Co-design: Hönnun og þróun hugbúnaðar sem nota á í heilbrigðiskerfinu í samstarfi með heilbrigðisstarfsfólki og sjúklingum

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My mission in life: meaningful work, meaningful topics & grand challenges
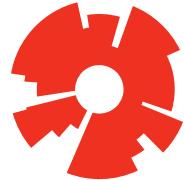
- With that as core value I entered the meaningful sector of healthcare

Breytingar í aldursdreyfingu fyrir mismunandi aldurshópa

2020 miðað við 2030

+49

Vinnufær aldur

-0,8   +3,9   -0,6   +4,6

0-19   20-66   67-79   80+   Totalt
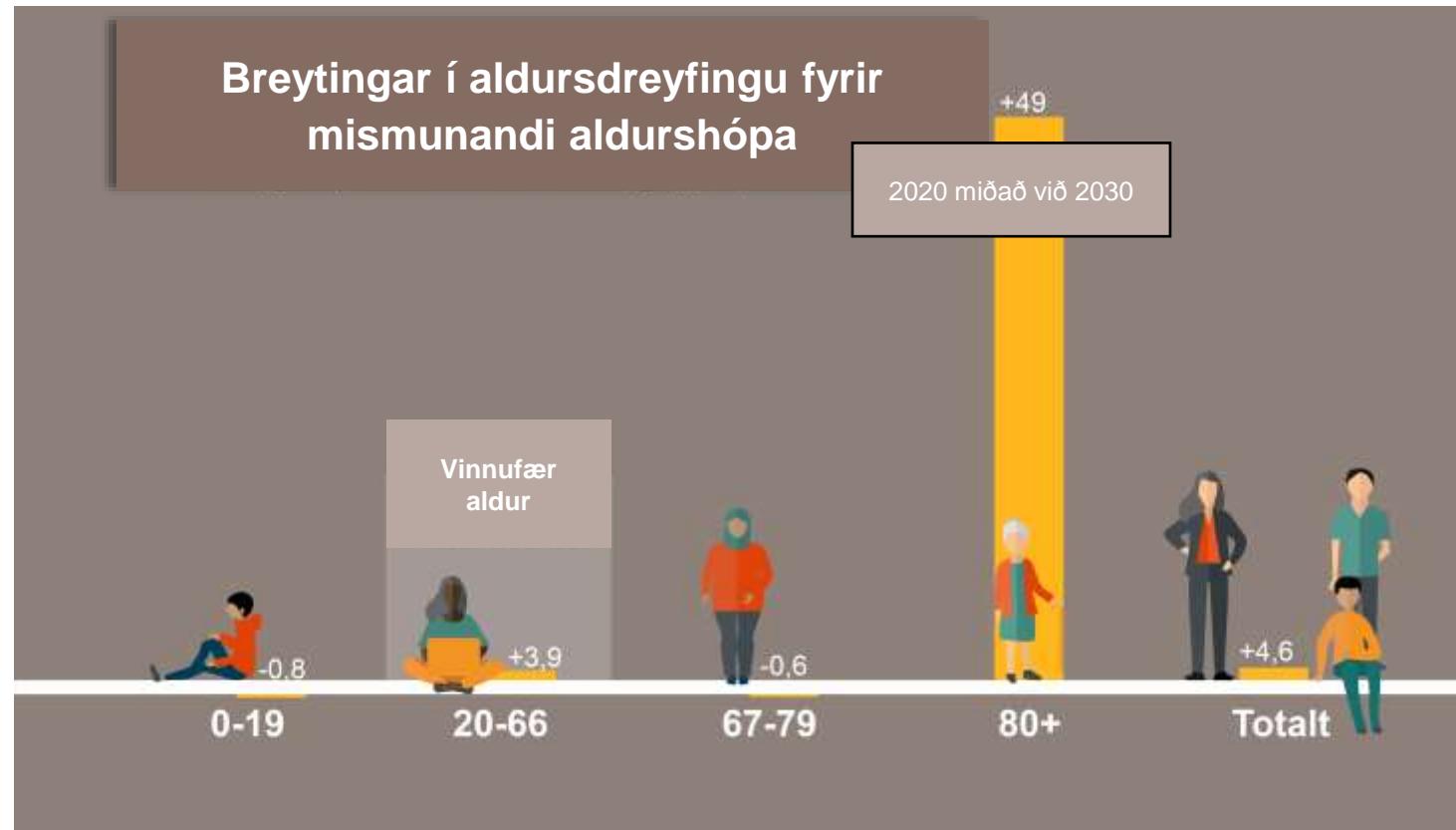
„Enginn kemst yfir nema fuglinn fljúgandi"

- When it comes to digitalization in healthcare, there is this myth that in healthcare, there is a systemic resistance to change – its only a myth

- The security issues and the legal issues are overwhelming – from my experience one foot in front of the other solves most issues and working in multi-disciplinary teams is key

Everything should be made as simple as possible, but not simpler.

ALBERT EINSTEIN

# Data is knowledge, and knowledge is power

Involving healthcare professionals and patients in co-design
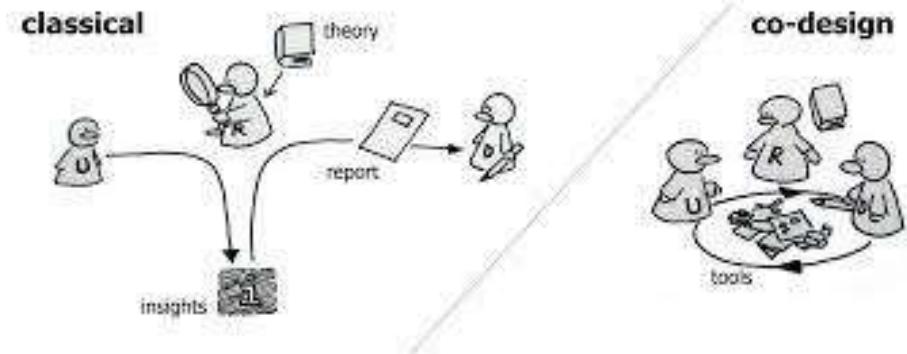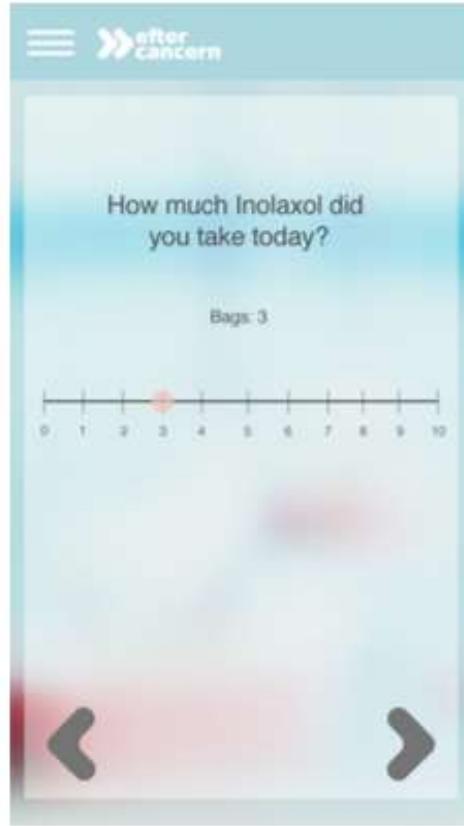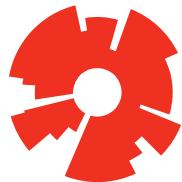
Islind, A. S., & Lundh Snis, U. (2018). From co-design to co-care: designing a collaborative practice in care. *Systems, Signs & Actions*, *11*(1), 1-24.

Grisot, M., Lindroth, T., & Islind, A. S. (2020). Digital Infrastructures for Patient Centered Care: Examining Two Strategies for Recombinability. In *Exploring Digital Ecosystems* (pp. 289-300). Springer.

Digital platforms that are complex digital infrastructures that take in data from wearable devices & mobile apps
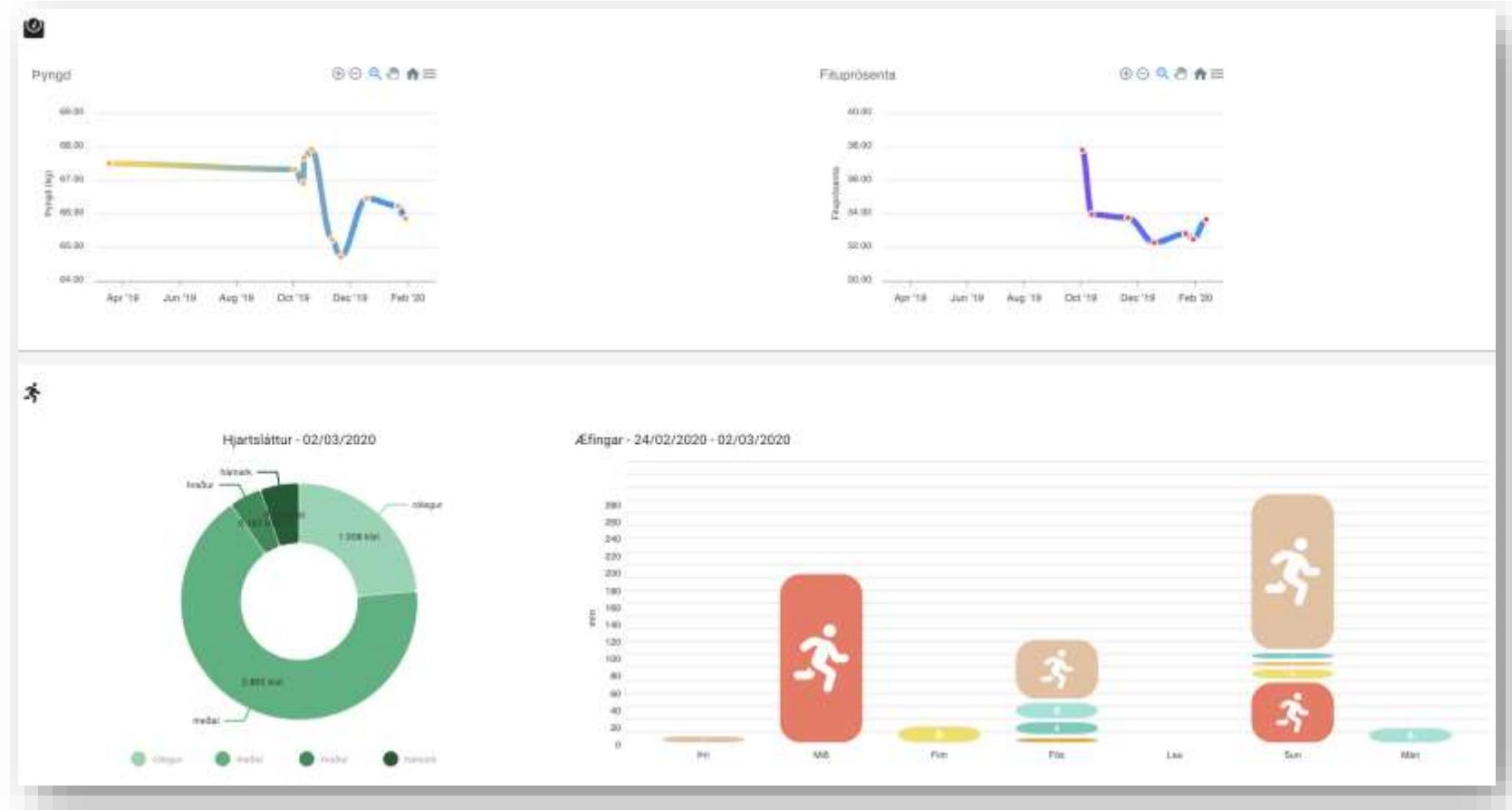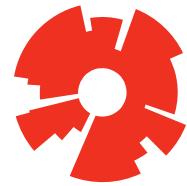
Islind, A. S. (2018). Platformization: co-designing digital platforms in practice (University West).

Islind, A. S., Lindroth, T., Snis, U. L., & Sørensen, C. (2016). Co-creation and fine-tuning of boundary resources in small-scale platformization. In *Scandinavian conference on information systems* (pp. 149-162). Springer.

Case 1: Cancer rehabilitation at Sahlgrenska University Hospital (2015-2020)

# Engaging in self-care through self-monitoring leads to patient empowerment
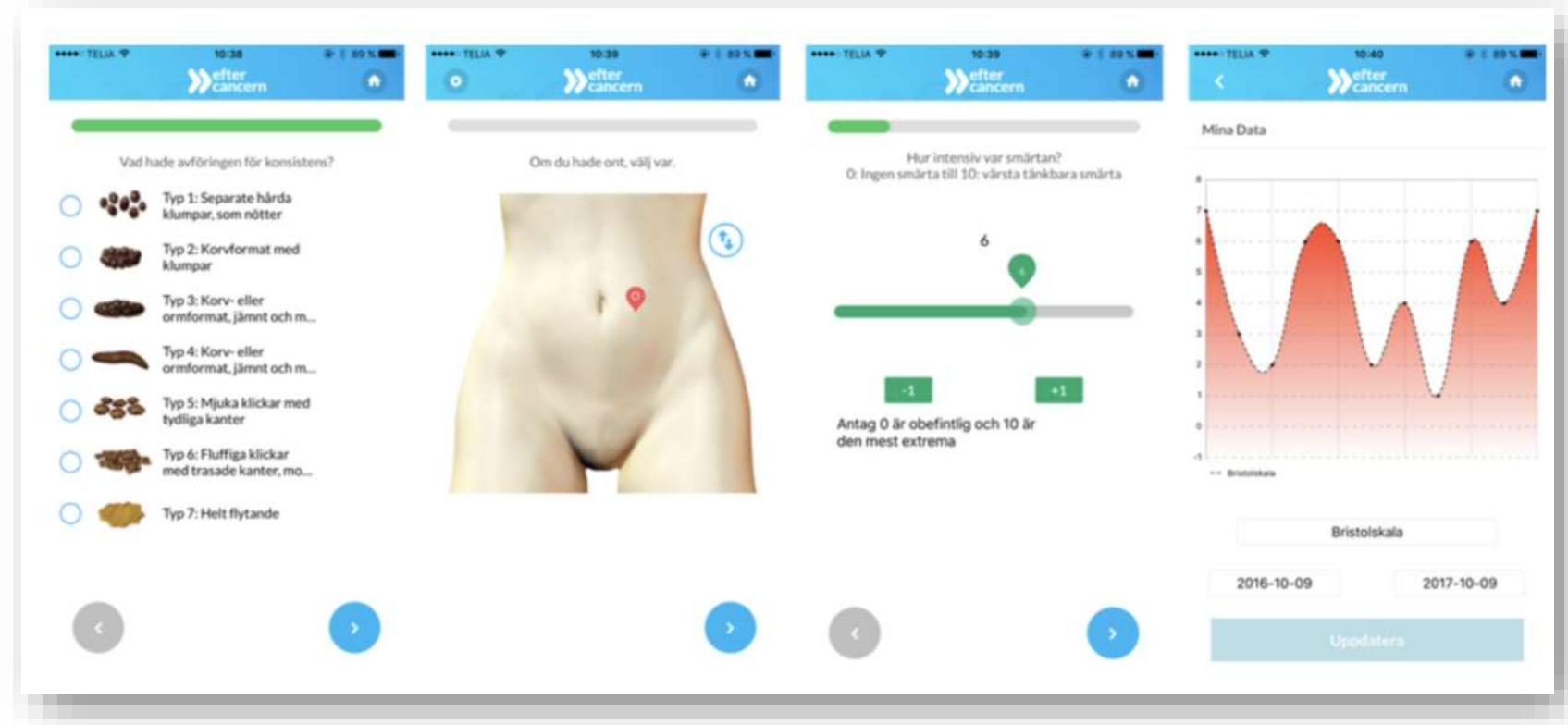
Lindroth, T., Islind, A. S., Steineck, G., & Lundin, J. (2018). From narratives to numbers: Data work and patient-generated health data in consultations. In *Building Continents of Knowledge in Oceans of Data: The Future of Co-Created eHealth* (pp. 491-495).

Islind, A. S., Johansson, V., Hult, H. V., Alsén, P., Andreasson, E., Angenete, E., & Gellerstedt, M. (2021). Individualized blended care for patients with colorectal cancer: the patient's view on informational support. *Supportive Care in Cancer*, 29(6), 3061-3067.

Johansson, V., Islind, A. S., Lindroth, T., Angenete, E., & Gellerstedt, M. (2021). Online Communities as a Driver for Patient Empowerment: Systematic Review. *Journal of medical Internet research*, 23(2).
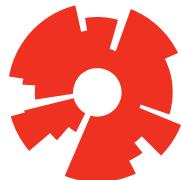
# Real-time data over time acts as a decision-support in complex cases

Islind, A. S., Lindroth, T., Lundin, J., & Steineck, G. (2019). Shift in translations: Data work with patient-generated health data in clinical practice. *Health informatics journal,* 25(3), 577-586.

Islind, A. S., Lindroth, T., Lundin, J., & Steineck, G. (2019). Co-designing a digital platform with boundary objects: bringing together heterogeneous users in healthcare. *Health and Technology,* 9(4), 425-438.

Cerna, K., Islind, A. S., Lundin, J., & Steineck, G. (2018). Decision-support system for cancer rehabilitation: designing for incorporating of quantified data into an existing practice. In *Proceedings of the 10th Nordic Conference on Human-Computer Interaction (NordiCHI).*
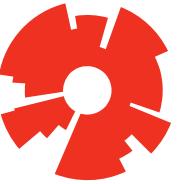
Data-driven healthcare
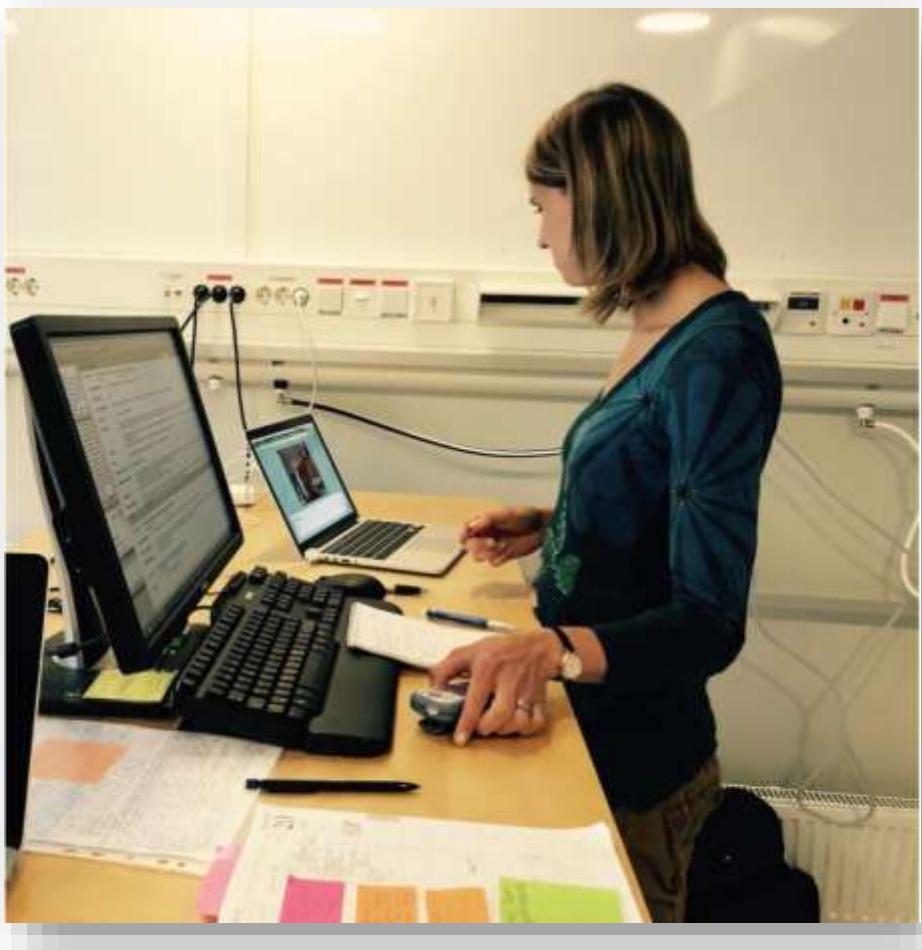
Islind, A. S., Snis, U. L., Lindroth, T., Lundin, J., Cerna, K., & Steineck, G. (2019). The virtual clinic: two-sided affordances in consultation practice. *Computer supported cooperative work (CSCW)*, *28*(3), 435-468.

# Case 2: Schizophrenia & bipolar disorder at Landspítalinn (2020-2025)

- Designing and developing a Digital Platform to support Treatment of Schizophrenia and Bipolar Disorder to function both as a decision-support for healthcare professionals and to engage patients in self-care
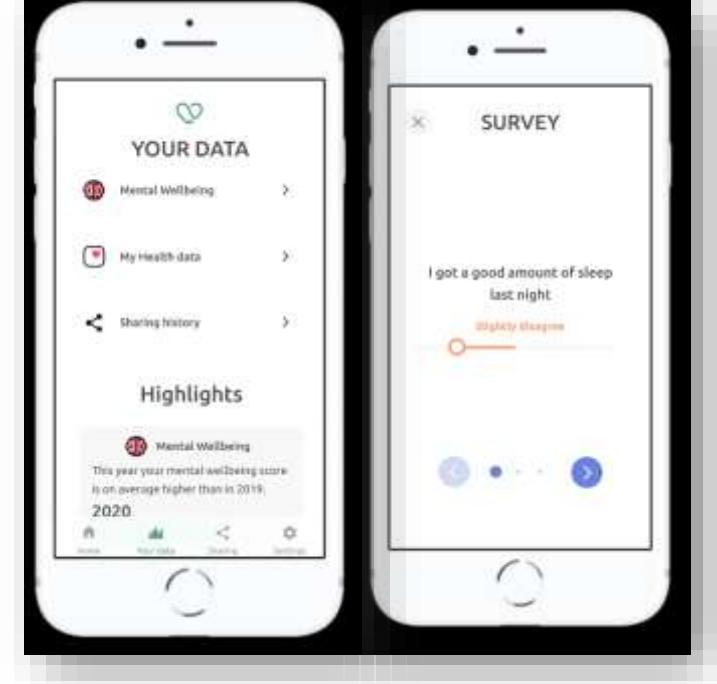
Co-design and development of a digital platform that supports various stakeholders of psychiatric care:

- The patients
- The loved ones
- The healthcare professionals

- 18 patients so far
- 20 healthcare professionals so far

Case 3: Sleep Revolution (2021-2025)

The Sleep Revolution project
15 million euros, we are on month 6 now
37 partners, 24 countries

Sensor-based patient-generated data
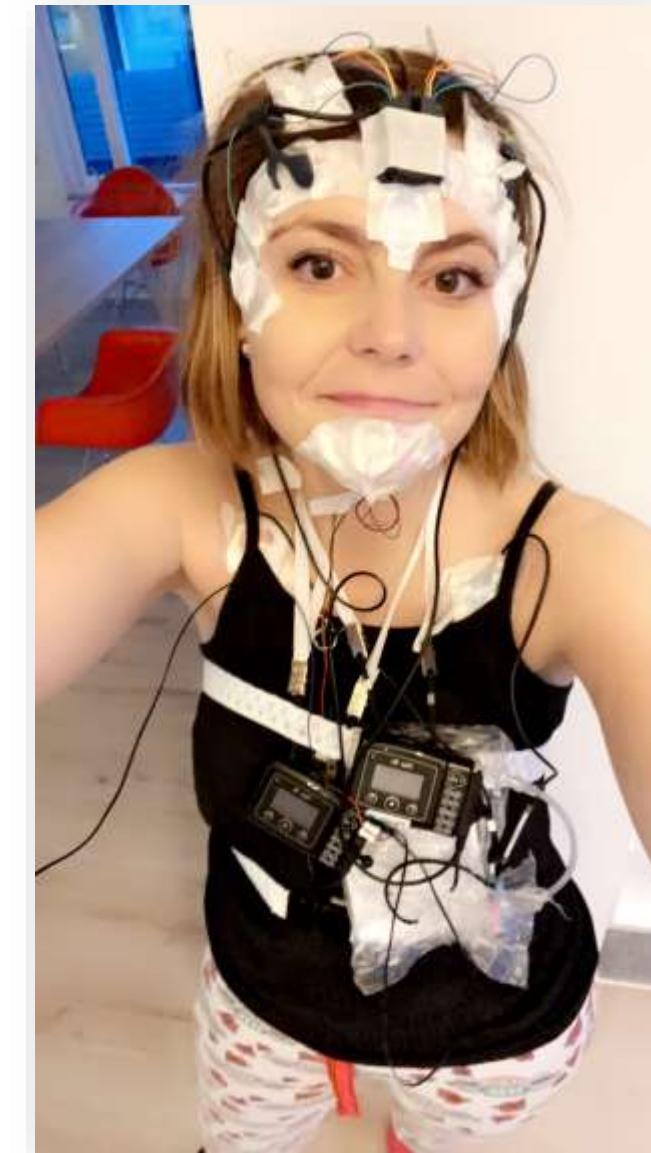
SLEEP REVOLUTION

Digital platform & complex infrastructure
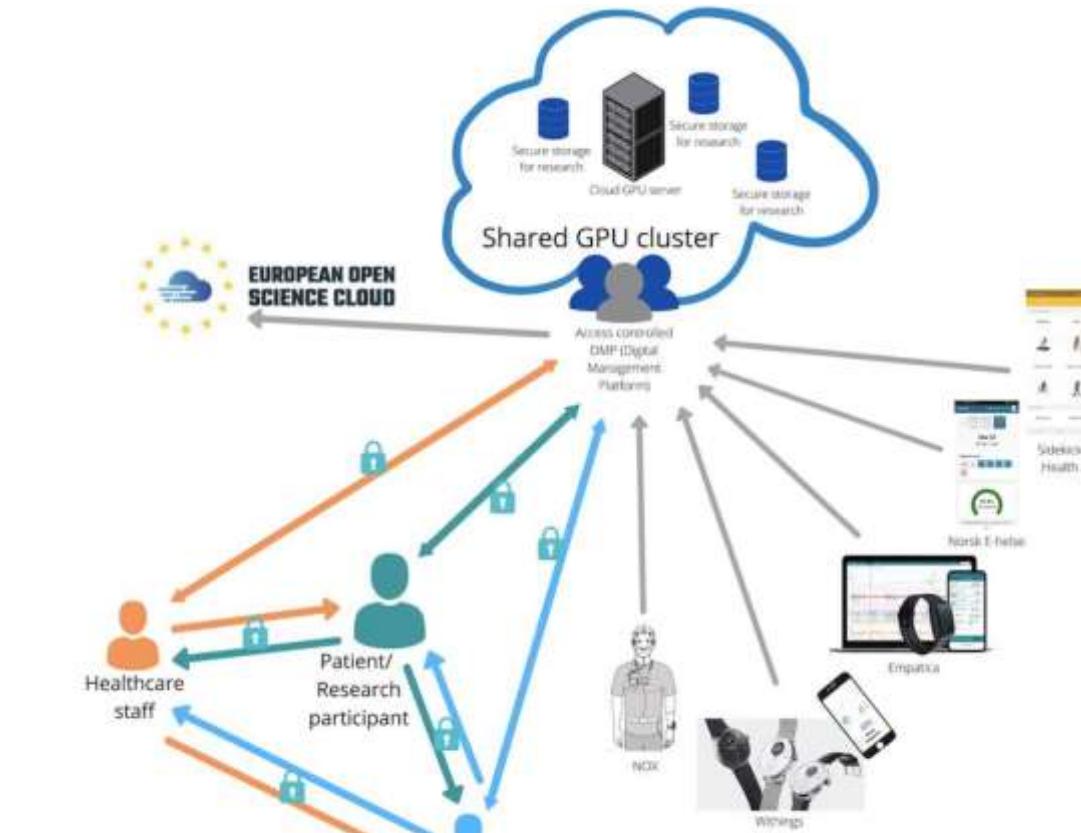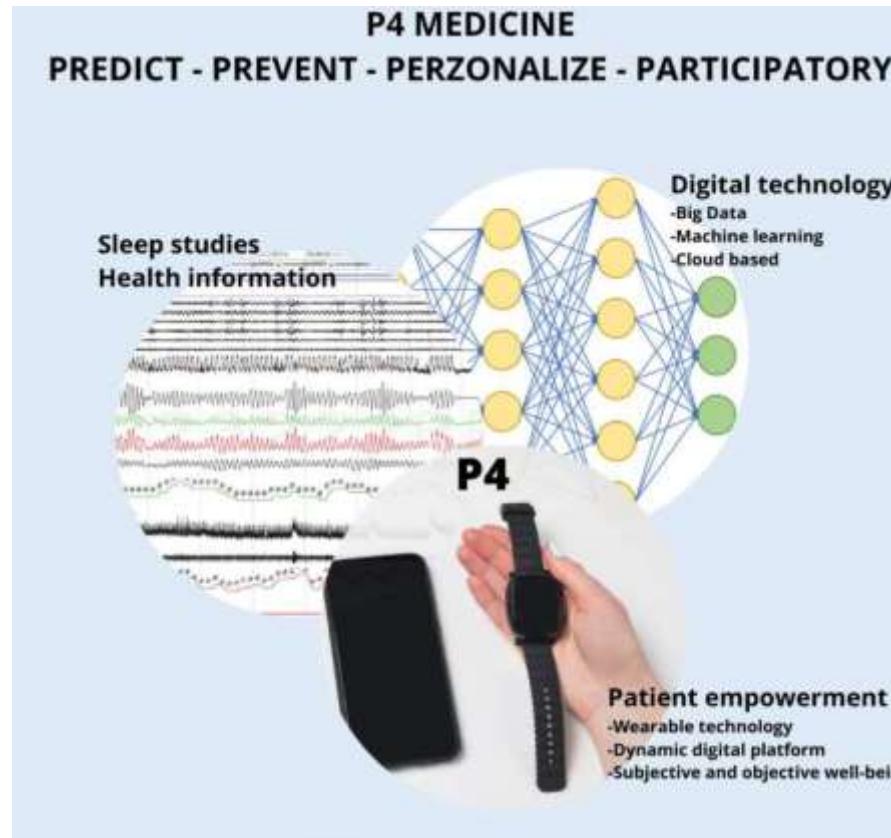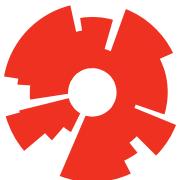
Arnardottir, E. S., Islind, A. S., & Óskarsdóttir, M. (2021). The Future of Sleep Measurements: A Review and Perspective. *Sleep Medicine Clinics*.

SLEEP REVOLUTION

Key take away points

- My research is focused on co-designing digital platforms and digital infrastructures in healthcare to benefit the work of the healthcare professionals, and life of the patients

If we involve people again and again, throughout the process:

1. the digital infrastructure will become an embedded part of healthcare

2. it will be designed for those that contributed to the co-design process

3. acceptance will be high and resistance will be low

4. it will lead to informed decisions by the healthcare professionals

5. it will lead to empowerment for the patients

Thank you

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