



## Case Study 2

DEGEIT e-Com is a company that develops e-commerce software apps and solutions. It has recently designed a 24 work packages development project to create new products and services, starting on the 5th of January, 2026, with the deadline set to May 29th. The budget is 550,000 euros (including 10% management reserve).

The challenge is to implement the WPs within those 5 months period, at the same time maximizing the strategic value (VE), minimizing total cost (CT) and total risk score (RT). It will likely not be possible to execute all WPs, due to resource availability and budget constraints.

The project cannot be extended beyond May 29th under no circumstance. Only WPs completed before that deadline will contribute to the total VE. Holidays should not be considered. Working times are from Monday to Friday, 8 hours a day.

Consider allocating up to 5 teams to each selected WP (there are 8 teams - Appendix A). Each WP requires a specific volume of effort, measured in man/month (M.mon), for up to three competencies: (i) B - business, (ii) IT - information technologies, and (iii) SM - sales & marketing. Appendix B defines how many M.mon are required for each competence and WP. For example, WP1 needs 6 M.mon to satisfy the Business requirements (if 6 people are allocated to this component of WP1, the respective work will be complete within a month).

Resource allocation should look for the best possible match between WPs' requirements and teams' skills, taking into account resource availability. The average monthly cost of each team member is 2,000 euros/month.

Analyze, select, and schedule WPs for the project, looking for the best fit and considering existing constraints and goals, namely, minimizing total cost and total risk and maximizing strategic value.

Reflect on assumptions taken, and critically interpret results achieved, point out possible measures that would improve the planning process.

**Write a report with answers to questions 1 and 2.**

Note: Use M. Project (or equivalent). All files must be delivered together with the report, all within a compressed zip file.



## APPENDIX A - Teams

Team	Team leader	Number of people	Competências		
			B - Business	IT - Information technologies	SM - Sales & Marketing
1	Joana	9	✓	✓	
2	Toni	8		✓	
3	Rui	7	✓		
4	Cláudia	6			✓
5	João	4	✓	✓	
6	Luís	6	✓		
7	Lucas	5			✓
8	Pedro	5		✓	✓

## APPENDIX B: Work packages

Project	Description	Risk 0-10	Strategic value	Fixed cost € (*)	Predecessor	Start no earlier than month no.:	Required skills		
							Business	Technology information	Sales and marketing
1	E-Com software development	3	9	3,900		1	6	14	4
2	Back-end technology selection	6	8	1,600	1	1	4	6	0
3	Hosting analysis	2	7	4,400		1	8	14	0
4	Storage capacity upgrade	5	6	1,000	3	1	0	6	0
5	Services migration	2	8	3,500	2	1	4	14	2
6	Security and certification	7	8	3,600	5	1	8	18	0
7	Social media platforms	6	6	1,700		1	0	0	8
8	Support module development	3	6	1,400	4	1	0	8	0
9	Services branding	2	6	2,900		1	12	0	10
10	Platform virtualization	6	7	3,300		1	6	18	0
11	SME acquisition	4	8	3,000		1	12	0	6
12	Multi-language interface	4	5	1,200		1	1	0	6
13	Mobile apps	6	6	4,200		1	4	14	2
14	On-go reporting development	7	4	800	13	1	2	3	0
15	Virtual teams training manuals	8	1	1,400	10	1	6	0	1
16	Marketing campaign	4	7	2,200	9	1	2	0	8
17	international market expansion	3	7	2,400		1	6	2	4
18	Client engagement program	1	6	2,000		1	4	0	6
19	Information services	3	2	1,700	7	1	3	0	2
20	Services robustness	9	3	3,800		1	6	16	6
21	Ethical review	5	3	800		4	1	2	3
22	Focus on customer experience	8	3	2,000		4	2	6	0
23	Multi-device access	3	2	1,500		4	3	1	1
24	Data protection	2	3	1,000		4	1	2	3
Totals				55,300			101	144	72