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Personal Data Empowerment with Personium

June 20, 2022

Japan Global Gateway

Advanced Technology Leading

AI / Data Utilization G

Self-Introduction

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- Fujitsu Limited (Japan)
  - SDG 9 Enabler
    - INDUSTRY, INNOVATION AND INFRASTRUCTURE
  - Personium Chief Evangelist
  - Ethical Personal Data Solution Consultant

Dixon Siu
(he / him)

- MyData Global Community
  - Board Member since 2021
  - Steering Committee Member 2021
  - Co-leading projects on children data protection, global south personal data empowerment, etc.

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Fitness tracking app Strava gives away location of secret US army bases

Data about exercise routes shared online by soldiers can be used to pinpoint overseas facilities

- **Latest: Strava suggests military users 'opt out' of heatmap as row deepens**

▲ A military base in Helmand Province, Afghanistan with route taken by joggers highlighted by Strava. Photograph: Strava Heatmap

37% of consumers say that lack of trust is an obstacle to using digital services. Companies have not invested in trust as a way to stand out.

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MyData Global

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MyData Global Board of Directors 2021 & 2022

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The core idea is that individuals should be **in control of the data about themselves**.

The MyData approach aims at Strengthening **digital human rights** while opening new opportunities for businesses to develop innovative **personal data-based services** built on mutual trust.

MyData vision

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Fair, sustainable and prosperous digital society
Through a human-centric approach to personal data

Fair, sustainable and prosperous digital society through a human-centric approach to personal data

People get value from their data and set the agenda on how it is used.

For organisations, the ethical use of data is always the most attractive option.

Fair, sustainable and prosperous digital society through a human-centric approach to personal data

People get value from their data and set the agenda on how it is used.

Need

Offer

For **organisations**, the ethical use of data is always the most attractive option.

FROM FORMAL TO
ACTIONABLE RIGHTS

FROM DATA PROTECTION TO
DATA EMPOWERMENT

FROM CLOSED TO
OPEN ECOSYSTEMS

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Global Trend

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API ecosystem model

Personal control but low integration.

Platform model

Integration but low personal control.

MyData operator model

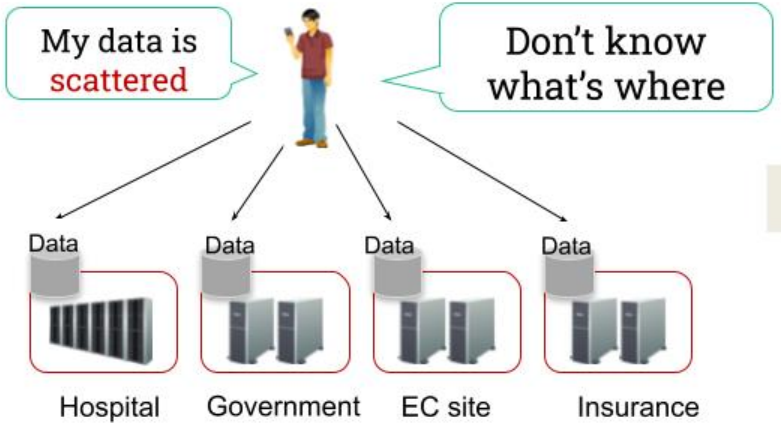
Highly integrated with full personal control.

What we want to do

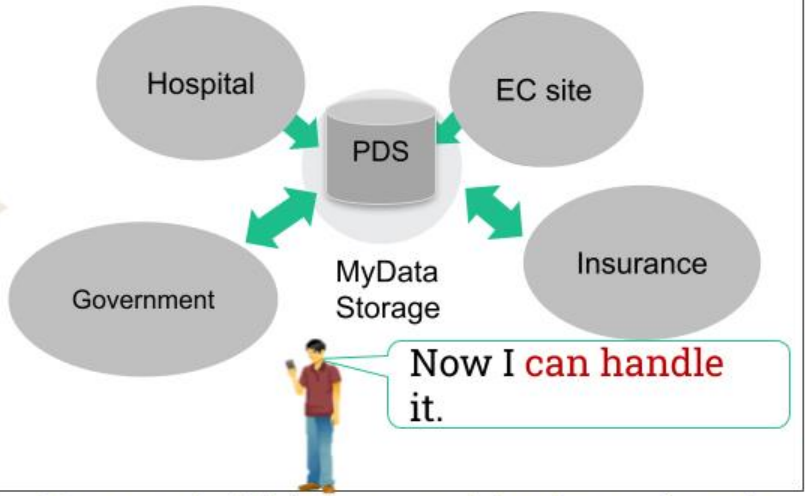
Personium

- Shift data management from System-centric to Human-control

System-centric Data Management



Human-control Data Management



- ✔ Systems have been built in order to automate businesses.
- ✔ As a result, our personal data are separately stored in siloed systems.

- ✔ Everyone hold his/her own data store and services read/write on it.
- ✔ Your data can be utilized freely beyond the boundary of services, solely upon your own will

The Personium project is provided under the Apache 2.0 license.

Personal Data Utilization

Personium

Public
Workflow Reduction

Healthcare
Improved Wellbeing

Finance
Streamlined Proposals

Distribution & Logistics
Reduce Re-delivery Cost

Others
SDGs: Digital ID for indigenous person

Manufacturing
Better Decisions to benefit end-users

Tourism
Sightseeing Recommendation

Sports
Improve performance

Education
Diploma & Skill Data Sharing for Job Matching

https://bit.ly/Personium-Projects-English

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Cross-industry Use Cases

Personal Data Empowerment

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Real-time employee wellbeing services

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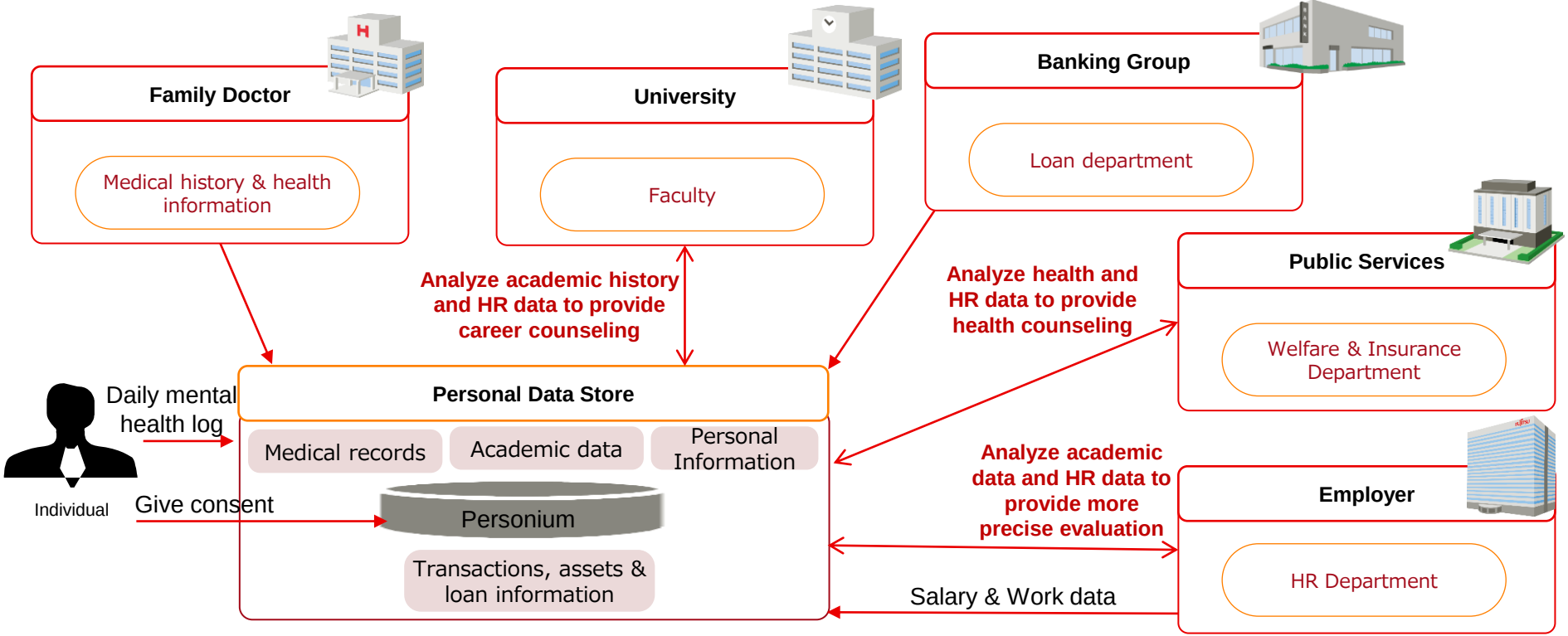
- Analyze employee's daily behaviour (mood indicator, work hours, learning patterns, etc.)



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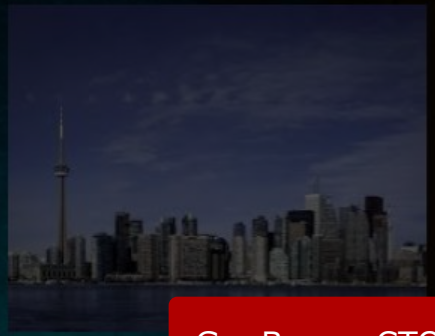
Cities implementing (partially or fully) the MyData idea

AMSTERDAM
#Decode #CitizenSensors



Amsterdam made a promise to it's citizens

- Data-minimisation
- Privacy by design
- Open & transparent
- Reliable & safe
- Easy to use & inclusive
- Personal data ownership
- Enhancing freedom, expression & creativity

Ger Baron, CTO – Director Digital and Innovation at the City of Amsterdam, presentation at [MyData in the Netherlands Community Meetings]

Why releasing data control is good

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- Restore trust and increase customer loyalty
- Diversified ecosystem help gaining new customers
- Valuable customized services with cross-industry data

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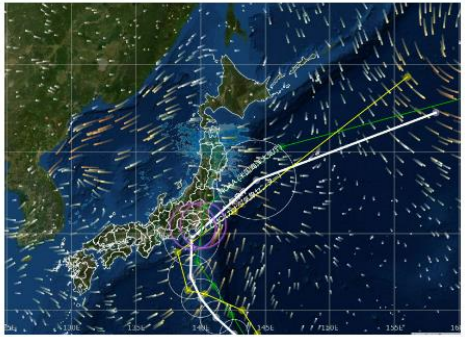
Personal data ecosystem

台風の進路予測イメージ



AIを用いて解析した災害情報表示イメージ

Disaster alert for people with accessibility needs

Barrier-free home to avoid household accidents

Universal MaaS

Toward the realization of universal and seamless mobility.

Universal MaaS is an initiative aimed at smooth and comfortable travel, focusing on people with mobility impairments, the elderly, inbound tourists and others who are unsure about travel for whatever reason.

Increased household income and business chances

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Smart City Solution

City as MyData Operator Project by Helsinki, Finland

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City as a MyData operator project 2020-2021

Goals:

Define how **MyData principles** can be applied in cities

Build **practical solutions** to demonstrate MyData capabilities

Increase trust between public sector and residents.

Benefits:

Save time and ease up the daily life of the residents.

Human-centric way of using data to enable scalable and seamless **digital services across administrative silos**.

2,65 M€ Funding (Finnish Ministry of Finance)

Two MyData operators in the consortium:

mydata share (Vastuu Group)

Personium (Fujitsu)

City as MyData Operator (Helsinki, Finland)

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- Preschool fees based on the parents' financial status
- Parents give consent for tax information access
- Reduced paperwork

"City as a MyData Operator" project 2020-2021

Reduced daycare fee for families

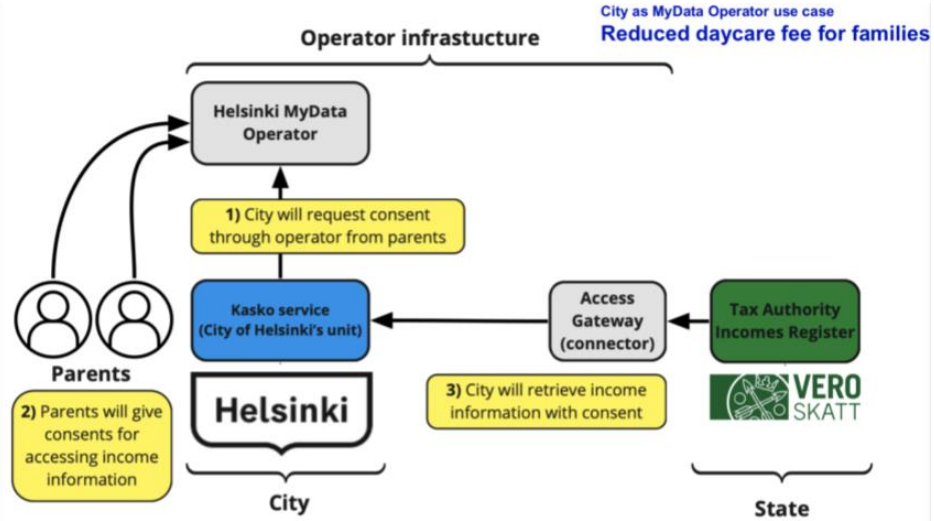
- By law 1) cities have to organise daycare services 2) parents' financial situation defines the rights to reduced day-care fees
- In Helsinki daycare is organised for ~27 000 children annually
- To be eligible for a reduced daycare fee, both parents must provide city with requested documents to justify their financial status

Current state (As-is):
Family income data has to be submitted by filling manual forms in pdf format either by mail or secure email to the City of Helsinki's customer fee unit.

Helsinki

Future vision (To-be):
As a citizen, I can authorise the city to verify my annual income. With my consent, the city can automatically check my income from the National Income Registry and determine the correct applicable day-care fee with potential reductions for my child.

Significant time and effort savings both for parents and City



Source: MyData Cases in Helsinki, Finland
https://docs.google.com/presentation/d/1UjOry-4ELfNz5BXCDDqcP2fbtpqKn0JyeYaZpnVqGvQ/edit#slide=id.geacd5bc53d_1_868

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Facts and Future Plan

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Facts

- Mainly government services
- Connecting the silos
- PDS is only an option

Future Plan

- More commercial services
- Sustainable ecosystem
- PDS is the core of every services

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Personal Data Ecosystem

How does it work?

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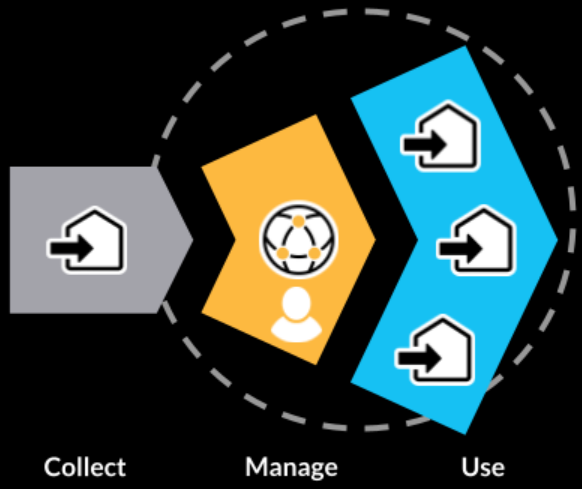
Facilitating personal data ecosystems

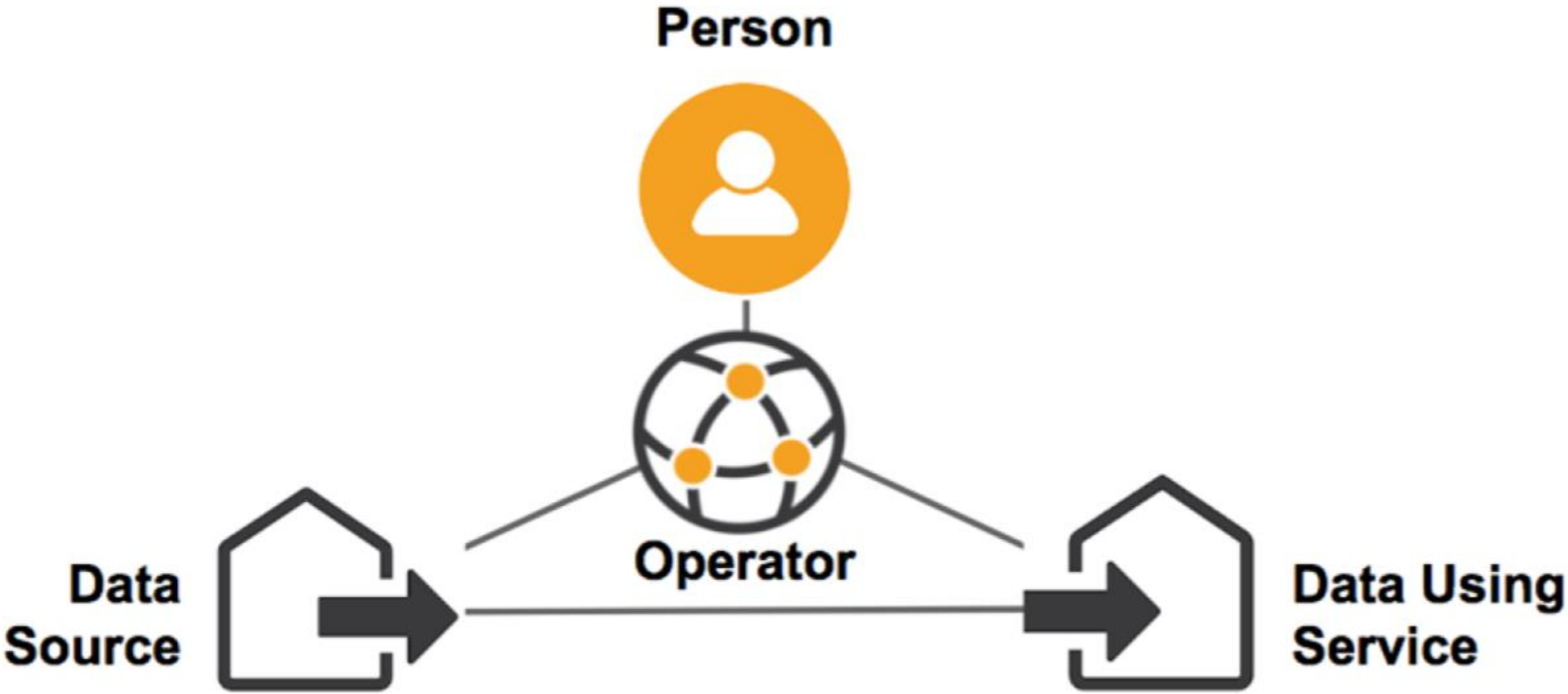
Now:

- Organizations manage the whole value chain
- Integrating data from multiple sources is hard

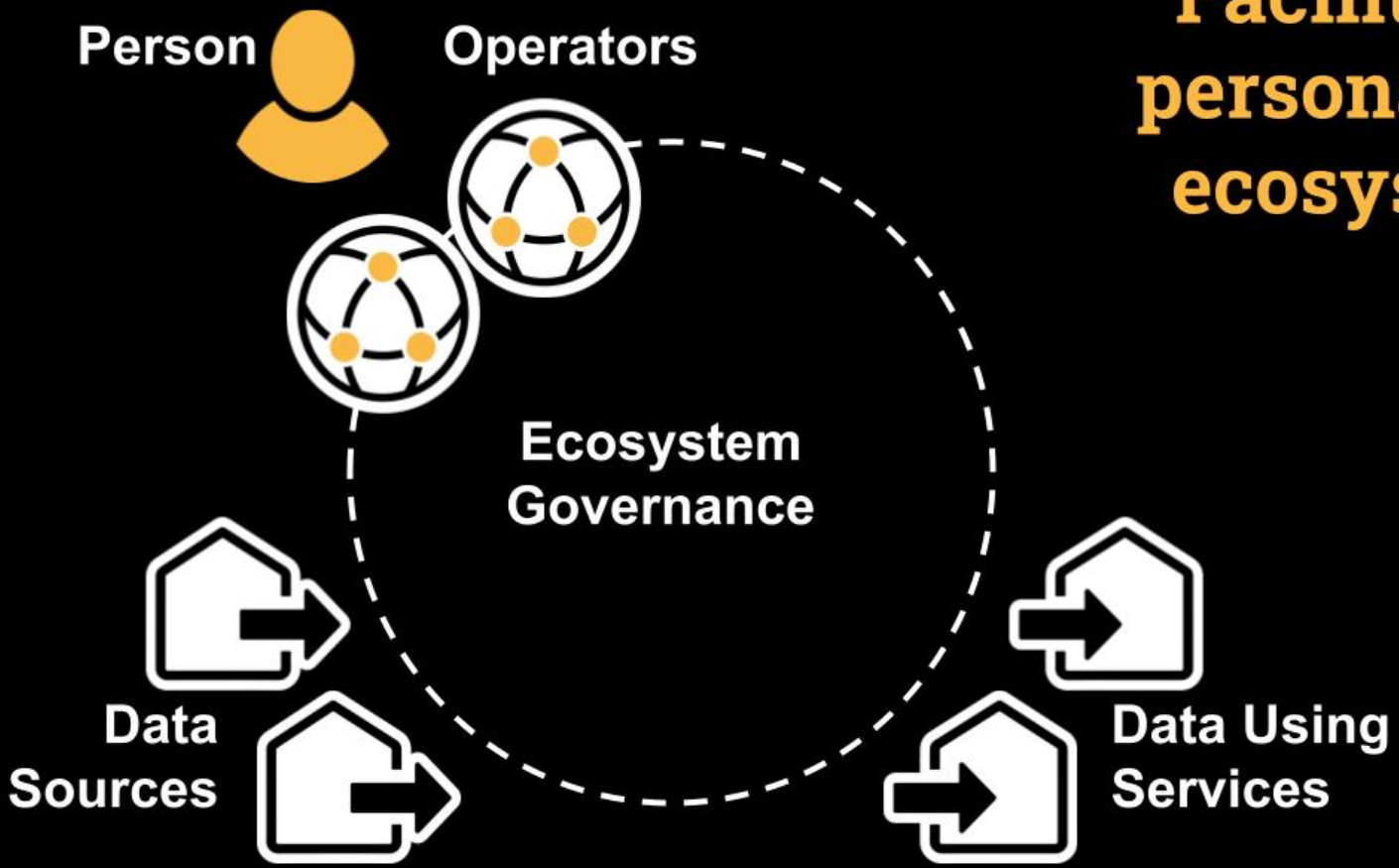
Future:

- Specialized services for different parts of the value chain
- Need mechanisms for permissions (consent etc.)




Person
Operator
Data
Source
Data Using
Service

Facilitating personal data ecosystems



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Overview of Personium

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First and still only one in Japan

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Human-centric Control

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Individuals (end-users)

- **manage** their own data
- **select** what data to be shared
- **supported** by an open ecosystem

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MyData Operators Awardee since 2020

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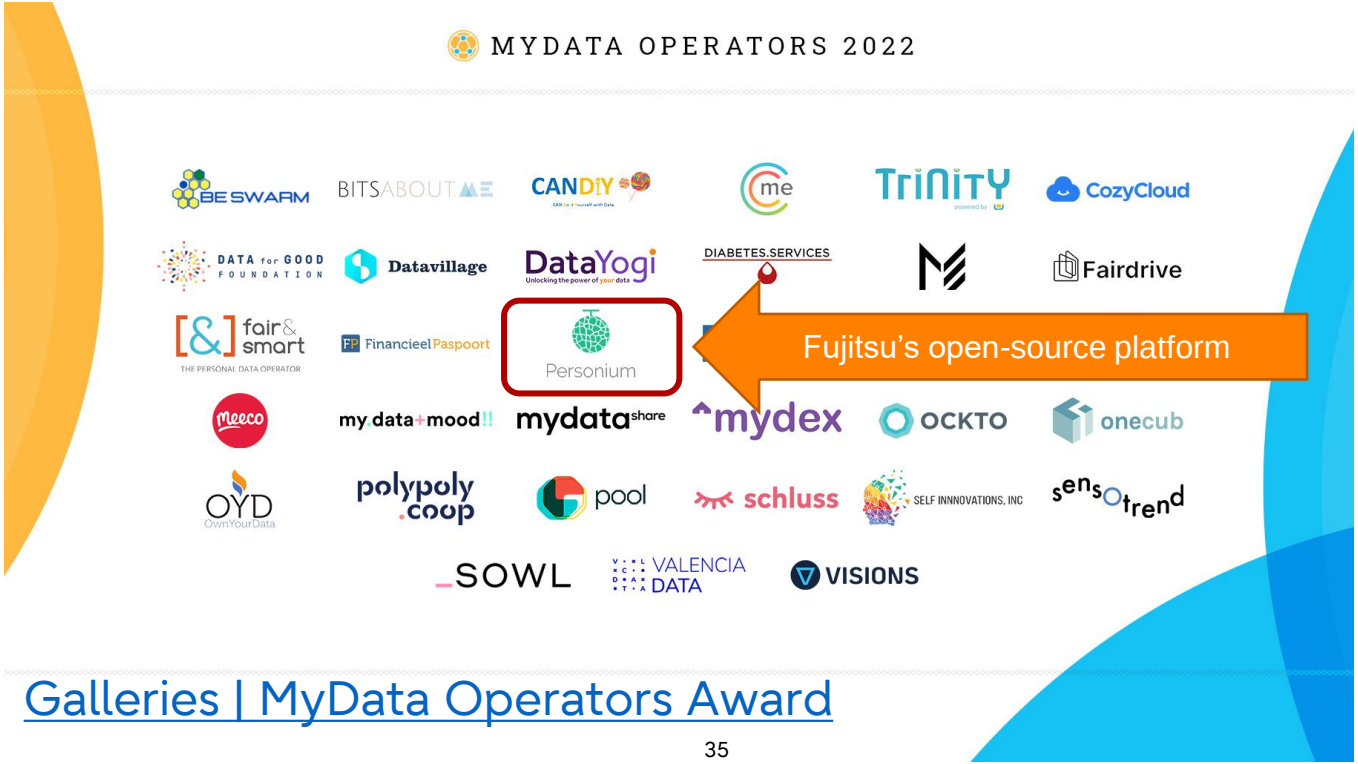
Personium (Fujitsu) is the only awardee from Asia since 2020

- 27 awardees in 2020, 22 awardees in 2021, and 33 awardees in 2022



Galleries | MyData Operators Award

Personium's Main Features

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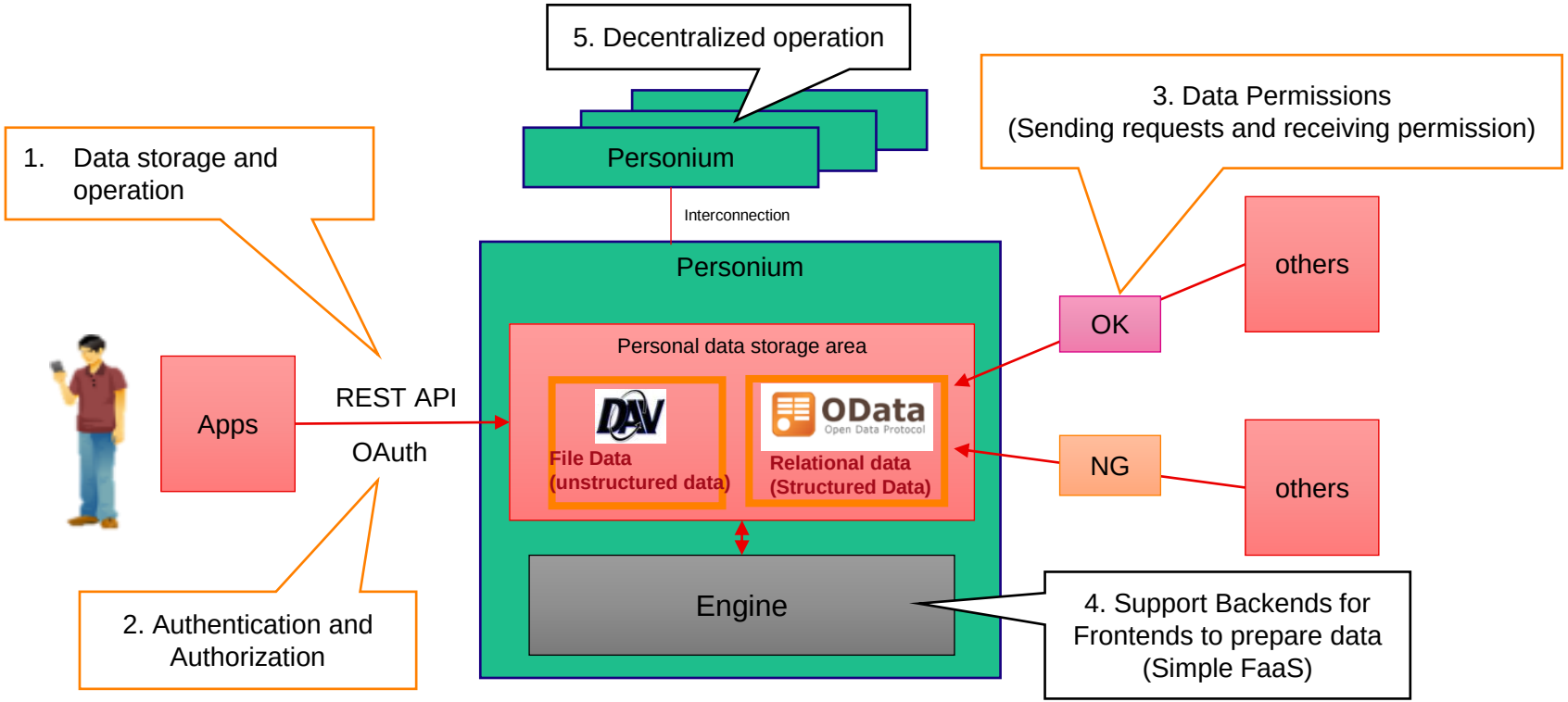
Securely manage unstructured data (images, voice, etc.) and structured data (transaction)



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Information Bank Press Release

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Title	Link	Date
City as MyData Operator	Helsinki newspaper article	February 15, 2021
Marunouchi Data Consortium	Revitalizing Tokyo's Business District with Data from Multiple Industries	September 12, 2019
Fujitsu and Dentsu use personal data to improve individual wellbeing by proposing new lifestyle	New Lifestyle Design Movement with Personal Data Driven Recommendations	May 13, 2019
Dai Nippon Printing to Promote Information Banks Develop and provide a platform for safe and secure information management	https://pr.fujitsu.com/jp/news/2019/01/29.html	January 29, 2019
Start of verification testing of information banks using personal data	https://pr.fujitsu.com/jp/news/2017/07/14.html	July 14, 2017

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Past webinars hosted under MyData Global principles at FUJITSU

Summary

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Summary 1/2

Registrants: 77
Attendees: 37
Presentation:

- MyData Global Overview
- MyData4Children

Registrants: 112
Attendees: 48
Presentation:

- Introduction
- MyData 4 Sustainability

Registrants: 52
Attendees: 22
Presentation:

- Introduction
- Privacy and the Deployment of AI Systems

Registrants: 80
Attendees: 32
Presentation:

- Introduction
- AI for Children
- Manifesto for Children
- Fujitsu Finland – AI Case

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Thank you

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Technical Overview of Personium

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Web of three-tier structure over HTTP (REST APIs)

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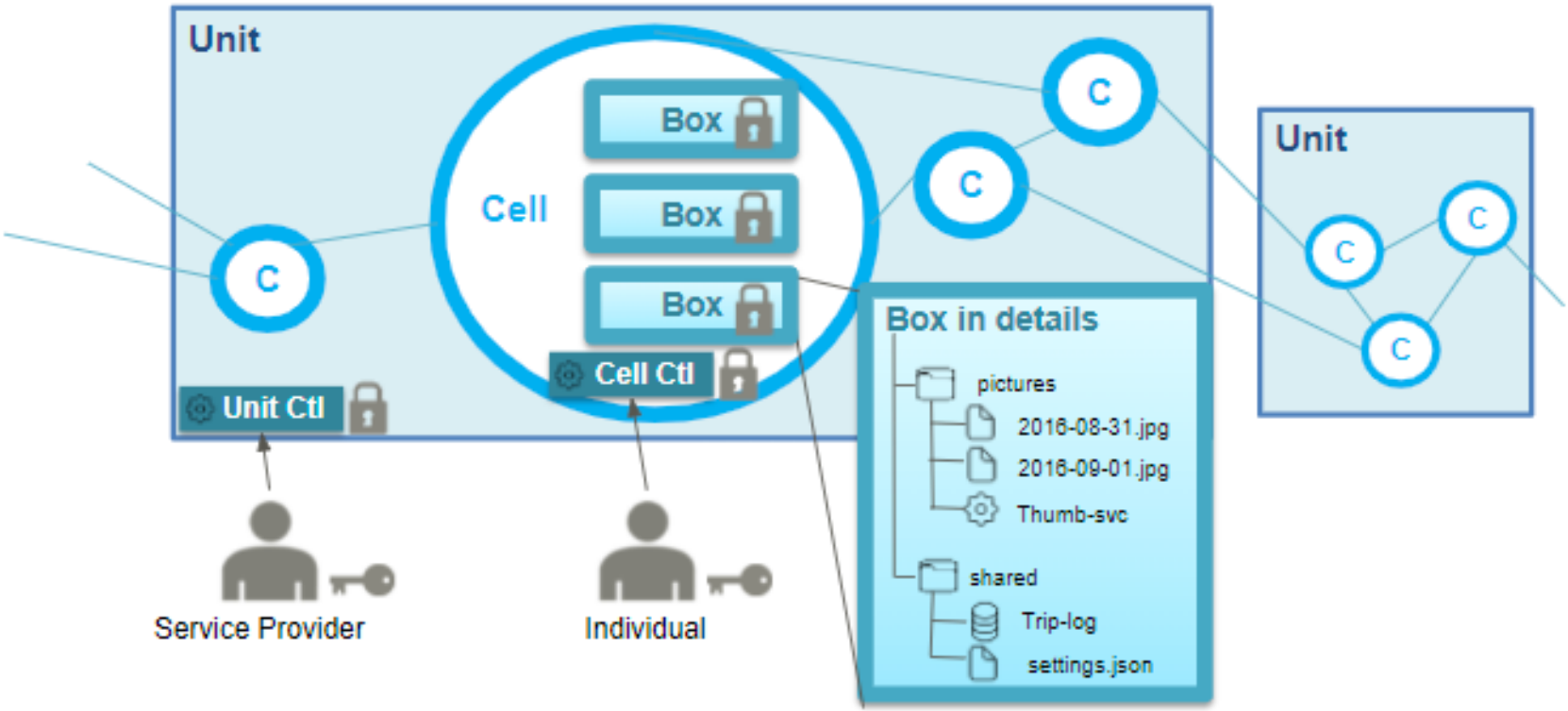

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Functional elements of a Cell

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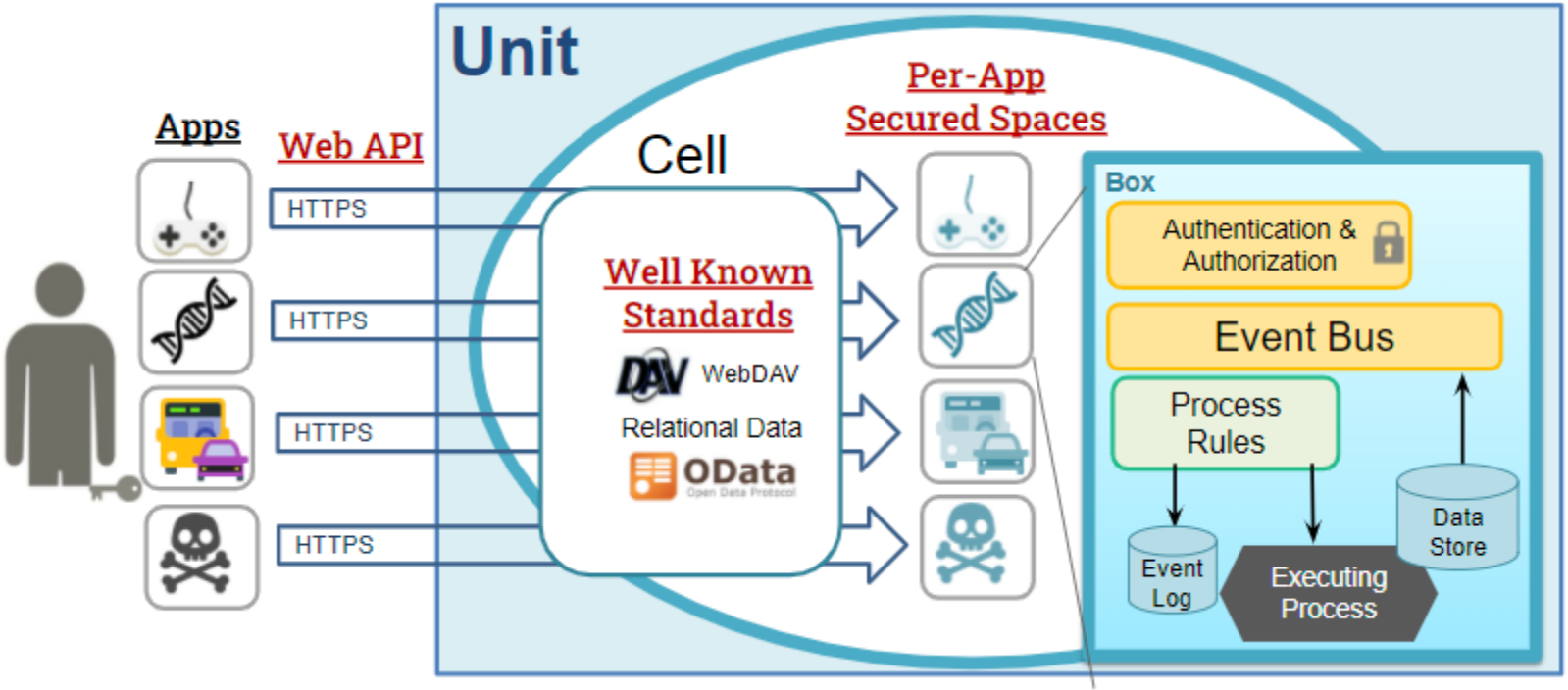

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Linking personal data store through URL

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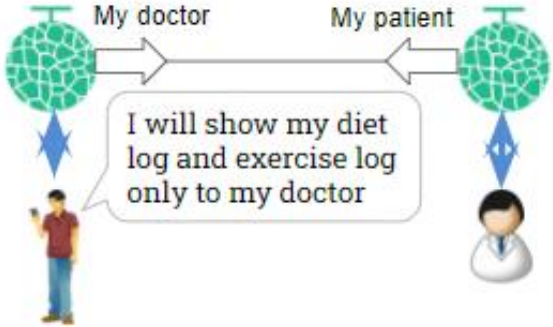

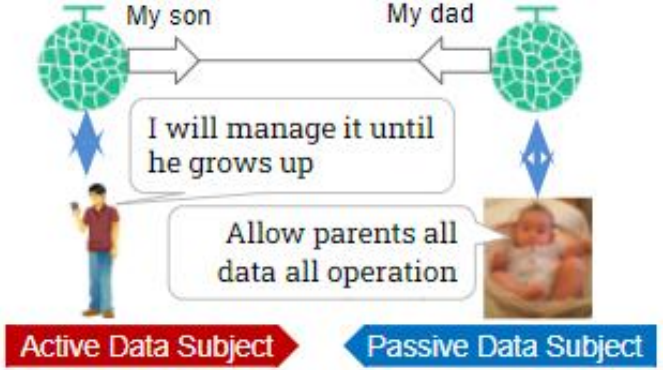

Privacy by Design

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- Personal data is not shared to anyone by default
- Cross-check your personal data privately with app service provider's DB

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Permission and Transparency

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Individuals (end-users)

- choose who can access the data
- choose different permission level
- support data anonymization before sharing