

Concept Decisions in Complex Product Development

Background

The main part of the product and manufacturing cost are fixated already in the concept decisions. The basic data for the decisions early in the product development projects is often the project members own experience supplemented by immature simulation results.

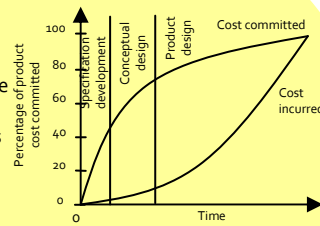


Figure 1: Manufacturing cost commitment during design, Ullman [1997]

A documented product development process is often used in large companies' product development projects. Even though the companies have the support in the product development that is suggested in theory they still suffer from a certain amount of rework in their development projects due to wrong concept decisions.

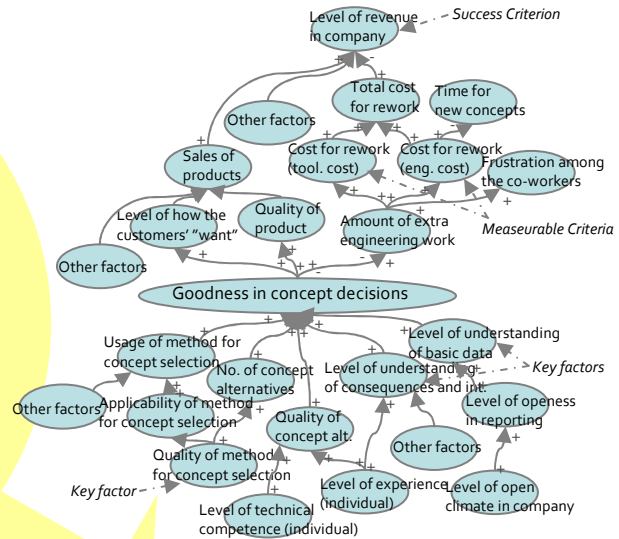


Figure 2: Reference model

Goals of research

The goal is to improve the concept decision process with the purpose to make it more effective (to do the right thing) and efficient (in the right way).

Research question

What aspects are influencing the concept decisions and how to manage those factors?

Research approach

The research project starts with an inductive approach where empirical data is gathered from the field using qualitative research interviews and documents reviews. The explorative, descriptive phase is followed by a more prescriptive phase that aims to develop and/or improve working procedures regarding the concept decision process. To finalize the research project the developed procedures will be tested and evaluated in the field.

Theoretical foundation

The theoretical foundation is illustrated in an ARC-Diagram (Areas of Relevance and Contribution Diagram).

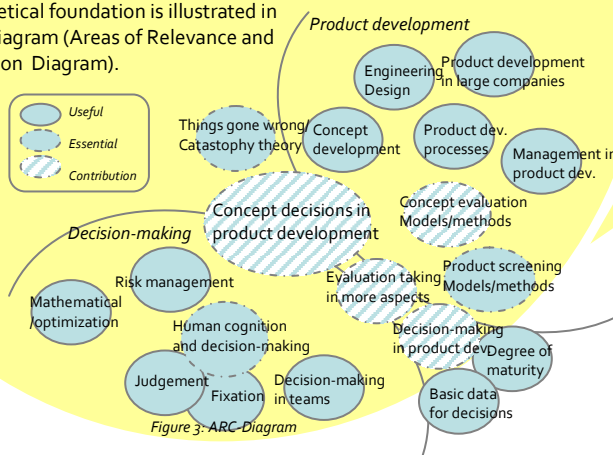


Figure 3: ARC-Diagram

Expected results

Deeper knowledge regarding what is influencing concept decisions, taking into consideration social aspects, decisions structure and technology.

Improved working procedures, such as methods and instructions. They should also be tested and evaluated in an ongoing project in the company where the study was initiated.



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