DIGHEL4360: Sociotechnical design in IT and digitalization projects Part 2

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Remember this!

DIGHEL4360 - Mandatory assignment 4: IT projects, software engineering, and sociotechnical systems design.

Deadline: 23rd of November in Devilry
Your answer should be no more than 400 words.

The regional public health organization HealthEastWest is in charge of managing five hospitals within a region in Norway. Currently, there is no standardized electronic patient record system within the region, and they want to initiate a project with the aim of implementing an IT system that can serve this purpose across these five hospitals.

Based on your learnings from the four lectures on IT projects, software engineering, and sociotechnical systems design, outline a set of challenges and important aspects HealthEastWest should consider when embarking on their project.

You can assume that HealthEastWest has little experience with and knowledge of the complexities of organizing larger IT projects. You are free to draw on any concepts, aspects, and issues discussed in the lectures and in the syllabus listed in the course schedule. The format of your answer could, for instance, be a list with short explanations and justifications of some challenges and considerations that you see as particularly relevant to highlight based on what we have discussed in the lectures and seminars.

If you have any questions, do not hesitate to contact me.

I look forward to reading your assignments. Good luck!
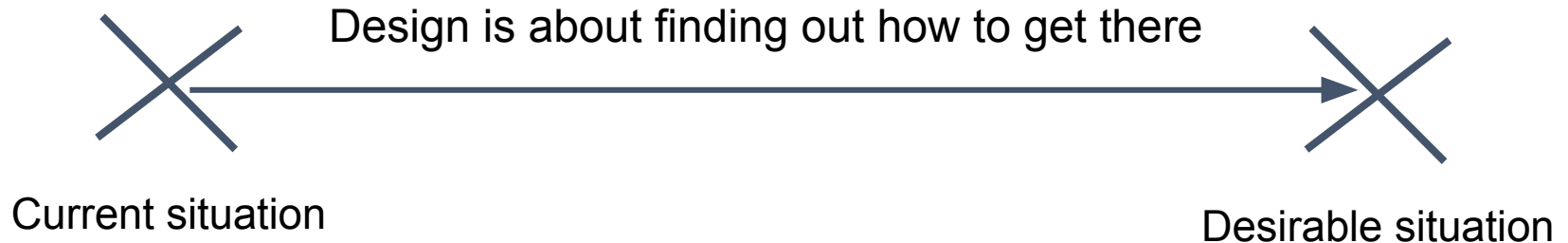
Today

Last week we…

- Looked at "sociotechnical design" in the context of IT and digitalization projects.
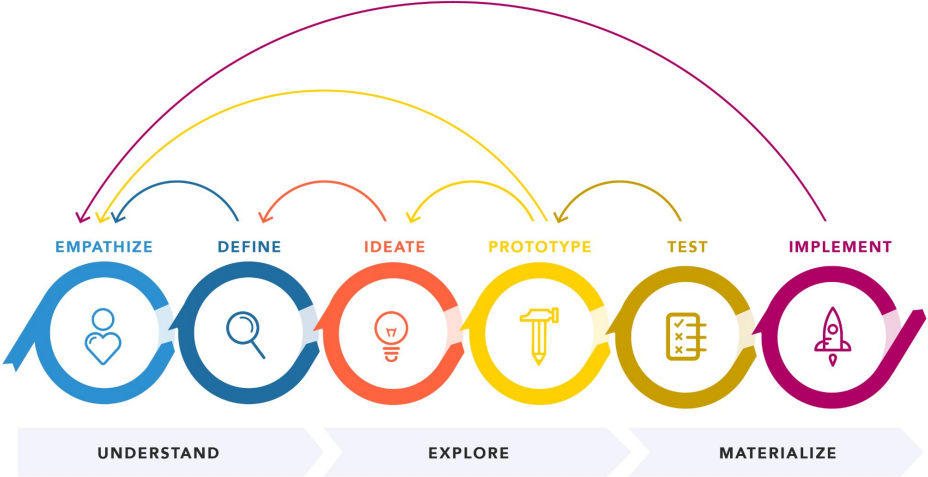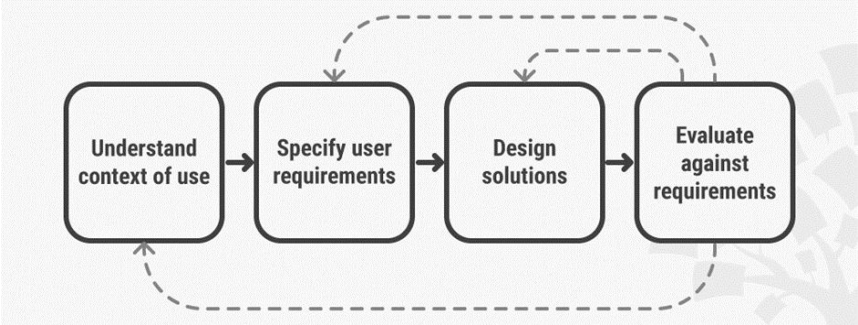   - Different scopes, values, in response to three types of problems with technology.

Today…

- We will look at some typical activities within sociotechnical design processes
- See a real-life "UX designer" and hear about his work

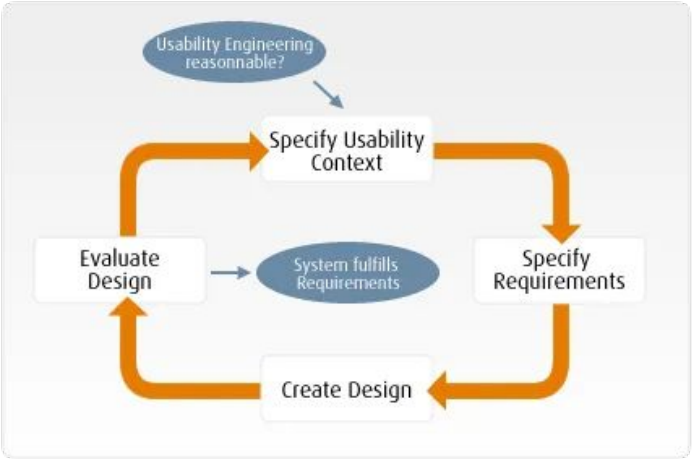# "Design" - beyond colours and layouts

- Can broadly be defined as systematic attempts to transform undesirable situations into preferred ones (Simon, 1979)

- Or; devising for how to solve problems

- Hence, central to many professional disciplines, e.g., engineering, architecture, organizational management, computer science, informatics
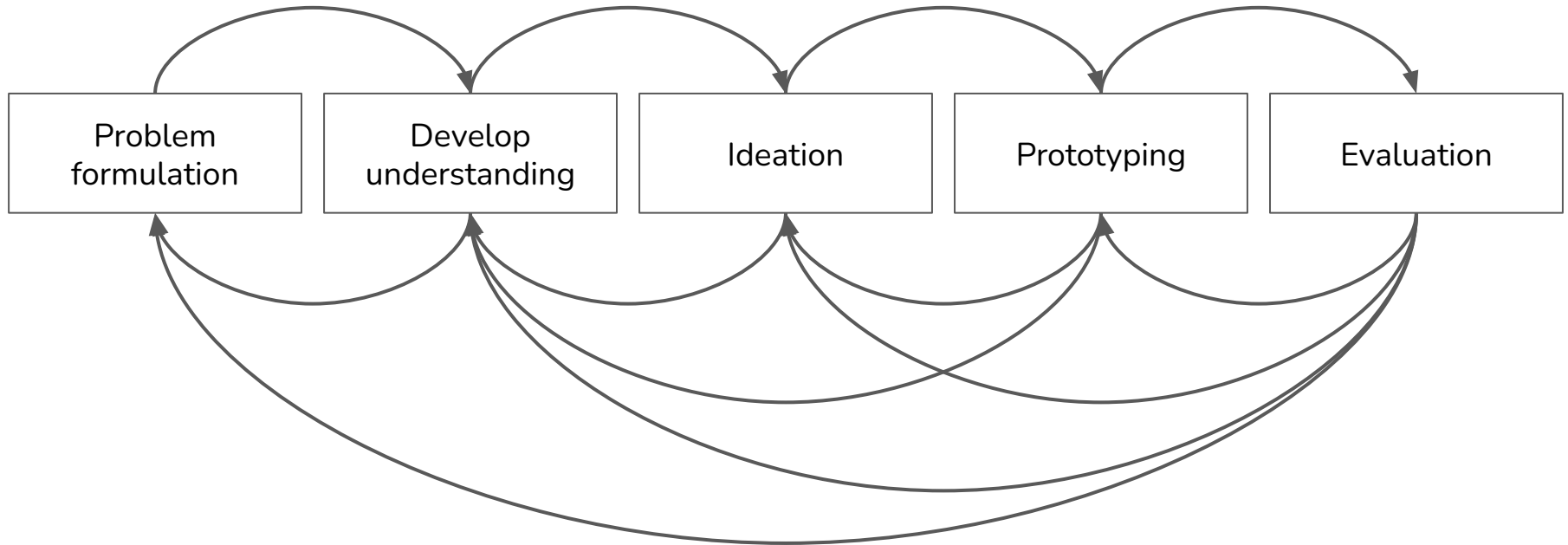
Design is about finding out how to get there

Current situation

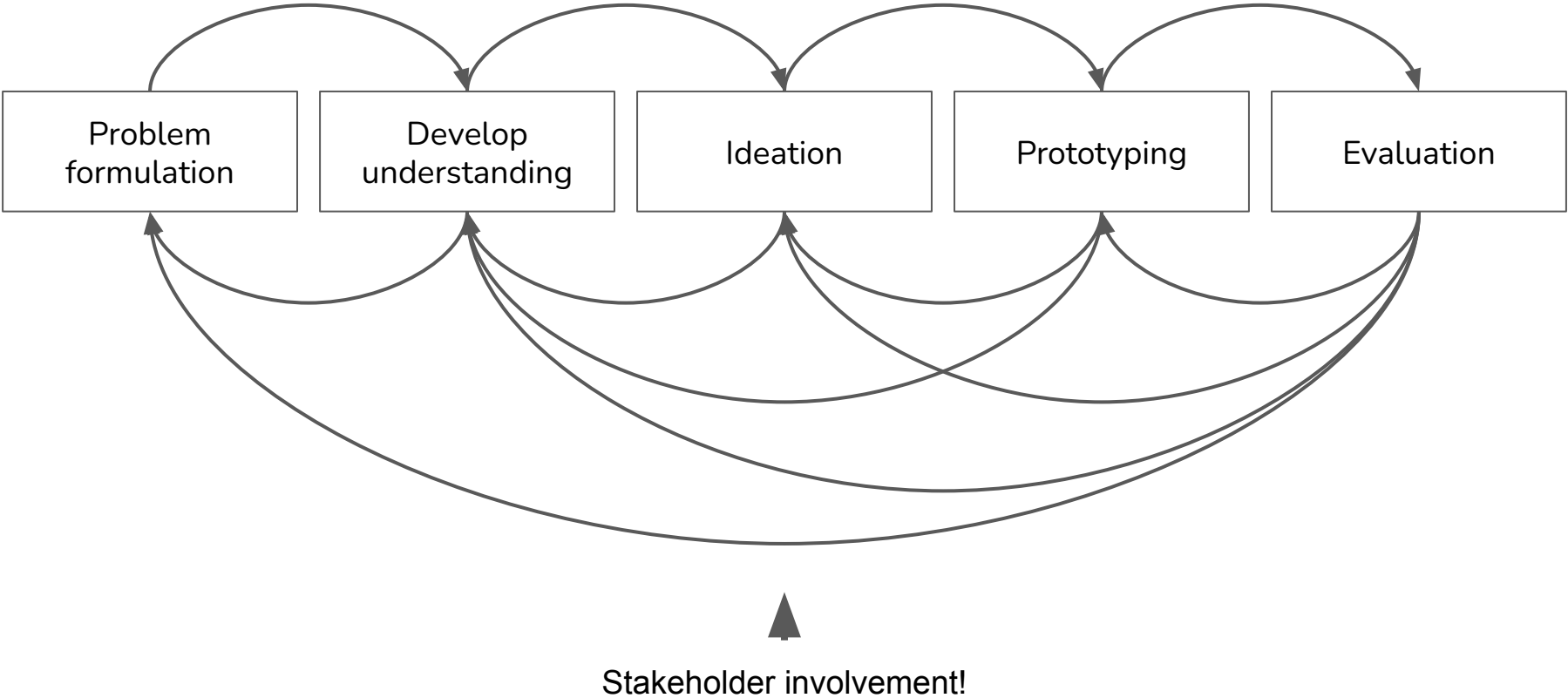Desirable situation

Design processes

Many different models from different approaches, but some activities often surface!

A typical design process and some activities

A general design process based on "design thinking"

A general design process based on "design thinking"

A general design process

Problem formulation and developing understanding

- Developing an understanding of the problem situation
- Challenging the problem formulation: Zooming in and out

A general design process

Ideation

- Divergent vs convergent thinking

- Leveraging design principles

- Thinking about sustainability and costs - i.e., what are low-hanging fruits that involve minimum immediate and long-term costs? → Key role of IT professionals
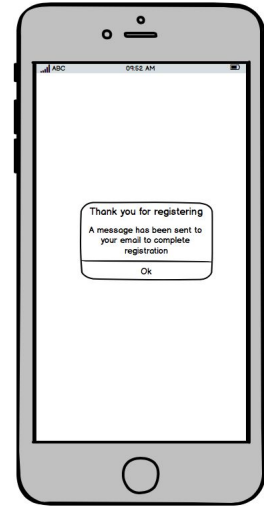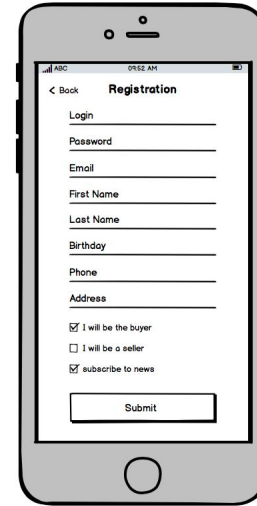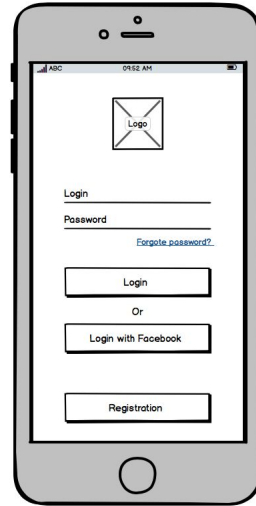
A general design process

Prototyping

- Prototypes are always developed for the purpose of evaluating / testing *something* - what we call a *dimension*

- Low-fidelity versus high-fidelity

- Evolutionary and parallel prototyping

A general design process

Prototyping

A general design process

Evaluation

- Evaluation involves gathering insights with the help of prototypes

- Form of evaluation depends on the dimension(s) being explored, and the form of prototyping

- E.g.,

  - overall solution concept → discussions and walkthroughs with stakeholders based on paper-prototypes, storyboards, flow-diagrams

  - usability → wireframes or working prototypes

Research opportunities

Research opportunities

1. How to organize projects for design, innovation, and digitalization

2. Developing better approaches to design in digitalization projects

3. From IT specialists to digitalization specialists