



**SUSTAINABILITY  
DAYS'23**

Get things done

# Die Zukunfts- plattform

## Session F5

Dr Päivi Sillanaukee

Ambassador Health and Wellbeing





# Digital Data in Medical Research and Health Prevention

*"the future in healthcare is based on digital data"*

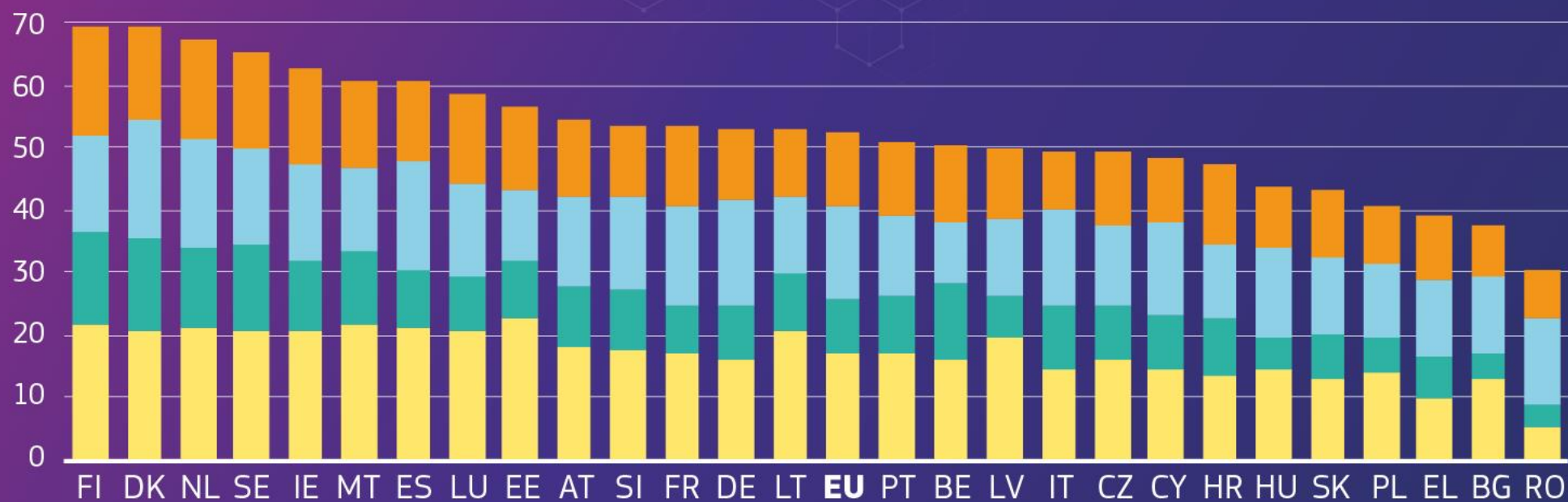
Dr Päivi Sillanaukee

Ambassador for Health and Wellbeing

Ministry for Foreign Affairs, Finland

# DESI 2022

Digital Economy and Society Index



HUMAN  
CAPITAL



CONNECTIVITY



INTEGRATION  
OF DIGITAL  
TECHNOLOGY



DIGITAL PUBLIC  
SERVICES

#DESleu #DigitalEU



# Why Finland?



**MAINTAINING  
HEALTH &  
WELLBEING**

**PERSONALIZED  
HEALTH**

**CONTINUOUS,  
VALUE-BASED  
HEALTHCARE**

**DIGITAL  
TRANSFORMATION,  
SMART HEALTH**

**INCREASE OF  
DATA**

Most efficient health  
care system

Innovation friendly  
legislation

Governmental  
backing

Public private  
cooperation model

National health  
registers

National centers  
of excellence

Flexible business  
environment  
Buzzing start up culture

Culture of trust

Highly educated  
citizens and experts

Global leader in  
digital health

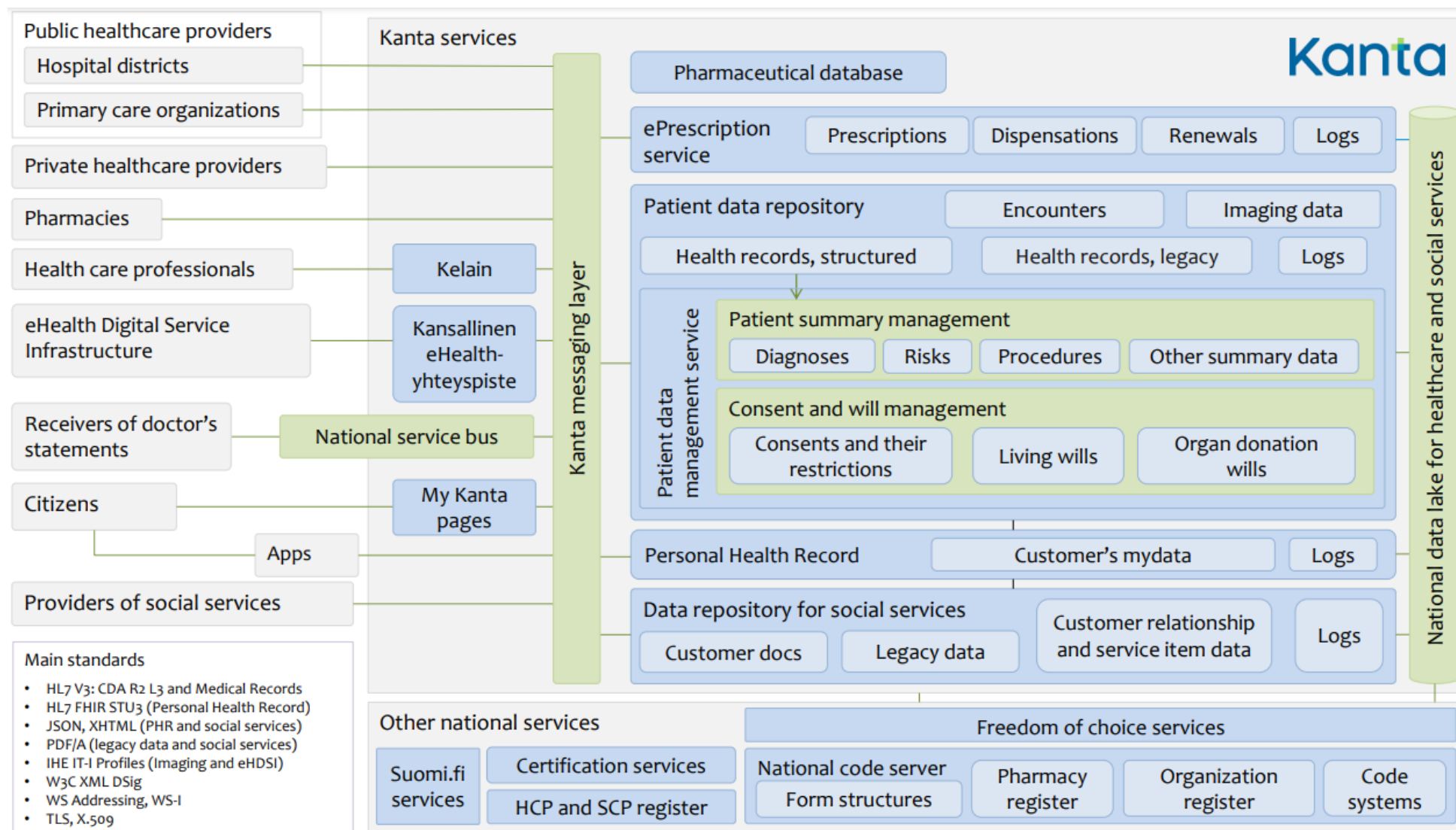
Biobanks  
Access to data

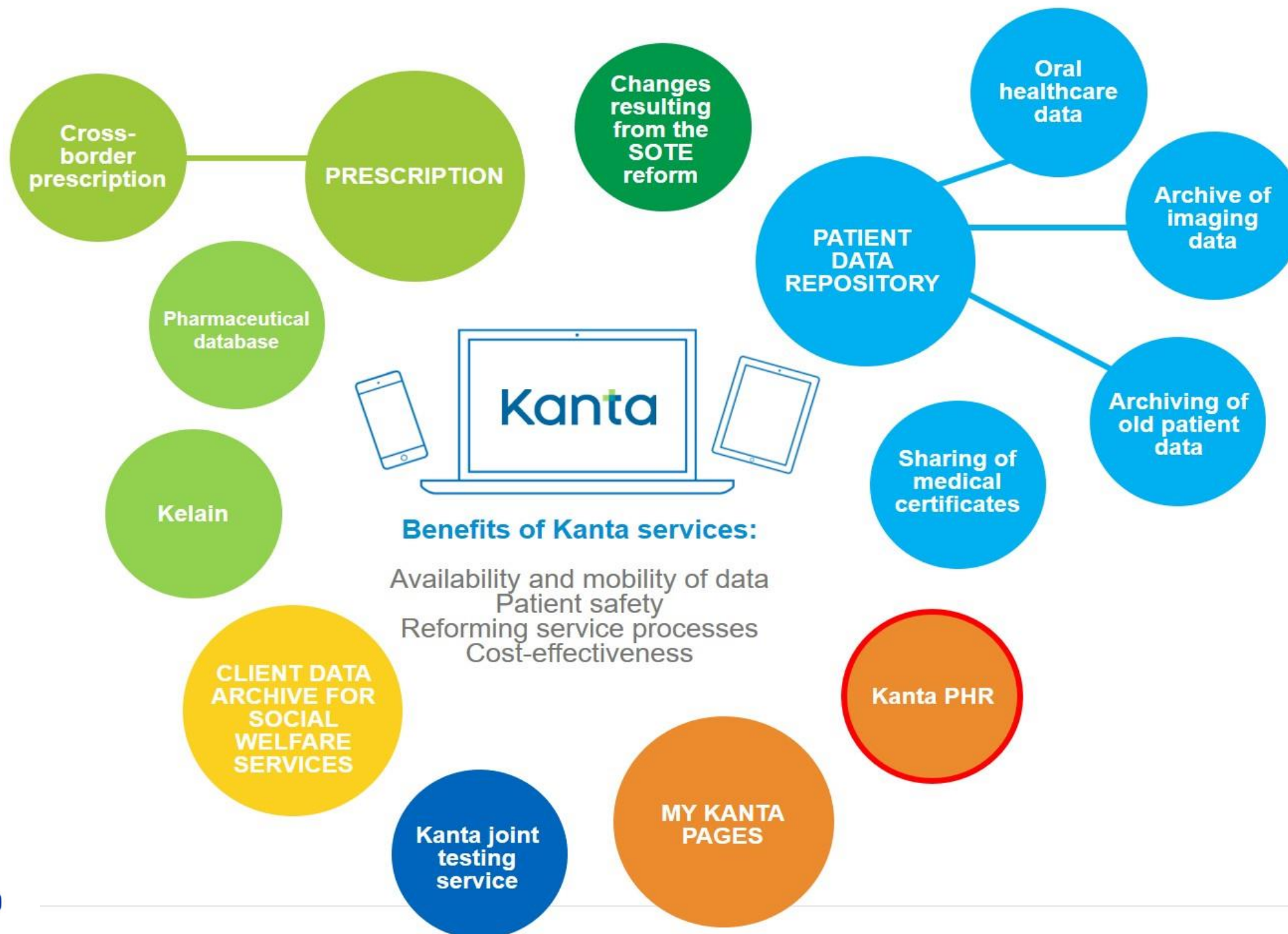
Positive Health tech  
trade balance

Unique genetic ancestry



# The Finnish Digital Kanta Network







# Sote-uudistus

## Health and social services reform

Reform of the organisation of health, social and rescue services



# Division of duties under the reform, as of 1 January 2023

## State

- guidance and direction
- funding

## 22+1

health, social and rescue services organisations  
+ Hospital District of Helsinki and Uusimaa

## 5

**collaborative areas**  
division of responsibilities in specialised services

## Strong role for the public sector

Private and third sectors complement public services



**Sote-uudistus**

Health and  
social services reform



# Priorities of the health and social services reform

## People-centred services

Services are developed so that one contact give access to the relevant service

## Effective and integrated services



## Services equally to all



## Focus on preventive and proactive work



## Participation

Decision-making stays close to you. Services are reformed in cooperation with residents

## Better quality and effectiveness



## Wellbeing services county

## Curbing the growth of costs



## Wellbeing services counties have responsibility for services

One operator is responsible for ensuring that you receive the health, social and rescue services you need.

**Sote-uudistus**

Health and  
social services reform

# Reform of Healthcare, Social Welfare and Rescue Services

- The responsibility for organizing public healthcare, social welfare and rescue services was transferred from municipalities to wellbeing services counties on 1<sup>st</sup> January, 2023.
- The key objective of the reform is to improve the availability and quality of basic public services throughout Finland.
- The use of digital tools, knowledge management and health data has an integral role in the reform.

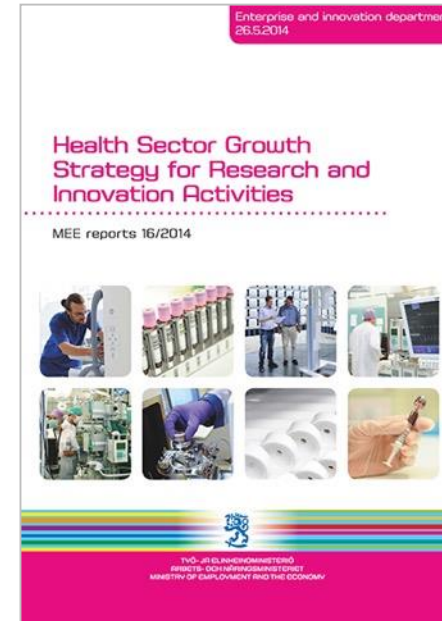




# GOVERNMENT'S HEALTH SECTOR GROWTH STRATEGY - TOWARDS A NATIONAL DATA-BASED INNOVATION ECOSYSTEM

## Political commitment of Finland to be

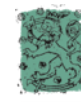
- An international hub of versatile and high quality scientific research, inventions and innovations.
- A global partner in public-private collaboration
- A dynamic operating environment for new companies.
- A reliable partner for the international growth of companies.
- An attractive target country for health sector investment.
- A model country of sustainable personalized healthcare.



Ministry of Economic Affairs  
and Employment of Finland



MINISTRY OF  
SOCIAL AFFAIRS AND HEALTH  
Finland



Ministry of  
Education  
and Culture

BUSINESS  
FINLAND

ACADEMY  
OF FINLAND

# Enabling Legislation

## **BIOBANK LAW**

**2012**

Enables faster  
drug discovery and  
clinical trials

Access to high quality data and  
biological specimens

## **ACT ON THE SECONDARY USE OF HEALTH AND SOCIAL DATA**

**2019**

Enables authorities,  
institutes and companies secure  
access to the health and  
social data in Finland



# DATA: National one stop-shop

## FOR THE SECONDARY USE OF HEALTH AND SOCIAL DATA

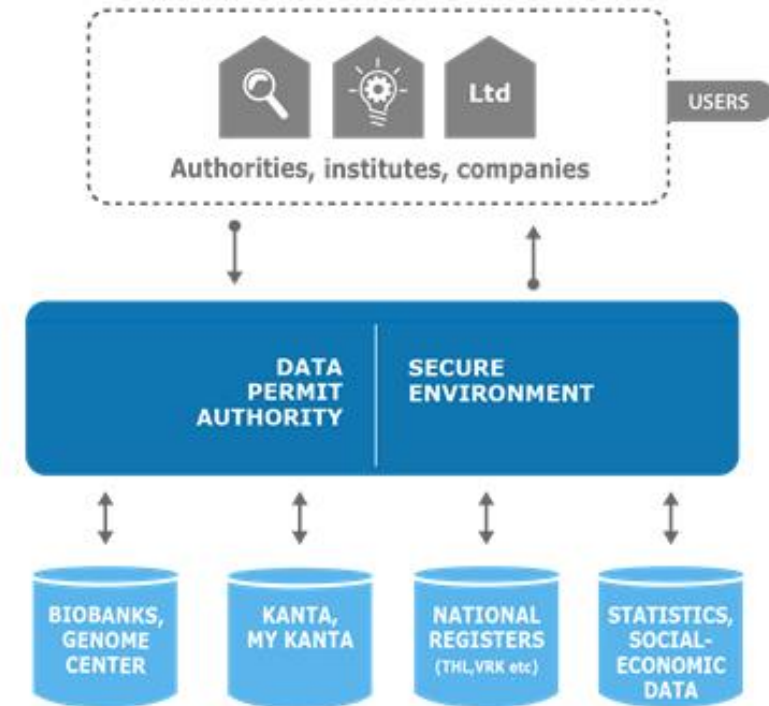
- Findata grants permits when data are requested from multiple registers
- Collect and process the data
- Provide the data in a secure IT environment for data users
- Help desk for data users

### Findata goals

- Enable effective and safe processing and access to data
- Eliminate overlapping administrative burden
- Enhance data protection and security
- Improve register data quality

# FINDATA

## SINGLE POINT OF CONTACT



Source: <https://www.findata.fi/en/>

# TEHDAS Joint Action Towards the European Health Data Space – TEHDAS

## Joint Action

Supports the Member States and the Commission,  
Develops and promotes concepts for sharing of data in  
secondary use

## Participants

Nominated authorities from 25 European countries

## Duration

30 months from February 2021 – Summer 2023

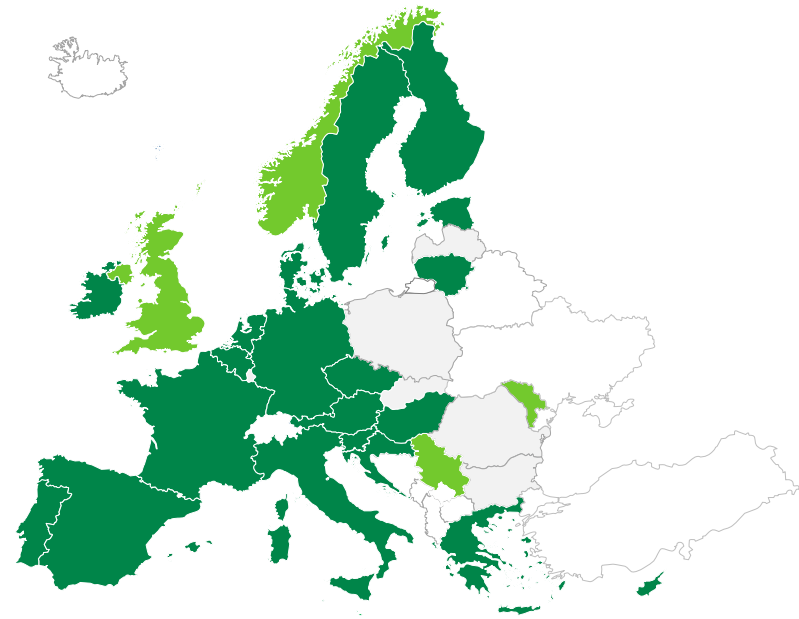
## Co-funding

€4 million - EU 60%, Member States 40%

## Project coordinator

Sitra, Finnish Innovation Fund,  
[markus.kalliola@sitra.fi](mailto:markus.kalliola@sitra.fi)

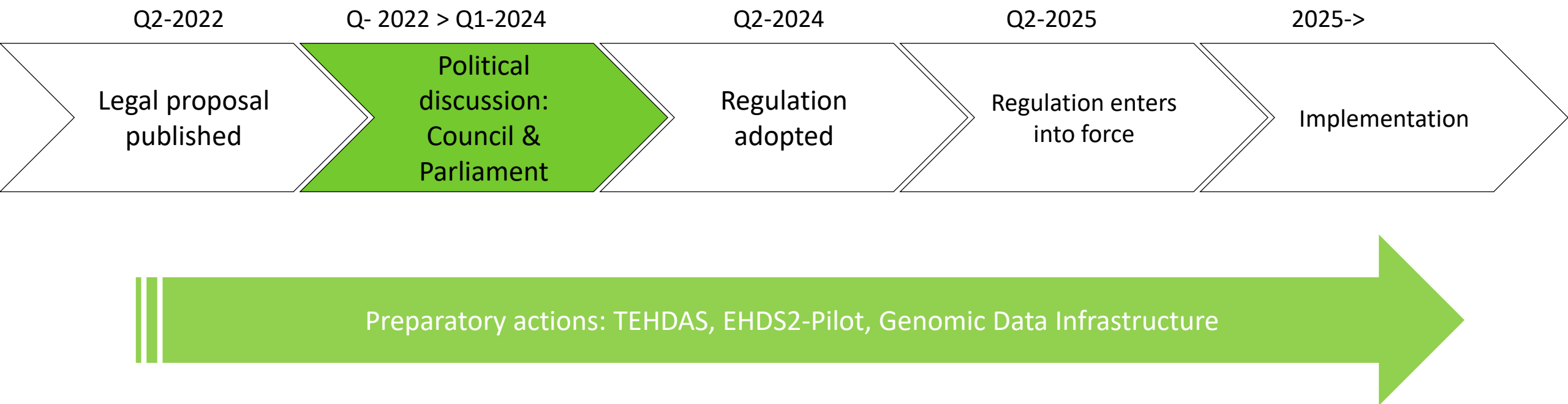
tehdas.eu



Co-funded by  
The Health Programme  
of the European Union

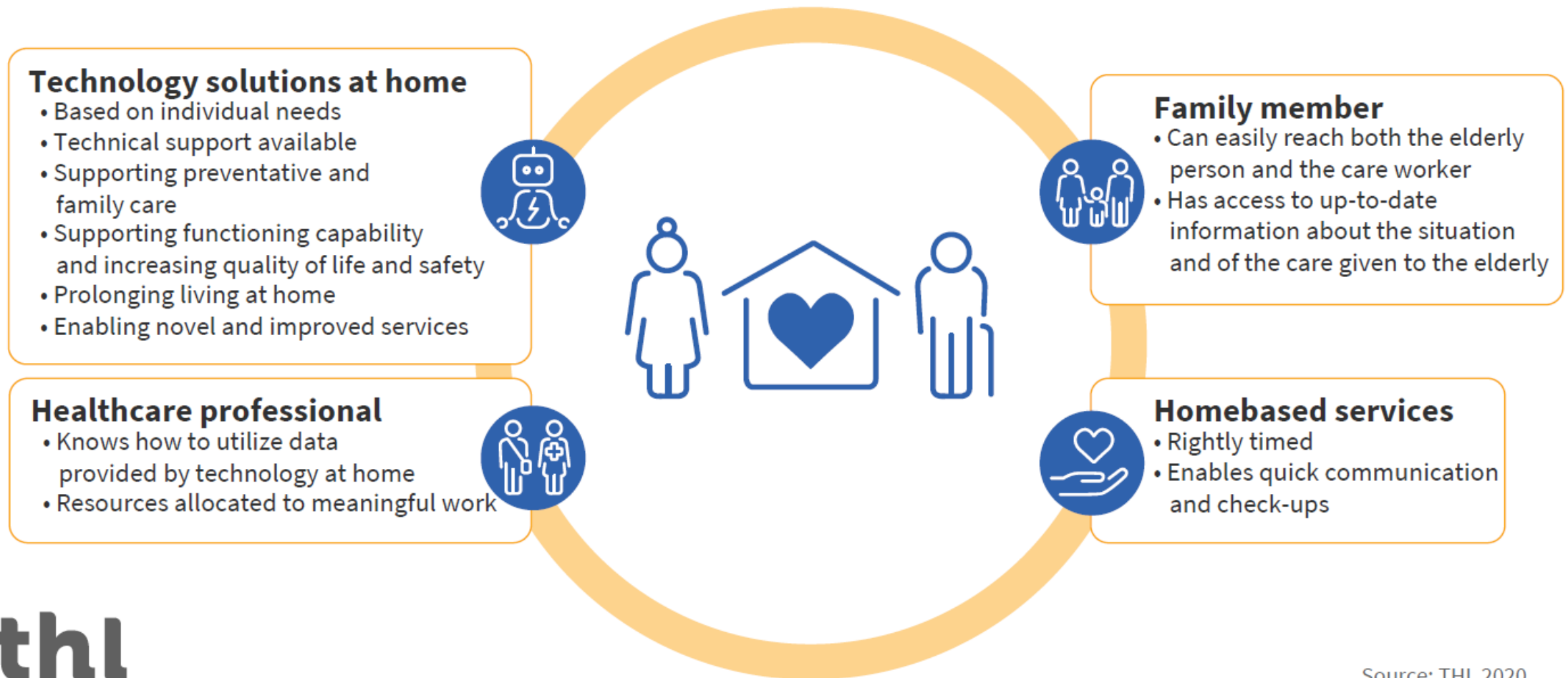


# TEHDAS Next steps for the European Health Data Space



# Technology supporting smart ageing and care at home

## KATI programme - vision



thl

Source: THL 2020



# A few Practical Examples: Remote Patient Monitoring and Care



## Kamu Health

Self-management tool used for asthmatics. Digital service for respiratory-illness care, provides reliable information on the patient's condition, self-care routine and asthma.

<https://kamuhealth.com/>

## Nukute

Combines tracheal sensor, accelerometer, pulse oximeter and secured cloud-based application into a solution for screening and diagnosis of Sleep Apnea, can also be used to analyze variations due to COVID-19.

<https://nukute.com/>



## Predicell

Enables remote monitoring based on location data and wearables (cardiac sensor, thermometer). The solution enables healthcare professionals to monitor change in the patient's condition and take action based on suggestions generated by AI-engine.

<https://www.predicell.com/>

Predicell



## Vivago

Watch for remote care, used primarily in elder care. Automated alerts on changes in condition. App to share relevant information with caretakers.

<https://www.vivago.fi/>



## Oura Ring

Enables individual monitoring of temperature and heart rate variations.

<https://ouraring.com/>



## 9Solutions

Plug & Play Nurse Call System – enables two-way Voice Connection, customer-specific location information and a mobile app for managing calls and alarms. Minimizes physical contact. System can be implemented within a day.

<https://9solutions.com/en/>

# A few Practical Examples: Mental Healthcare Solutions



## **Meru Health**

Meru Health's digital clinic offers an app-based treatment program for depression, burnout and anxiety. The program combines technology, evidence-based therapy and daily support from licensed clinicians - the new standard of mental healthcare.

<https://www.meruhealth.com/>



## **Emooter**

Person can find out your state of wellbeing in minutes and get instant feed-back. Emooter interviews the person with a team with a couple of meaningful and scientifically validated questions each week.

<https://www.emooter.com>



## **Auntie Solutions**

Preventing burnouts. Auntie offers support for employees for stress, overachieving as well as for the lack of motivation.

<https://auntiesolutions.com/>



## **Headsted**

Offers online programs for mental wellbeing have helped thousands of users to deal with anxiety, low mood, stress, and depression.

<https://headsted.co.uk/main/>



## **Mentalhub.fi**

Health Village is a web service for specialized health care that was developed together with experts and patients

<https://www.terveyskyla.fi/en/>



## **Moodmetric/Vigofere**

The Moodmetric ring and app have been developed to help individuals and organizations to manage stress better.

<http://www.moodmetric.com/>



# Fingenious® Service

A digital gateway to Finnish biobanks and biomedical research – the 1st in class service in Europe.



Built to serve academic and industry researchers and to advance medical research globally.



A single point of contact for all public biobanks and their samples and data.

One contract with all the biobanks via Finnish Biobank Cooperative – FINBB.



# FinnGen Partners

## Coordinating partners:



## Biobanks:



## Funding partners:



Hospital District of Southwest Finland  
University of Turku  
Satakunta Hospital District  
Vaasa Hospital District



Hospital District of Helsinki and Uusimaa (HUS)  
University of Helsinki  
Kymenlaakso Social and Health Services (Carea)  
South Karelia Social and Health Care District (Eksote)



Finnish Red Cross Blood Service  
Finnish Association of Hematology  
Institute for Molecular Medicine Finland (FIMM), HiLIFE,  
University of Helsinki



Northern Savo Hospital District  
University of Eastern Finland  
South Savo Social and Health Care Authority  
Joint Municipal Authority for North Karelia Social and Health services (Siun sote)  
Eastern Savo Hospital District



Central Finland Health Care District  
University of Jyväskylä



Northern Ostrobothnia Hospital District  
University of Oulu  
Joint Municipal Public Utility for Northern Finland central laboratory Nordlab  
Central Ostrobothnia Joint Municipal Authority for Social and Health Care  
Kainuu Social and Health Care Joint Municipal Authority  
Lapland Hospital District  
Länsi-Pohja Hospital District



Pirkanmaa Hospital District  
University of Tampere  
Kanta-Häme Hospital District  
South Ostrobothnia Hospital District



Finnish Institute for Health and Welfare (THL)



The Finnish Red Cross Blood Service



FINNGEN

## Funding:

BUSINESS  
FINLAND



The International Journal of science / 19 January 2023

# nature

## LINES OF DESCENT

Finland's isolated history offers fresh view of disease genetics

**Facing the strain**  
How the body's first exposure to COVID can skew future immunity

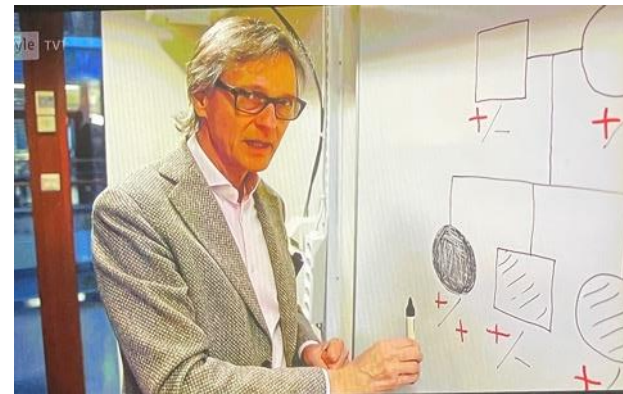
**Researchers at play**  
Turning experiments into games can boost behavioural science

**Record warming**  
Highest temperatures in 1,000 years for Greenland's ice sheet



Nature January 19th 2023

7 papers in  
Nature,  
Nature Medicine,  
Nature Communications,  
Communications Medicine and  
Communications Biology



**Aarno Palotie**  
YLE News  
Finnish National  
Broadcaster  
Jan 18th



# iCAN – DIGITAL PRECISION CANCER MEDICINE

## **Aim to collect and analyze 5000 samples by EO2022 and 15 000 by EO2026**

- For each sample there will be extensive profiling involved:
  - Tumor whole-exome sequencing (WES) + Normal WES
  - Bulk RNA sequencing of tumor
  - Basic immune profiling (stain/flow)
  - Germline DNA variations (FinnGen collaboration)
- + Linkage to:
  - Rich clinical/hospital data
  - Longitudinal health data
  - Patient Reported Outcomes
- Majority of profiling is funded with public funding which will be complemented with private funding. Thus iCAN is building a consortium providing companies with an interesting research collaboration opportunity aiming for breakthrough discoveries and improved treatments.

## **iCAN second round (2023-26) public funding call is now open with 90M€ total funding available**

- 80% increase compared to the first round and thus iCAN has an opportunity to a great increase in public funding, possibly doubling
- Increased public funding requires credible demonstration of partnerships for which iCAN now provides a significant incentive for company partners joining now and continuing to the second period until EO2026



# Global Digital Health Processes

- some processes where Finland is active

## **EU**

eHealth Network

EHDS – TEHDAS joint action

1+ Million Genome

## **UN**

Roadmap for digital co-operation

Generation Equality

Global Pulse I-DAIR

AI for Children

## **WHO**

Global Strategy for Digital Health

UN Inter-Agency Group on Ageing

ACT-Accelerator

Aging Asia

Well Aging Society Asia-Japan

Freedom Online Coalition



# Welcome to explore the Finnish healthcare ecosystem



**Dr. Päivi Sillanaukee**

Ambassador for Health and Wellbeing

Ministry for Foreign Affairs, Finland

[paivi.sillanaukee@formin.fi](mailto:paivi.sillanaukee@formin.fi)



# SUSTAINABILITY DAYS '23

Get things done

[www.sustainability-days.ch](http://www.sustainability-days.ch)

