Why Personal Data Empowerment is the future and overview of the MyData Operator Ecosystem?

September 23, 2023

Dixon SIU (he/him)

- Fujitsu Limited (Japan)
  - Open-source Software Engineer
  - Personium Chief Evangelist
  - SDG 9 Community Enabler
  - Global Delivery Responsible Business Country Co-Lead (Japan)
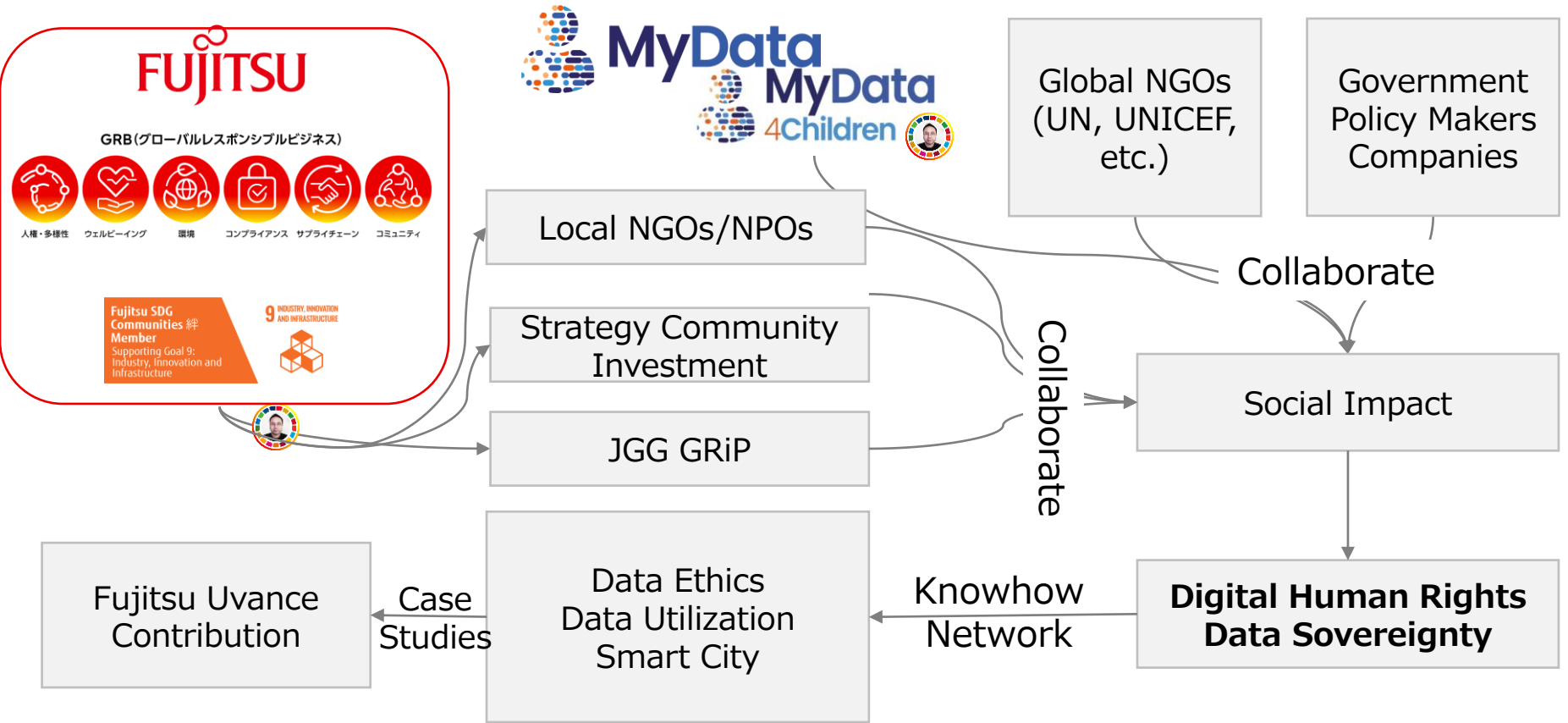
Vision

Brief background of my works

Personal Data Empowerment

Vision

We believe the ethical and transparent use of personal data contributes to a fair and sustainable data economy. To promote data rights around the world, we participate in the multi stakeholder initiative MyData Global.

Personium is an active and long-term member of MyData Global and serves on the international leadership group.

We signed the MyData Declaration based on our strong sympathy with its principles.

Raising awareness of Data Literacy

MyData Global

- International nonprofit

- Headquartered in Finland

- Founded in 2018

- Over 500 members from over 50 countries
  6 continents

MyData Global **Board of Directors 2022**
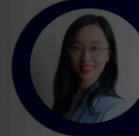
Lucy Yang · Christoph Fabianek · Charlie Martial Ngounou · Paula Bello · Dixon Siu

Chris Lee · Marlies Rikken · Antti 'Jogi' Poikola · Viivi Lähteenoja

Thought Leadership
- Child online safety workshops
- Personal data empowerment movement in global south

Child Online Safety

Digital Rights and Responsibility Workshop at the Agape Floating Garden Church in Kampong Luong area

[Digital Security for Children is Key](#)
At the Cambodia ICT Camp June 2022

FUJITSU

Organize personal data empowerment workshops to:

○ Raise awareness for data sovereignty

○ Educate data engineer

Dixon Siu

Board Member, SDG 9 Community Enabler and Personal Data Empowerment Evangelist at Fujitsu Limited. Founding and Board member of MyData Global. Board member at aNewGovernance.

(Japan)

https://afroleadership.org/governing-board/

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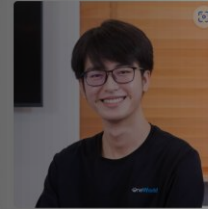# Advisory Committee of Cambodia ICT and Digital Forum

FUJITSU

Promoting cross-sectorial expertise and joint action to address emerging digital issues and promote an inclusive and sustainable use of ICTs for digital development.

Advisory Committee

Thy Try
Executive Director - Open Development Cambodia (ODC)

Eric Lou
CEO - OneWorld Information Technology

Leng Len
Freelance Media Practitioner

Dixon Siu
Software Engineer - Fujitsu Limited

Chiang Poren
Digital Law Researcher

Pyrou Chung
Director - Open Development Initiative

Elizabeth Liew
Global Strategic Partnerships and Programme Development Lead - TechSoup

Knowledge
Develop indicators and measures to monitor the digitalization process and its implications.

Policy
Participation in dialogues concerning ICT development and Digital Economy and Social Policy.

Cooperation
Engage with the members through various in-person or online meetings and capacity-building activities.

About | CamIDF

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

Protection of personal data remains top factor for brand trust (cont'd)

✓ 63% of Chinese consumers said they are open to sharing their personal data only if it won't be shared or sold to other companies or third-party providers
✓ 60% said they will only do so where there is a clear data security policy

Q. Thinking about your consumer data, to what extent do you disagree or agree with the following statements in relation to sharing it with organisations? (Only showing 'Agree' responses)

41%
I am open to sharing my data without any concerns

60%
I am open to sharing my data, where there is a clear data security policy

52%
I am open to sharing my data, if I get financial compensation

63%
I am open to sharing my data, if it won't be shared with or sold to other companies or third party providers

55%
I am open to sharing my data, if I get a better customised/personalised experience

49%
I am open to sharing my data with those I trust

Source: PwC's 2022 Global Consumer Insights Survey

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.

Inevitable massive data leak!

- "The authorities have been building **massive personal profiles** of citizens, using data that is far beyond what any one platform could possibly collect. This **centrally held data then becomes an attractive target**," says Charlie Smith, the pseudonymous founder of the website Greatfire.org, which tracks Chinese censorship.

Reference: The Shanghai data leak shows China's state surveillance is expanding too fast to handle | Fortune
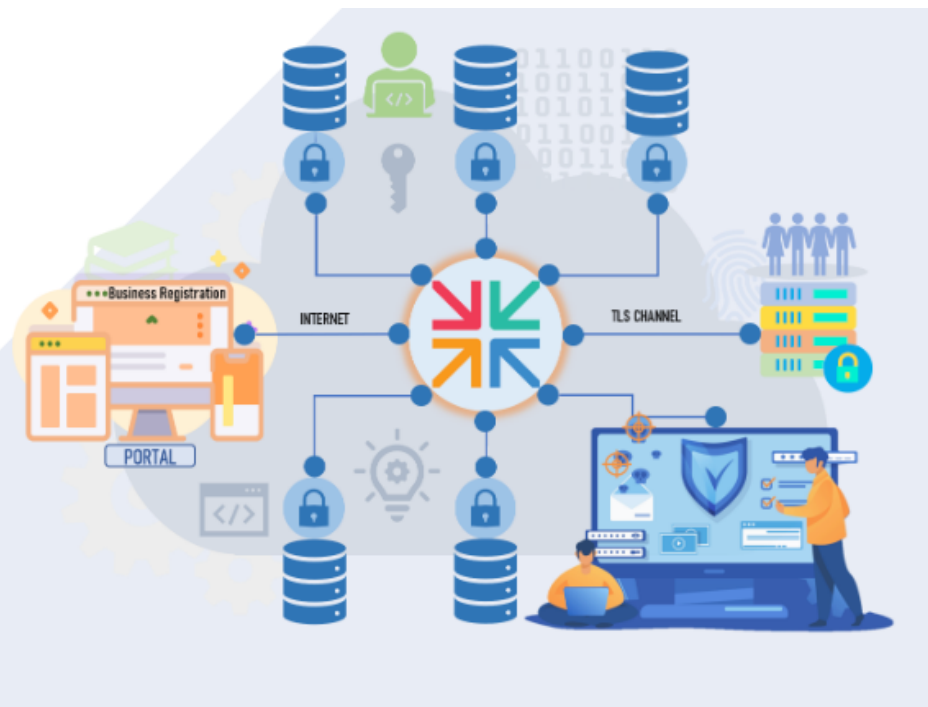
Real life problems

○ During the COVID pandemic, additional procedures (vaccination proof, PCR test) when leaving and entering countries

○ Fill in same information for different data silos (government offices, apps, online services, etc.)

○ Health data not shared between hospitals and clinics

Personal Data Ecosystem

How does it work?

API ecosystem model

Platform model

MyData operator model

Personal control but low integration.
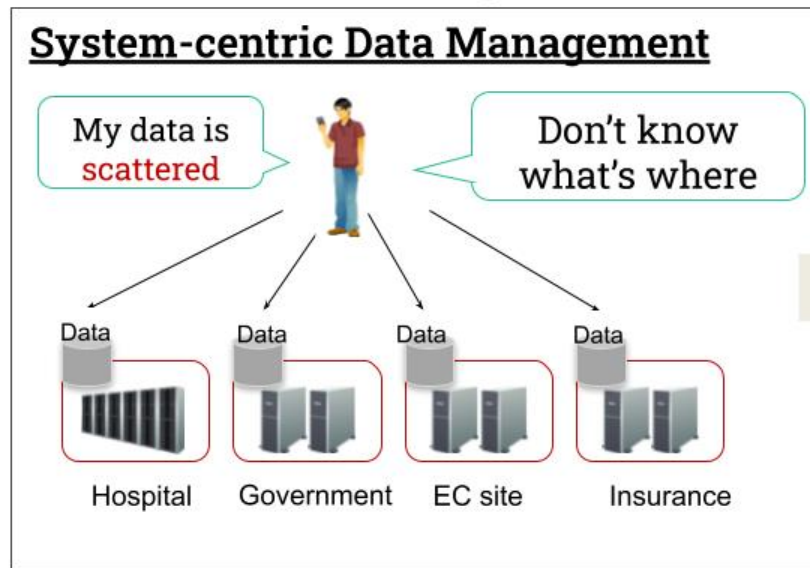
Integration but low personal control.

Highly integrated with full personal control.

Personium

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

System-centric Data Management

My data is **scattered**

Don't know what's where

Data Data Data Data

Hospital Government EC site Insurance

Human-control Data Management

Hospital

EC site

PDS

Government

MyData Storage

Insurance

Now I **can handle** it.

✔ Systems have been built in order to **automate businesses**.
✔ As a result, our personal data are separately stored in **siloed systems**.
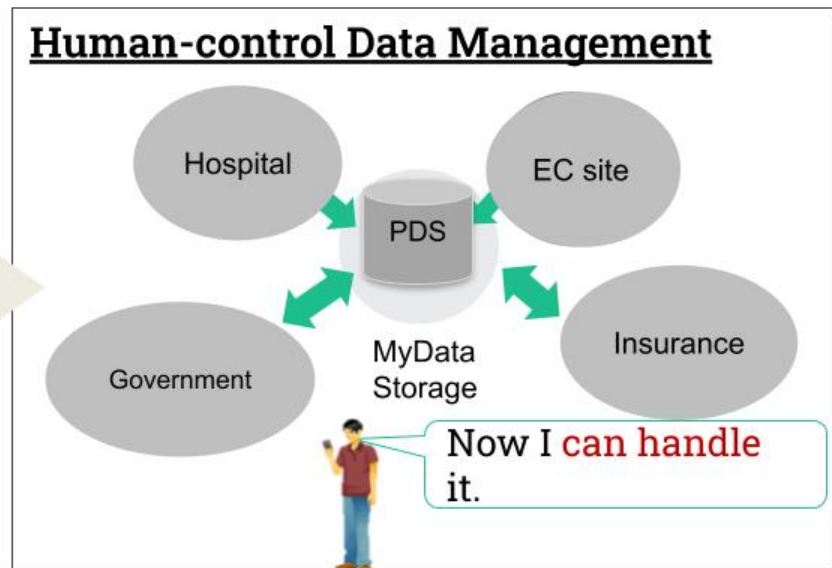
✔ Everyone hold his/her <u>own data store</u> and services read/write on it.
✔ Your data can be utilized **freely** beyond the boundary of services, solely upon your **own will**

Personal Data Utilization

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

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.

Facilitating personal data ecosystems

Now:

- Organizations manage the whole value chain

- Integrating data from multiple sources is hard

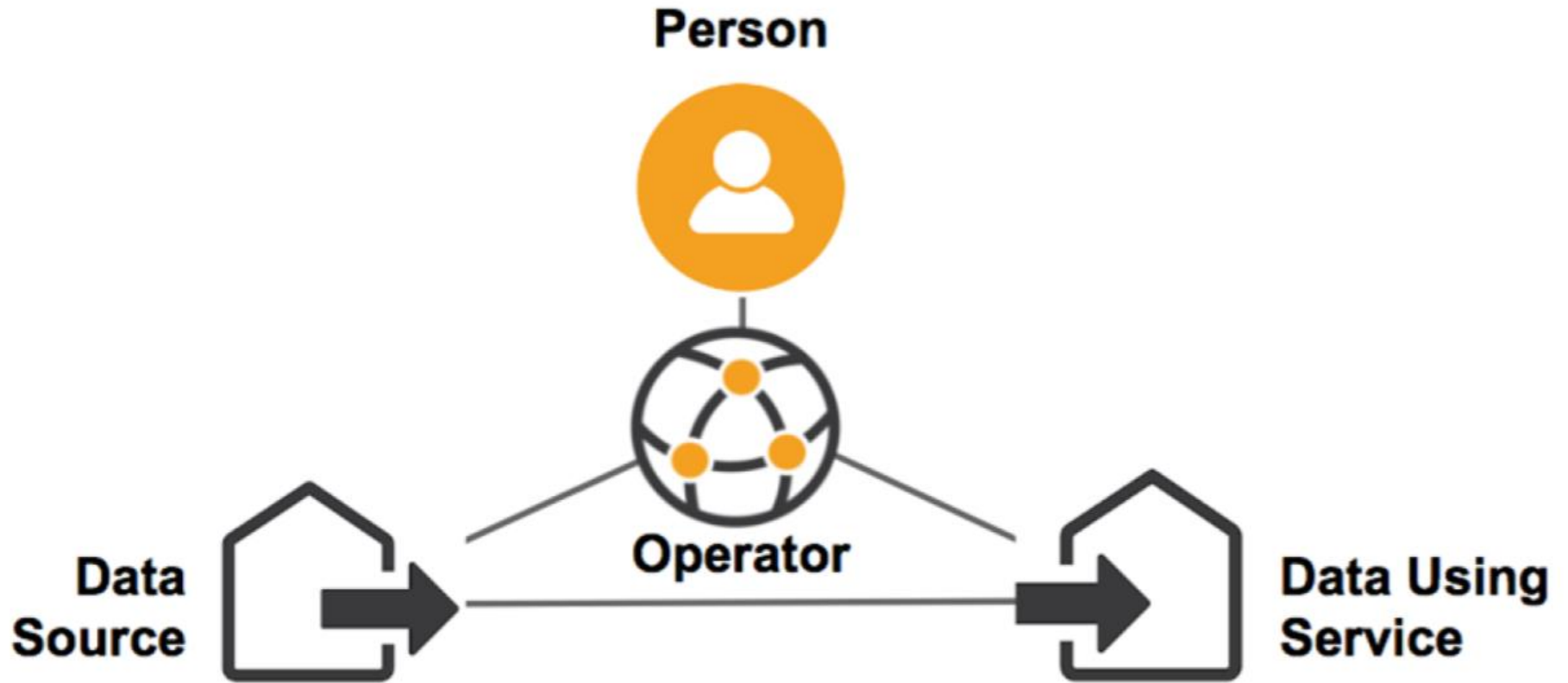**Future:**
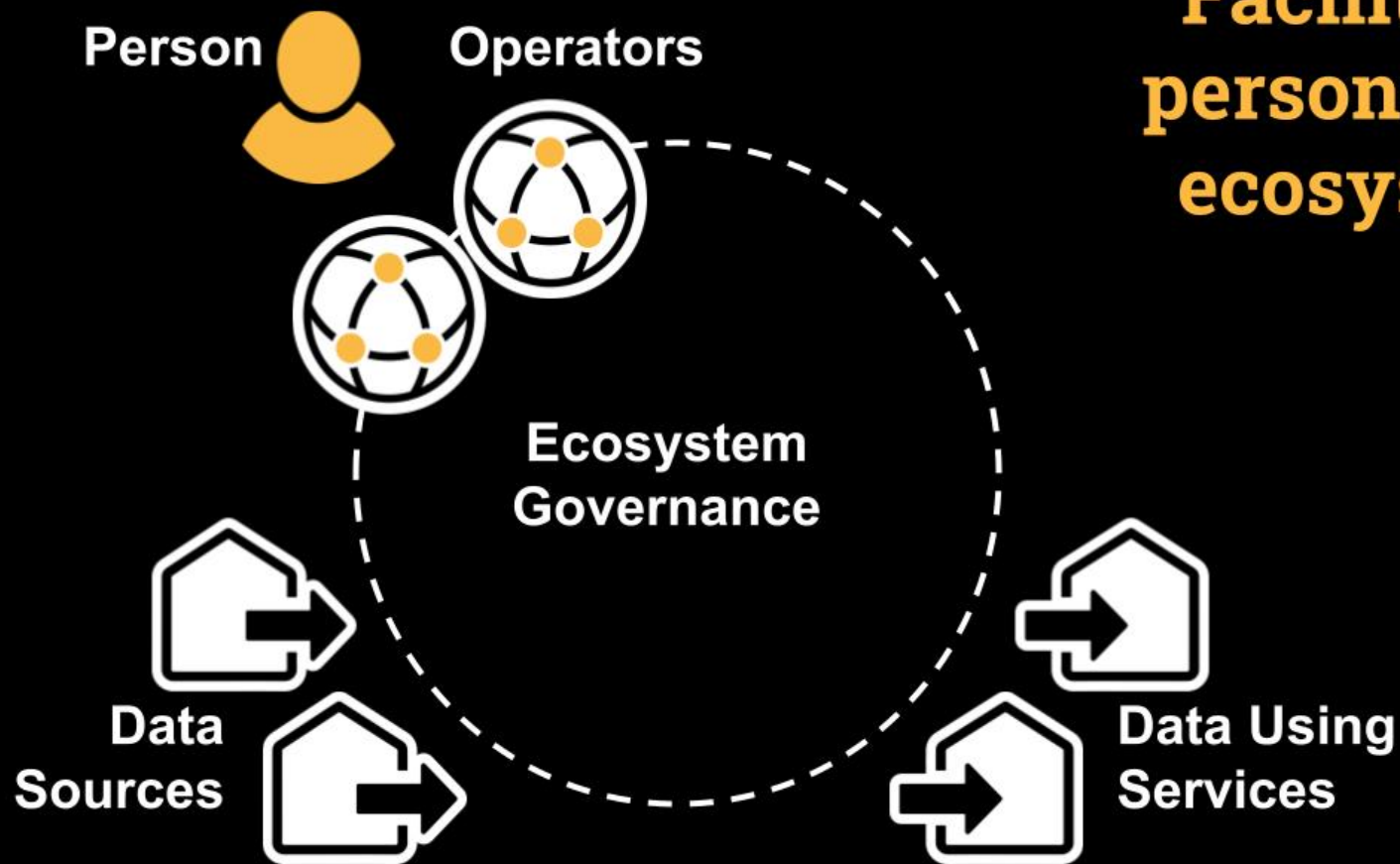
- Specialized services for different parts of the value chain

- Need mechanisms for permissions (consent etc.)

Person

Operator

Data Source

Data Using Service

Cross-border Data Transfer

○ Data handling / filtering of personal data

○ Analyzing data using edge computing technology
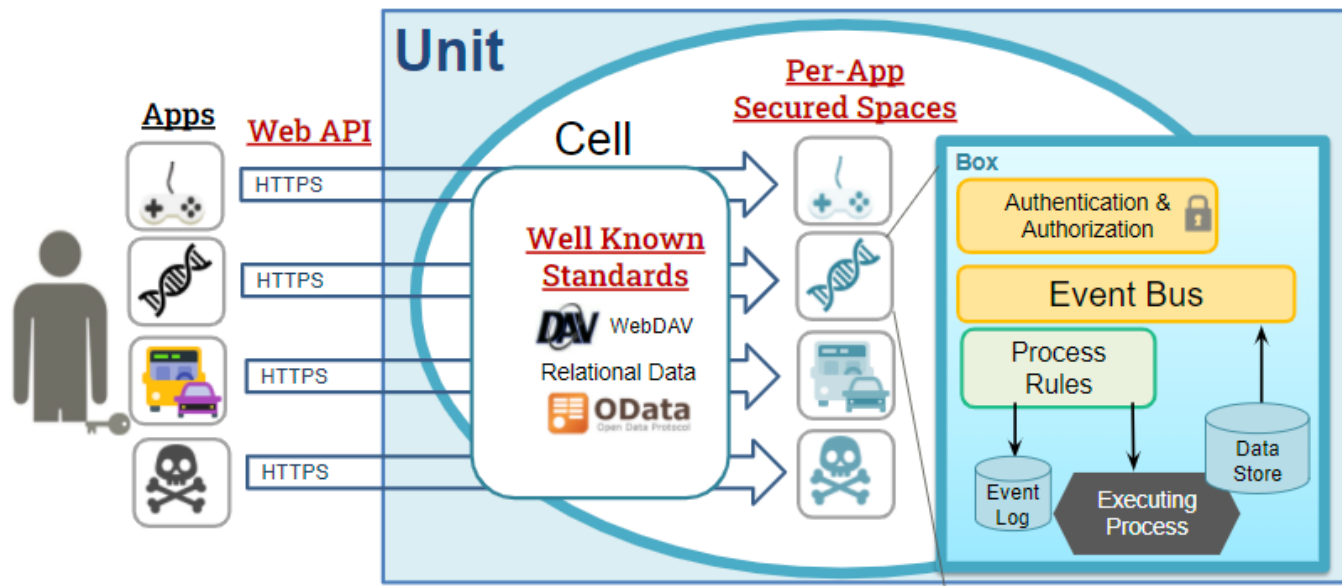
Personal Data Store Platform

Personal Data Store

1 Housing assistance service
Citizen Alison will allow the housing officer Tony to access her identify, family structure and current home address when applying for a housing assistance service.

Alison Willis (Teacher)

Government Services Portal

Rest API

Identity

Medical Records

Educational Qualifications

Employment History

Certified Documents

Rest API

Government Services Portal

Tony Patton (Housing Officer)

Megan Morgan (Tax Officer)

2 Online tax return service
Citizen Alison will allow the tax officer Megan to access her identify and income info for filing an online tax return.

Past Projects

"City as a MyData Operator" project 2020-2021

- Project funded by the Finnish Ministry of Finance, total 2,65 M€
- Project Consortium: Cities of Helsinki, Turku, Espoo and Oulu in collaboration with Vastuu Group Oy

Goals

- Understand how Finnish cities and municipalities can apply MyData principles
- Build practical solutions to demonstrate MyData capabilities

vastuu group   LAKES   FUJITSU   nixu cybersecurity.

City as MyData Operator (Helsinki, Finland)   FUJITSU

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

City as MyData Operator use case
Reduced daycare fee for families

Current state (As-is):
Information of the family income has to be submitted by filling in the form and sending proof documents in pdf format either by mail or secure email to the City of Helsinki's customer fee unit.
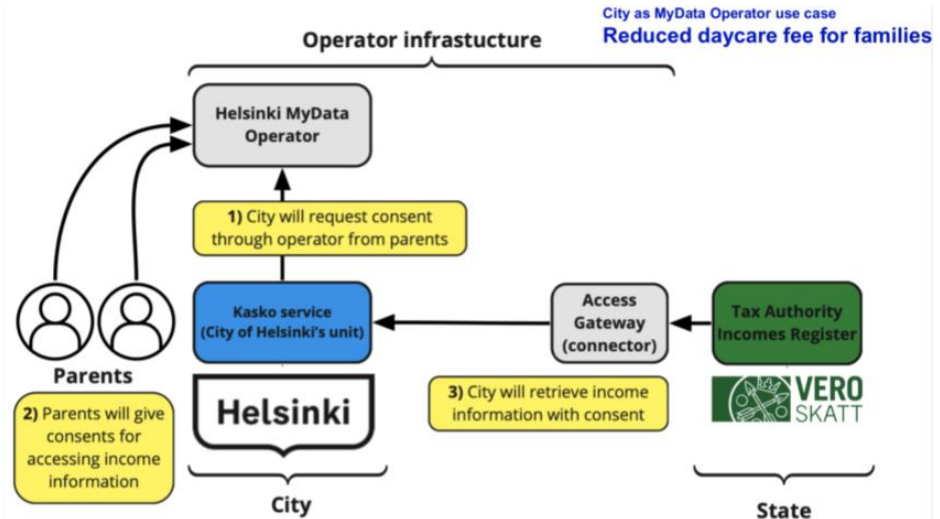
Future vision (To-be):
As a citizen, I can authorise the city to verify my annual income that may have a reducing impact on my child's daycare service fee. Automatically checking my income from the National Income Registry enables the city to determine the correct applicable day-care fee with potential reductions for my child.

Helsinki

City as MyData Operator use case
Reduced daycare fee for families

Operator infrastucture

Helsinki MyData Operator

1) City will request consent through operator from parents

Kasko service (City of Helsinki's unit)

Access Gateway (connector)

Tax Authority Incomes Register

3) City will retrieve income information with consent

VERO SKATT

Parents

2) Parents will give consents for accessing income information
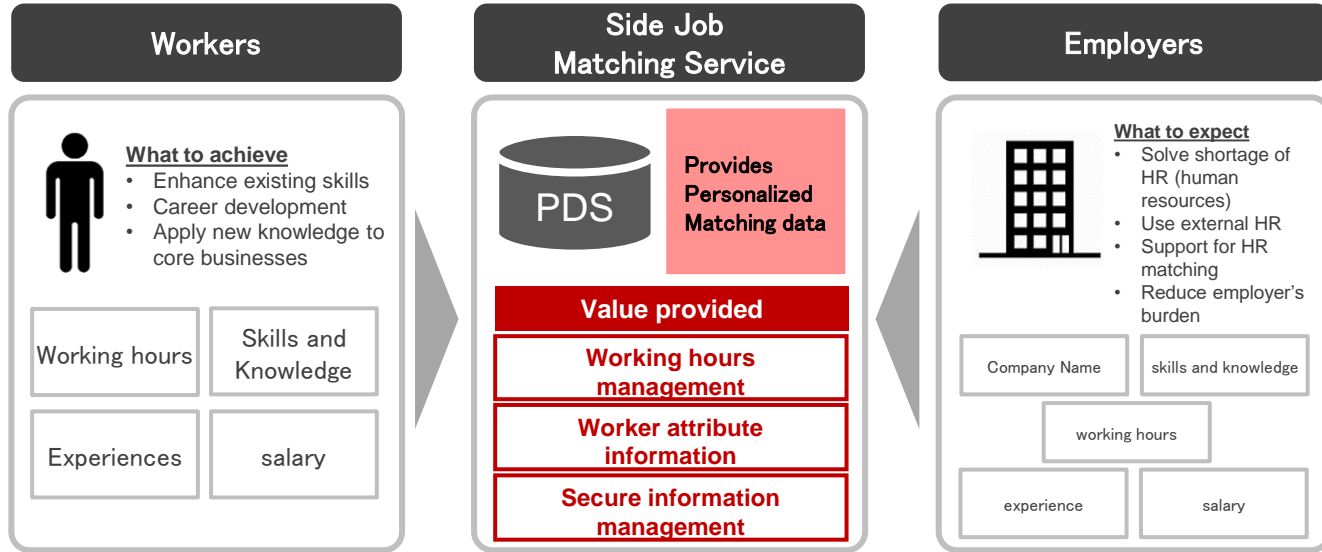
Helsinki

City

State

8

Other potential MyData use cases in Helsinki

- **Verification of driving license information** based on a person's consent or employment agreement for the use of city-owned vehicles.

- **Verification of citizen's income level** (and other relevant parameters) to check for the eligibility of subsidies for municipal childcare.

- Citizen participation in voluntary activities requiring a hygiene passport & hygiene course authorization, **certificate information verification.**

- Citizen gives consent to use data on library borrowing history or use other data sources to get targeted and **personalized recommendations for cultural events and activities.**

- Citizen gives sports-related information (swimming pool, gym) combining their health data for **proactive health services** offered by the city.

- Citizen skills profile data is readily available in employment office processes, **helping find the right job or access to training.**

Outline of Side-Job Matching Services

By sharing and utilizing personal data

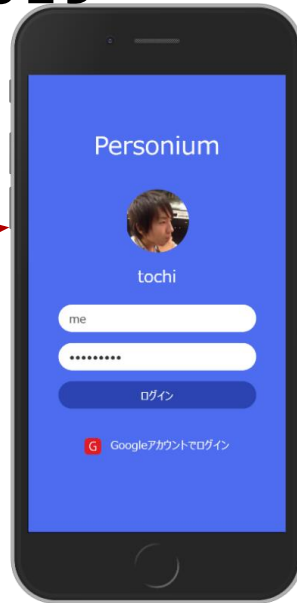**Employment agency can match the worker (side job seeker) to the most ideal employer**

Workers	Side Job Matching Service	Employers

Workers

What to achieve
- Enhance existing skills
- Career development
- Apply new knowledge to core businesses

Working hours	Skills and Knowledge
Experiences	salary

Side Job Matching Service

PDS

Provides Personalized Matching data

Value provided
Working hours management
Worker attribute information
Secure information management

Employers

What to expect
- Solve shortage of HR (human resources)
- Use external HR
- Support for HR matching
- Reduce employer's burden

Company Name	skills and knowledge
	working hours
experience	salary

Differences from other employment agencies

Interfirm employment (Realization of multiple employment)	**Working hours management**

- Workshop: New Lifestyle Design Movement with Personal Data Driven Recommendations
- Period: August 2019
- Participants: 80

Individual receives Google Calendar data and share it with hobbies and other personal attributes in order to get customized recommendations

Information Bank Press Release

FUJITSU

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

Smart City Solution

Security check through FASTiD, Netherlands

Our story

The founders of FastID worked at the airport for years and became increasingly annoyed by all the queues, tickets, and identity checks. They dreamed of being able to live and travel 'hands-free', with no paper tickets, plastic cards, or identity passes, and with faster, easier and more secure access to events, services, and locations.

In today's society, we are supporting two new trends: the social discussion about the ownership of personal data and the increasing possibilities of identification via biometrics. Blending these trends together, we came up with the idea of FastID. With FastID we aim to give consumers the ownership of their personal data back. And give them fast and secure access to events, services, and locations with biometrics.

After starting in 2021, we are rapidly adding more companies to our platform.

Our ambition for the future

In the years to come, our technology will completely transform the way you identify yourself on arrival at locations. It will change the way you make use of different services and the way you control your own data.
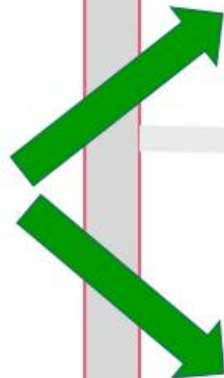
8:53a.m.

https://www.fastid.nl/

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Check out and upsell with the app

UpSell & Check-Out

Pay & ID

Check-Out

Book an Upgrade

Vip Breakfast

Book an Upgrade

Auto ID or check out

VIP Breakfast for Anna

DailyLog (Miro, Loom)

- Private SNS group in Fujitsu
  - Feeling / Physical status
  - Mental health related information
- **Well-being apps** are increasing since 2021 (COVID, work from home, etc.)
- **Fujitsu Nederland HR Head** agreed to launch a pilot using Personium based Well-being app

Smart City Solution

CO2 Emission Monitoring by the city of La Rochelle, France

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01

A personal data warehouse to consolidate the data I have collected from Blablacar, SNCF, Google, my telephone operator, my employer, my jogging app, etc.

02

A temporary mobile application (Tracemob) operating on geolocation to collect travel data and view my first results on my smartphone.
Why ?
Because the portability of my personal data from data producer like my phone operator is not ready at the beginning of the project

03

A new Software (Coach Co2) in my data warehouse to calculate my carbon footprint.

# THE TOOLS REQUIRED- TraceMob, COZY and Coach CO2 to calculate my carbon footprint with real and personal data

TraceMob is a mobile application developed by [Fabrique des Mobilités](). It allows you to collect your traces of mobility and therefore to have your travel history

Cozy Cloud is a free, secure and open-source personal cloud platform: it's like your digital home. Using "connectors", you can automatically and securely retrieve your SNCF, APRR, Blablacar, MAIF, EDF, bank, insurance personal data, as well as your travel history from TraceMob.

Coach CO2 is the tool available in your Cozy Cloud, which allows you to analyze your travel data to calculate the time you spend in the car per week, the carbon impact of your trips, the number of km cycled during the month… with the ultimate objective of supporting you in adopting less polluting means of transport!
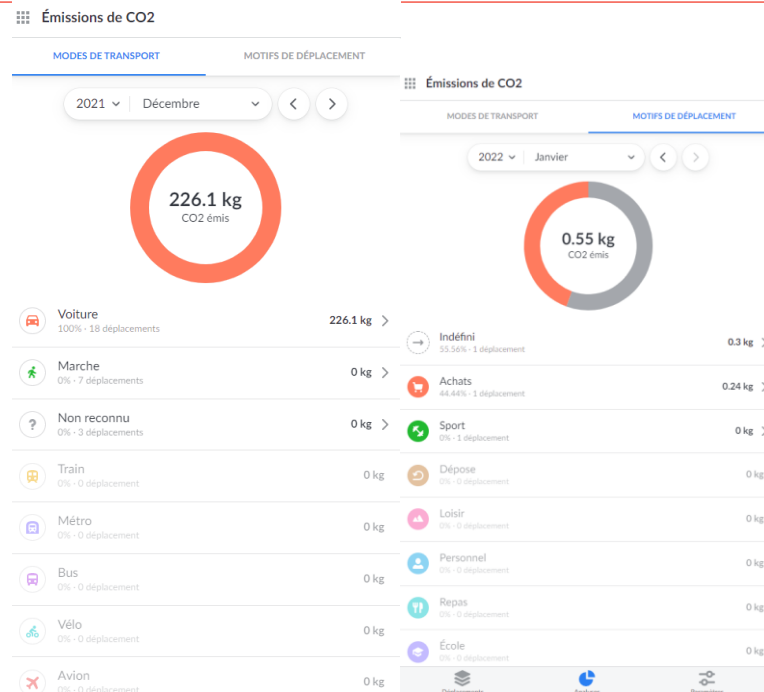
research is being carried out by the [CNAM]() to understand the links that may exist between the use of digital tools and [changes in mobility behavior]()

Émissions de CO2

MODES DE TRANSPORT | MOTIFS DE DÉPLACEMENT

2021 ⌄ Décembre ⌄ < >

226.1 kg CO2 émis

Voiture — 100% · 18 déplacements — 226.1 kg
Marche — 0% · 7 déplacements — 0 kg
Non reconnu — 0% · 3 déplacements — 0 kg
Train — 0% · 0 déplacement — 0 kg
Métro — 0% · 0 déplacement — 0 kg
Bus — 0% · 0 déplacement — 0 kg
Vélo — 0% · 0 déplacement — 0 kg
Avion — 0% · 0 déplacement — 0 kg

Émissions de CO2

MODES DE TRANSPORT | MOTIFS DE DÉPLACEMENT

2022 ⌄ Janvier ⌄ < >

0.55 kg CO2 émis

Indéfini — 55.56% · 1 déplacement — 0.3 kg
Achats — 44.44% · 1 déplacement — 0.24 kg
Sport — 0% · 1 déplacement — 0 kg
Dépose — 0% · 0 déplacement — 0 kg
Loisir — 0% · 0 déplacement — 0 kg
Personnel — 0% · 0 déplacement — 0 kg
Repas — 0% · 0 déplacement — 0 kg
École — 0% · 0 déplacement — 0 kg

Déplacements — Analyses — Paramètres

Cross-industry Use Cases

Personal Data Empowerment
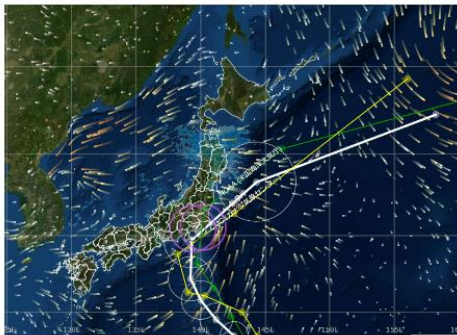
Personal data ecosystem

Disaster alert for people with accessibility needs

Barrier-free home to avoid household accidents

Increased household income and business chances

Fair trade and farming data (AgUnity)

- Returning control of farming data will help farmer gain bargaining power and receive proper farming advices

- Proof of ethical way to do business

THE 4 PILLARS OF AGUNITY

ACTION -READY
GLOBALLY

We are constantly growing our world presence (aiming at 30 countries by 2026) and our team ensures a unique combination of technical know-how and the means to deliver strategies applicable to remote areas worldwide.

| **Blockchain**	**Partnerships**	**Network**	**Framework of Trust**
Our app ensures that all transactions by both our users and clients are permanently and securely recorded on a dedicated, immutable Blockchain ledger.	We deliver through excellent collaborations with Service Providers, Commodity Buyers /Traders and development agencies implementing SDG related programs serving the 'last mile'.	Our robust platform is designed to provide seamless transactional services regardless of available telecom network services in the 'last mile'	Our user friendly interface and intuitive app architecture are specifically designed to provide a framework of trust around integrated services, applicable for rural communities and their service providers.

Real-time employee wellbeing services

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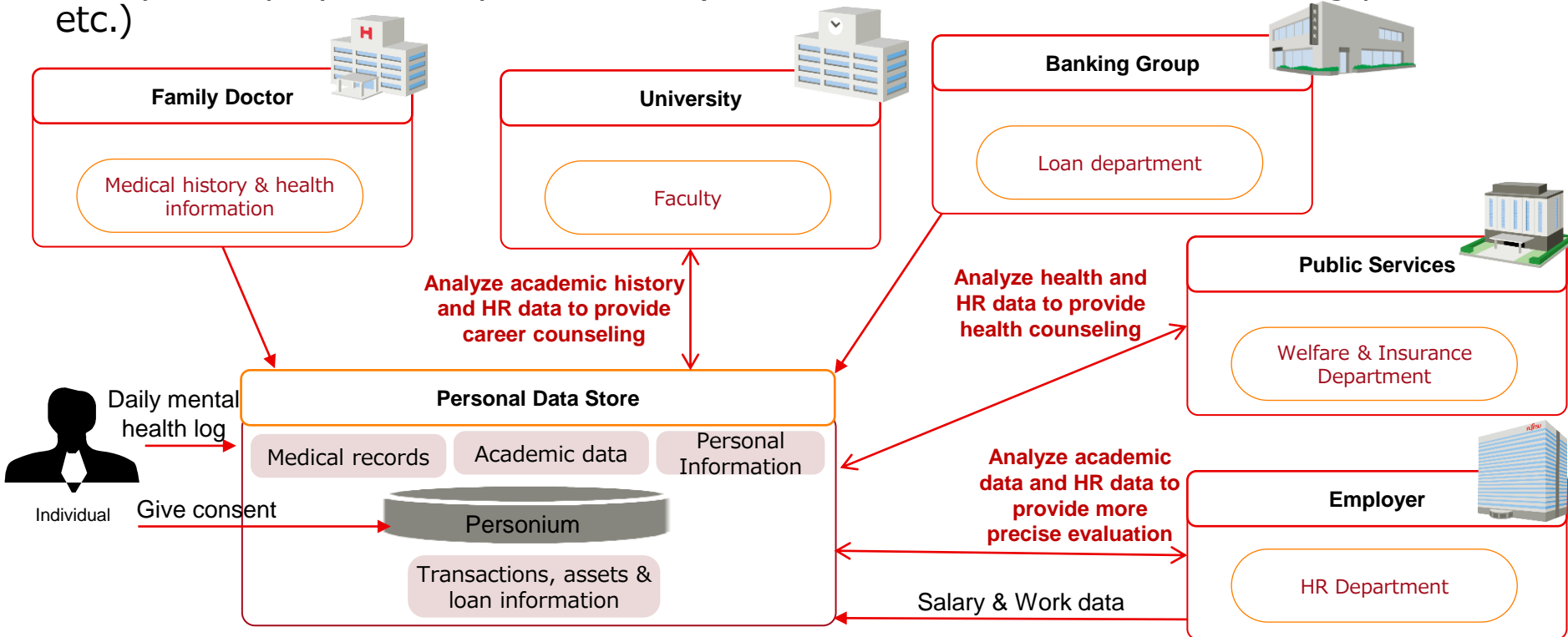
Thank you

FUJITSU
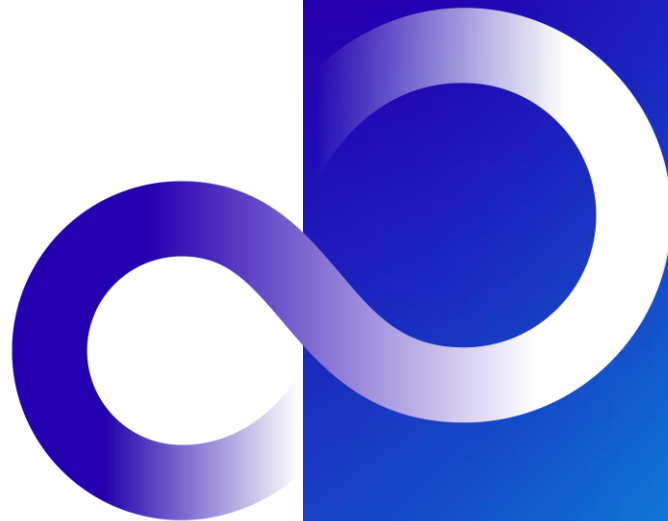
Overview of MyData Global

MyData Global

> **International** nonprofit
> Headquartered in **Finland**
> Founded in **2018**
> Over **500** members

... including over **100** organisations

... from over **50** countries

> **30** local hubs on **6** continents
> Emerging international **thematic** groups
> Organiser of the leading personal
> data **conference**

Local Hubs

Canada
Silicon Valley
Los Angeles

Austria
Brussels
Denmark
France
Geneva
Germany
Greece

Netherlands
Saar
Scotland
Slovenia
Sweden
Vaud
Zurich

South Korea
Japan
Bangladesh
Taiwan
Greater Bay Area

Cameroon

Brazil

Sydney

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MyData vision

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.

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.

Need

Offer

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

Need

Offer

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.

FROM FORMAL TO ACTIONABLE RIGHTS

FROM DATA PROTECTION TO DATA EMPOWERMENT

FROM CLOSED TO OPEN ECOSYSTEMS

Overview of Personium

FUJITSU

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

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

MYDATA OPERATORS 2022

Fujitsu's open-source platform

[Galleries | MyData Operators Award](#)

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Personium's Main Features

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

5. Decentralized operation

3. Data Permissions
(Sending requests and receiving permission)

Personium

Interconnection

1. Data storage and operation

Personium

Personal data storage area

REST API

OAuth

Apps

DAV
File Data
(unstructured data)

OData
Open Data Protocol
Relational data
(Structured Data)

OK

others

NG

others

Engine

4. Support Backends for Frontends to prepare data
(Simple FaaS)

2. Authentication and Authorization

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