# UNIVERSITY OF OSLO

# IN4380 – Digital Transformation of Healthcare

## Seminar 12: Designing and executing digital health interventions

Troels Mønsted
Associate Professor
Department of Informatics

May 9th 2023



# Agenda

- Short follow-up lecture on prototyping
- Recap
  - Important concepts and takeaways from lecture 12.
- Exercise
  - Plan an identification phase.

# Phase 2: Invention

The purpose of this phase is to to generate and screen a wide range of solutions to select the one with the greatest likelihood of making it into patient care.

Most important tasks and technique:

- Develop and select ideas
- Build and evaluate a prototype of the solution



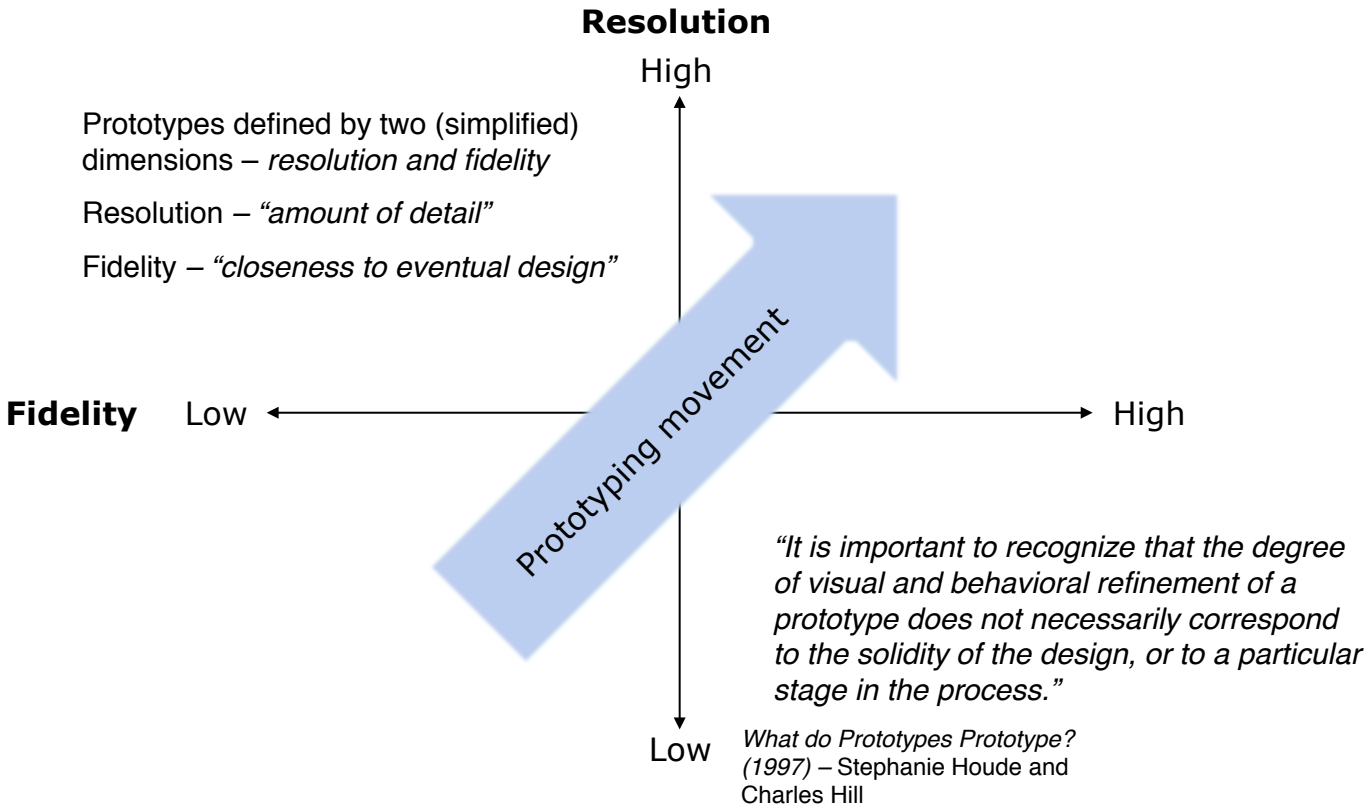
# Prototyping as a central technique

Prototypes are early types of the system that can be used to both conceptualize the design, evaluate different concepts, and present the properties of the finished system.

Questions prototypes can help us find answers to according to BioDesign:

- It the concept technically feasible and functional?
- Is it a novel and unobvious innovation?
- How do the target users and leaders respond to the solution?
- Can it be manufactured?
- When can it be made available?

# What is a prototype?

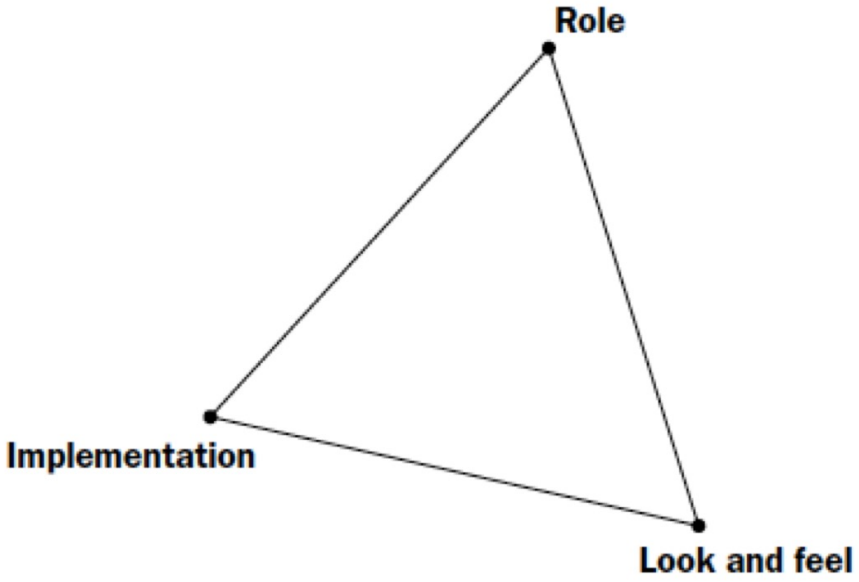


# Prototypes can prototype different things!

"Current ways of talking about the prototype tend to **focus on attributes of the prototype itself**, such as which tool was used to create it (as in "C", "Director", and "paper" prototypes); and on **how finished-looking prototypes or -behaving a prototype is** (as in "high-fidelity" and "low fidelity" prototypes). Such characterizations can be misleading because the capabilities and possible uses of tools are often misunderstood and the significance of the level of finish is often unclear, particularly to non-designers."

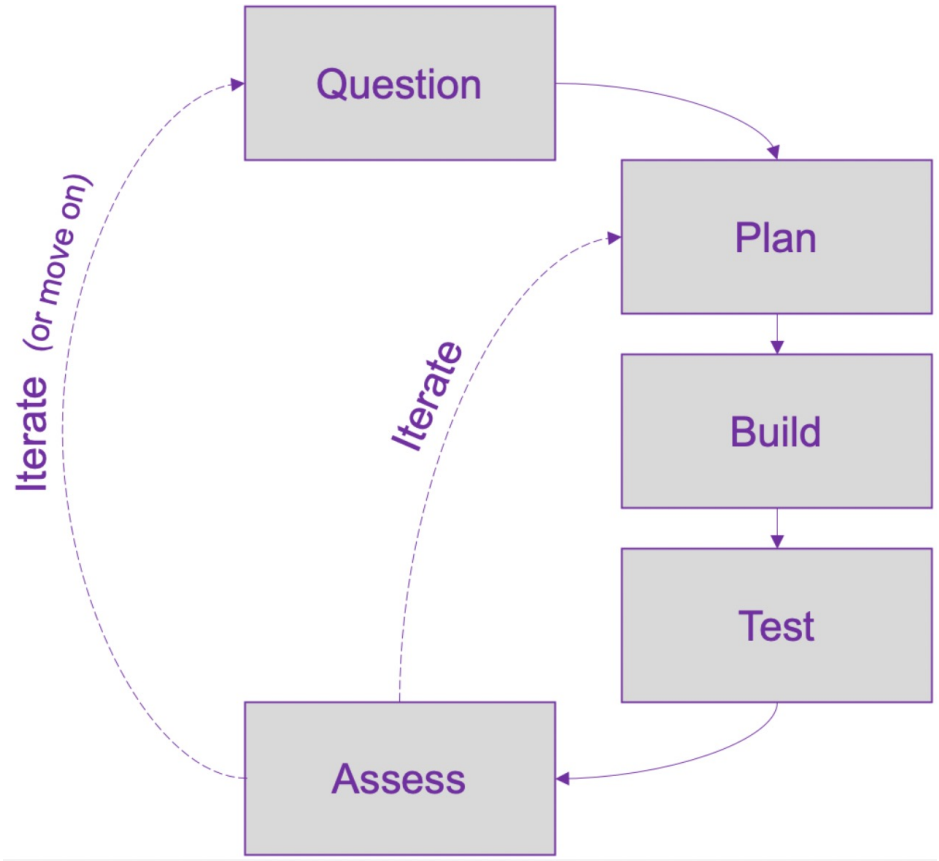
Houde and Hill (1997):2

# So what should your prototype prototype?

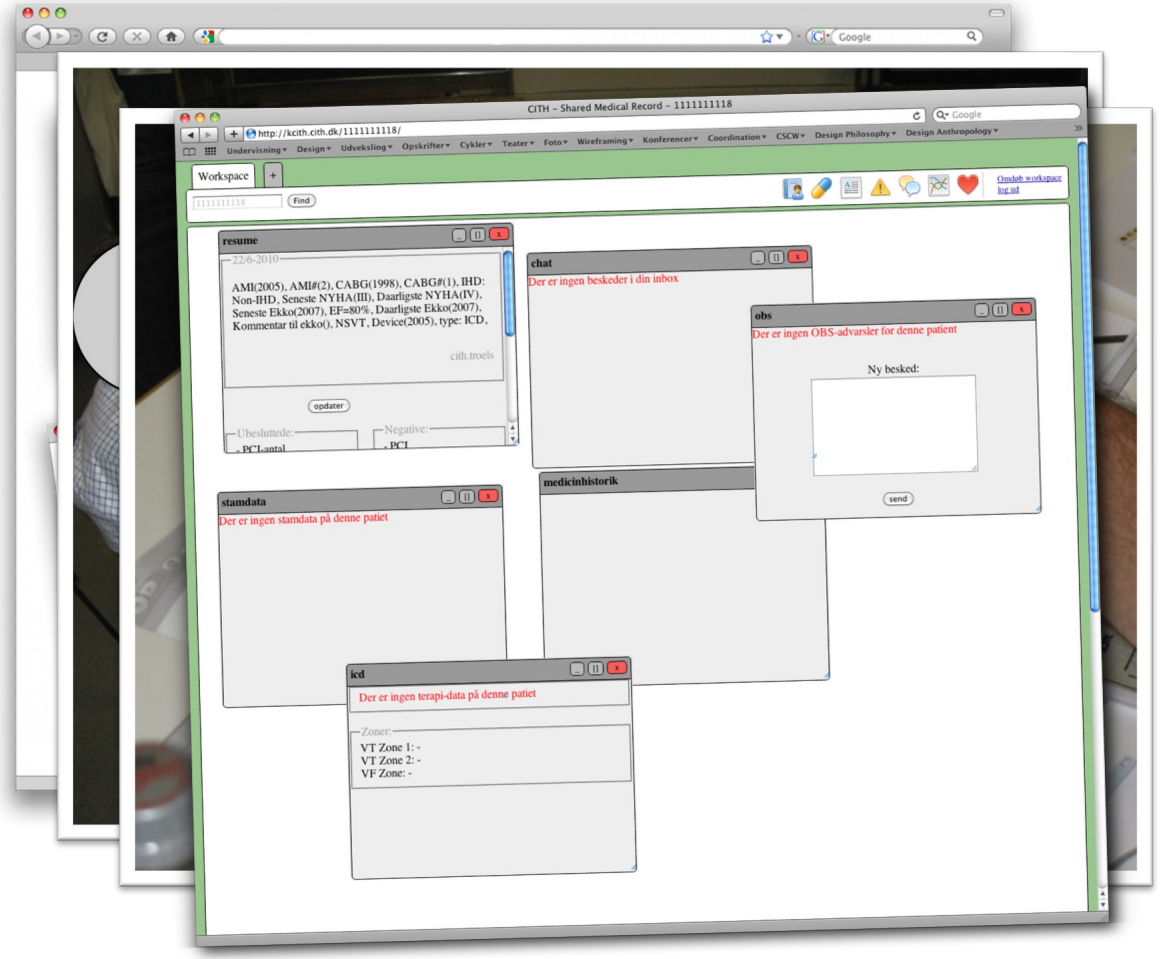



Houde and Hill (1997):3

# The basic prototyping process according to BioDesign



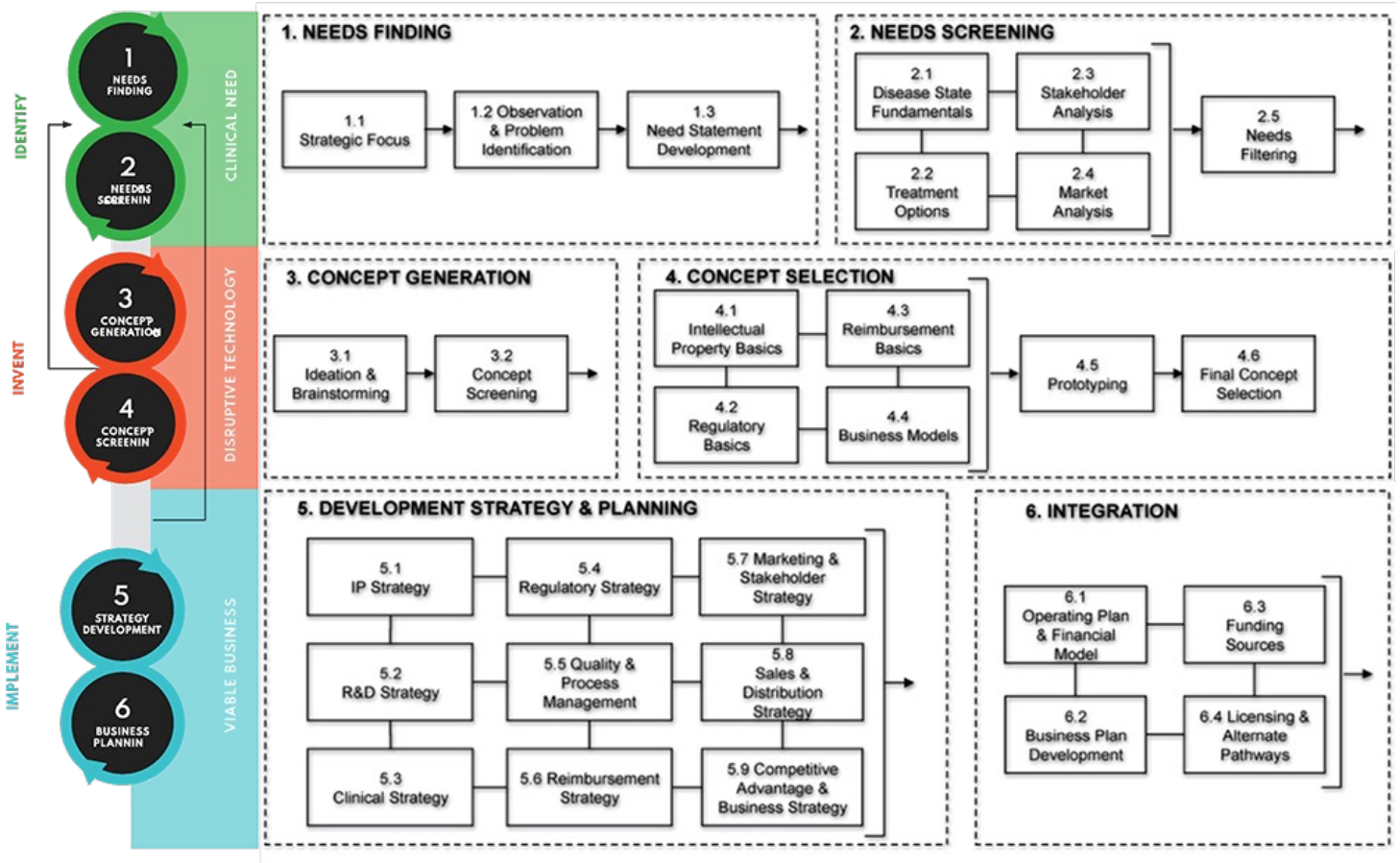
# Example of early stage prototyping: Validation of core concept with users



# Example of late stage prototyping: Real-life testing of functional prototype



# The Biodesign framework



# Recap (30 min)

Discuss in groups

- What was the key knowledge and concepts introduced on lecture 11?
- What are your primary takeaways from the lecture? Formulate at least 1 (preferably 3) learning points you want to remember.

What is a good learning point?

- Specifies a general insight with clear reference to the knowledge source(s).
- Exemplifies this either with reference to one or several empirical examples or personal experience.
- Formulates an independent interpretation of the learning point and discusses the importance of this for your own professional development.

# Exercise: Plan a design process for increasement of trust in healthcare data

**Case**

- Read the following case from Copenhagen Healthcare Innovation: https://copenhagenhealthinnovation.dk/opslag/assessing-trust-in-healthcare-data-evaluating-perceptions-and-consequences-among-healthcare-personnel-and-patients/

**Group discussion**

- Discuss how you would carry out the identification phase if you were to carry out this project:
  - Who would you involve in the examination?
  - How would you collect data?
  - How would to screen and select among the identified needs and who would you involve in this process.

**Presentation**

- Present the outcome of your discussion on class.

# Questions

