



Project management exercise: Scheduling and risks

Christina Thöne (HETH/IAA)
OCTOCAM PM Spain

Risk management - identification, analysis, response

Nominal group technique + risk rating

1. Write 3-5 risks on a piece of paper each (no talking!)
2. Risks are put on a flipchart
3. Go through risks and ask for clarifications
4. Write your top 3 risks from the pool of risks on a paper (no talking!)
5. Make first ranking according to votes from 4.
6. Risk rating:
 - Make a consequence (Cf) and likelihood (Lf) rating scheme (from 1-5, 1-10 or else)
 - Which risks are crucial for the project (1) and which not (0) = importance?
 - Assign a Cf & Lf to the top (x) risks from 5.
7. Final ranking: average of Cf & Lfs from 6.
-> Global rating = $\text{importance} \cdot \text{Cf} \cdot \text{Lf} / \text{Cf} + \text{Lf}$
Rank risks (e.g. $12/7 > 5/6 > 0/7$)

Risk matrix

		Consequence				
		1 Minimal	2 Moderate	3 Significant	4 Major	5 Unacceptable
Likelihood	5 Very High					
	4 High	9		15		
	3 Medium			8	14	
	2 Low	10		12 13		
	1 Very Low		11			3

Risk description example

Management risk

- Description: The USD - EUR rate can increase significantly over the time of the project
- Consequence: There is a possibility that change could cause an increase in the project's budget spending
- Impact: 3 (moderate impact on budget)
- Likelihood: 3 (likely based on past changes in the conversion rate)
- Mitigation plan: Budget reserves.
Major parts are purchased in USD,
all main parts are procured through
the US partners.
European partners have an insurance
Budget reserves can accommodate a
significant change in exchange rate.

Risk management exercise

Task 1

- **Identify** 5-10 risks for your project (technical, management, etc.) e.g. using the NGT method
Write a clear risk and risk consequence statement for each risk
- Assign them a **consequence and likelihood** factor, put them in a risk matrix and make a priority list. Make a short statement justifying the factors chosen for this risk
- Think of risk trigger events and **how to deal with the risk** (accept, transfer, mitigate, use contingency reserve?). Make a clear plan statement
- Is there something you can do to reduce the risk (make a prototype, plan early etc.?)

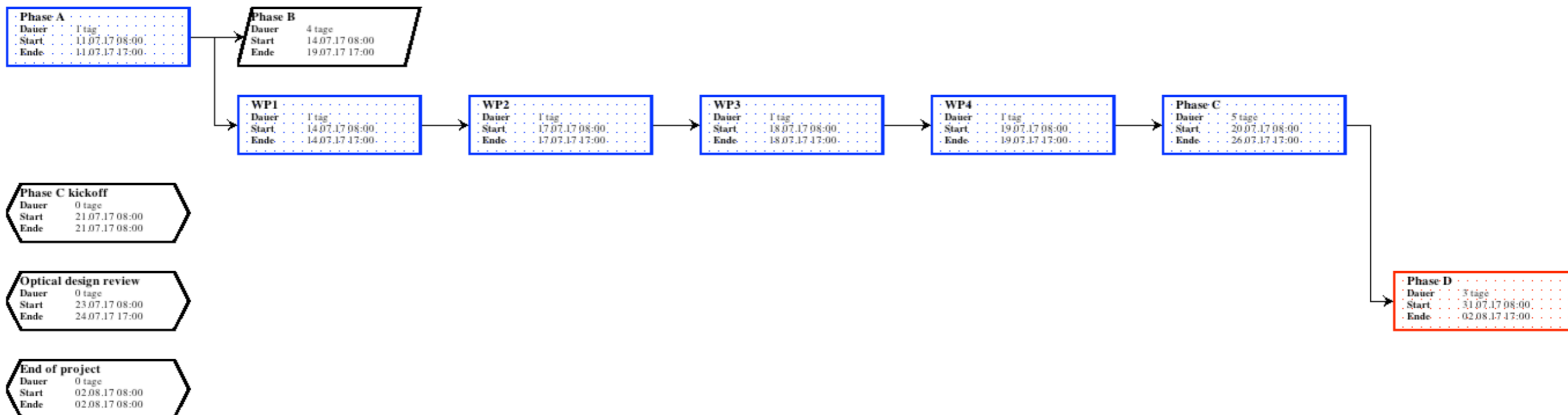
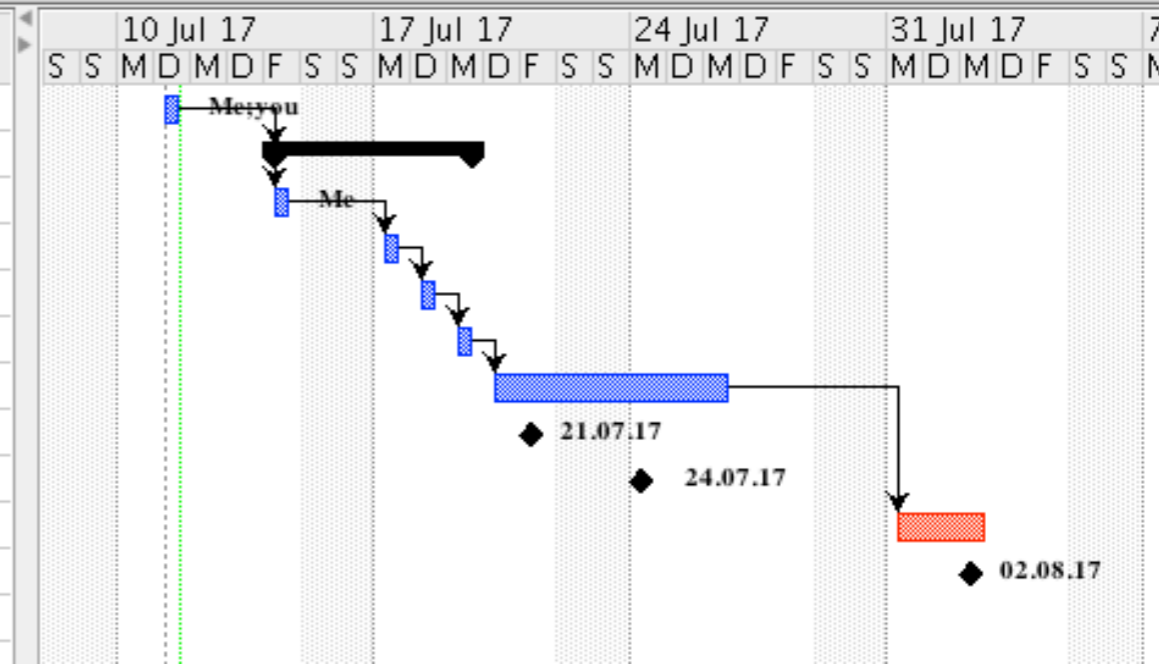
Scheduling

- WBS
- (Effort)
- Duration
- (Cost = effort * labour rate)

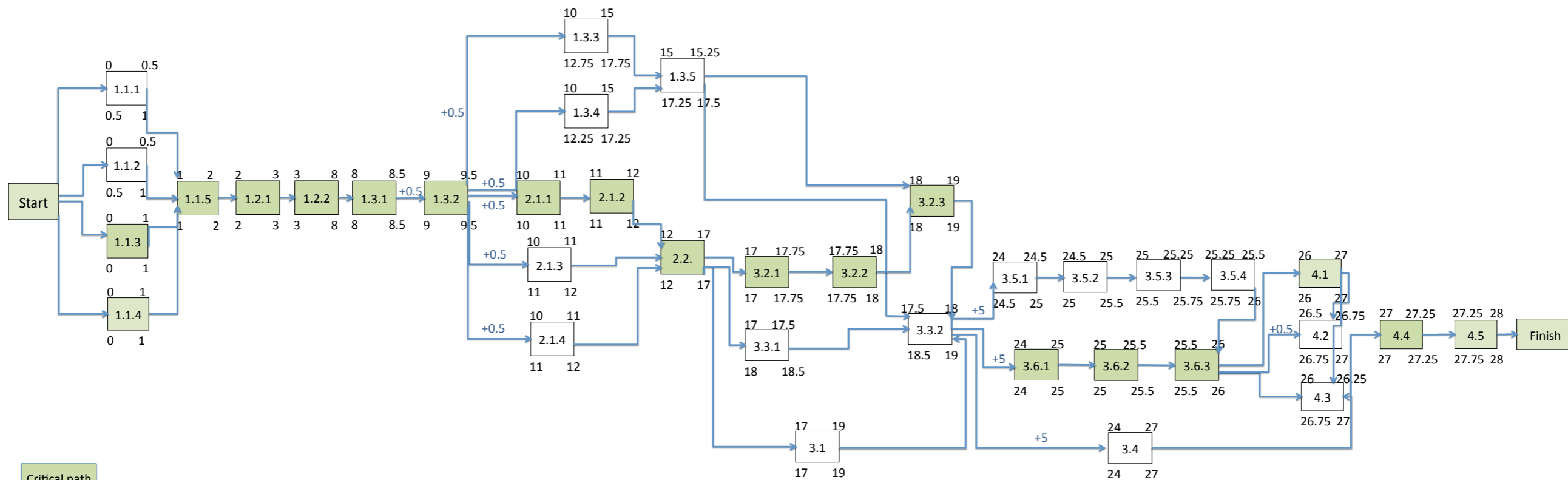
WBS #	Task	Effort	Duration	Cost	Comment
1.	Product selection & characteristics	5d	2 weeks		
1.1	Characteristics				
1.1.1	Panel size	1x2h	0.5d	30€	
1.1.2	Water tank	1x2h	0.5d	30€	
1.1.3	Orientation of panels	2x2h	1d	60€	
1.1.4	Connection to house water system	1x3h	1d	45€	
1.2	Offers from companies				
1.2.1	Characteristics	4h	1d	60€	Company offers take a week to get delivered
1.2.2	Pricing & delivery time	1h	5d	15€	
1.3	Comparison of offers and final decision				
1.3.1	Collection of offers	2x2h	0.5d	60€	
1.3.2	Meeting with the landlord	3x2h	0.5d	100€	
1.3.3	Order panels+tank	---	---	1200€	
1.3.4	Order electronics/pump/sensors	---	---	450€	
2.	Preparations for installation	2d	1 week		

Example dummy project in ProjectLibre

ID	Name	Dauer	Start	Ende
1	Phase A	1 tag	11.07.17 08:00	11.07.17 17:00
2	Phase B	4 tage	14.07.17 08:00	19.07.17 17:00
3	WP1	1 tag	14.07.17 08:00	14.07.17 17:00
4	WP2	1 tag	17.07.17 08:00	17.07.17 17:00
5	WP3	1 tag	18.07.17 08:00	18.07.17 17:00
6	WP4	1 tag	19.07.17 08:00	19.07.17 17:00
7	Phase C	5 tage	20.07.17 08:00	26.07.17 17:00
8	Phase C kickoff	0 tage	21.07.17 08:00	21.07.17 08:00
9	Optical design review	0 tage	23.07.17 08:00	24.07.17 17:00
10	Phase D	3 tage	31.07.17 08:00	02.08.17 17:00
11	End of project	0 tage	02.08.17 08:00	02.08.17 08:00



Example network diagram (made by hand!)



Critical path

Times given are in days

Scheduling your project - exercise

Task 2

- Make a rough **WBS** for all your project and a more detailed for one phase
- Assign a **duration** to each WBS item
- Assign some **milestones**
- Make a **Gantt chart** either „by hand“ or in a PM program (e.g. ProjectLibre)
- If you have too much time you can try a network diagram for a small part of the project! ;-)
(ProjectLibre f.ex. does that for you automatically if you put in predecessors and successors)