

# Design Thinking and Electronic Prototyping

Week 8



Aalto University  
School of Electrical  
Engineering

Salu Ylirisku

27.10.2020

# Project

**Today (27.10.):**

**Use cases / user stories**

**In 5 weeks (1.12):**

**Project Results with Prototype Demo**

# Quote from diaries

**“I realised that it is so easy to forget about users, customers, people while designing something.”**

# **This is NOT an engineering course**

**...but**

**Design Thinking and  
Electronic Prototyping!**

# What this means?

- **Less technical ambition in construction and calculation**
- **More focus on**
  - contextual study
  - conceptual understanding
  - communication

# Project evaluation in the end is 1/3 based on your focus on users

1. Design Concept (**user** value)
2. Design Exploration (**user** study and **user** involvement)
3. Design Judgment (**user-based** criteria)

**If you lose focus on the users, you won't get the full points!**

# Design Concept

1. Name & Visualisation
2. Purpose & Users
3. Key benefits (which problems solves / value adds)

# Design Exploration

1. **User study: Observations/Findings about users**
2. **Technology study: Observations/Findings about tech**
3. **Excess Ideas: Which ideas were considered but discarded**



# Design Judgment

- 1. Why do you think that your idea is a good one?**
  - If it solves a problem – is that problem really a meaningful one to be solved?
- 2. Why did you choose to prototype the specific functions and features?**
- 3. Why did do the project activities in the order that you did?**
- 4. Why did you discard certain ideas?**

# Grounding your design on user-understanding/empathy

- 1. Who is your user? (Now pick just one!)**
  1. What are their key characteristics / needs?
- 2. What is the situation?**
  1. Time, context (psycho-social & physical setting)
- 3. What does the user want to do (goal)?**
- 4. Action: What steps are there in the action?**
  1. What happens first
  2. What happens second
  3. ...

# This and the next week's tasks

1. **Diary – Deadline on Monday 2.11. at 10 AM**
2. **Reading: End of Chapter 4, begin Chapter 5 until p. 141-170**
  - **Knowing What to Do: Constraints, Discoverability, and Feedback**
    - Constraints That Force the Desired Behavior
    - Conventions, Constraints, and Affordances
    - The Faucet: A Case History of Design
    - Using Sound as Signifiers
  - **Human Error? No, Bad Design**
    - Understanding Why There Is Error,
    - Deliberate Violations
3. **Project**
  - Weekly assistant meeting
  - Continue building your prototype