

DigiHealth Hub

Digital and data skills development

SAPHIRe - Making data usable: regional considerations, best practices and examples, 26.11.2020

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OULUHEALTH ECOSYSTEM



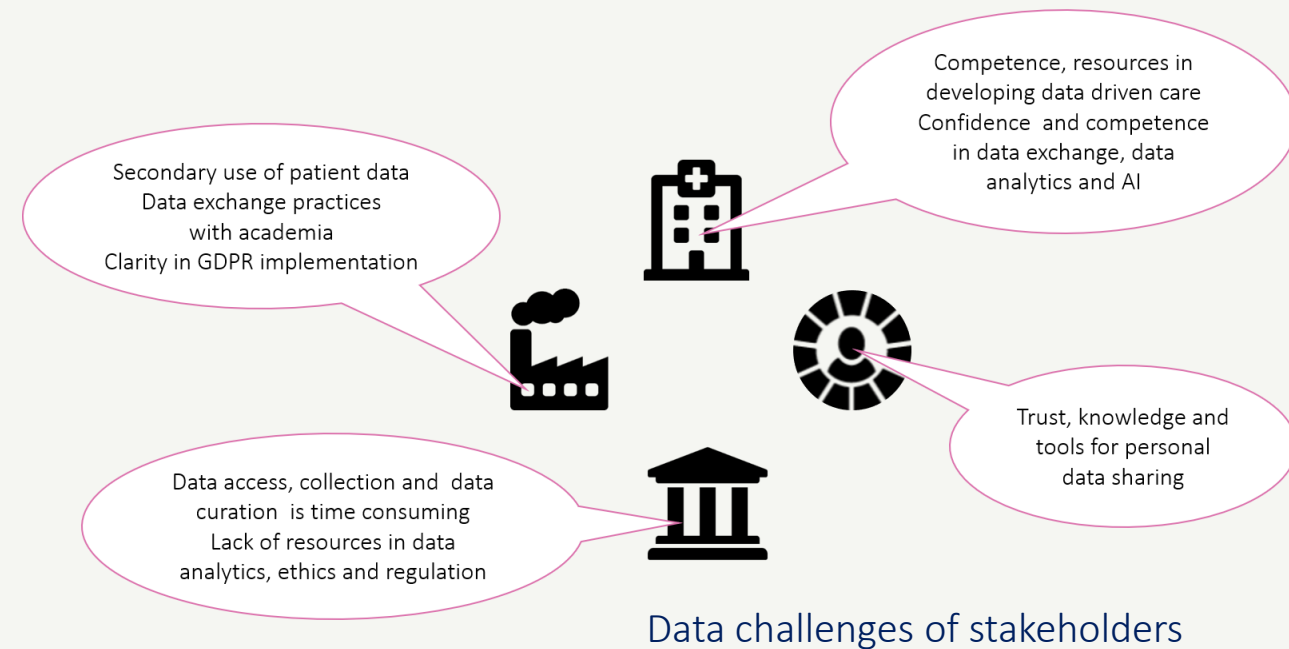
- Accelerates the implementation of health innovations, boosts the health-tech business and creates better solutions for the benefit of citizens
- The main stakeholders are from academia, the public sector, and the private sector
- Activities are collaborative
 - business development
 - testing and piloting
 - research and innovation
 - outreaching activities



New technologies are changing the healthcare by enabling streamlining the services, enhancing personal care and restraining the continuous growth of healthcare costs.

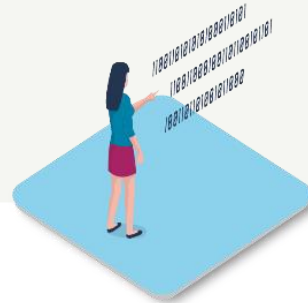
However there is a need

- to increase the expertise and the capability in the health data management and data modelling
- to investigate the operating models in data sharing and knowledge transfer between higher education, research, and businesses
- to build competencies in the start-up and SME ecosystem to use data analytics and AI tools in the data driven economy



DIGIHEALTH HUB

Is a focal point of support for innovation and research in the fields of



Health data practices and competences in analytics (incl. AI) for the data driven health and wellbeing innovations
Led by prof Perälä-Heape



Deployment and assessing digital health services (mHealth, Artificial Intelligence, and Robotics)
Led by prof Jarmo Reponen



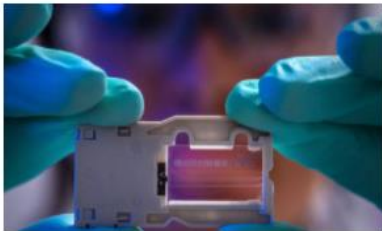
Ecosystem collaboration and strategic partnerships
Led by Satu Väinämö



TOOLS AND GUIDANCE FOR HEALTH DATA EXPLOITATION

Health Data Guide

This guide is designed to provide practical information on healthcare data and analytics for researchers and companies alike. Focus is in the context of machine learning and artificial intelligence, which require effective handling of big data from multiple data sources.



Sources of Health Data



Data Preprocessing

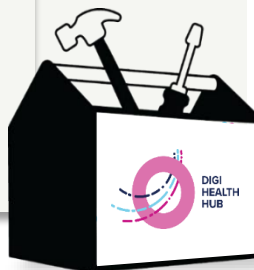
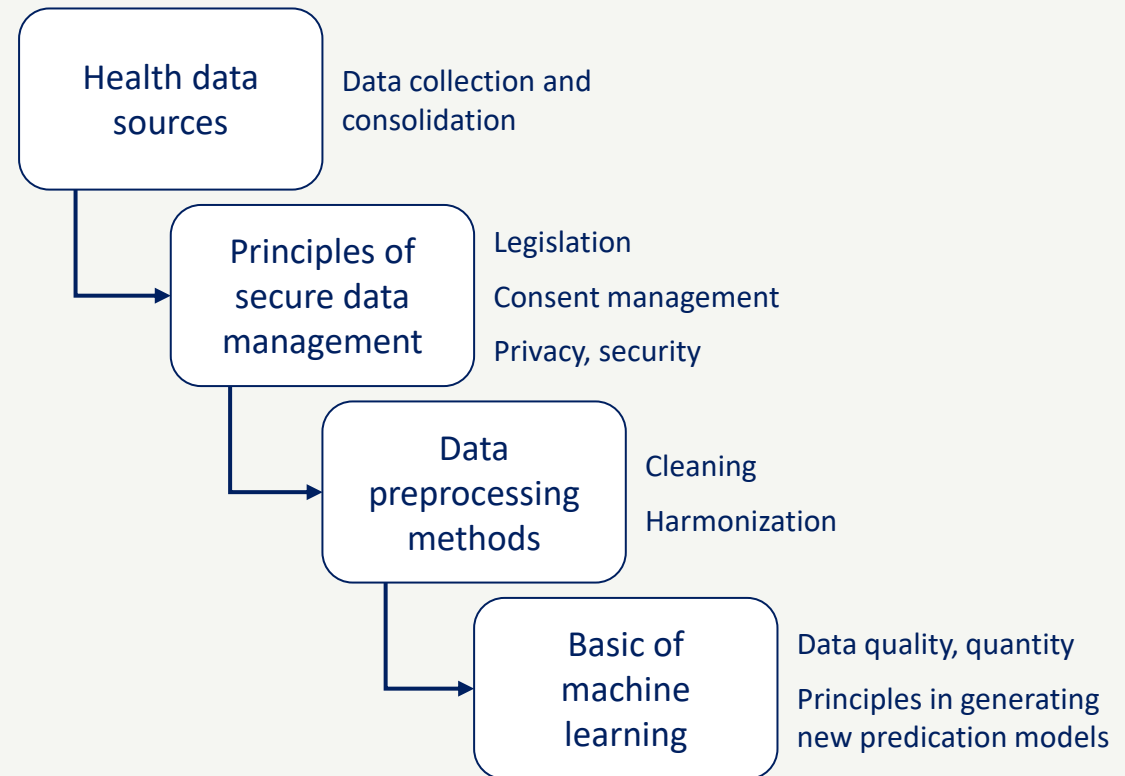


Basics of machine learning



Secure data management

<https://www oulu.fi/cht/digihealthhub/healthdataguide>



TOOLS AND GUIDANCE FOR HEALTH DATA EXPLOITATION

Health data assessment (HDA)

- A **checklist** for assessing the quality, quantity, and usability of the (health) data for research and business.
- It goes through the most critical aspects of **accessing data, data quality, and reusability**.

Health Data Assessment Checklist for research and business



Getting Started



1. Create data management plan.

See [instructions by the Academy of Finland](#) for research projects. In business context, create a **data strategy plan** which involves business goals. For introduction, see more [here](#).



a. Plan what kind of data is needed and how it can be collected or retrieved.

Plan what kind of variables are needed to answer your questions and check if you can use existing datasets. Consult a domain expert and get familiar with previous studies.



b. Estimate how much data is needed to complete your project.

Consult a statistician or a data analyst to estimate the needed dataset size. If you want to use a machine learning approach, you generally need much more data than for a statistical approach. *Template for assessing the amount of data coming soon.*



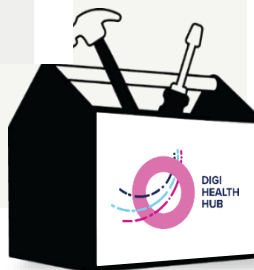
c. Check if you can exploit already existing data, such as open access datasets.

See more about accessibility to health datasets in the [Health data guide](#).



d. Figure out what is your role in data management (e.g. data owner or data processor).

<https://www.oulu.fi/cht/digihealthhub/healthdataassessment>



NATIONAL HEALTH DATA ANALYTICS NETWORK

within The Well-being and Health Sector's Artificial Intelligence and Robotics Programme (Hyteairo)

OBJECTIVES

- Awareness raising by gathering existing best practices
 - Webinars, studies, surveys
- Competence building towards AI-assisted knowledge management and predictive, data-based service models
 - Building network partnerships
 - Peer learning methods

FOCUS

- To accelerate secondary use of health data in research and development focusing on exploitation of AI



The banner features the AIRO logo (Artificial Intelligence and Robotics -programme) on a yellow background. To the right, a robot icon is shown next to a list of focus areas: Living at home, Care and logistics in the hospital environment, Pharmacotherapy and pharmaceutical service, Well-being coaching and rehabilitation, and Analytics. The hashtag #hyteairo is also present. Below the banner, a row of partner logos is displayed, including thl, OULUN YLIOPISTO, DIGI HEALTH HUB, VTT, Kela, A! (Aalto-yliopisto), FCAI, FINDATA, Metropolia, DigiFinland, and ksshp.

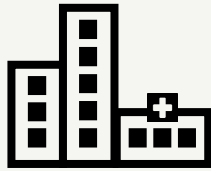
More info at
www.thl.fi/hyteairo

thl OULUN YLIOPISTO DIGI HEALTH HUB VTT Kela A! Aalto-yliopisto FCAI FINDATA Metropolia DigiFinland ksshp

AGENDAS TO BUILD COMPETENCES ON DIGITAL AND DATA SKILLS



THE ROLE OF REGIONAL ACTORS IN MAKING HEALTH DATA (MORE) USABLE



City of Oulu

Open access to data

Creation of regional data strategy

Local MyData Hub



University of Oulu

Supportive data services

Best practices

Guidance on regulatory and data sharing contracts

Access to scientific knowledge, etc.

Northern Finland Birth cohorts' services



University hospital

Future social and health care program and data governance models for the smart decision systems

Data lakes

Biobank services: Biobank Borealis of Northern Finland



Some topics of interest for possible common initiatives and future projects

- 1) Strong collaborations with other Health DIHs
- 2) Horizon Europe program topics
 - Setting up a European Smart Health Innovation Hub
 - Innovative tools for use and re-use of health data
 - Data-driven decision-support tools for better health and care delivery and policy-making

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