



**eHealth**  
week

11 - 13 MAY 2015  
RIGA, LATVIA

ORGANISED BY

Ministry of Health  
of the Republic of Latvia



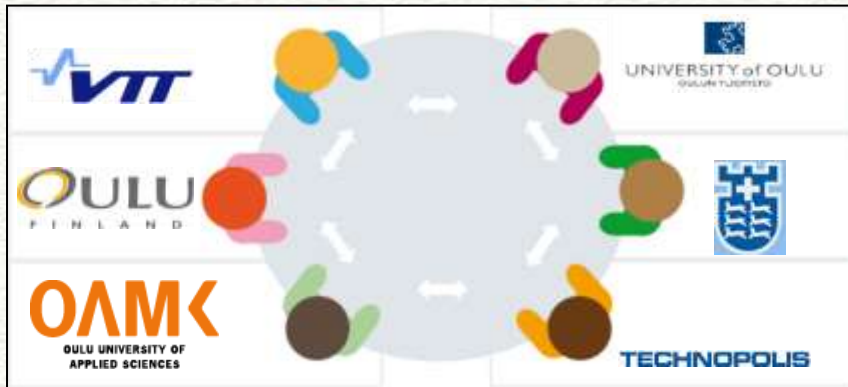
# DIGITAL HEALTH REVOLUTION

DIGITAL TRACES IN CONNECTIVE PREVENTIVE HEALTH

Maritta Perälä-Heape, Director, Centre for Health and Technology, University of Oulu, Finland

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# OULU INNOVATION ALLIANCE (OIA) BRINGS TOGETHER REGIONAL STAKEHOLDERS



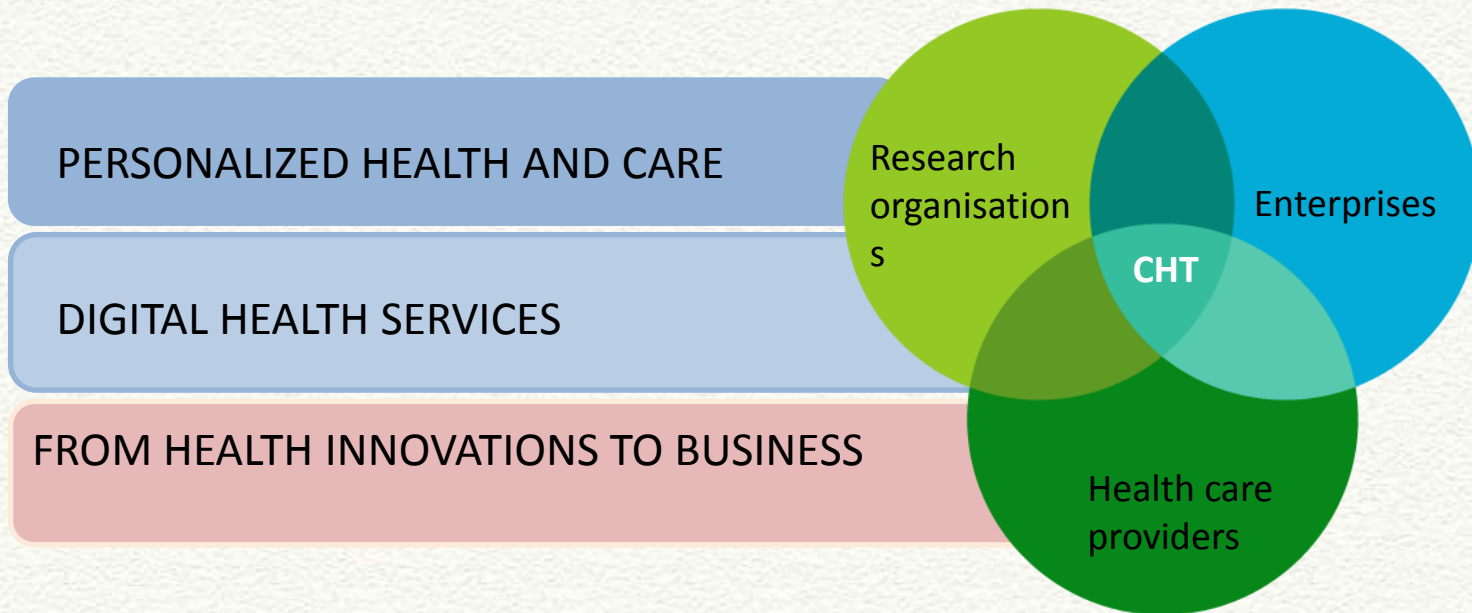
## MODE OF OPERATION

- Systematic, contract-based RD co-operation between regional players
- Composing and coordinating multi-disciplinary RD projects and programmes
- Supporting business driven RD
- Facilitating strategic cooperation through international networks and partnerships

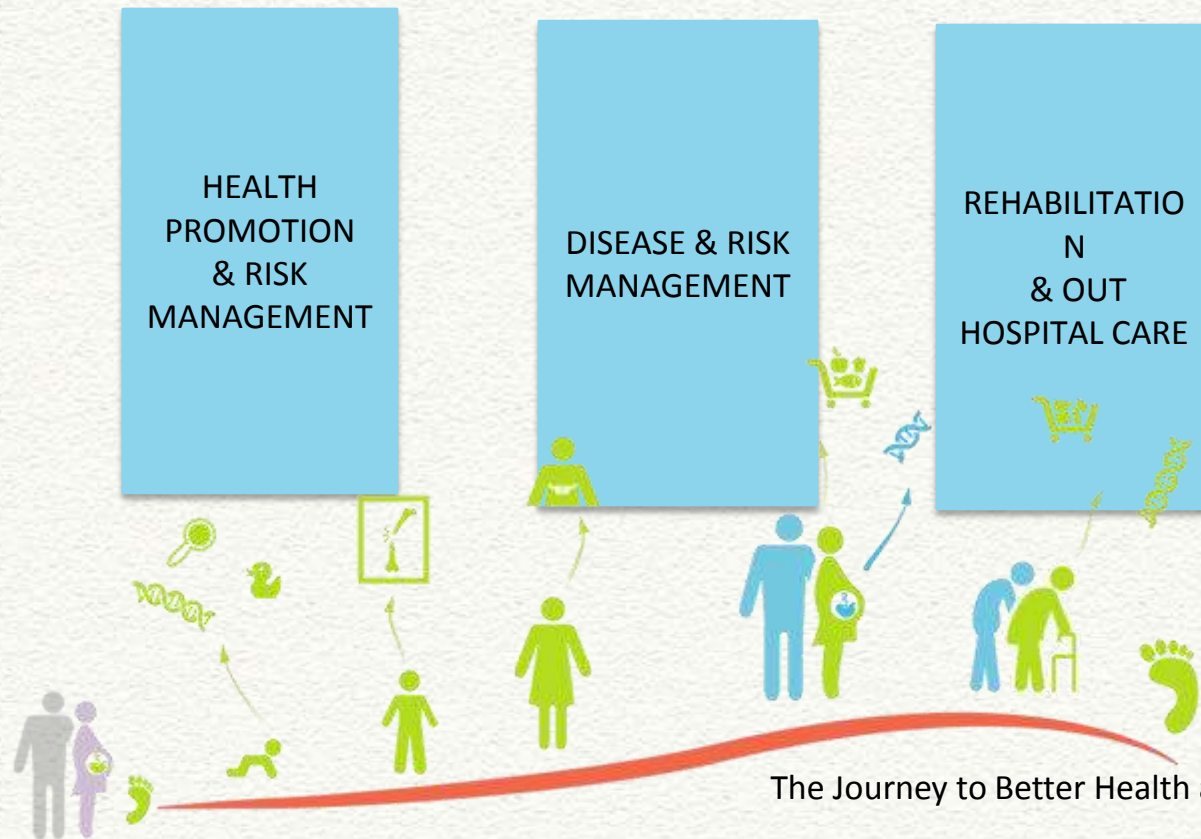
## GOALS AND OUTCOMES

- Channeling of ideas and expertise for practical use
- Increasing R&D investments
- New business opportunities

# Centre for Health and Technology



# Hidden health parameters are treasures to maintain health over one's lifetime



from a static health system to a learning one that improves individual, community and population health.

# DIGITAL HEALTH REVOLUTION (DHR)

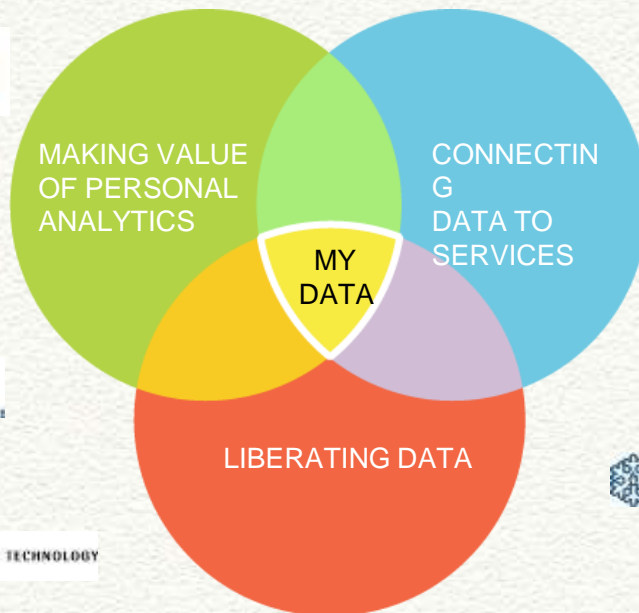
Unique approach to develop future My Data based health services

## We will

- contribute to the change in the control of data in favor of the individual
- explore health-related data from genomics to digital footprint
- develop successful personal data movement across systems and services
- build pilots of new service concepts
- study the business logics and consumer involvement
- invite actors to join the Mydata ecosystem



# MULTIDICIPLINARY CONSORTIUM



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COORDINATOR:



Centre for Health and Technology

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WEB: [www.digitalhealthrevolution.fi](http://www.digitalhealthrevolution.fi)

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# DIGITAL HEALTH REVOLUTION

*Personalized, predictive, preventive, participatory service ecosystem*




PROACTIVE  
DIGITAL  
HEALTHCARE  
SOCIETY



NEW DIGITAL  
HEALTH  
MARKETPLACE



MYDATA  
BASED  
SERVICES



REAL-TIME SELF-  
MANAGEMENT OF  
HEALTH AND WELLBEING

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DIGITAL HEALTH  
REVOLUTION

- Outcomes so far

- My Data Principles
- My Data architecture definition
- My data clinics
- Research Pilot set up
- Ethical and regulatory, privacy issues on data sharing
- User interface and My Data
- My Data ecosystem players
- Benchmarking



# What is My Data?

- My Data is a global phenomenon and the future scenario, around which technology and business is being developed at a growing pace.
- My Data is a human-centered approach to personal information management and processing.
- It gives people the right and practical means to access to data collected about them such as purchasing data, traffic data, telecommunications data, medical records, financial information and data derived from various online services.



# My Data Principles

- **Human Centric:** individual in control, transparency to personal data usage, privacy, trust
- **Usability of Data:** guarantee data portability, machine readable, open formats, APIs, standards
- **Open Business Environment:** interoperability, possibility to change services without “data locks”

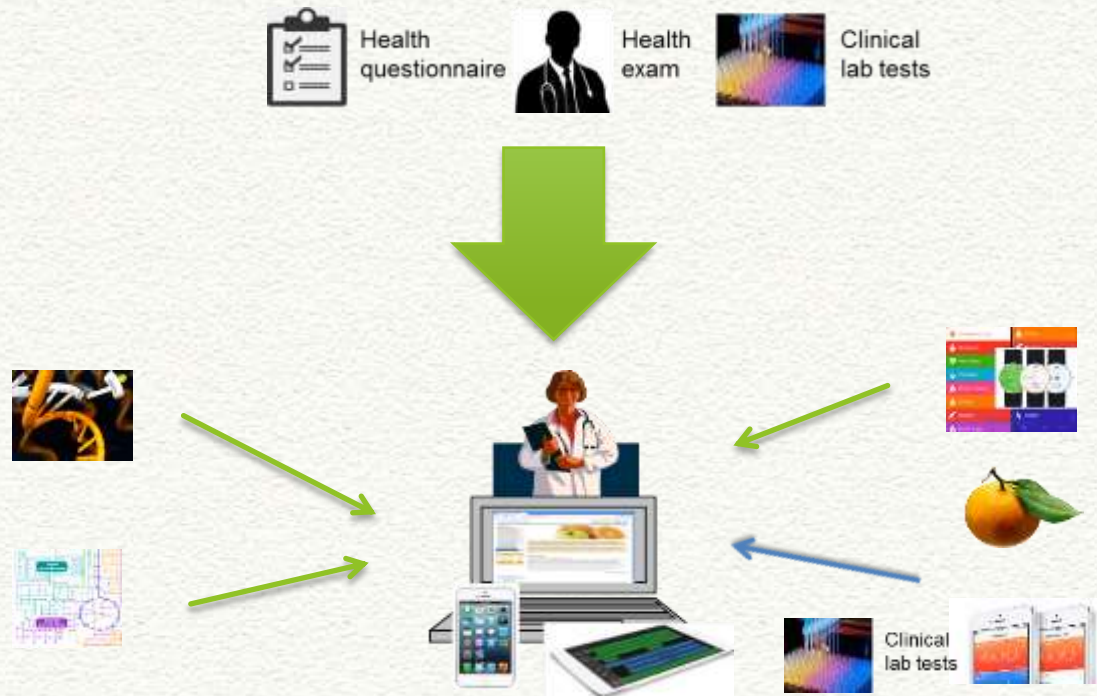


# Individual as

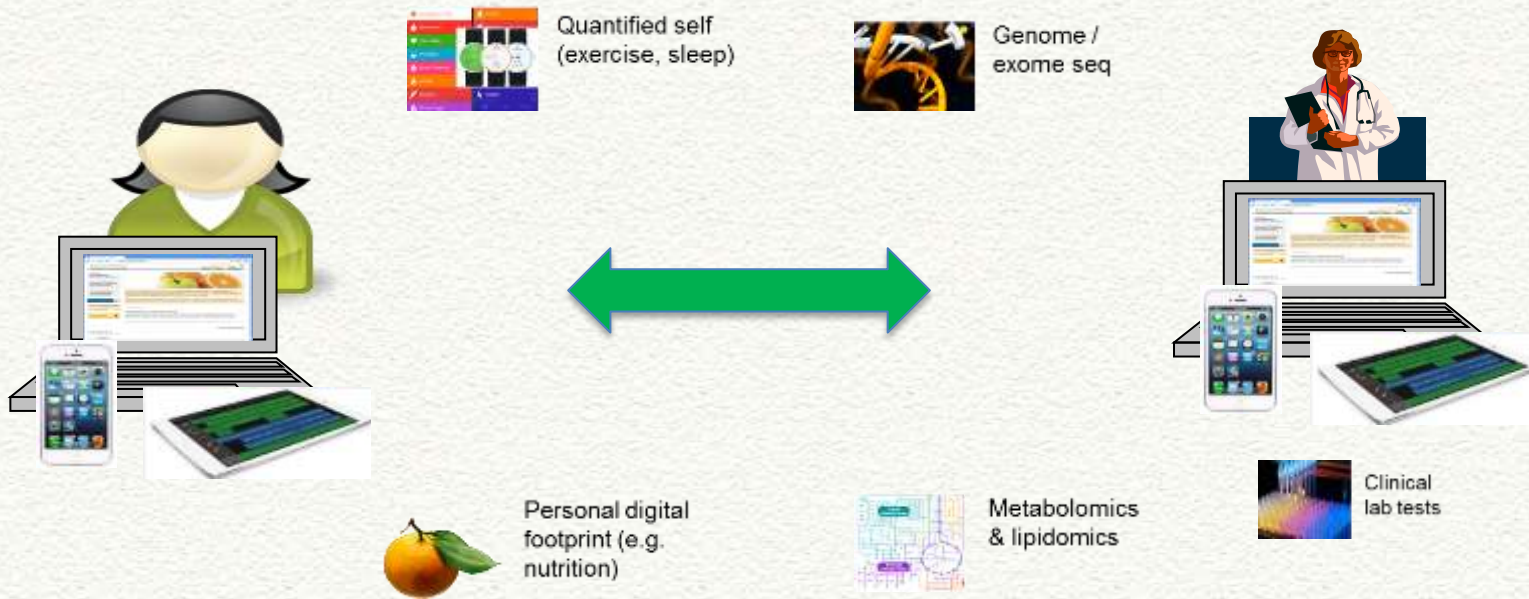
- Correlation point: data from one person can be connected
- Control point:
- Individual decides who uses her data and how by giving consents
- Individual has rights and practical means to manage her personal data
- Data is accessible to individuals and services authorized by her in machine readable form.



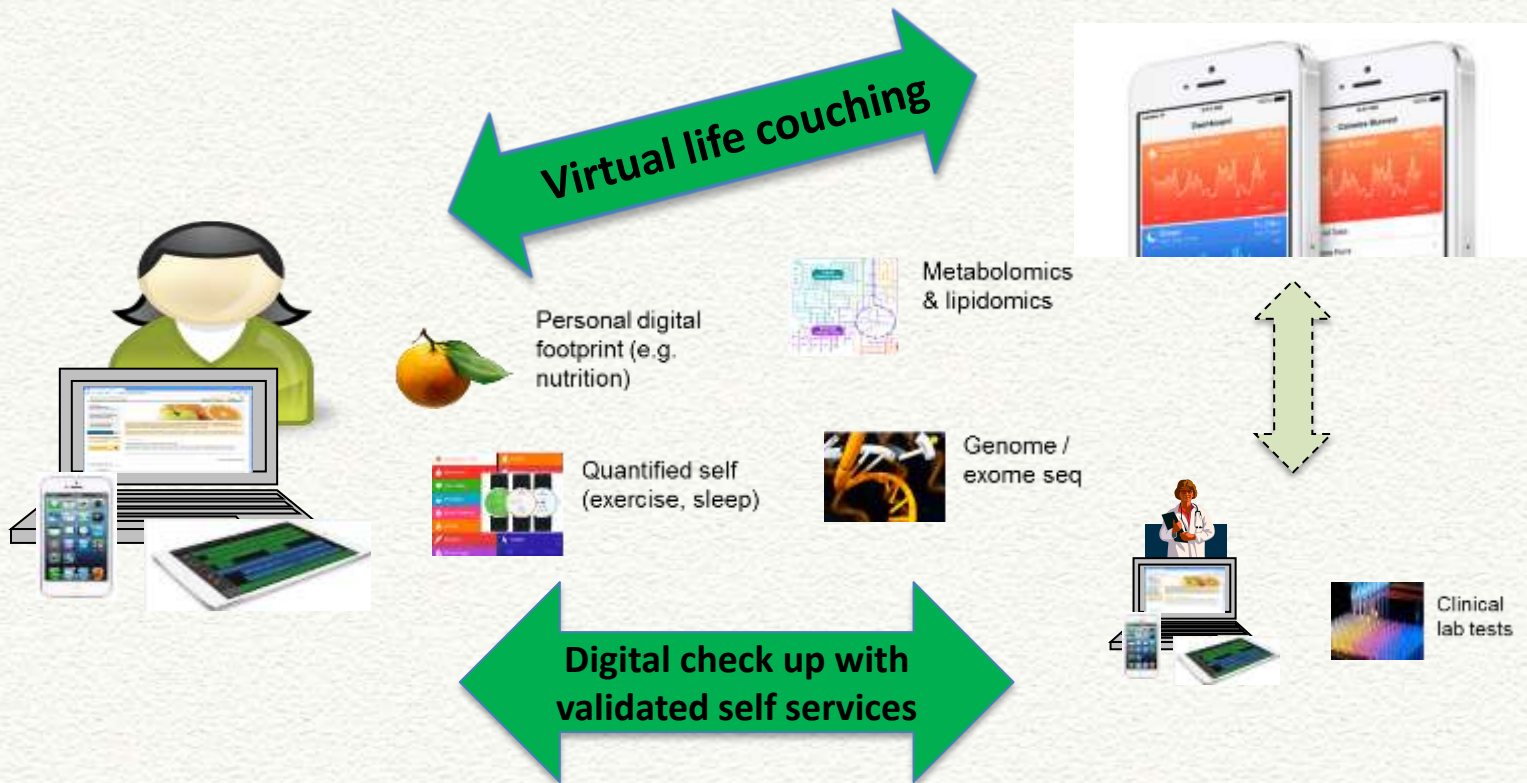
# Integration of personal data into every day practises in doctor's offices and hospitals - Need for change in work flows



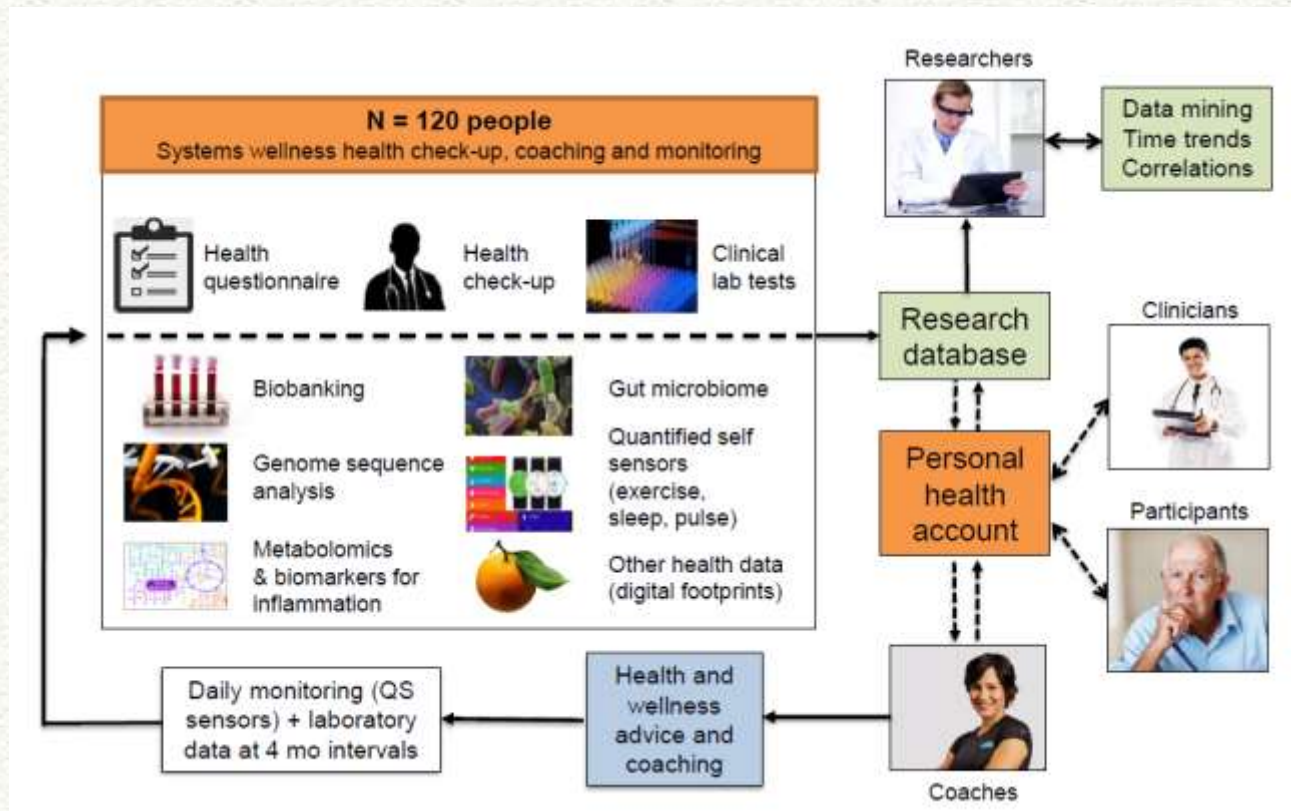
# Citizen's participation changes the system and processes



# Intelligent & real time communication with several service providers



# DHR PILOT





# Forerunners in precision medicine\* and holistic view in health

- President Obama: “a new Precision Medicine Initiative will bring us closer to curing diseases like cancer and diabetes — and to give all of us access to the personalized information we need to keep ourselves and our families healthier,”
- Dr. Eric Topol: “Deep personal data from an individual is a comprehensive picture of health”
- Prof. Leroy Hood (the Institute of Systems biology, Seattle): “Medicine gets up close and personal if personal health data is fed back to participants via life coaches”
- Dr. Google:” Google’s baseline study is focused to collect a massive amount of information on healthy people (175). The study will include genome sequencing and the collection of 24/7 data from digital health sensors worn by participants. The genetic and molecular information is used to create a picture of a healthy human and to use that data to proactively identify and address health problems

\*Precision medicine (PM) is a medical model that proposes the customization of healthcare—with medical decisions, practices, and/or products being tailored to the individual patient. In this model, diagnostic testing is often employed for selecting appropriate and optimal therapies based on the context of a patient’s genetic content or other molecular or cellular analysis. Tools employed in PM can include molecular diagnostics, imaging, and analytics/software





## Political environment supports the use of personal data and it's openness In Finland

- A new strategy for information and data management in health and social care in preparation (MyData working group & Exploitation of personal data in future health care systems)
- Genome strategy
- A radical health care reform on-going: the responsibility to organize care will be the task of five special responsibility areas (SOTE) instead of present system where municipalities share the task.



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# THANK YOU

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