



## Università degli Studi di Padova

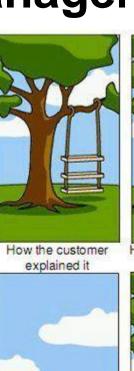
Project management: basic elements

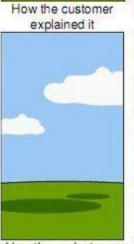
leonardo.mazzoni@unipd.it

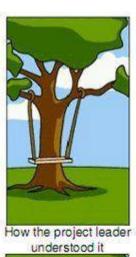


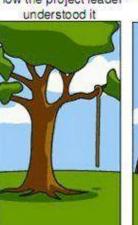
## Rationale for project manager









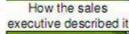


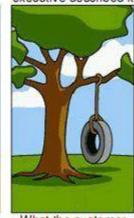


How the engineer









What the customer really needed

How the project was documented

What operations installed

was billed

How the helpdesk supported it



## Definition of a project

In 1994, Russell D. Archibald, one of the founders of PMI, described it as "A complex effort, involving interrelated tasks performed by various organisations, with well-defined objectives, schedules and budgets".

Later in 1996 PMI characterises it as "A temporary effort undertaken to create a unique product or service".

For the Harvard Business School, on the other hand, 'A project is a single set of activities designed to produce a defined result, with a start and end date, and a precise allocation of resources'.



## Characteristics of a project

- Complex → many actors, different degrees of risk and unpredictable events
- Uniqueness → context and elements vary
- Temporality → starting and ending phases
- Specific Goals
- Planning and continuous control of resources considering the temporal, budget and technical constraints



# Characteristics of a project



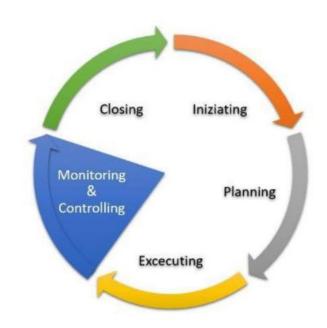


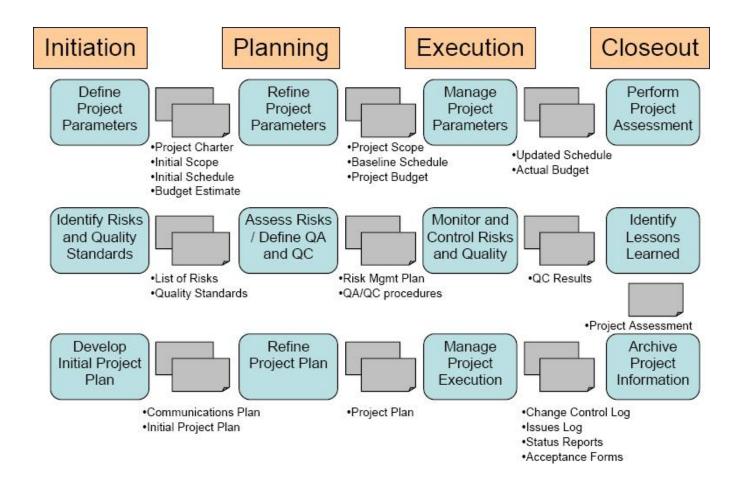
## Competencies of a project manager

- Learning to face organisational inertia and instil change
- Design, plan and strategise
- Communication and negotiation with different stakeholders
- Collaboration
- Knowledge of technical aspects, market dynamics and enforced agreements



### Phases of a project







### **Initiation**

- It is necessary to set the context of the project, at both organisational and market levels
- A blueprint / project charter is defined and includes:
- The objectives of the project and their justification;
- The requirements that meet the needs and expectations of the stakeholders;
- The results (deliverables) to be produced by the project;
- The milestones and key deadlines to be met;
- The project budget;
- The contractual assumptions and constraints;
- The project manager assigned to the project;
- The project success criteria.



### **Initiation**

#### It is necessary to set the project scope:

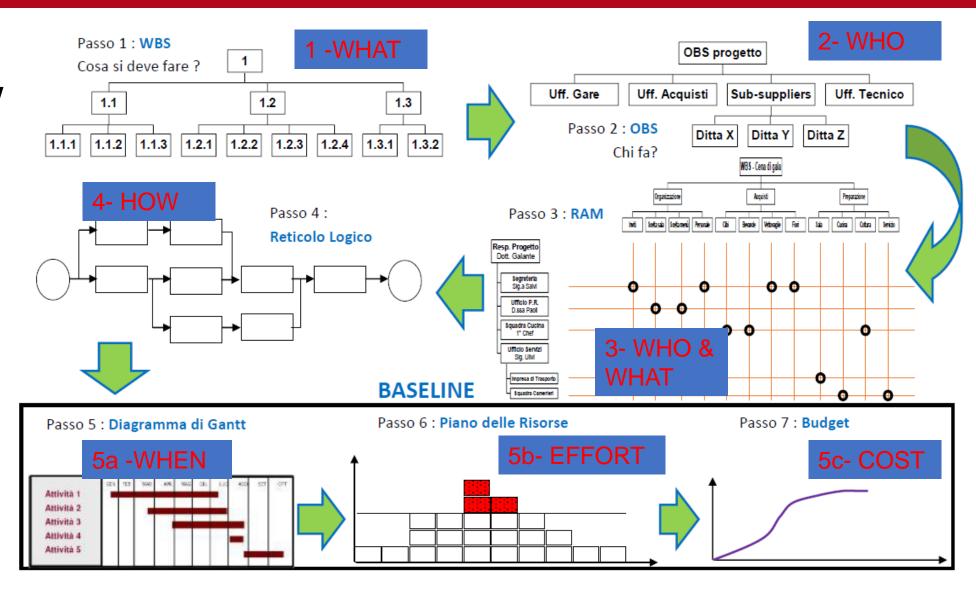
- Objectives of the product or service;
- Characteristics of the product or service and their acceptance criteria;
- Project limitations (the opportunity space within which the project is
- moves);
- Project requirements and deliverables;
- Any standards and norms to be met;
- Initial organisation of the project (main participants);
- Most evident areas of risk;
- Milestones and deadlines;
- WBS Work Breakdown Structure
- Broad Estimates.



# Initiation - Customer needs analysis

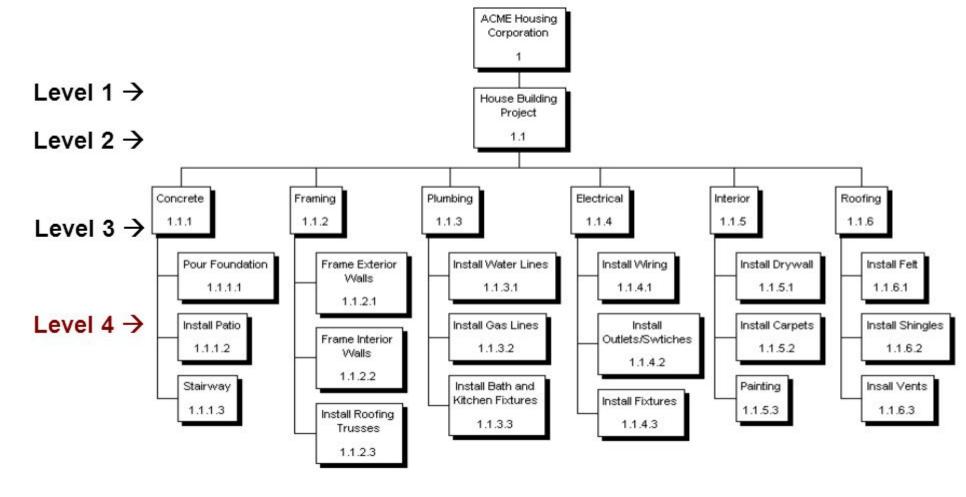
- -Analysis of the current situation;
- -Conceptual design of the desired situation;
- -Identification of the resources and equipment needed for the project;
- -Analysis of costs and benefits, and their translation into economic terms (project budget);
- -Identification of project stakeholders: clients, protagonists (including key users), project support staff;
- -Drafting of project objectives and/or preliminary project specifications project (sometimes in the form of a technical annex) including costs, activities and their deliverables, planning documents.

### Planning Overview



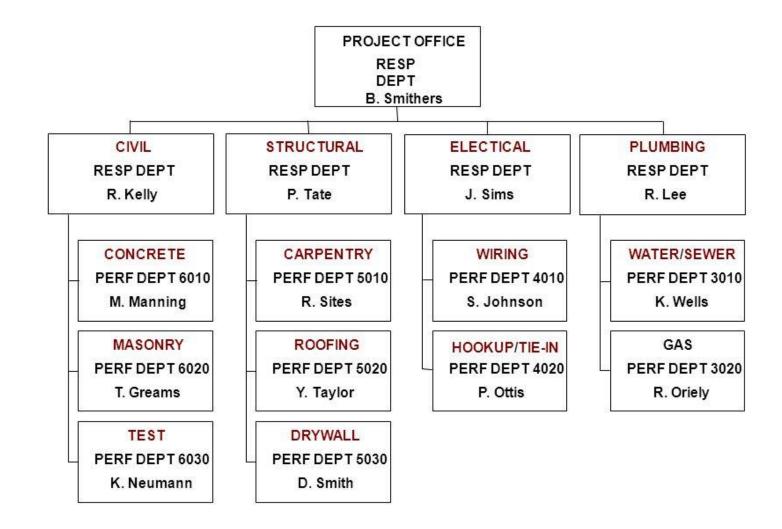


### **Planning - WBS**





# Planning - OBS





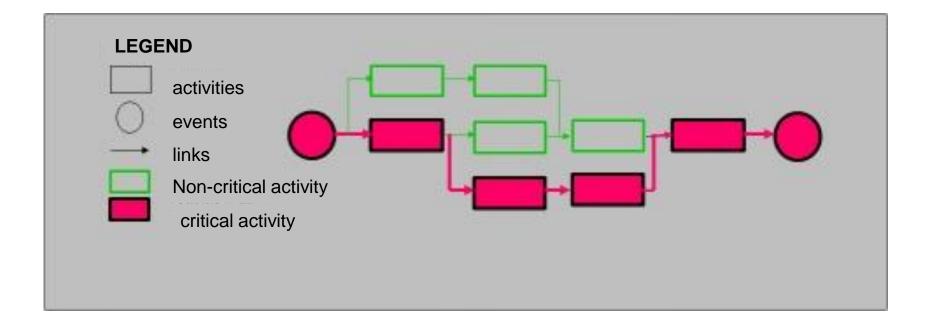
# **Planning - RAM**

WBS Element	Project Team Members					Other Stakeholders		
	I.B.You	M. Jones	R. Smith	H. Baker	F. Drake	Sponsor	CInt Mgt	Func Mgt
I.0.I.I Activity A	N				R			
1.0.1.2 Activity B		R	С					
1.0.1.3 Activity C	R		S			Α		G
1.0.2 Activity D			R		S			Α
1.0.3.1 Activity E			R			N		
1.0.3.2 Activity F				R				
1.0.3.3 Activity G	R			S		Α	Α	
1.0.4 Activity H		R			С	N		

**Key:** R = Responsible, S = Support Required, C = Must Be Consulted, N = Must Be Notified, A = Approval Required, G = Gate Reviewer



# Planning – logical path





### **EXERCISE**

Imagine to design an app/booking systems for business travelers

- 1. Perform a brief market analysis of the target
- 2. Identify key needs and how you system can bring benefit to them, underlining the specific pains relievers and gain creators
- 3. Structure a plan with a WBS (main activities and sub activities), a temporal scheme and indicate the typology of team you would choose among those presented
- 4. What are the main critical points/lesson learned?