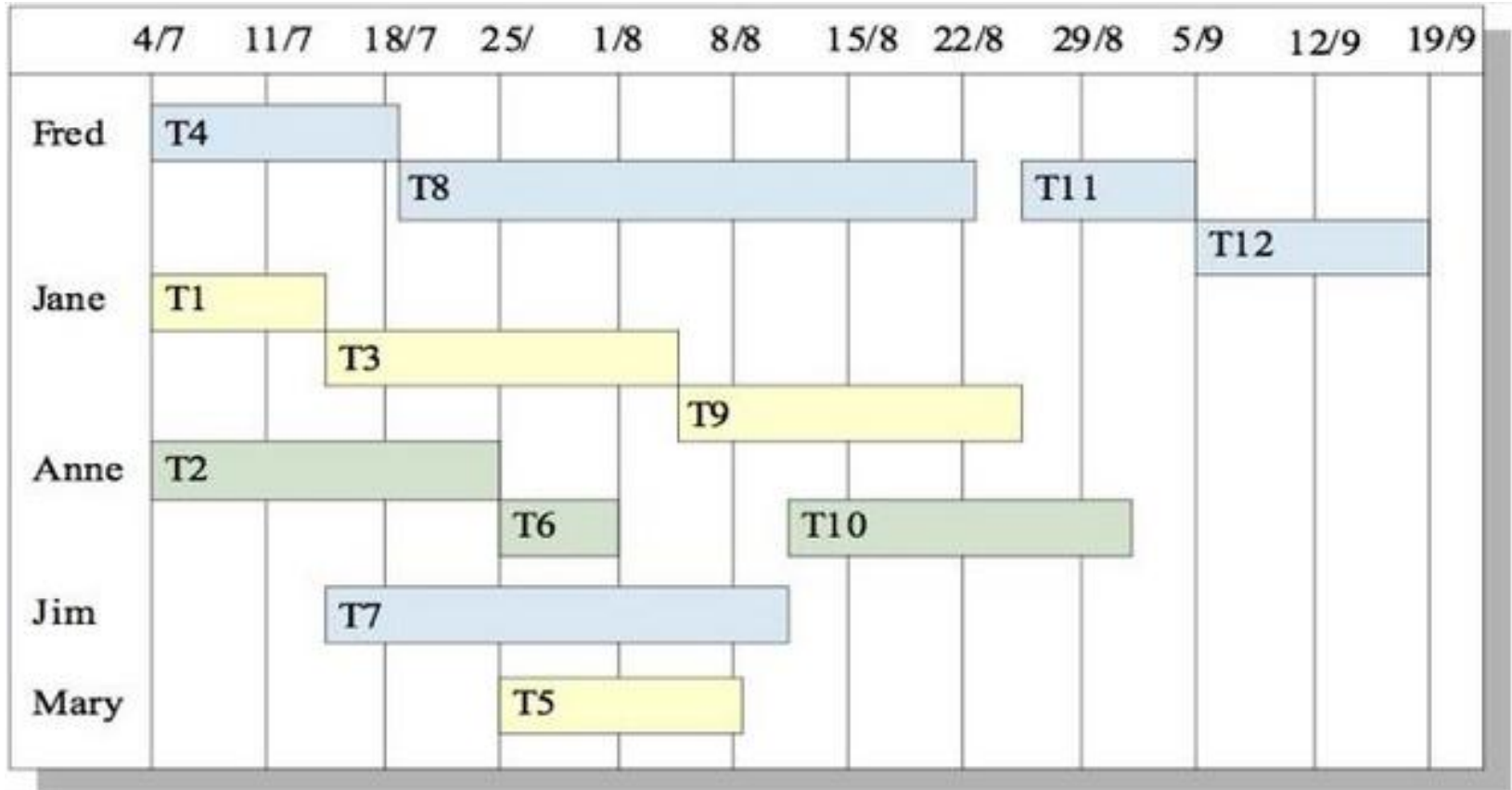
Select Gantt charts also show the **dependency relationships between activities**. Independent tasks are connected using **arrows**, which show the relationship between two independent tasks. The relationship stems from the dependency of one task on another, where **one task must be finished in order to being the other task**.

One of the key differences between a **PERT chart** and a **Gantt chart** is the way the information is presented. Gantt charts present information in the format of a **bar chart**. This presentation helps show the percentage of work completed for each task. A PERT chart, on the other hand, displays information as a **network model**.

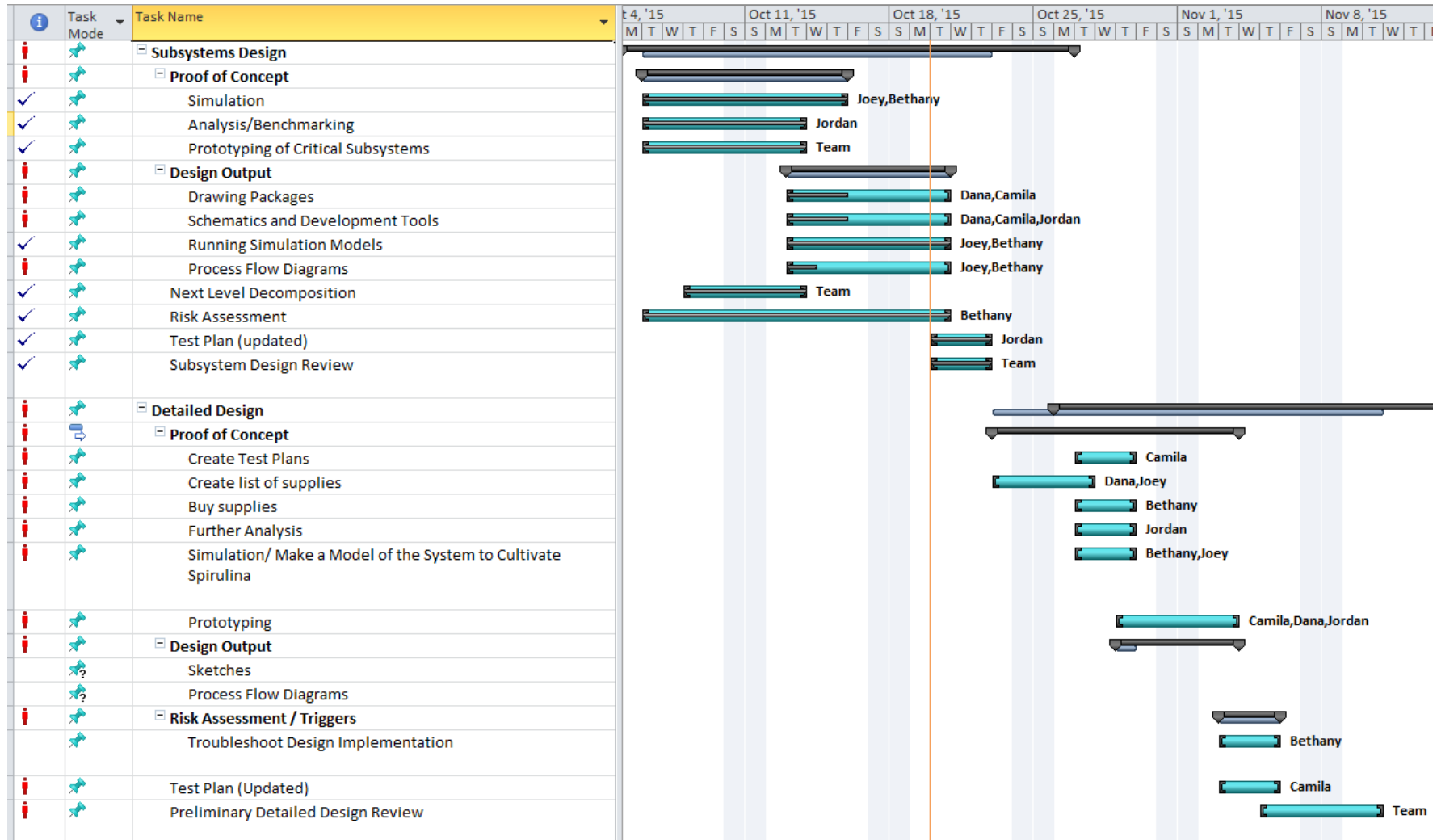
Gantt Chart /Example 1



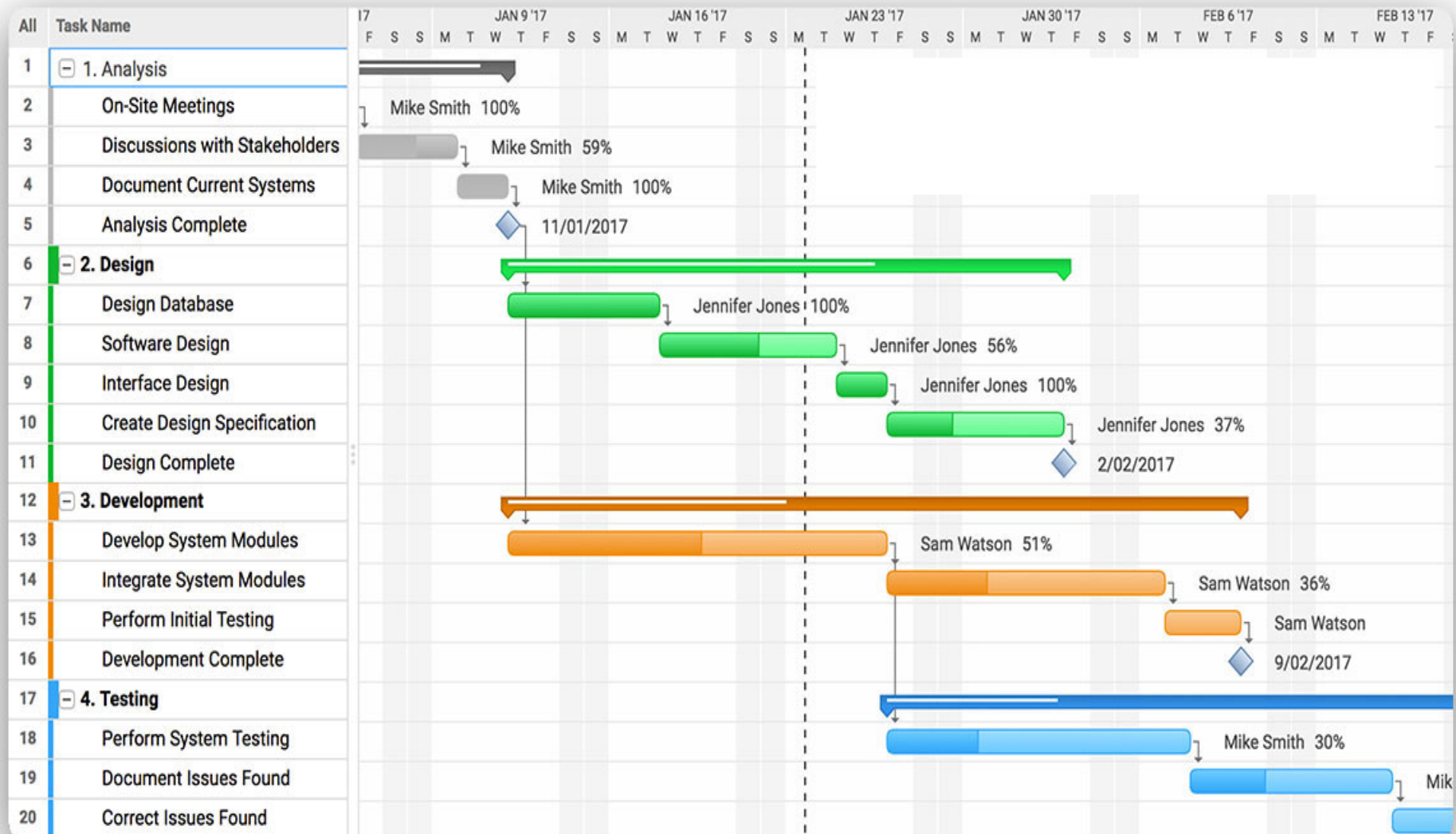
Use of resources



Gantt Chart /Example 3



Gantt Chart /Example 4



Project management is the practice of

- ✓ initiating
- ✓ planning
- ✓ executing
- ✓ controlling
- ✓ closing



the activities (work packages/tasks) of the project to achieve the objectives at the specified time

Project Management Structure defines the **main roles** for the project participants

It is used to

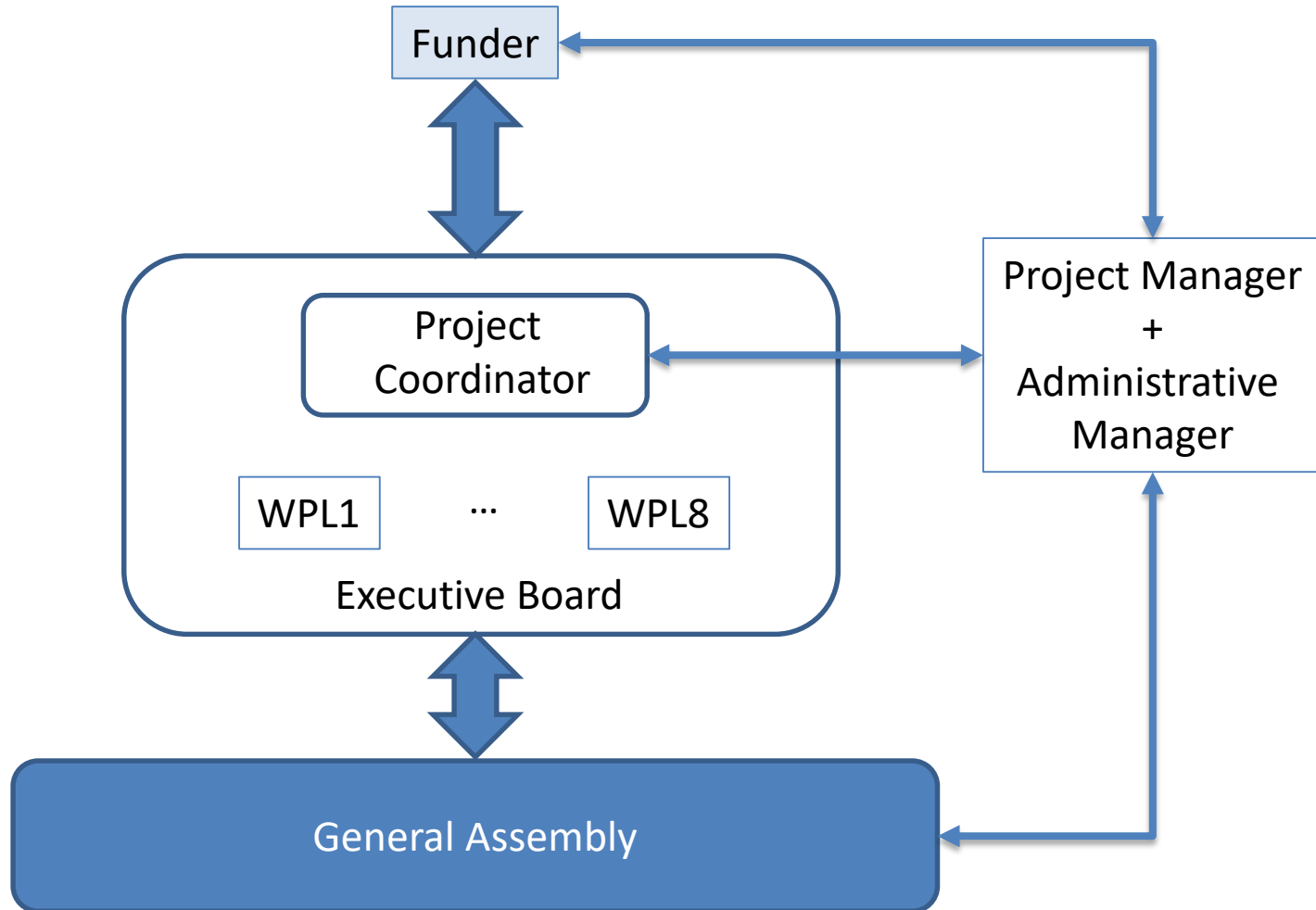
- ✓ Define **responsibilities** for the implementation of project activities
- ✓ **Monitor** the achievement of project objectives
- ✓ Assess the **quality** of the project implementation
- ✓ Give **feedback** on the project results
- ✓ Report to the **funder**
- ✓ Manage **deadlines** and use of **resources**

Main roles

- General Assembly
- Executive Board / Project Management Board
- Project Coordinator / Project Manager
- Administrative / Financial Manager
- Work Package Leaders



Example: Management Structure



- Ensure that the management structure **supports your main activities**

Large projects require a more robust structure than small projects

Define:

- ✓ Who is responsible for what?
- ✓ Who will decide what, how and when?

Check partners' expertise

- If anything valuable is still missing, you might need an **Advisory Board**

Are there ethical issues involved in the proposal?

- You might need an **Ethical Board**

The **decision making** has to be clear and transparent:

What will happen in case of conflict? What will happen, in case of no agreement on something? Who will decide then? Veto right?

In **Innovation projects** it is advisable to appoint an **Exploitation and Innovation Manager** to be part of the management structure:

- ✓ Support the (industrial) partners in setting up their **individual business plans**
- ✓ Support with **IPR related issues**

Hint: the partner in charge of innovation management has a commercial interest in the technology getting successfully commercialized!

- It's important that the **Innovation Manager** works hand-in-hand with the project coordinator

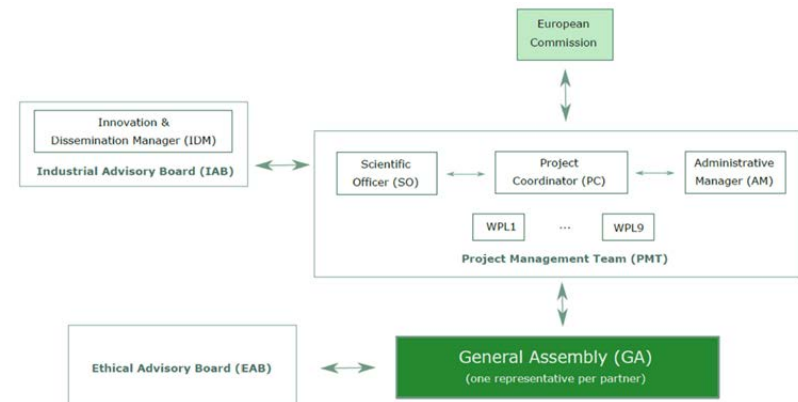
It might be of added value for the management structure of your project to create an **IPR-Exploitation Board**



Management Structure

“The overall structure is composed of:

- *a Project Coordinator (PC)*
- *the Scientific Officer (SO)*
- *a General Assembly (GA)*
- *a Project Management Team (PMT)*
- *the Work Package Leaders (WPLs)*
- *Industrial and an Ethics Advisory Boards*
- *an Innovation and Dissemination Manager (IDM)”*



Management Procedures Collaborative Projects

Meetings: Project meetings, Final meeting, Advisory Board meetings, ...
Indicate: who, when, where, what!

- ✓ Measures for arrangements of **confidentiality**
 - ✓ **IPR** Management
 - ✓ **Decision making** and procedural changes
 - ✓ Rules for **exploitation and management of knowledge** after the end of the project
- Milestones
- Risk management

Project Management Handbook



It is all about **monitoring** the activities of the project

- ✓ Organise a (supervisory/advisory) **board** if necessary
- ✓ Foresee regular **meetings** with the boards
- ✓ Think about **reports**: deliverables/milestones
- ✓ Schedule **monitoring activities** throughout the duration of the project



If there is a **team**, it could be involved in the scientific monitoring

→ **Organise lab meetings!**

Financial management is usually performed by the administration

→ Regular meetings with the researchers are beneficial!

Risk: Any event not governed by you that might happen with a negative impact on your project

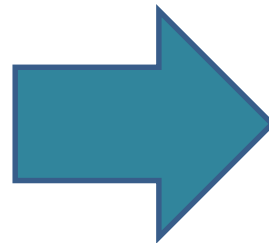


List **ALL** risks related to the project

For each risk:

- Provide a **short description** (refer to the concerned WPs)
- Indicate its **likelihood** (low – medium- high)
- Indicate its **impact** on the project (low – medium- high)
- Explain the **plan B (mitigation/contingency plan)**

- ✓ Project **Costs Estimates**
- ✓ Activity **duration** estimates
- ✓ **Stakeholders** involvement
(Internal / External project actors)
- ✓ **Quality** of implementation
- ✓ **Dissemination** and **communication** management
- ✓ **Environmental** factors
- ✓ **Project Management** activities



Risk Management

Example: Risk management Individual Project

| Risk | Likelihood / Impact | Contingency Plan |
|---|--|---|
| R1: Not all parents will grant the participation of their children to the interview (see WP 2) | Medium Likelihood Medium Impact | (choose one or more) <ul style="list-style-type: none">A face-to-face meeting will be arranged with the parents refusing to participate in the research to better explain the activity and to answer their concernsThe interview will be extended to new classes in order to reach the minimum of children participating to the interview. |
| R2: During the project the host institution won't organise a workshop on grant writing. Indeed topics of seminars might change every year. (see T3) | Low likelihood Low impact | I'll participate to a training workshop on grant writing directly organised by APRE, whose UNIVR is member. |

Example: Risk management Collaborative Project

| Description of risk (indicate level of likelihood: Low/Medium/High) | Work package(s) involved | Proposed risk-mitigation measures |
|--|--------------------------|---|
| R1: The system is not ready for deployment (medium) | WP3 | All proposed developments will be required to have a baseline version that can be tested and used even if more advanced versions are not ready. |
| R2: Delay in developing the sensors (low). | WP1 | Most of the basic components are already known and the related commercial orders can be issued at an early stage of the project. |
| R3: Integration required over technology from several partners with different communication platforms and different protocols (low). | WP2 | Early visits, agreement and consultation with each partner on the communication strategies that are currently in place. |



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