37208-ENG - LABORATORY DIGITAL INNOVATION AND MANAGEMENT (DIM) – DIM LAB

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Preparation to Lab 04

Takeaways from PBL5 (Design and economics)

- Design for manufacturing (DFM) helps to optimize the product design for efficient and cost effective manufacturing.
- To application of DFM requires the estimation of the unitary costs of manufacturing and the reduction of costs related to components, assembly and production processes
- To analyze the economic viability of NPD processes there are quantitative and qualitative analyses.
 - -Quantitative analysis involves measuring revenues and costs, and computing **NPV** as well as **break-even point** and **margin of safety**
 - -Qualitative analysis involves examining interactions between the project and the firm, market, and macroeconomic environment.
- Sometimes a NPD are started because of positive externalities for the company (e.g., acquisition of competences, first mover advantage)

Overview of the Labs (1/2)

Lab	Day	Торіс	Presentation by teams (during the Lab)	Feedback by the faculty (upon the Lab)
00	30 th April	Product-company	- Selected product and company	- Confirm teams' selection
01	7 th May	Product strategy and planning (PBL 1)	 How does the NPD fit the product strategy? Expected timeline for the project and Project Management Empirical strategy for need validation 	- Confirm mission statement - Refinement of strategy for need validation
02	14 th May	Customer needs, product specifications and concept generation (PBLs 2 and 3)	 Customers' needs Product specifications House of Quality and benchmarks Set of generated concepts Testing strategy 	 Feedback on process/outputs of the need validation/product specifications/concept generation Refinement of the strategy for concept testing

Overview of the Labs (2/2)

Lab	Day	Торіс	Presentation by teams (during the Lab)	Feedback by the faculty (upon the Lab)
03	21 th May	Concept selection and testing (PBL 4)	 Scoring/selection of the concept Concept testing and rough estimation of customer demand Assumptions of economic analysis 	 Feedback on the scoring process and output Feedback on the testing process and output Feedback on the assumptions of the economic analysis
04	29 th May	Product development economics (PBL 5)	- Estimated costs - Economic analysis (break even and NPV)	 Feedback on the assumptions and outcomes of the economic analysis Suggestions for the final presentations
05	4 th June	Final presentation	- Proposal of improved product and justification	- Overall comment on the product development process and outcome

"Homework for Lab 04"

- 10 minutes presentation (7-8 slides) + 5 minutes feedbacks
- Refined estimation of customer demand based on concept testing
- 2. Considerations regarding economic feasibility
 - Estimation of unit costs
 - Break-even point and NPV under different scenarios/assumptions (e.g., price ranges)