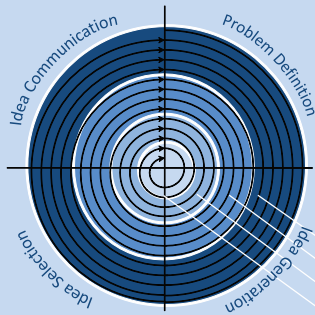


THE OPTIMAL USE OF PROTOTYPING IN THE PRODUCT DESIGN PROCESS

THEORY

THE PRODUCT DESIGN PROCESS

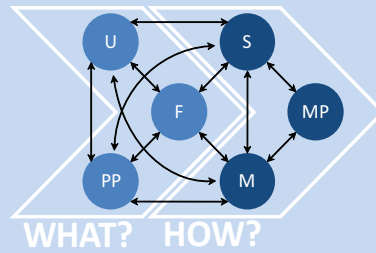


The Product Design Cycle consists of four steps, Problem Definition, Idea Generation, Idea Selection and Idea Communication. The last step, Idea Communication or making the idea comprehensible, gives the designer the opportunity to refine the Problem Definition and restart the cycle. By applying this cycle systematically four analogue phases occur, INFORMATION PHASE, EXPLORATION PHASE, DECISION PHASE and TEST PHASE.

- INFORMATION PHASE
- EXPLORATION PHASE
- DECISION PHASE
- TEST PHASE

THE 6 PRODUCT FEATURES

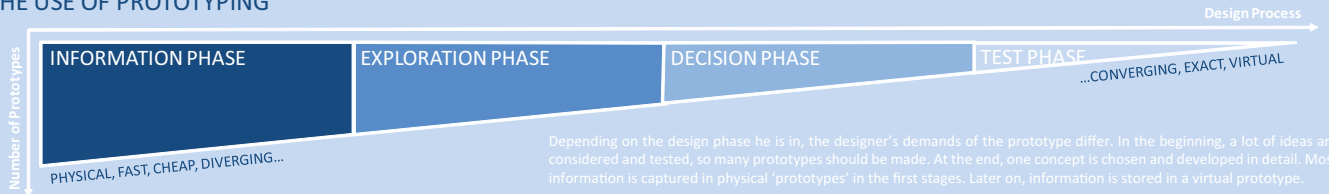
(Ilse van Kesteren – Pieter Jan Stappers)



There are six product features, which together determine a product. Three features concern the users impression, Product Personality (the charisma of the product), Use (the users interface of the product) and Function (the operation of the product). The other three are technical features, Material (the material the product is made of), Shape (the shape of the product) and Manufacturing Process (the processes used to make the product). All features interact with each other.

- PP Product Personality
- U Use
- F Function
- M Material
- S Shape
- MP Manufacturing Process

THE USE OF PROTOTYPING



Depending on the design phase he is in, the designer's demands of the prototype differ. In the beginning, a lot of ideas are considered and tested, so many prototypes should be made. At the end, one concept is chosen and developed in detail. Most information is captured in physical 'prototypes' in the first stages. Later on, information is stored in a virtual prototype.

INTO PRACTICE

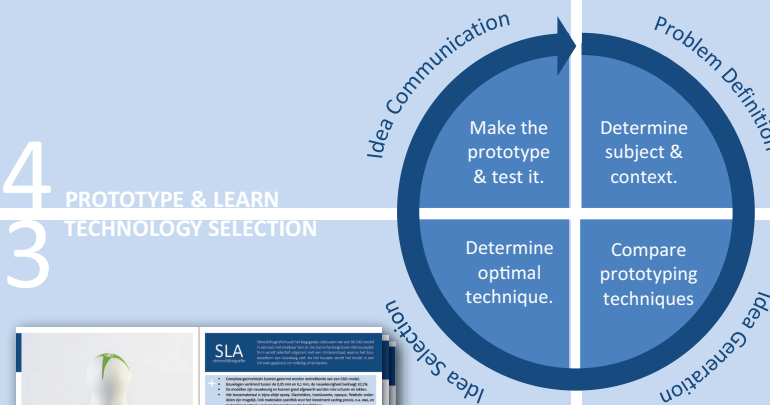
PROTOTYPES USED IN THE DESIGN PROCESS OF RIMBOU - UMBROSA



ROADMAP

THE OPTIMAL USE OF PROTOTYPING

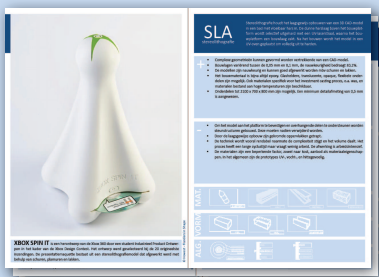
Make the prototype and learn from your findings.



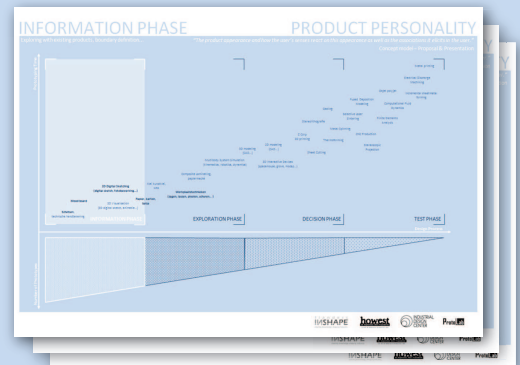
- Which product features do you want to examine?**
Product Personality | Use | Function
Material | Shape | Manufacturing Process
- In which design phase are you?**
Information Phase | Exploration Phase | Decision Phase | Test Phase
- Consider your prototyping context!**
Visualisation | Ergonomics | Form & Fit | Functional Test
Material | Shape
Internal Use | External Use
Knowledge | Budget | Time | Dimensions | Number of prototypes needed

4 PROTOTYPE & LEARN
3 TECHNOLOGY SELECTION

1 WHY PROTOTYPE?
2 TECHNOLOGY OVERVIEW



Use the extended information of the Technology Overview to determine the optimal prototyping technique. Keep in mind the chosen criteria in step 1.



Based on the chosen criteria, some techniques are highlighted in the overview.