

# Personal Data Empowerment with Personium

June 20, 2022

Japan Global Gateway  
Advanced Technology  
Leading

AI / Data Utilization G

MYDATA OPERATORS 2022



- Fujitsu Limited (Japan)
  - SDG 9 Enabler
    - INDUSTRY, INNOVATION AND INFRASTRUCTURE
  - Personium Chief Evangelist
  - Ethical Personal Data Solution Consultant
- MyData Global Community
  - Board Member since 2021
  - Steering Committee Member 2021
  - Co-leading projects on children data protection, global south personal data empowerment, etc.



Dixon Siu  
(he / him)

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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.

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FROM FORMAL TO  
**ACTIONABLE RIGHTS**



FROM DATA PROTECTION TO  
**DATA EMPOWERMENT**



FROM CLOSED TO  
**OPEN ECOSYSTEMS**





# 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%

**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.**

# Global Trend

## API ecosystem model



Personal control but  
low integration.

## Platform model



Integration but low  
personal control.

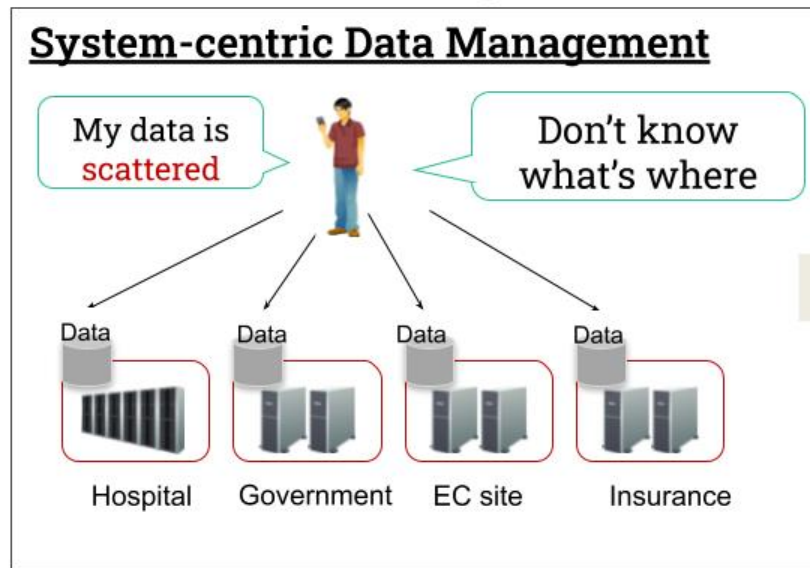
## MyData operator model



Highly integrated with  
full personal control.

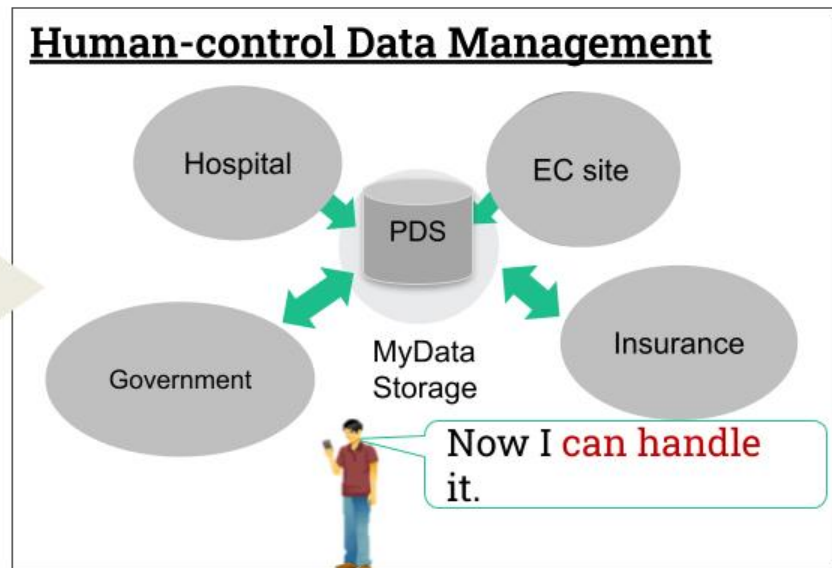
- Shift data management from System-centric to Human-control

## System-centric Data Management



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

## Human-control Data Management



- ✓ 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**

# Personal Data Utilization



## 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



# Cities implementing (partially or fully) the MyData idea



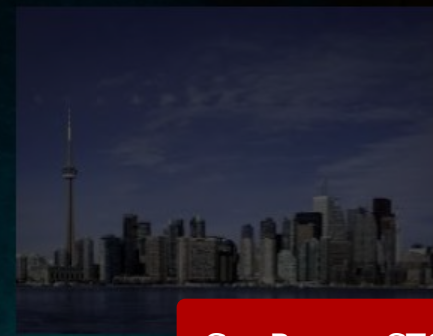
**AMSTERDAM**

#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](#)

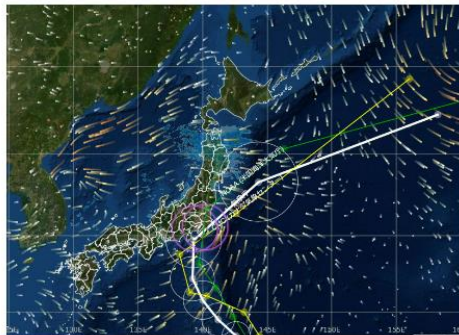
# Why releasing data control is good

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



# 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



# Smart City Solution

City as MyData Operator Project by Helsinki, Finland

# Cities implementing (partially or fully) the MyData idea

## The Most Functional City in the World that Makes the Best Use of Digitalisation



### Convenient everyday life

Proactive and personalised services and recommendations

Automated processes and services, "no service" is good service

24/7 self-services available when needed

Trust based on human-centric, fair and ethical use of data and AI



HELSINKI

#MyData #MyDataOperator



LYON

#SelfData #MyData

TORONTO?

#Google #CivicDataTrust?

BRITTANY (RENNES)

#Education #MyData

TRENTO

#telco #MyData

# MyData in the City of Helsinki



The City of Helsinki has adopted MyData principles as it attempts to become the most functional digital city on the planet through proactive digital services.

**MyData principles will guide the Finnish capital to ensure that people retain control of their data and trust how it is used while also benefiting from more digital services.**

Computer Weekly Apr 18, 2021



# 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<sup>share</sup>

(Vastuu Group)



(Fujitsu)

# City as MyData Operator (Helsinki, Finland)

- 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):

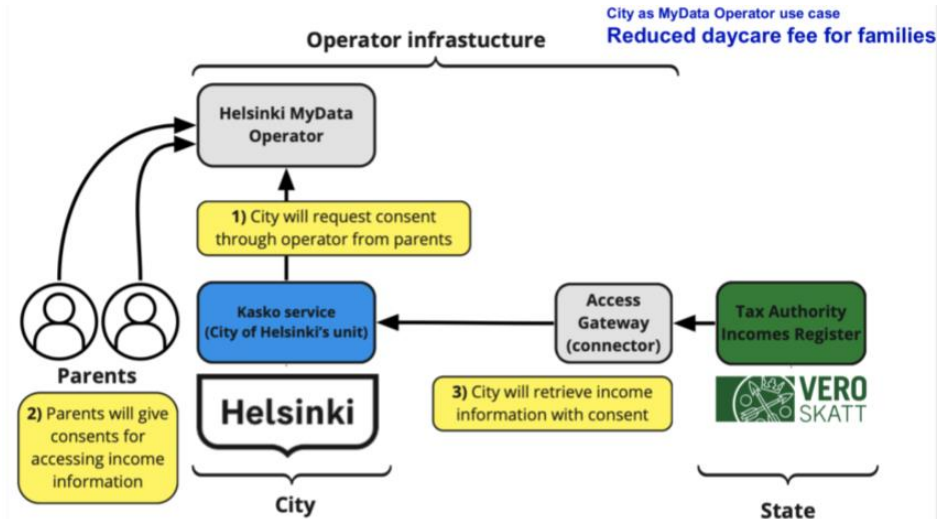
Family income data has to be submitted by filling manual forms in pdf format either by mail or secure email to the City of Helsinki's customer fee unit.

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](https://docs.google.com/presentation/d/1UjOry-4ELfNz5BXCDdQcP2fbtpqKn0JyeYaZpnVqGvQ/edit#slide=id.geacd5bc53d_1_868)

## 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

## For City of Helsinki and Partners

- Provide and inspire practical data sharing use cases during the suggestion period
- Easily enforce interoperability between components in the ecosystem
- Inspire technical integration of data using services
- Help getting trust from the citizens through Fujitsu's contributions to global community

## For Fujitsu Finland

- Win the contract of infrastructure
- Gain invaluable experiences and increased brand image in personal data economy
- Gain access to a network of innovative influential collaborators
- Rebrand successfully outside of infrastructure market

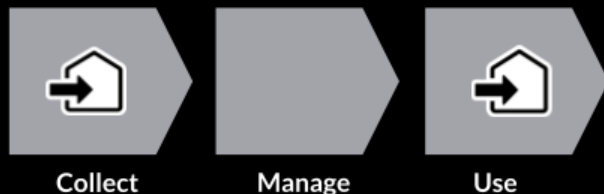


# Personal Data Ecosystem

How does it work?

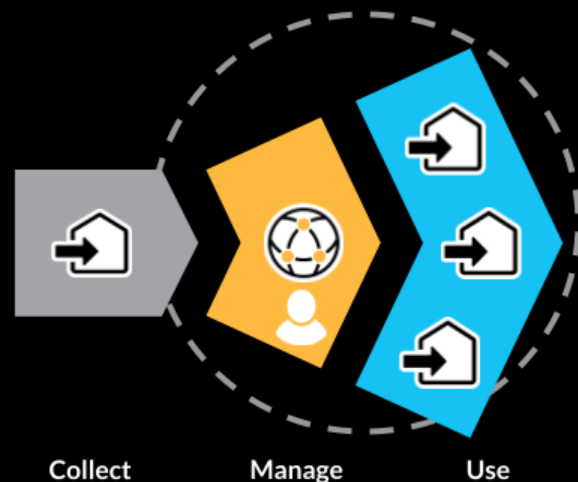
## Now:

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

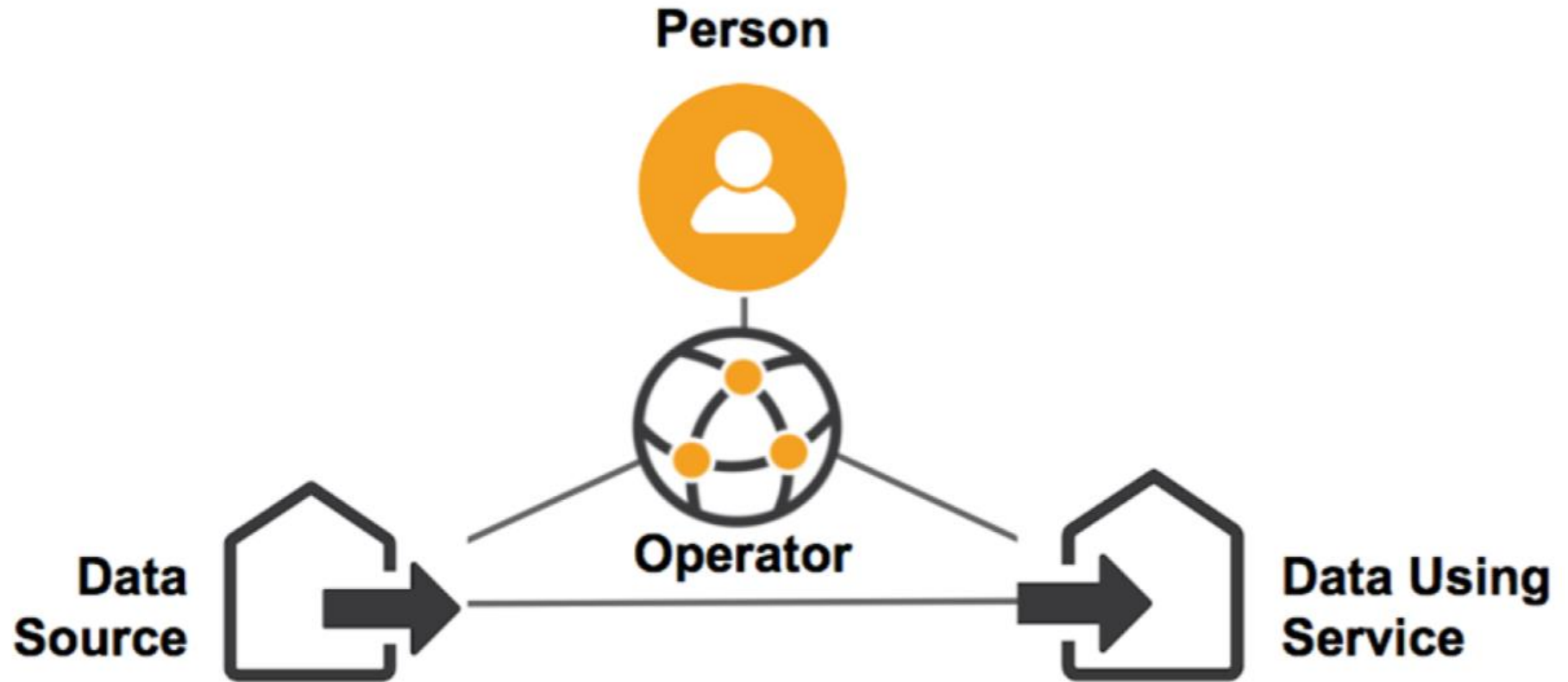


## Future:

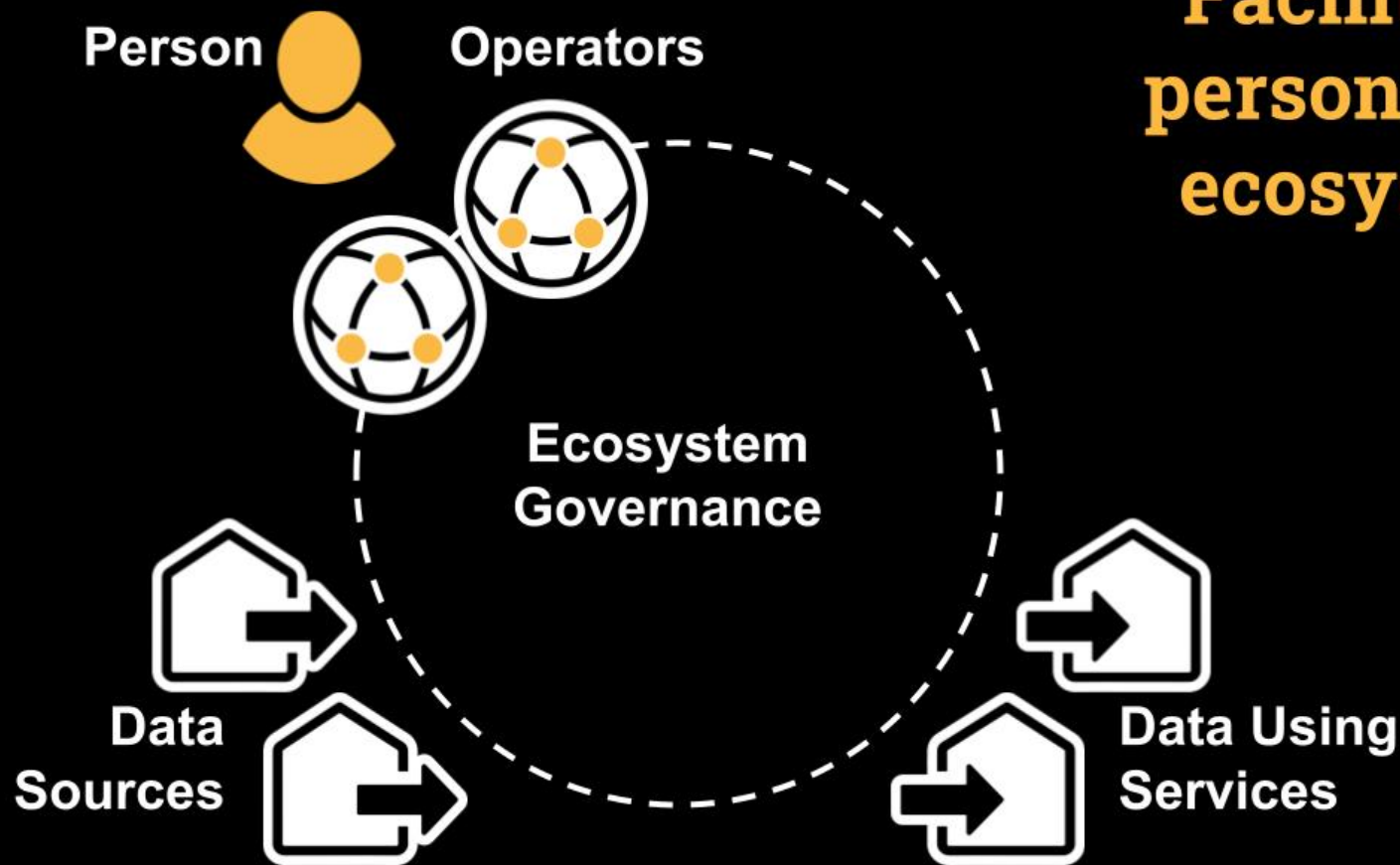
- Specialized services for different parts of the value chain
- Need mechanisms for permissions (consent etc.)



# Facilitating personal data ecosystems



# Facilitating personal data ecosystems



# Overview of Personium

# First and still only one in Japan

FUJITSU



# Personium

An interconnectable open source  
PDS (Personal Data Store) server  
envisioning world wide web of protected data APIs.

Individuals (end-users)

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

# MyData Operators Awardee since 2020

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

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

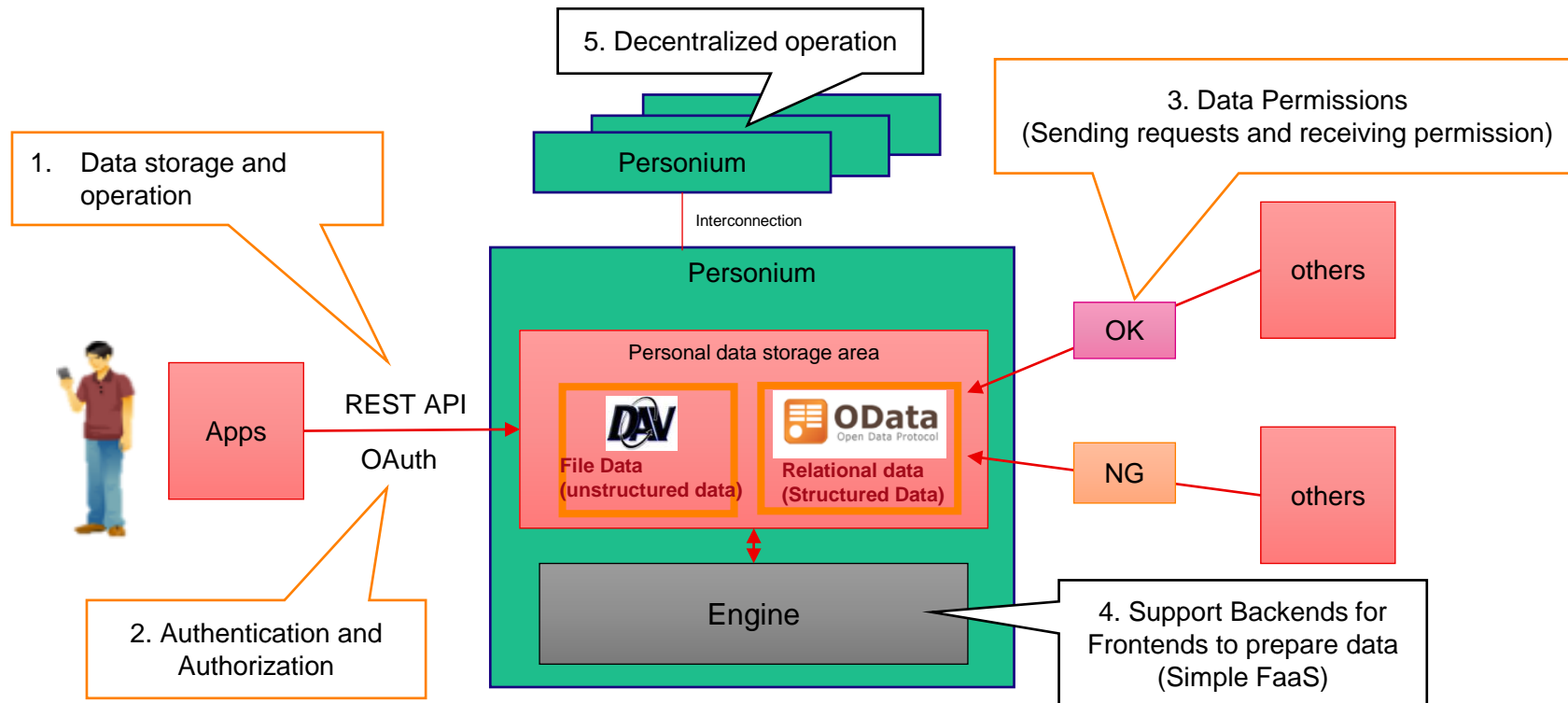


[Galleries | MyData Operators Award](#)



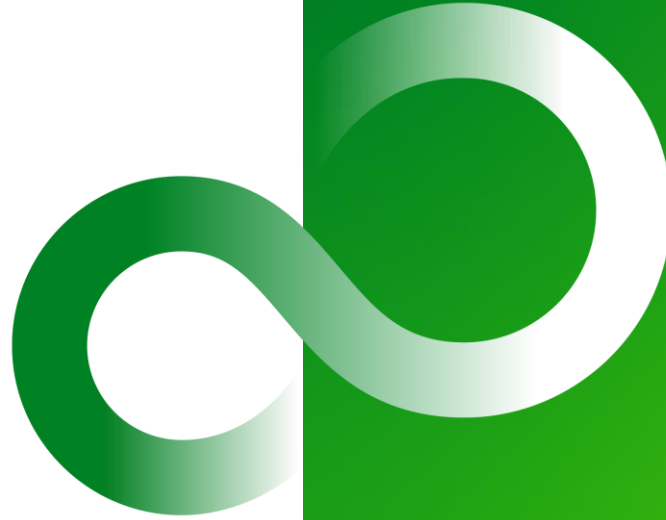
# Personium's Main Features

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



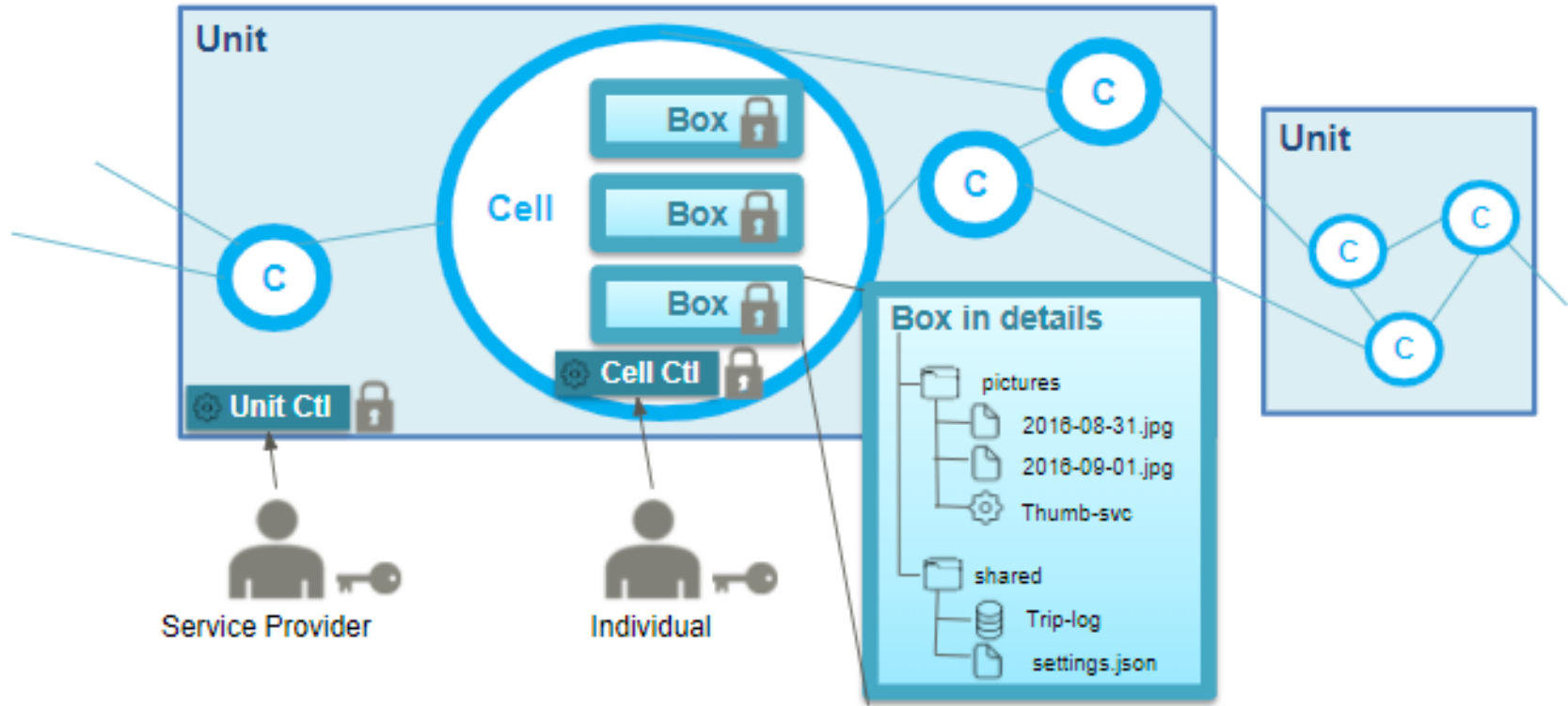
Title	Link	Date
City as MyData Operator	<a href="#">Helsinki newspaper article</a>	February 15, 2021
Marunouchi Data Consortium	<a href="#">Revitalizing Tokyo's Business District with Data from Multiple Industries</a>	September 12, 2019
Fujitsu and Dentsu use personal data to improve individual wellbeing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

Thank you

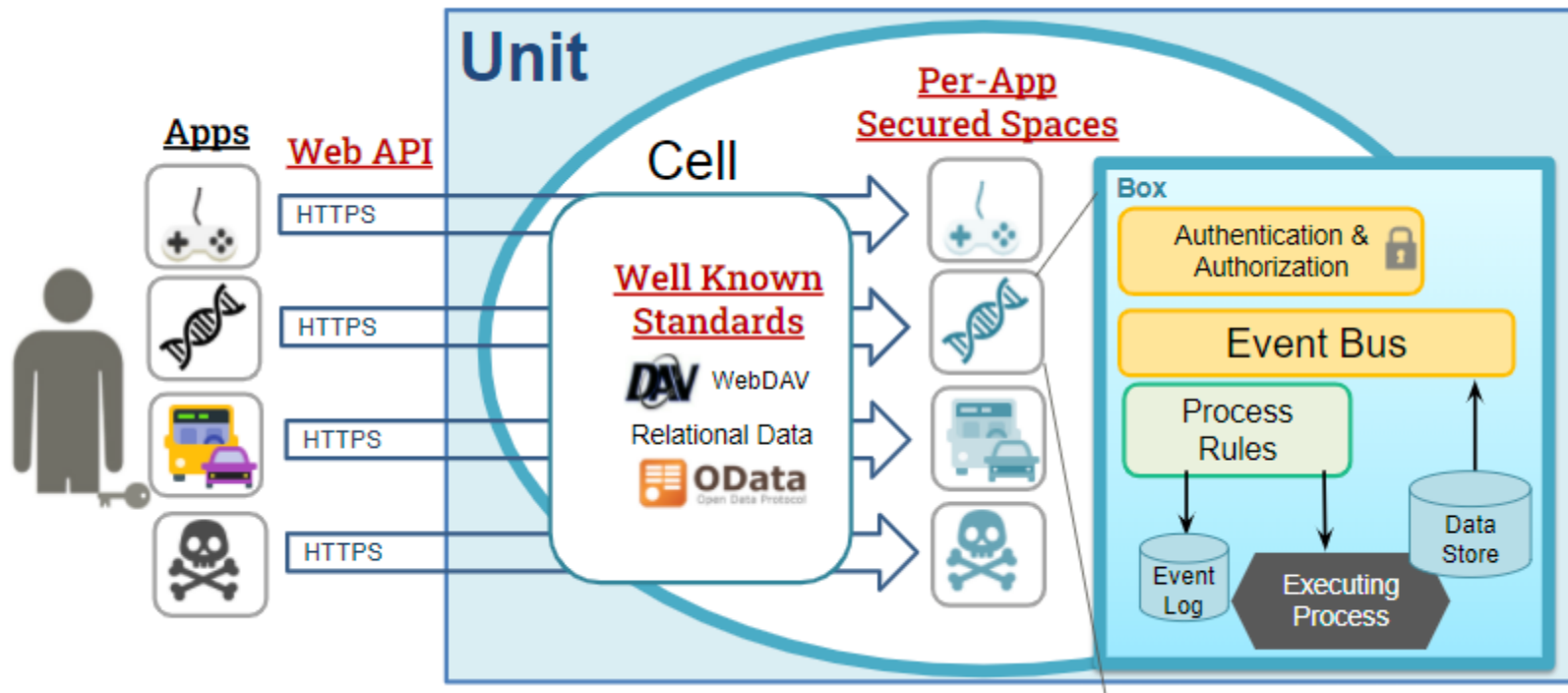


# Technical Overview of Personium

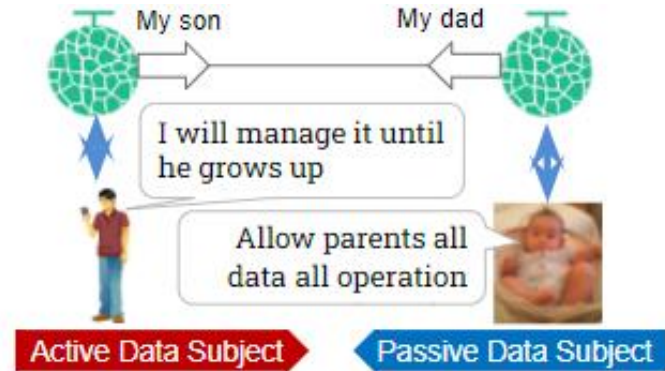
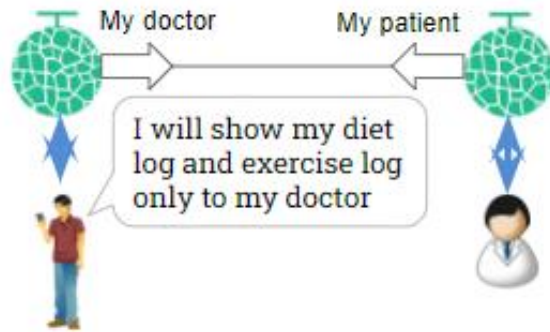
# Web of three-tier structure over HTTP (REST APIs)



# Functional elements of a Cell



# Linking personal data store through URL



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



Individuals (end-users)

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