Service Design and Engineering (SDE) track

29.8.2023

Marjo Kauppinen   Marko Nieminen   Mika Nieminen   Johanna Viitanen
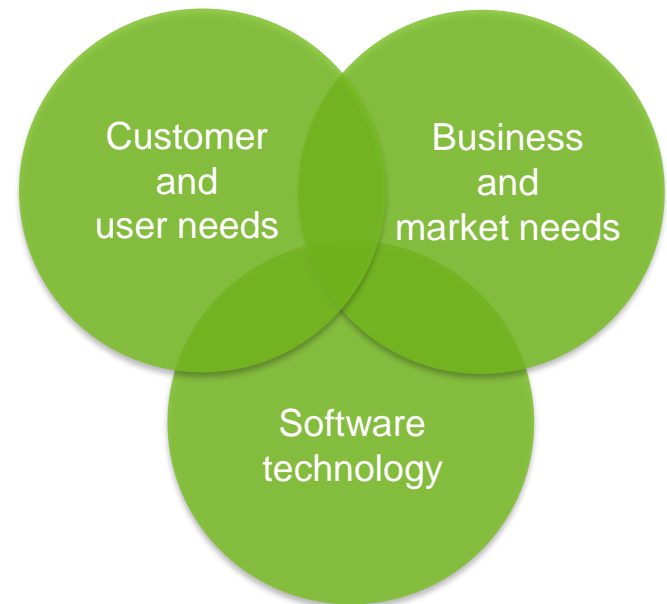
Service Design and Engineering (SDE) - why

- Digital services can change any business and public sector.

- Digital services are developed by multidisciplinary teams.

Professionals that are able to
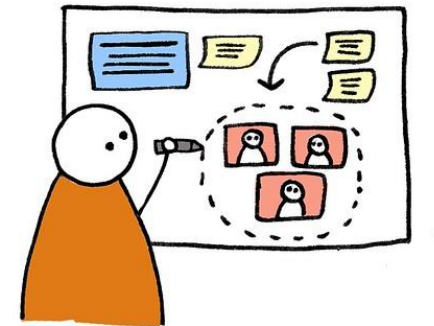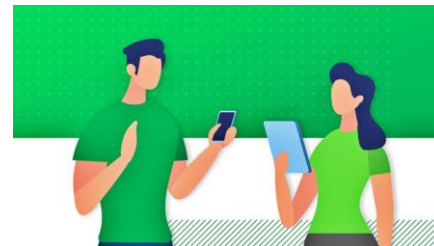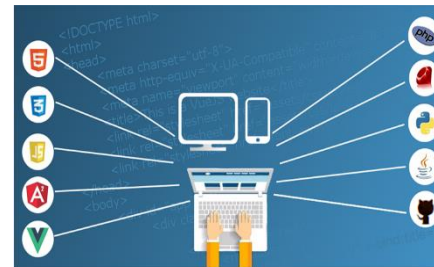develop digital services
by combining

- service design
- user-centered design
- software engineering
- business and entrepreneurship

Customer
and
user needs

Business
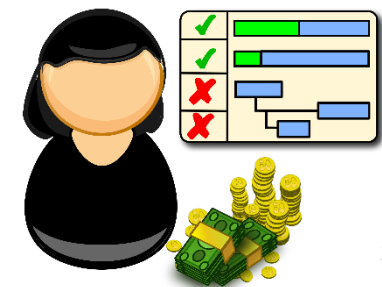and
market needs

Software
technology

Service Design and Engineering (SDE) - why

After completing their studies, students can work in
- industry
- design and engineering companies
- public organisations
- startups

as
- product owners
- software developers
- user interface and interaction designers
- usability specialists
- user experience managers
- service designers
- project managers
- business analysts.

The track also provides a good starting point for doctoral studies.

Track: Service Design and Engineering (SDE)

Master's thesis (30 cr)

Any Aalto minor (20-25 cr)*

Elective Studies (20-25 cr)

Track optional courses (25* / 45cr)
Courses of **user-centered design** and **software engineering** +
other optional courses

Compulsory courses (15cr)

Data-Driven Concept Design

User-centered Methods for Product and Service Design

Software Engineering

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Compact major (40 cr)*

Long major (60 cr)

Track: Service Design and Engineering (SDE)

Track optional courses of
user-centered design & software engineering

- Human-computer interaction
- User interface construction
- Collaborative evaluation of interactive systems

- Software design and modelling
- Software processes and projects
- Requirements engineering
- Software architectures
- Software testing and quality assurance

Courses that strengthen the multidisciplinary contents of the studies are especially recommended!

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Human-centred health informatics (HCHI)

The HCHI group brings together research enthusiasts from various fields such as engineering, design, medical, nursing and psychology.

Our research group focuses on
- Human-centred design of electronic health (eHealth) services
- Patient experience
- Usability of electronic health record (EHR) systems
- User experiences of health and social care professionals
- Usability in IT system procurement

We collaborate with healthcare providers, health IT companies and research groups in health informatics, social sciences and health management.

Topics for our future research include usability of client information systems, implementation and configuration of EHRs as well as customisation of eHealth services for improved user experiences.

Researchers develop better treatment methods for kidney disease patients
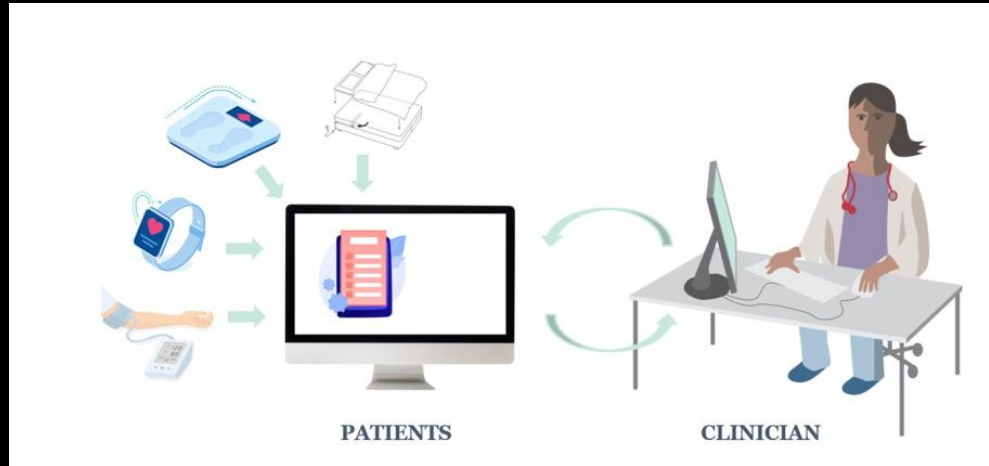
Samuli Ojala
Published: 19.6.2023

HUS, Aalto University, the University of Jyväskylä and VTT are investigating ways to offer better home dialysis treatment methods for kidney disease patients
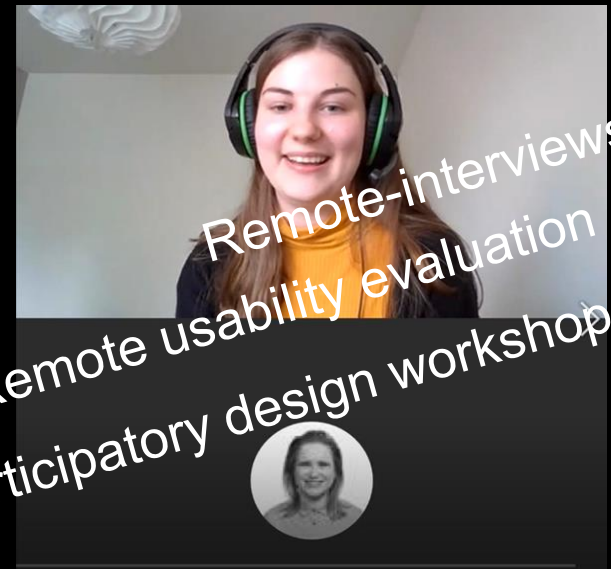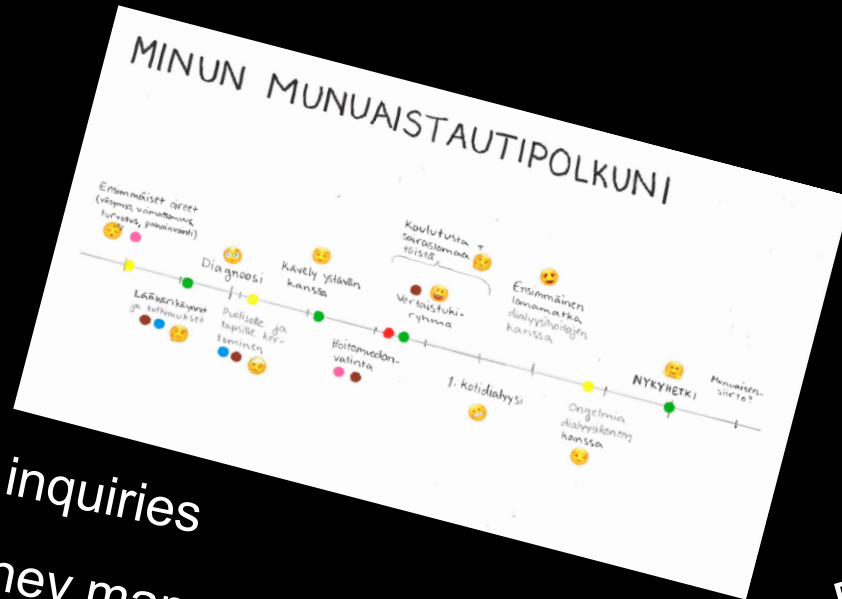
Malin Ekholm (left), Anna Aspelund, Virpi Rauta, Johanna Viitanen (at the back) and Keegan Knittle (right) met at the Department of Computer Science in June 2023. Photo: Miia Lähde/Aalto University

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Link: https://www.aalto.fi/en/department-of-computer-science/hchi

eHealth in Home Dialysis research project (2020-2026)

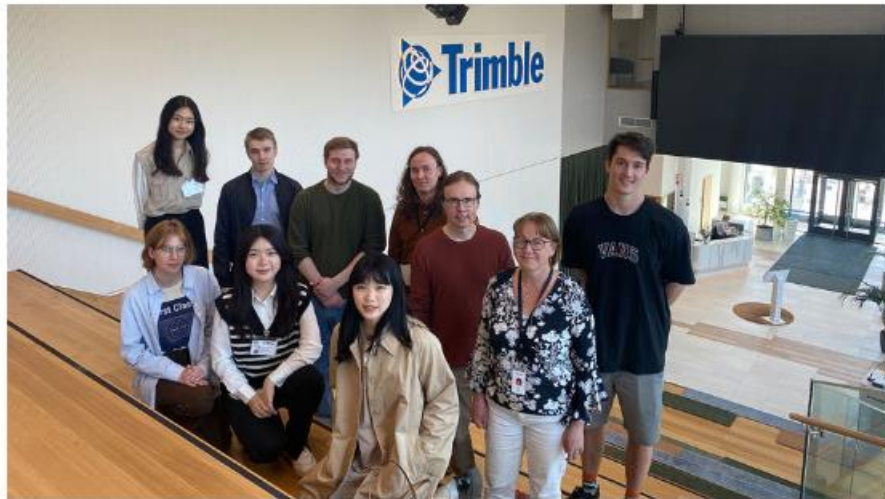Patients

Healthcare professionals

Contextual inquiries

Patient journey maps

Remote-interviews

Remote usability evaluation

Participatory design workshops

Usability is a critical factor in IT systems – Aalto students and companies collaborate for better digitalisation

Samuli Ojala
Published: 19.6.2023

Aalto University students and teachers joined forces with partner companies during a course which teaches evaluating the usability and user experiences of digital systems

Ferdinand Wittmann, Jan Kompatscher, Xueqi Qu, Xiaolin Jiang, Xinyuan Chen, Sibilla Silbano and Joonas Vuola were in charge of evaluating Trimble's service concept. Image: Eira Erola

Aalto University teamed up with Apotti, Roidu and Trimble Solutions to organise a course that focused on the usability and user experience of digital services. Students designed and carried out evaluations on various digital services in cooperation with the client companies.

'The usability and user experiences of digital services for professionals and citizens is becoming evermore important in our society,' says **Johanna Viitanen**, assistant professor at Aalto University's Department of Computer Science. 'The question is, how well do these digital systems support an efficient and sensible way of working, as well as whether users experience them as sufficiently convenient, encouraging and reasonable.'

Empathy in design and digitalisation – Aalto University researchers hold workshops for students at Arabia Comprehensive School

Samuli Ojala
Published: 2.6.2023

Aalto University researchers organised workshops for seventh graders, whose creative thinking skills were put to the test in designing future information services

Paula Valkonen (left) and Kaisa Savolainen (right) from Aalto University and Liisa Luostarinen from the Arabia Comprehensive School shuffling through the workshop presentations. Image: Anna Pulkkinen

Researchers from Aalto University and teachers from the Arabia Comprehensive School recently joined forces to organise service design workshops for seventh graders. The workshops harnessed students with design thinking skills and challenged them to design digital health and wellness services, which would be emphatic towards the end-users.

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Access to agricultural advisory services

App Testing and Field Advisory Test

Collaborative Student Challenge with Bishop Stuart University, Uganda

1. Build a mobile application module with an online web portal that help farmers request for loans online, save money and access research information and advisory services online.

2. Promote the mobile app among farmers and train them digital skills to operate it.

3. Help Farmers in weather forecasting to help them make more timely and informed decisions.

Aalto University
School of Science

APPLY NOW!
marko.nieminen@aalto.fi

Service Design and Engineering (SDE)

- Teaching staff can support you

- Do not hesitate to contact us ☺
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