Service Design

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Service design and human-centred design methods in healthcare

Kaisa Savolainen & Johanna Viitanen

7.3.2024

Aalto-yliopisto
Aalto-universitetet
Aalto University

SERVICE DESIGN?

What?

Why?

How?

Lecture, at 13.15-15.00

Introductions

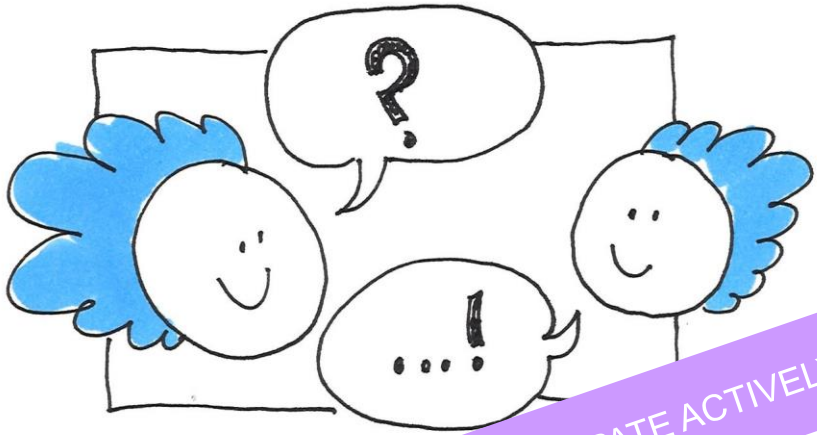
Service Design from different perspectives

Break (at around 14.00)

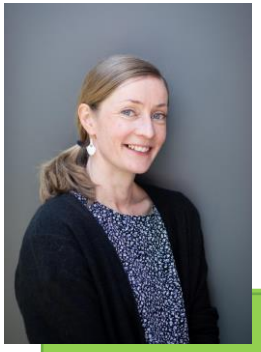
Exercise 1 and 2

Q&A

Conclusions



PLEASE ASK QUESTIONS AND PARTICIPATE ACTIVELY



Who are we?

Johanna
(DSc, LicSc, MSc)

- Asst. professor (SCI, Computer Science)
- Over 15 yrs in the university: research and teaching on usability and UX
- Parallel positions in public sector organizations (usability specialist)

Kaisa
(DA, MSc)

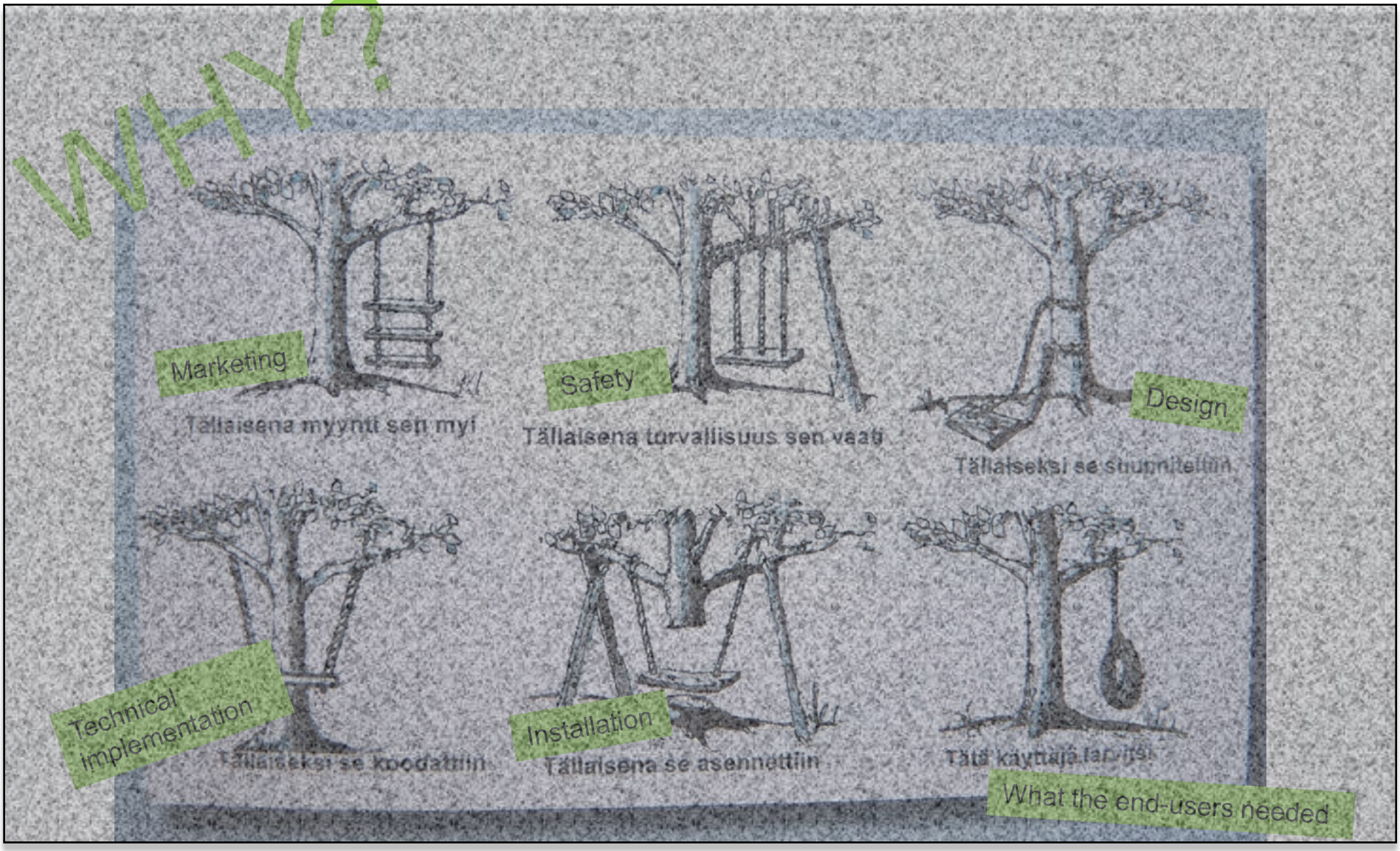
- Current: Postdoc researcher (ARTS & SCI)
- Earlier: 10 yrs in the private sector
- Usability specialist, market & business analyst, UX portfolio manager, design insight specialist, research manager...

Academic perspective –

Johanna

Aalto-yliopisto
Aalto-universitetet
Aalto University

WHY?



Picture from the book: Helppokäyttöisen verkkopalvelun suunnittelu by Sinkkonen, I., Nuutia, E., Törmä, S. 2009, p. 15

HOW?

HOW?

Human/user-centred design

for interactive systems and services

Human-centred design is an approach to interactive systems development that aims to make systems usable and useful by focusing on the users, their needs and requirements, and by applying human factors/ergonomics, and usability knowledge and techniques. This approach enhances effectiveness and efficiency, improves human well-being, user satisfaction, accessibility and sustainability; and counteracts possible adverse effects of use on human health, safety and performance.

Ref: ISO - International Organization for Standardization. (2019). ISO 9241-210 Ihmisen ja järjestelmän vuorovaikutuksen ergonomia. Osa 210: Vuorovaikutteisten järjestelmien käyttäjäkeskeinen suunnittelu. Ergonomics of human-system interaction -- Part 210: Human-centred design for interactive systems.

Principles of human-centred design

a) The design is based upon an understanding of users, tasks and environments

b) Users are involved throughout design and development

c) The design is driven by user-centred evaluation

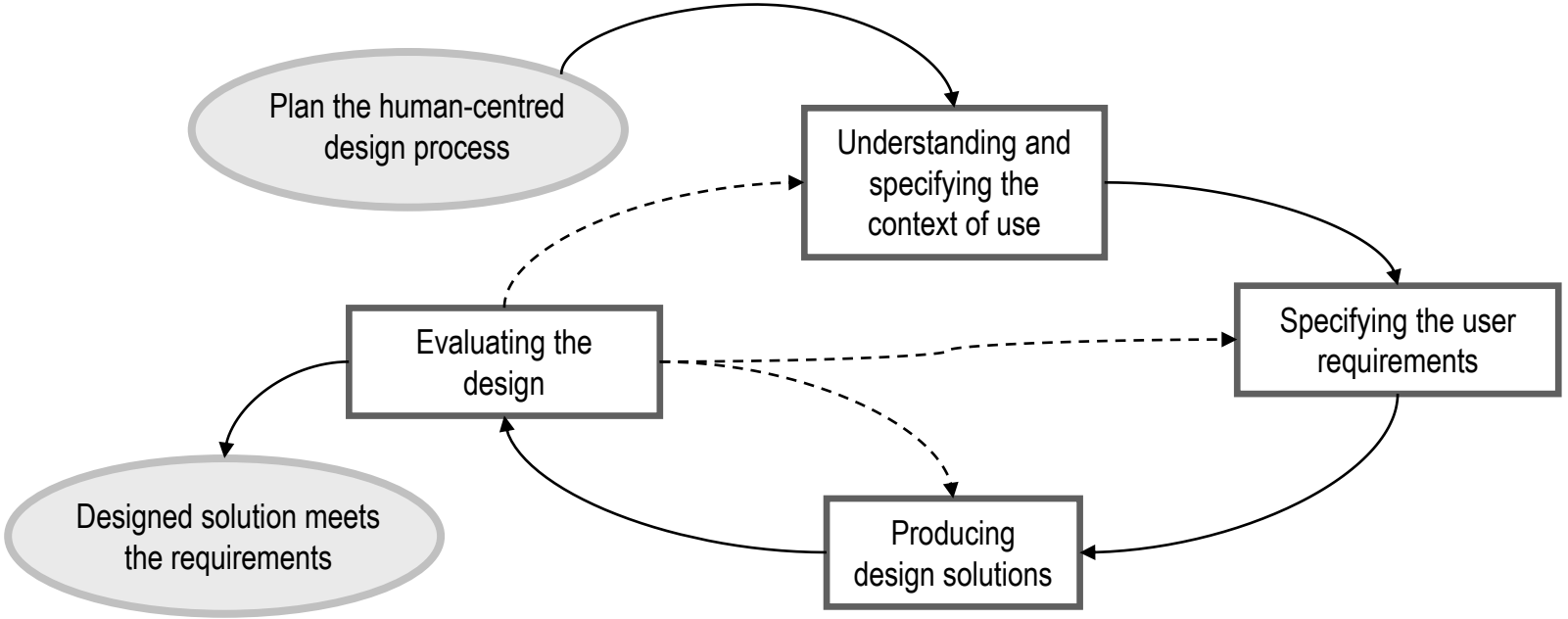
d) The process is iterative

e) The design addresses the whole user experience

f) The design team includes multidisciplinary skills and perspectives

REF: ISO - International Organization for Standardization. (2019). ISO 9241-210 Ihmisen ja järjestelmän vuorovaikutuksen ergonomia. Osa 210: Vuorovaikutteisten järjestelmien käyttäjäkeskeinen suunnittelu. Ergonomics of human-system interaction -- Part 210: Human-centred design for interactive systems.

The process of
Human-Centred Design



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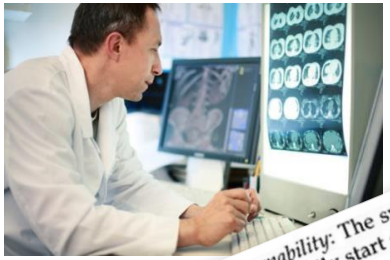
Usability

Interaction between the user and the system

Efficiency, Few errors,
Learnability, Memorability, Satisfaction
…



- *Learnability*: The system should be easy to learn so that the user can rapidly start getting some work done with the system.
- *Efficiency*: The system should be efficient to use, so that once the user has learned the system, a high level of productivity is possible.
- *Memorability*: The system should be easy to remember, so that the casual user is able to return to the system after some period of not having used it, without having to learn everything all over again.
- *Errors*: The system should have a low error rate, so that users make few errors during the use of the system, and so that if they do make errors they can easily recover from them. Further, catastrophic errors must not occur.
- *Satisfaction*: The system should be pleasant to use, so that users are subjectively satisfied when using it; they like it.

User friendly??
Ease-of-use??

User Experience

Engagement
Motivating
Pleasure
…

References:
Nielsen, J., Usability Engineering, Academic Press, Inc, San Diego, 1993.
ISO - International Organization for Standardization. (2019). ISO 9241-210 Ergonomics of human-system interaction -- Part 210: Human-centred design for interactive systems.

Key concepts

Usability

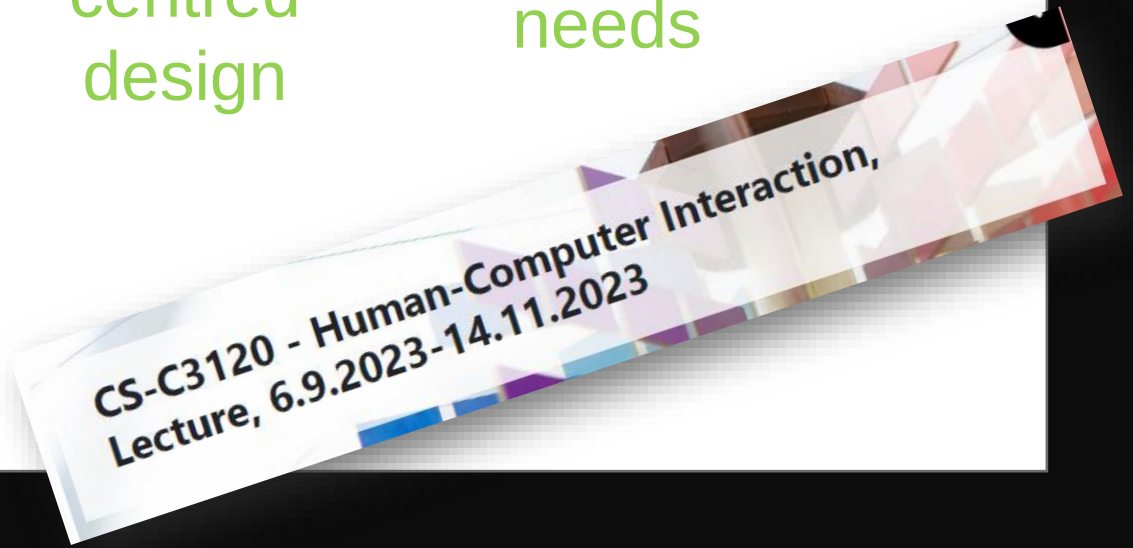
User research

Context of use

Human/user-centred design

User needs

User experience (UX)



Design perspective -
Kaisa

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WHY?

Case example: Why the City of Helsinki utilizes service design

Design opportunities: summary

A. Improvement of customer understanding, empathy

B. Development of operating models

C. Experimental approach (‘experimental doing’)

D. Plurality of voices

E. Part of the city’s brand and communication

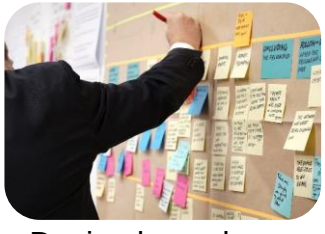
Helsinki A?

Design activity map (v0.1)

Design of service solutions

(User-driven) Design in the built environment

Design in the development of the organization



Design know-how and training

Design in participation and collaborative work

Design in strategy and branding

The map illustrates the **different types of design activities in the City**, which support design thinking and the cultural transformation of the organization into a user-inspired one.

A single project can contain elements from different types of design activities.

Helsinki

Aalto-yliopisto
Taiteiden ja suunnittelun korkeakoulu

Image sources: Helsingin kaupunki

HOW?

Background/research

Fieldwork
Observations
Interviews
Focus groups
Probes
Shadowing
Context mapping
Personas
Five whys

Ideation

Brainstorming
Workshops
Service blueprint
Frontstage/backstage mapping
Service touchpoints mapping
Customer journey mapping
Scenarios

Prototyping

Scenario-based design
Storyboarding
Storytelling
Experience prototyping
Bodystorming
Roleplay

Business perspective

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WHY?

WHY?

- Offers new customer-relationship possibilities for technically oriented IT-companies
- Helps IT-companies to understand their customer and customer´s customers needs better and helps to create more value to customer and customer´s customer.
- Offers great communication and interaction environment even for challenging situations and practitioners
- Helps to focus on right things in the right time of the service process, and to match IT-development to them
- Helps to understand large entities, and complex service chains

HOW?

- In consulting business, service design (as a term, with its´ methods, and project size) adapts each time to the customer company´s needs and investing willingness
- As a term: might include everything from the whole variety of user research to user interface (UI) design, and from workshop organizing to strategic thinking

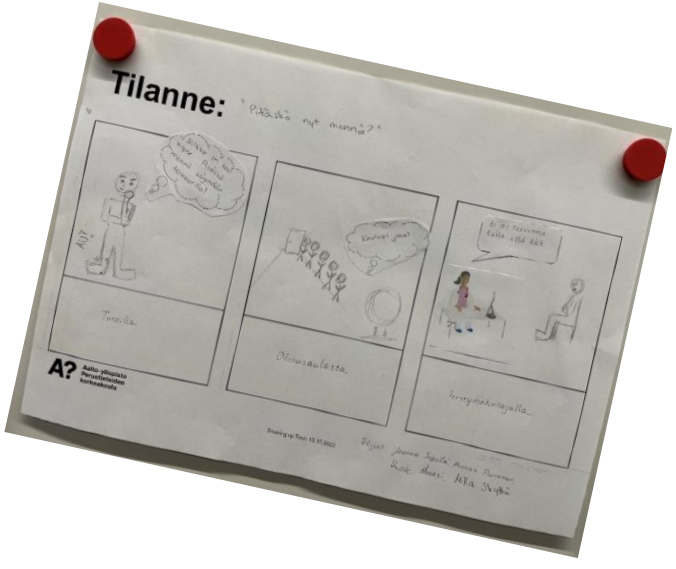
- With its´ methods: interviews, workshops, journey map visualizations…
- Investigation willingness variates from only 2 hours´ consultation to several years´ projects to whole teams
- Service design teams are sometimes integrated in a company´s other teams, and sometimes they organizes their own, independent competence groups.

HOW?

BREAK
5 min

Service Design Exercises Today

1) Investigating the Context of use with Storyboards



2) Idea Generation Based on Storyboards, and Affinity Diagram

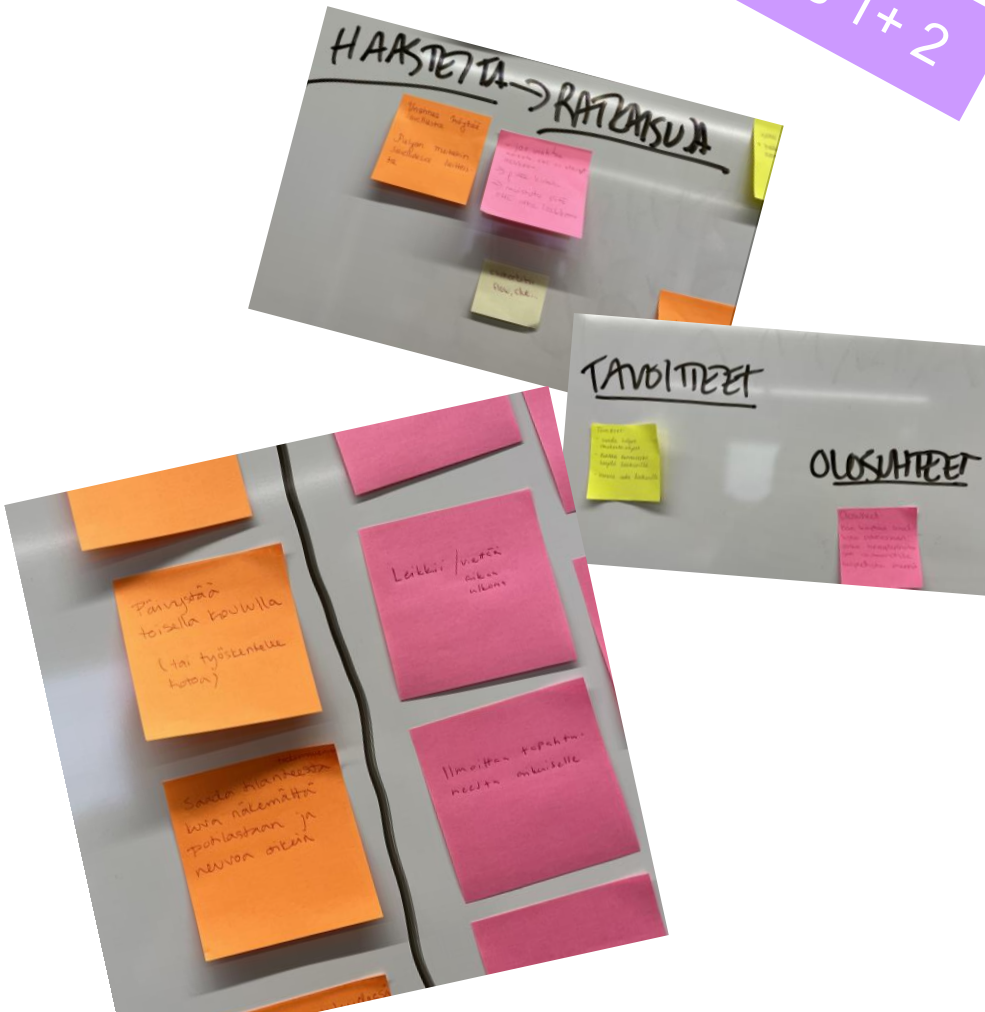
Design Problem:

How digital health services can improve the student healthcare?

Documentation

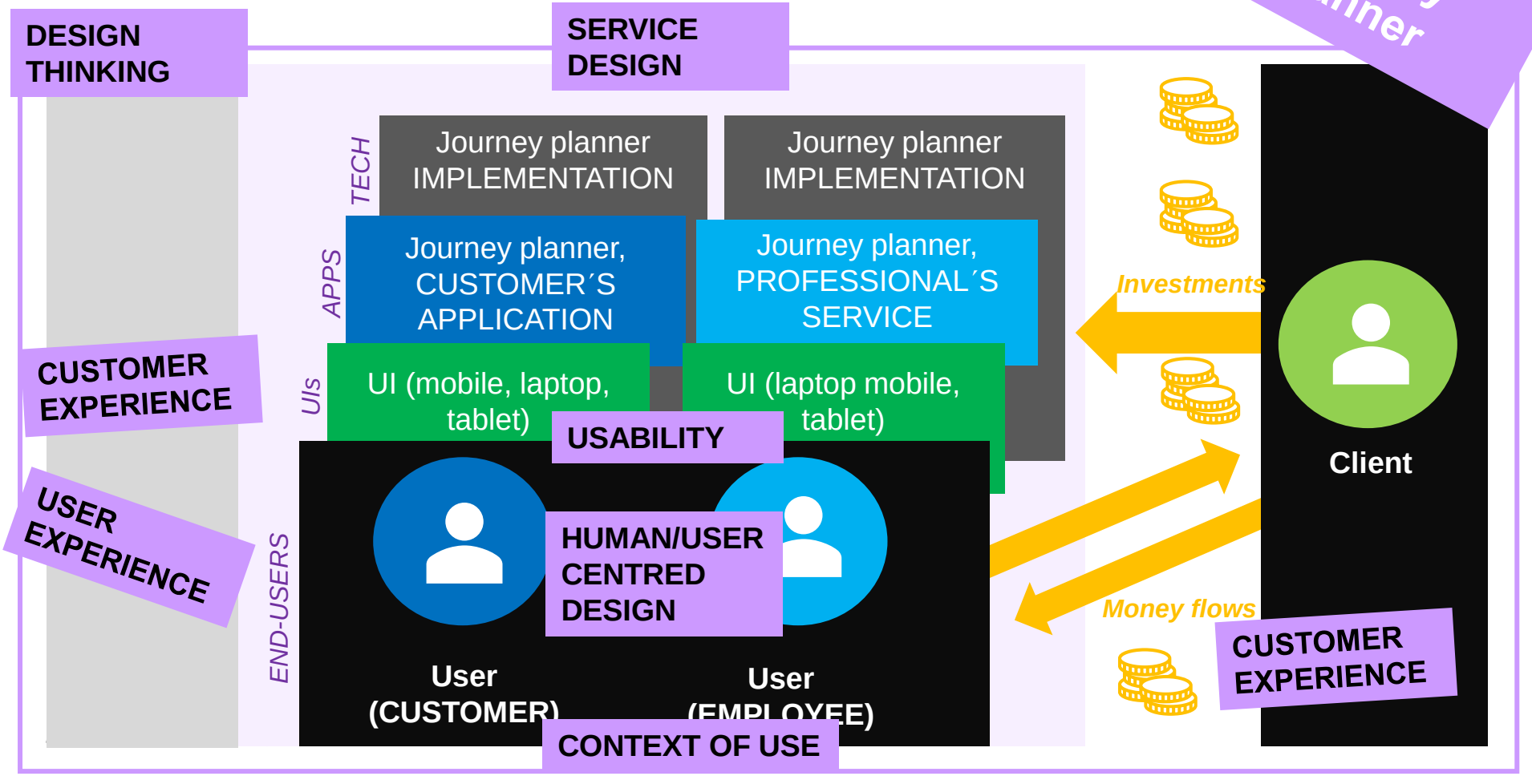
Exercises 1+ 2

- Please take photos of your posters
- Share those to others via MyCourses



Q&A

Conclusions



Readings (AVAILABLE VIA AALTO PRIMO)

- Patricio, L., Sangiorgi, D., Mahr, D., Čaić, M., Kalantari, S., & Sundar, S. (2020). Leveraging service design for healthcare transformation: Toward people-centered, integrated, and technology-enabled healthcare systems. *Journal of Service Management*, *31*(5), 889-909.
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- Gulliksen, J., Göransson, B., Boivie, I., Blomkvist, S., Persson, J. and Cajander, Å. (2003). Key principles for user-centred systems design. Behaviour and Information Technology, 22(6), 397-409.
- Hertzum, M. (2010). Images of usability. Intl. Journal of Human–Computer Interaction, 26(6), 567–600.