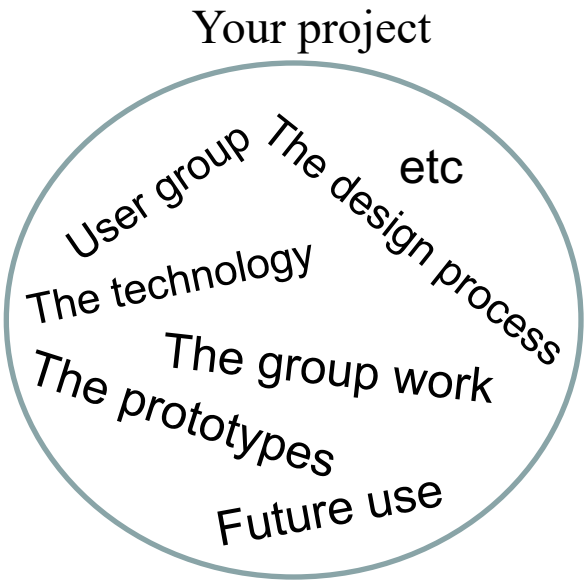


UiO : Department of Informatics
University of Oslo

Analytical Perspectives on Design

4. November 2024
Guri Verne
Design of Information Systems

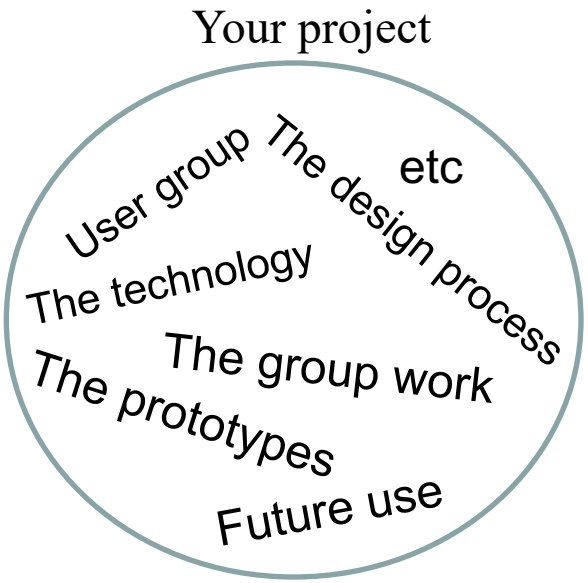
How to analyse and discuss your project and the results





.. seen through a researcher's glasses

How to analyse and discuss your project and the results





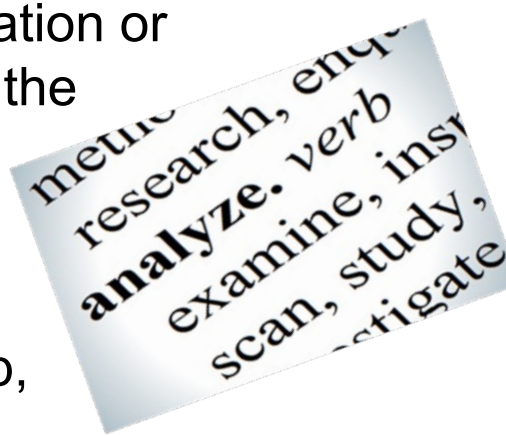
.. seen through the researcher's glasses

In PD, analysis and design is intertwined: e.g. prototypes can be tools for exploring the use context, design moves etc (S&R, p. 134).



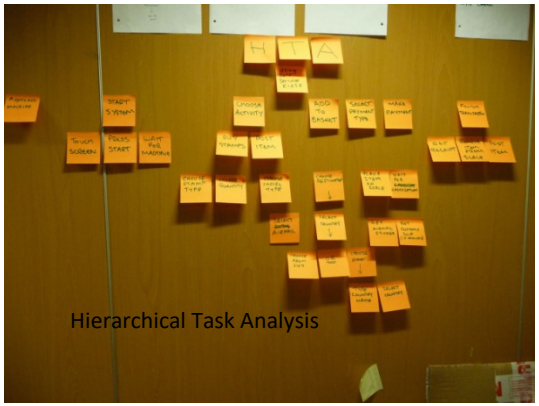
What is an analysis?

- The separating of any material or abstract entity into its constituent elements.
- Oxford English Dictionary:
  A detailed examination or study of something so as to determine its nature, structure, or essential features.
- Also: the result of this process; a detailed examination or report; a particular interpretation or formulation of the essential features of something (From Latin)



- Ancient Greek:
  ἀνάλυσις (analusis, "a breaking up", from ana- "up, throughout" and lysis "a loosening")

Analysis helps to see something new



Sampling for water analysis



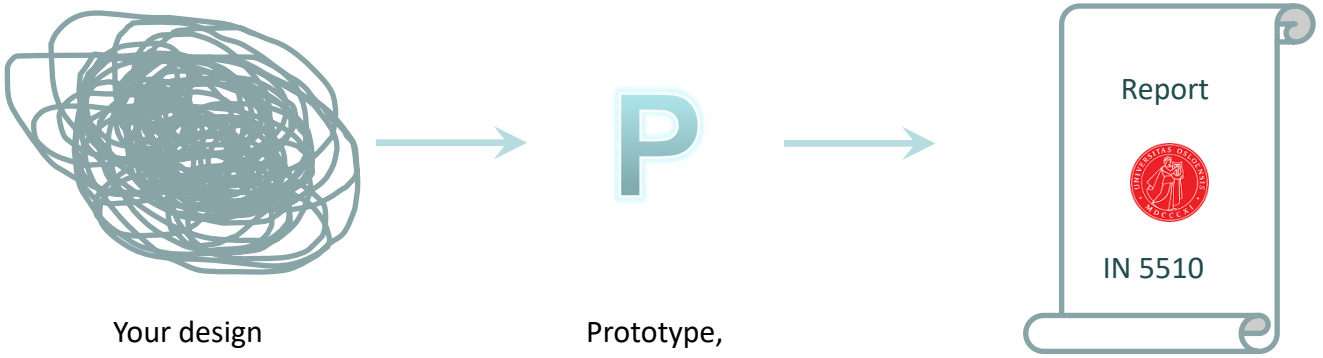
- An analysis is
  - a structured account
  - clear about criteria
  - based on a theory

    .. gives concepts

Helps your understanding!

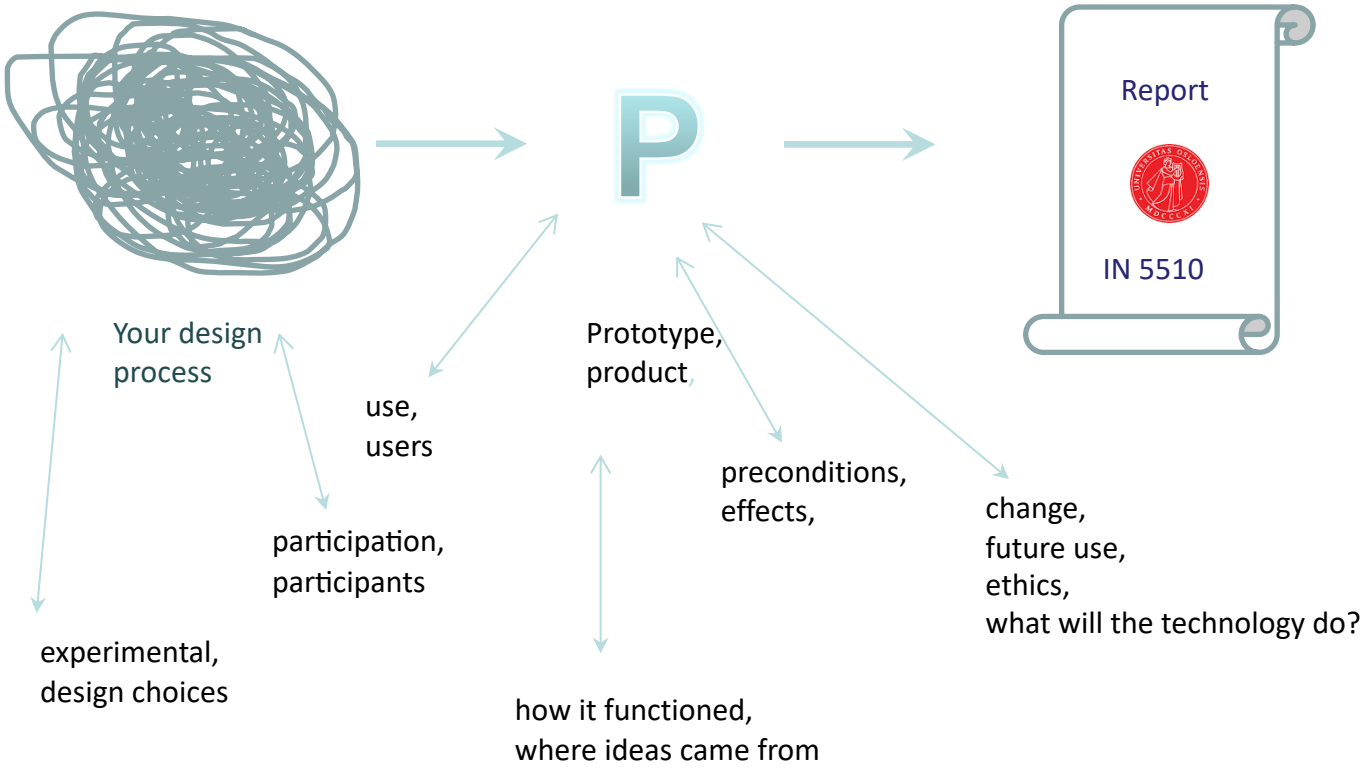


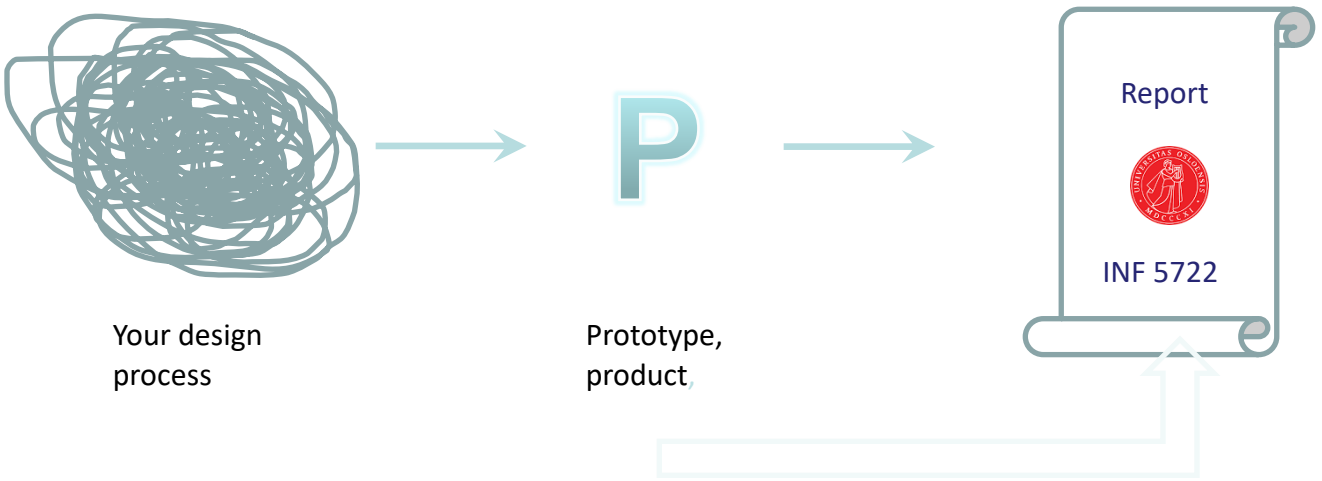
Blood sample for analysis



Your design process

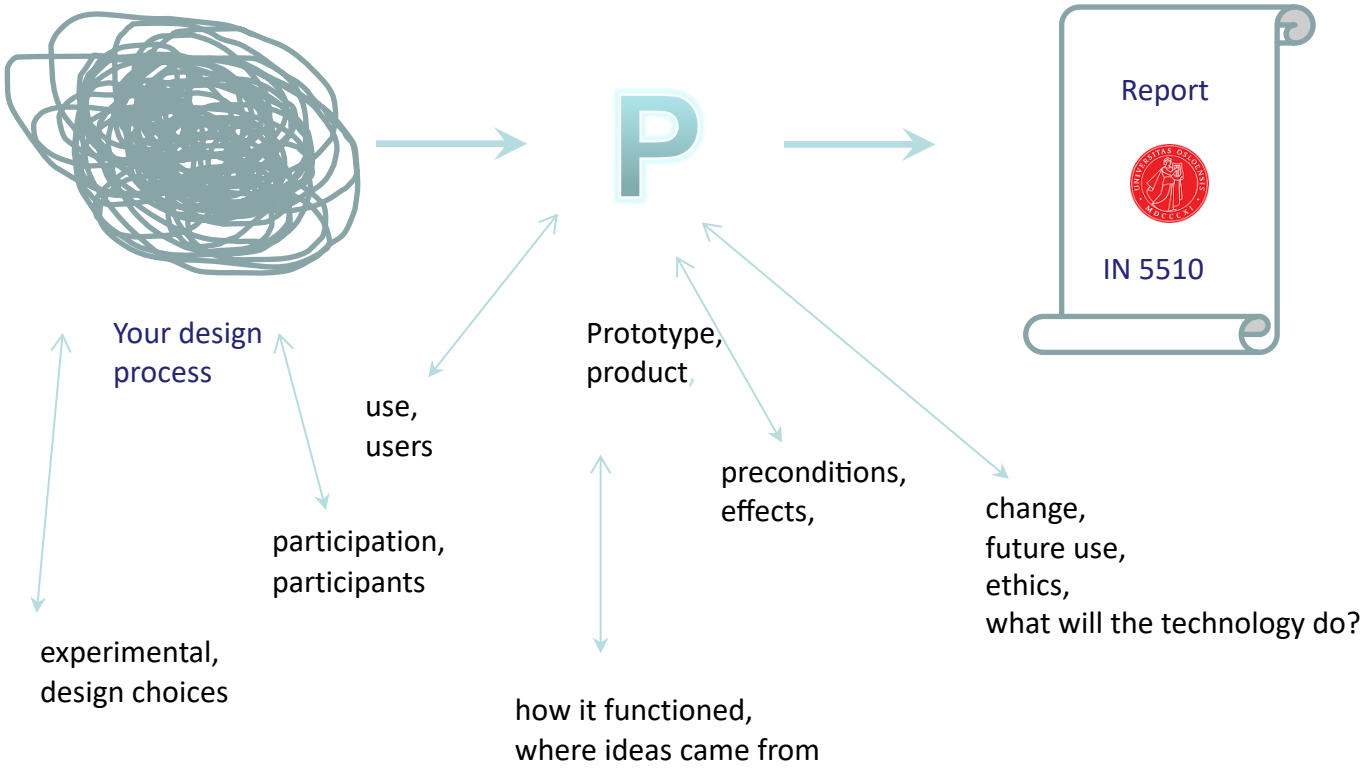
Prototype, product


Report
IN 5510
Your design process
use, users
participation, participants
experimental, design choices
Prototype, product
how it functioned, where ideas came from
preconditions, effects,
change, future use, ethics, what will the technology do?



What can you analyse?

- The process
  - participation, experimental, design choices, …
- The prototypes
  - how they functioned, where ideas came from,..
- The future product(s)
  - use, users, what will the technology “do”? ..
- ...



How can you analyse?

Concepts and theory will help!!

Concepts can help you find interesting elements and describe them

Talk with your neighbour:

- What can be interesting to analyze in my project?

Where and how does the analysis start?

Theoretial concepts will help you

Example from Guri's PhD fieldwork

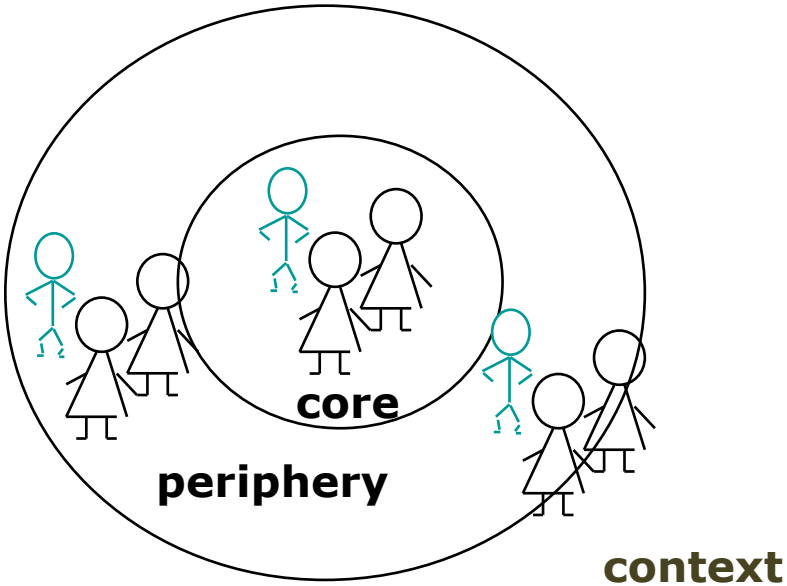


My immediate analysis:
Simple questions
Errors
Complicated questions

Repetisjon

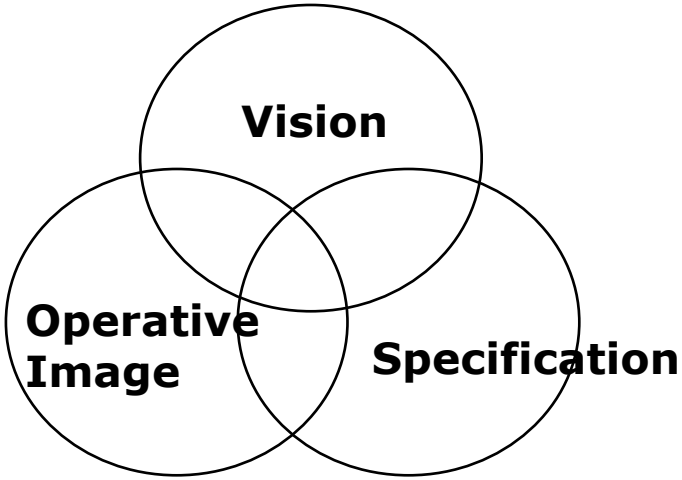
The design process 1

- The three circles of involvement

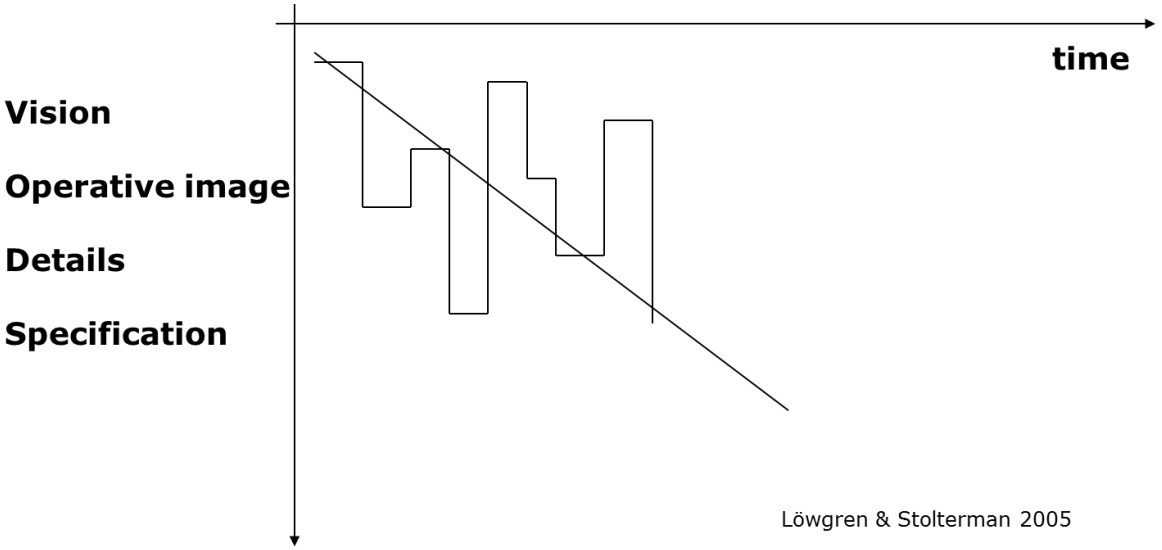


Löwgren & Stolterman (2004)

The design process 2

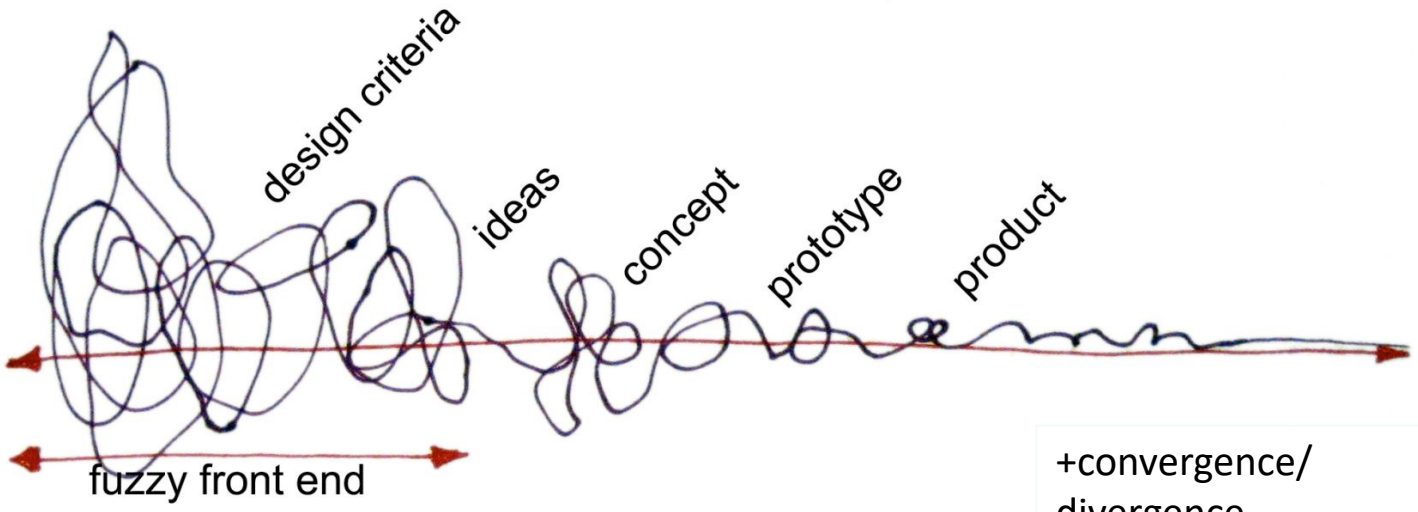


- The dialectic early stages of the design process
- Convergence – divergence



Löwgren & Stolterman 2005

The design process 3



+convergence/
divergence
(Löwgren&Stolterman (2005, p30),
Sefyrin&Mörtberg 2010)

The front end of the design process has been growing as designers move closer to the future users of what they design.

(Sanders & Stappers 2008, p. 6)

The design process 4

- Design moves
  - Seeing-moving-seeing
  - Conversation with the material
  - Discovered consequences
  - Different domains
  - Design as a cumulative process of discovery

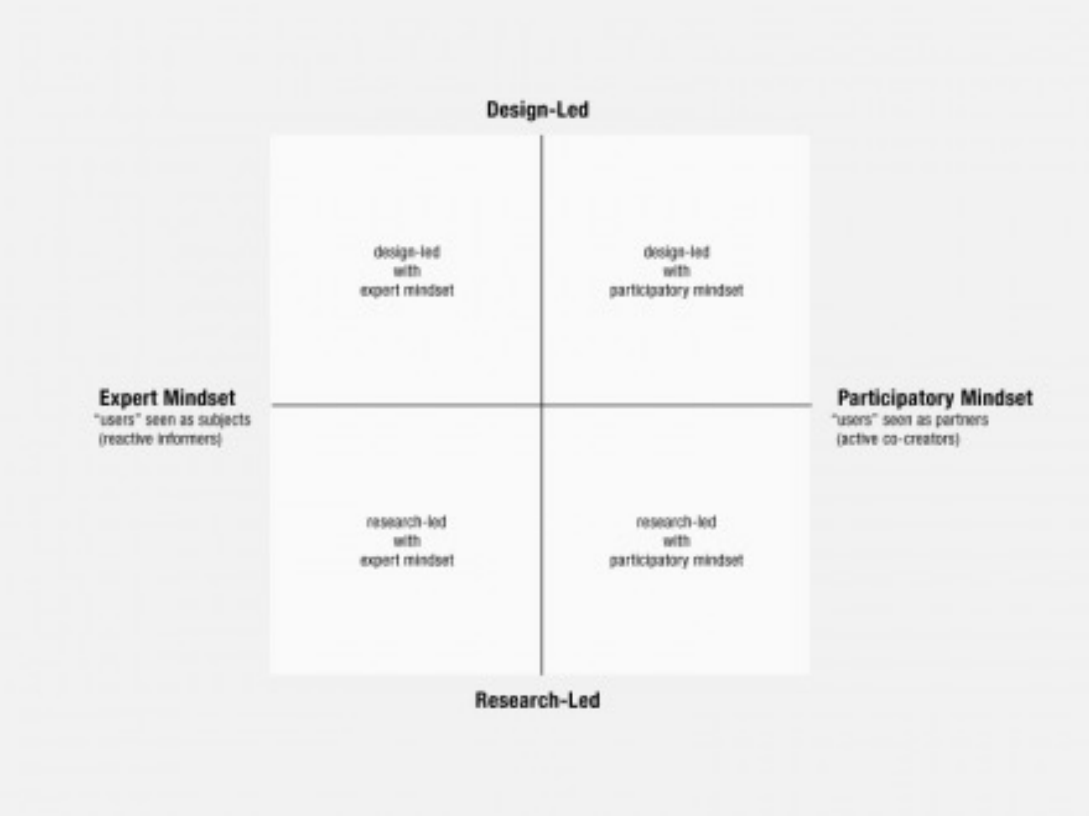
(Schön & Wiggins, 1992)

Participation in what?

- «Participation at the moment of idea generation»
  (Nigel Cross in Sanders and Stappers (2008))

- «Participation at the moment of decision»
  (Sanders and Stappers (2008), Bratteteig and Wagner (2014))

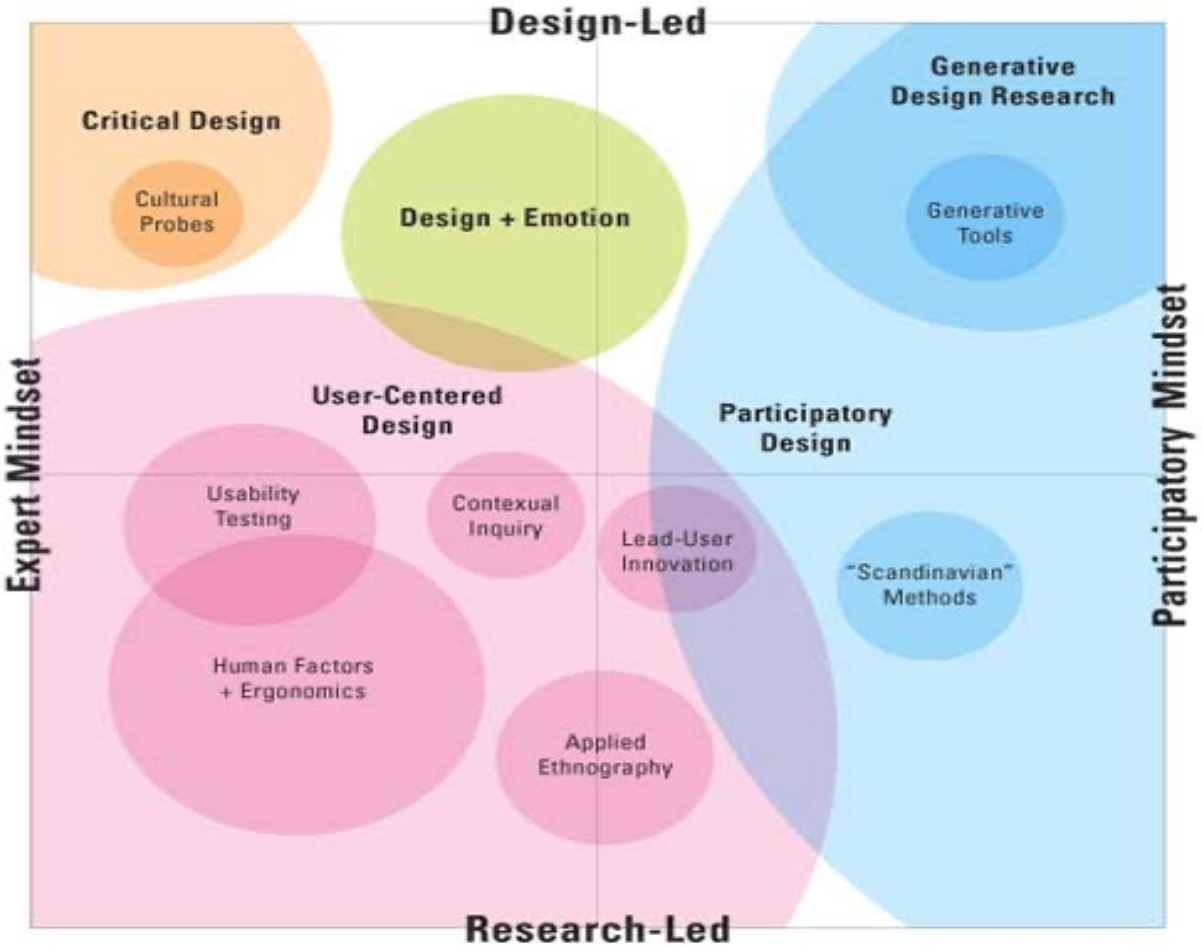
- «A participatory result»
  (Sanders and Stappers (2008), Bratteteig and Wagner (2014))



Map of design research— underlying dimensions

Sanders, L (2008) An Evolving Map of Design Practice and Design Research, *Interactions,* November-December 2008, pp. 13-17

Expert Mindset
"users" seen as subjects (reactive informers)



Participatory Mindset
"users" seen as partners (active co-creators)

Figure 2 Map of design research—research types (Sanders 2008)

Sanders, L (2008) An evolving map of design practice and design research, *Interactions,* November-December 2008, pp. 13-17

PD or Co-design?

1. Critical approach ?
2. The participants' taking part in the design
3. Involving the participants in the process

(Anna M. Finstad,
Design for opplevelser på togreiser
En digital designprosess, 2021)

Wearing two hats: knowledge from research and design



- Research may be descriptive, normative or constructive
- Methods seem similar: interview, workshop, observation
- What kind of knowledge do we get from designing?

There is a competence in collaborating and talking with users.

Research Through Design (Gaver 2012) has both similarities to and is very different from PD.

Bratteteig, T. and Verne, G. (2018) Inquiry when doing research and design: wearing two hats.

Prototyping

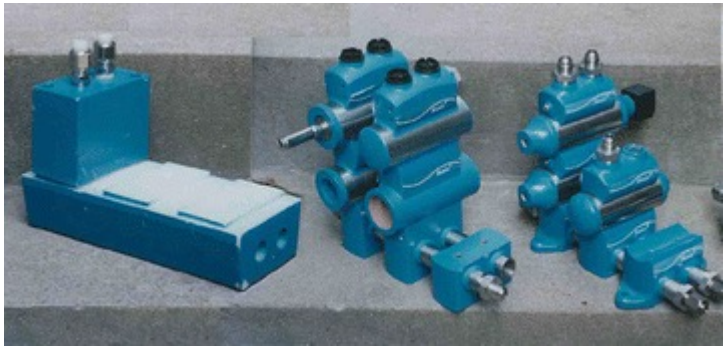


(Åsmund Dæhlen 2019)



(Harald Maartmann-Moe 2019)

- Things-to-think-with (Brandt 2007)
- Conversation with materials and situations
  - They talk back (Schön & Wiggins 1992a)
- Develop common ground
- Help define the problems
- Boundary object
- The role of the prototype (Houde&Hill 1997)
- Experiences, “peeling apples” (Mattelmäki 2009)
- A design result?



Boundary objects

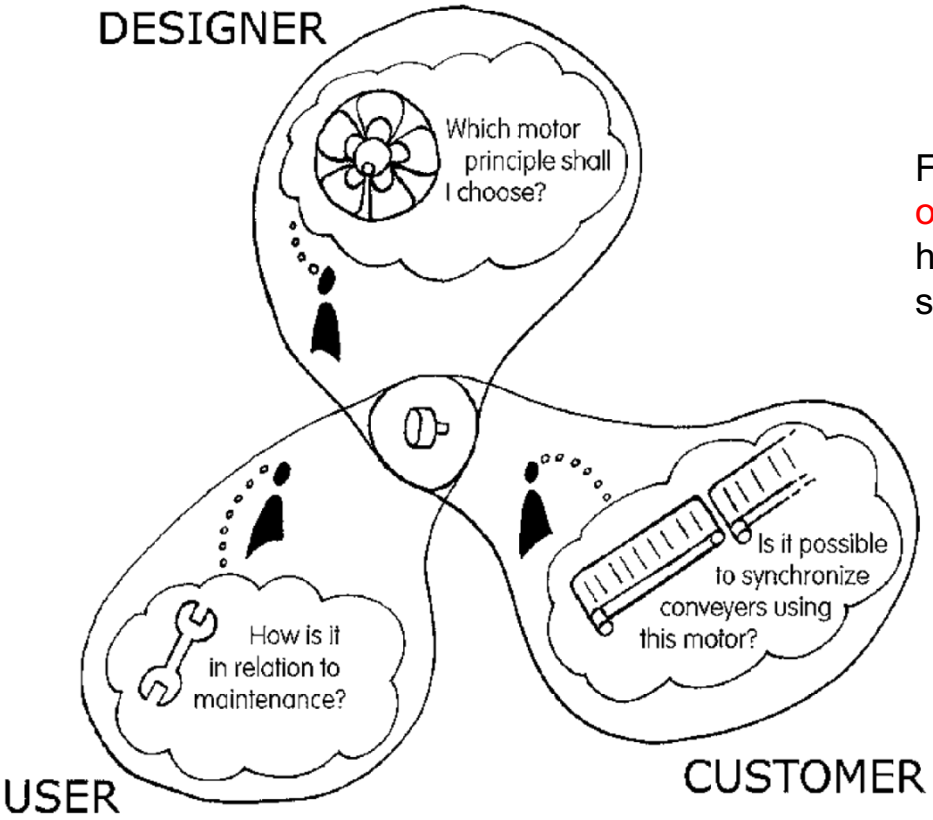
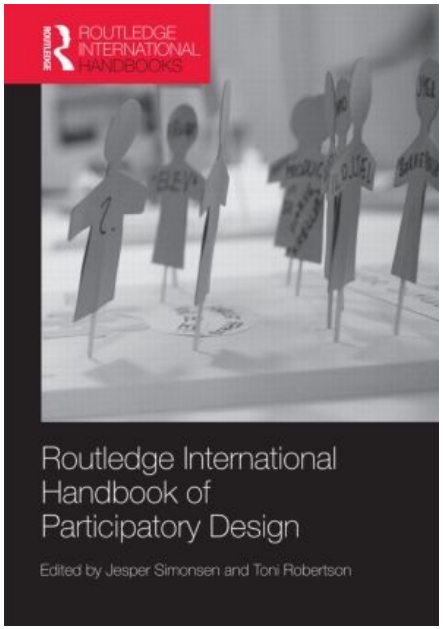


Fig. 5 The mock-ups act as boundary objects where different people can have different understandings of the same model (Brandt 2007, p. 188)

Participatory Design – guiding principles

- Equalizing power relations
- Democratic practices
- Situation-based actions
- Mutual learning
- Tools and techniques
- Alternative visions of technology

Page 33-34



Located accountabilities in technology production

There is a looong distance between designers and developers to the users.

Alternative bases for a politics of professional design practice

- Design from nowhere
- Detached intimacy
- Design from somewhere

XEROX® parc
A Xerox Company



Design from nowhere

IT systems are constructed from nowhere to everyone, or the designers are seeing everyone but not seeing themselves

How the disciplines are organised separate use and design.

No one is responsible for the outcomes of collective labour.

Lucy Suchman (2002)

Detached intimacy

Distance from the specific sites of technologies-in-use

Intimate relations with their own professions and within the company

Own experience as basis
for understanding use

Lucy Suchman (2002)



Design from Somewhere:

Knowledge is partial, located and situated

Dependent on a range of actors

Connections are partial

We may be responsible for what we build

Artful integrations

(Lucy Suchman 2002)

What does a technology «do»?

- In addition to its intended purpose
  e.g. automation of tax => people unlearn tax

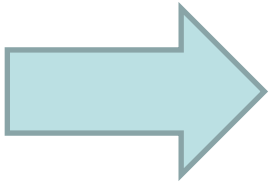
Talk with your neighbour:

- Do you have experience with technology that requires more work than expected to function properly? Or perhaps unintended consequences?

What does a technology do?

An example from my garden:







Introducing Roberto - the robot lawn mower



- Roberto removed the work of mowing
- Roberto introduced new work (Verne 2020)
- Needed to rethink activities in the garden







What does a technology «do»?

- In addition to its intended purpose
- e.g. automation of tax => people unlearn tax

- Automation leaves some work obsolete
  - and introduce new work of different kinds

Automation	Inside	Outside
Old work	Automated away	Still to do
New work	Installing, maintaining, overriding defaults	Finding out what is left ☺ New possibilities

(Verne 2015, 2020)

Summing up analysis

- Take “apart” what you want to analyse, using theoretical concepts
- Organize it in new ways
- Learn from seeing your stuff in the new way