

# TOOL | METHOD FOR INTRODUCING BUSINESS CASES INTO PROJECTS

### How is the tool linked to Entrepreneurship PBL?

Given that it is a project, you run through the whole Entrepreneurship PBL model in relation to this tool, but it provides examples of how to get through the whole process.

### What can be achieved by using 'Business cases in projects'?

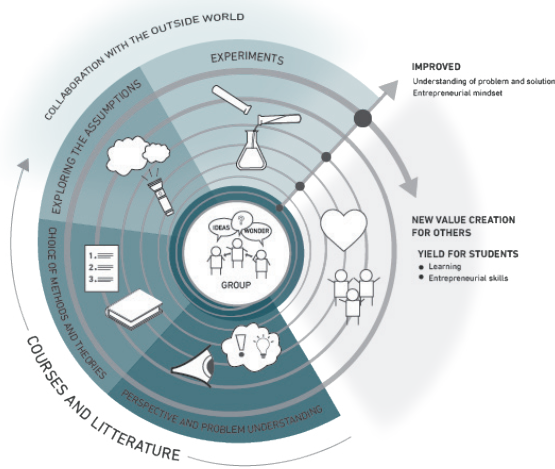
The students get a realistic understanding of Entrepreneurship PBL through focused, but realistic, project work. They see how businesses look at value creation/business cases in practice, and that the technical solution is not always the only thing to consider, but that it is important to put it into context, and that optimisation may not create value in itself if the costs of implementing it are higher than what could ultimately be recouped.

### How is it used?

Throughout the project an existing system or apparatus is optimised, or a new one is built to cover a new feature. The product's value creation is checked by setting up a cost/benefit analysis. Updates/iterations of the concept can be made, based on both the technical value but also the economic value, according to the figure below.

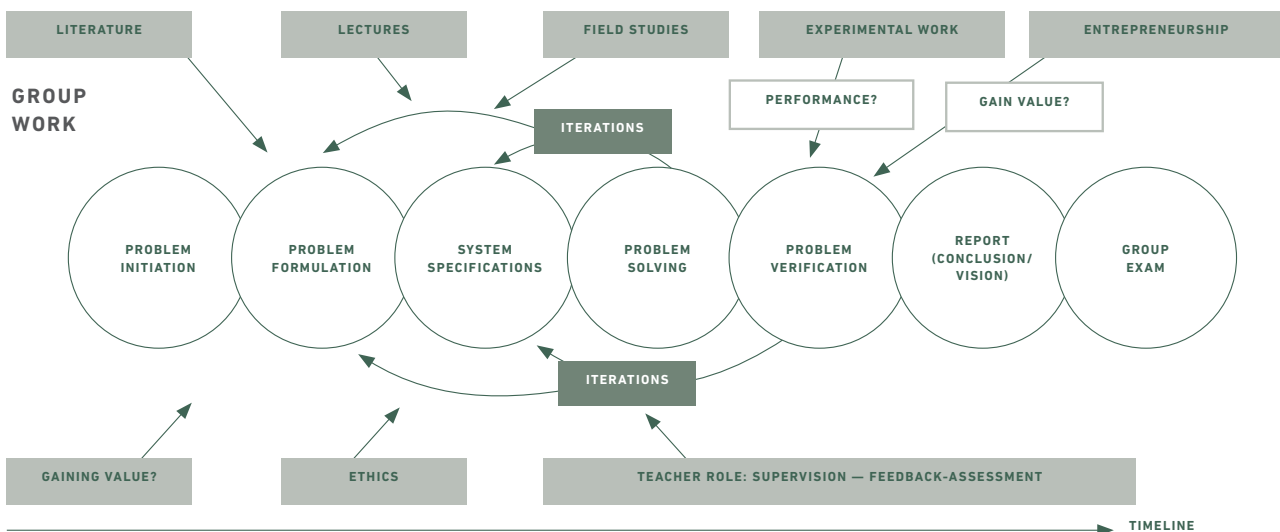
The business case and cost/benefit part are introduced through visits from three companies which give talks on how they evaluate a business case and make a cost-benefit analysis. Relevant firms are selected within the main area of the study for the presentations.

The project is evaluated by normal project examination and the entrepreneurial level is evaluated through the learning objectives for business cases and cost benefit analysis. Here, exemplified in the thermal direction of energy:



### What is the tool?

A way of ensuring value creation in a project by introducing learning objectives around business cases and cost/benefit analysis.



LEARNING OBJECTIVES:

**Knowledge**

- Have knowledge and understanding of the functioning of thermal machines and systems
- Have knowledge about methods for the design of thermal energy systems
- Have knowledge of the interaction between the components included in thermal machines and energy systems
- Be able to understand scientific methods and theories in relation to the semester's theme
- Be able to understand how to set up a business case for the thermal machines or systems

**Skills**

- **Be able** to develop and use stationary models of thermal systems under full and partial load
- Have basic skills to design the optimal system configurations and determine the operating parameters for thermal systems
- Be able to analyse results from simulations and possible laboratory work, and assemble them to give an overall impression of the system's performance
- Be able to make a cost/benefit analysis for the thermal machines or systems

**Competences**

- Have achieved the ability to translate academic knowledge and skills in the field of thermal systems into processing of a practical problem
- Have the ability to engage in professional and interdisciplinary cooperation within thermal systems
- Have the ability to evaluate the basic economic conditions for the development and commissioning of systems or devices

**Sources**

Learning objectives and thematic descriptions can be seen as model descriptions for projects in the 5th semester in the curriculum for energy: <https://studieordninger.aau.dk/2019/14/798>.

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