12 January 2023

Personal Data Spaces
Workshop 1 – Landscape of Personal Data Spaces

Agenda

Activity	Time
Welcome & introduction	9:55 – 10:10
Policy for personal data spaces in the EU Malte Beyer-Katzenberger – DG CNECT	10:10 – 10:40
What is a personal data space? Viivi Lähteenoja – MyData Global & University of Helsinki	10:40 – 11:00
Break	11:00 – 11:20
Parallel sessions • Marcello Grita – Arbetsförmedlingen, Sweden • Björn de Vidts – Data Utility Company, Flanders • Mikko Rusama – City of Helsinki, Finland	11:20 – 12:30
Lunch	12:30 – 13:30
Understanding the business models – Panel discussion	13:30 – 14:30
Break	14:30 – 14:50
Retrospective on the results of the previous sessions	14:50 – 16:20
Thank you and closing word	16:20 – 16:30
Networking drinks	16:30 - ...

Welcome & Introduction

Seth Van Hooland – DG DIGIT

European Commission

Why are we here?

Viivi Lähteenoja – MyData Global & University of Helsinki

European Commission

Promotion of **interoperable** **personal data spaces** in the EU.

The **policy and business landscape** of interoperable personal data spaces adoption and implementation: what are the key challenges for different stakeholders, public & private?

The **technical landscape** of personal data spaces: how can existing and potential technical approaches support addressing identified challenges in an interoperable way?

The co-creation of a **roadmap of future actions** as a joint work plan for the coming 5 years: what do we need to do next to promote interoperable personal data spaces?

BACKGROUND KNOWLEDGE

Basics of **MyData operators** and the MyData approach

Basics of the **Solid protocol** and approach

Provocation paper on “What are **personal data spaces**?”

Policy for personal data spaces in the EU

Malte Beyer-Katzenberger – DG CNECT

European Commission

Political considerations

I would like to put people in control of their data.

What the EU Data Strategy of 2020 (COM(2020) 66) says

«In response to this, there are calls to give individuals the tools and means to decide at a granular level what is done with their data (by the MyData movement and others).
This promises significant benefits to individuals, including to their health and wellness, better personal finances, reduced environmental footprint, hassle-free access to public and private services and greater oversight and transparency over their personal data. Those tools and means include consent management tools, personal information management apps, including fully decentralised solutions building on blockchain, as well as personal data cooperatives or trusts acting as novel neutral intermediaries in the personal data economy.
Currently such tools are still in their infancy, although they have significant potential and need a supportive environment.”

But why are such tools (still) in their infancy after all those years?

- What is the nature of the challenge?
- What would drive adoption?
- What should policy-makers (at all levels) do?

The Data Governance Act (Regulation (EU) 2022/868

- Introduces the notion of «data intermediary» and submits those to strict rules on data use;
- Encourages data altruism;
- Provides for a framework to discuss standardisation (European Data Innovation Board, supported by Data Spaces Support Centre).

Strengthening portability rights in other legislation

- GDPR Article 20 (and its limitations);
- Digital Markets Act (Article 6(9)) for end users of large online platforms;
- Data Act (chapter II) for IoT products usage data.

Financial support

EU supporting proof-of-concept and building bricks work under its Horizon Europe programme

- https://www.datavaults.eu/
- https://smashhit.eu/
- https://www.trusts-data.eu/
- https://pimcity.eu/
- https://dapsi.ngi.eu/

Thank you

European Commission

Thank you

What are personal data spaces?

Viivi Lähteenoja – MyData Global & University of Helsinki

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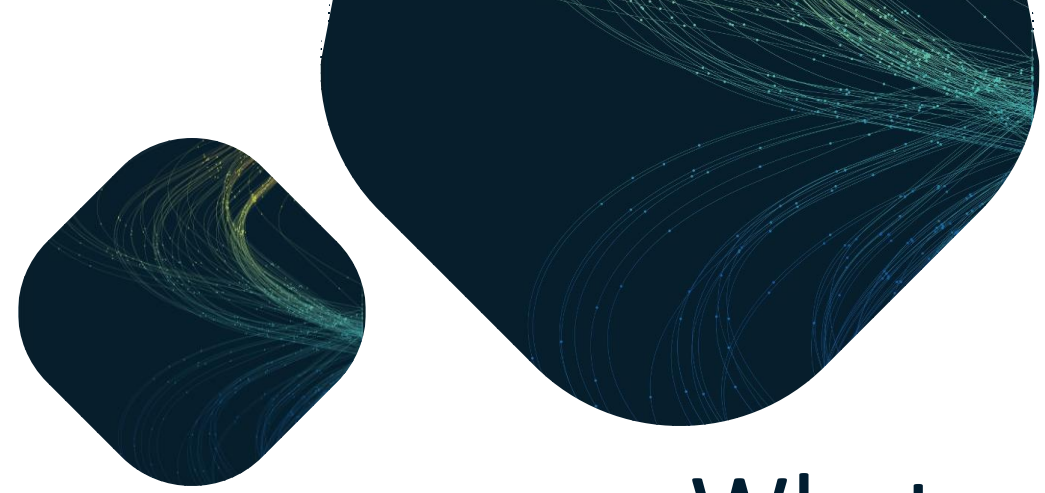

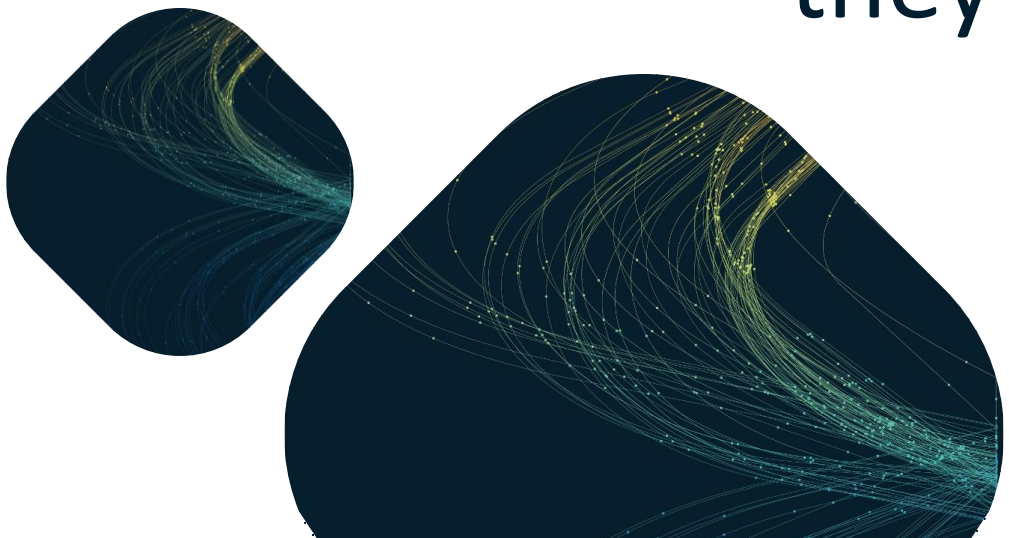

What makes personal data spaces distinct from “regular” data spaces is the **purpose** for which they exist: personal data spaces serve individual people.

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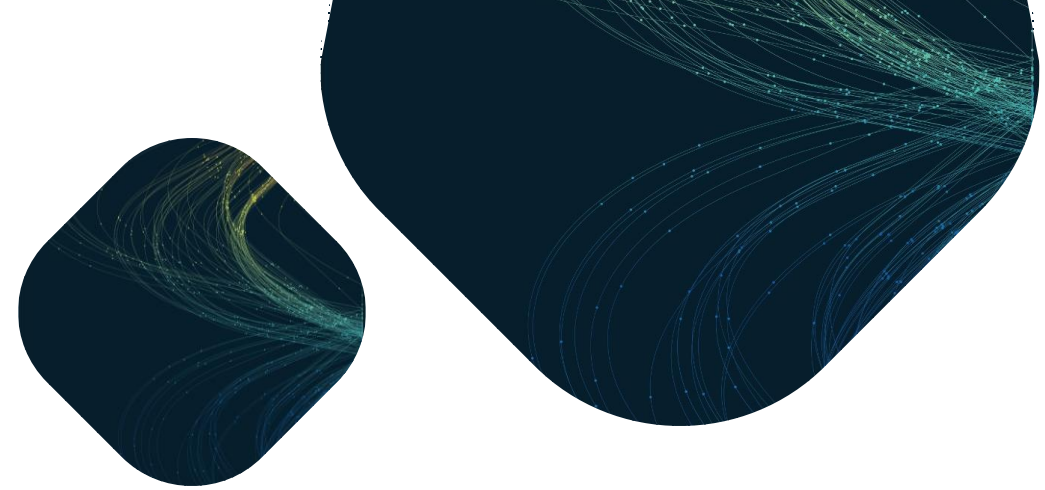

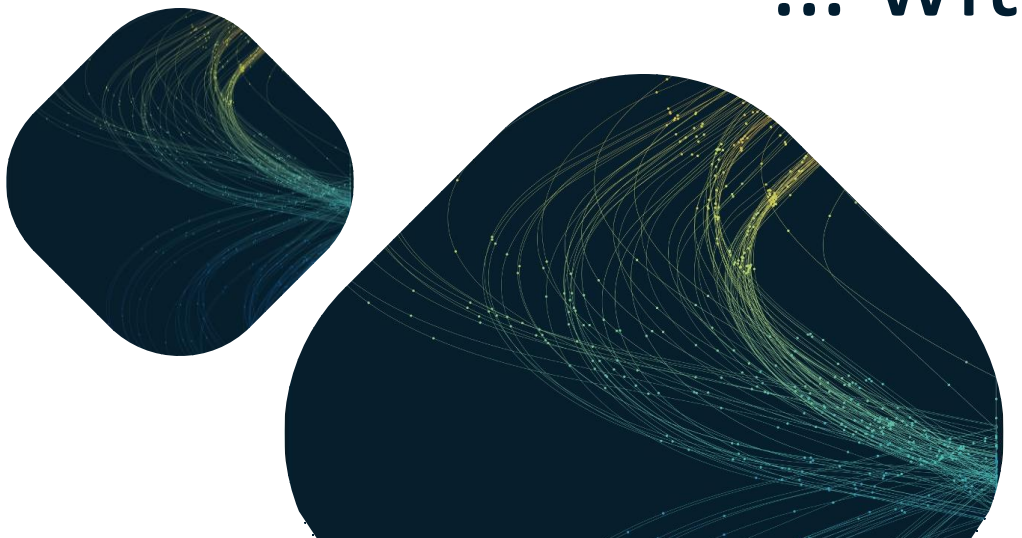

Data spaces as …

… collaboration environments
… with models of interoperating

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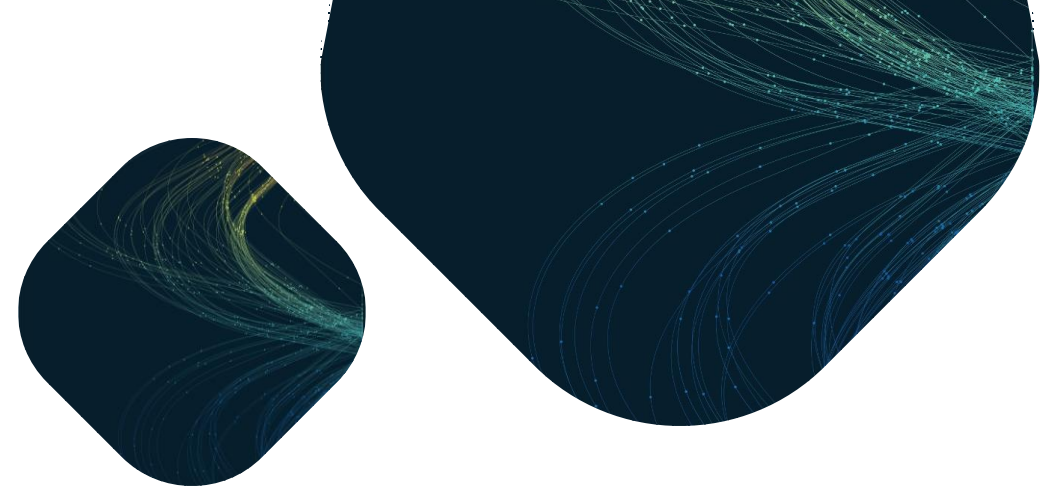

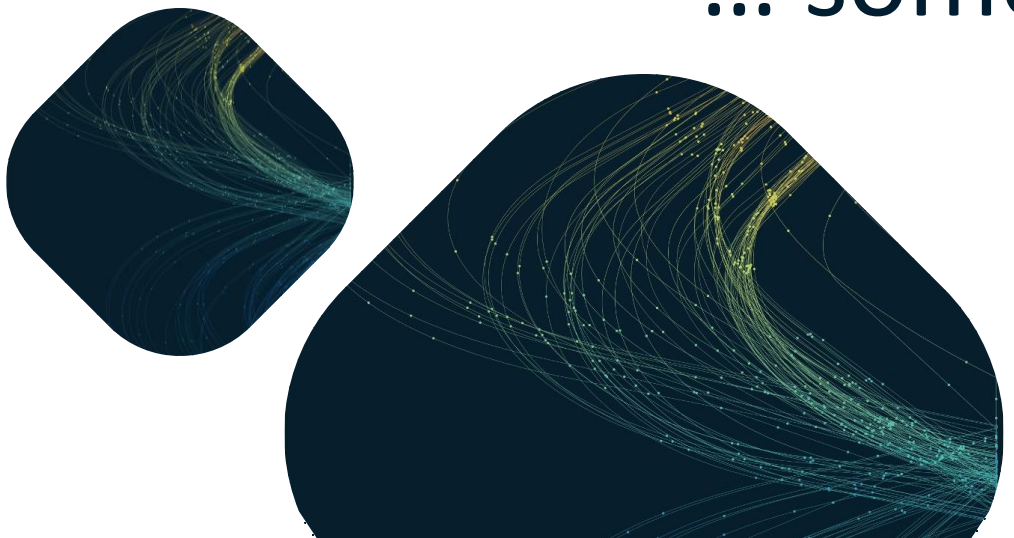

Data spaces have …

… participating organisations
… some of which provide services

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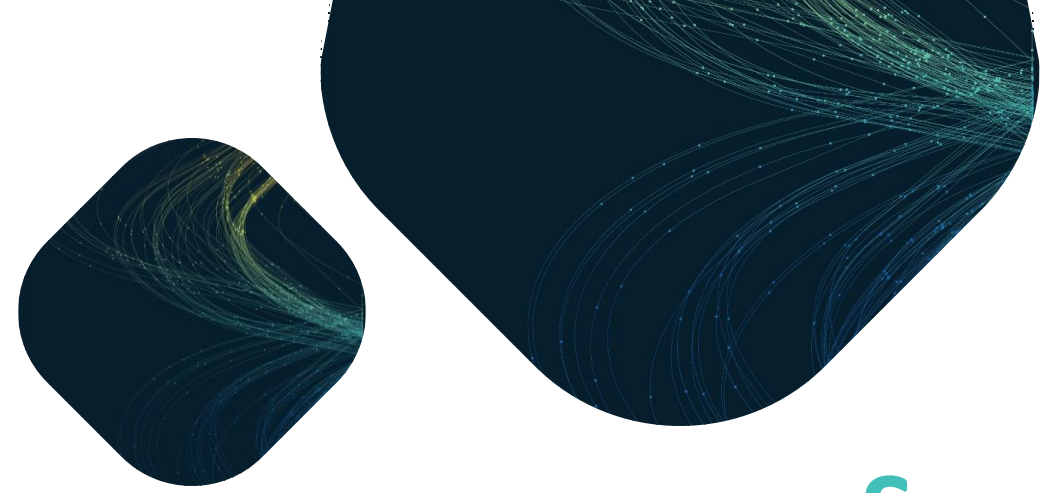
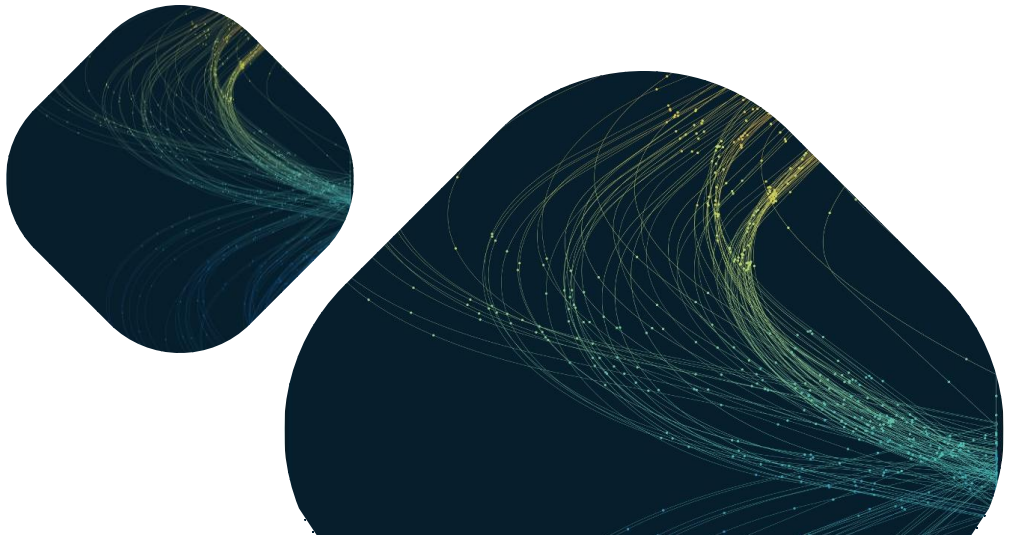
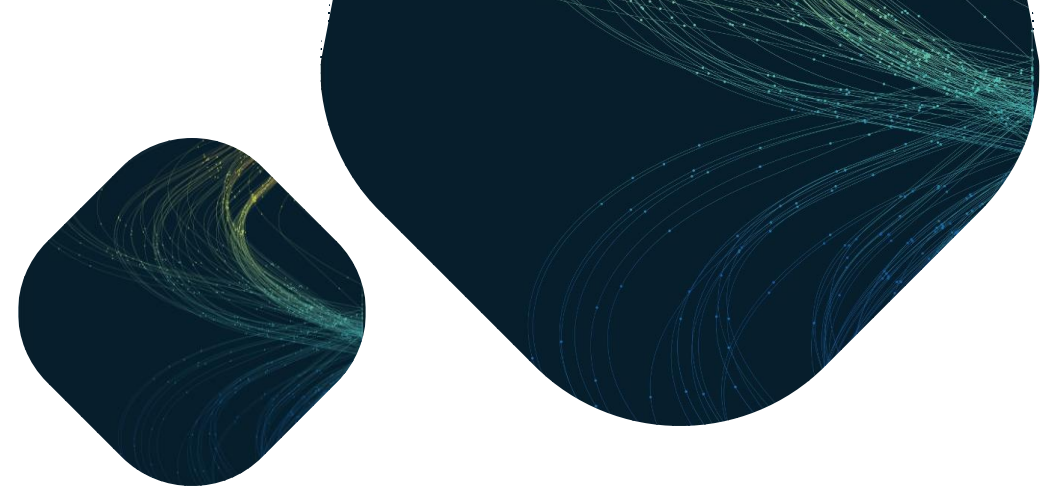
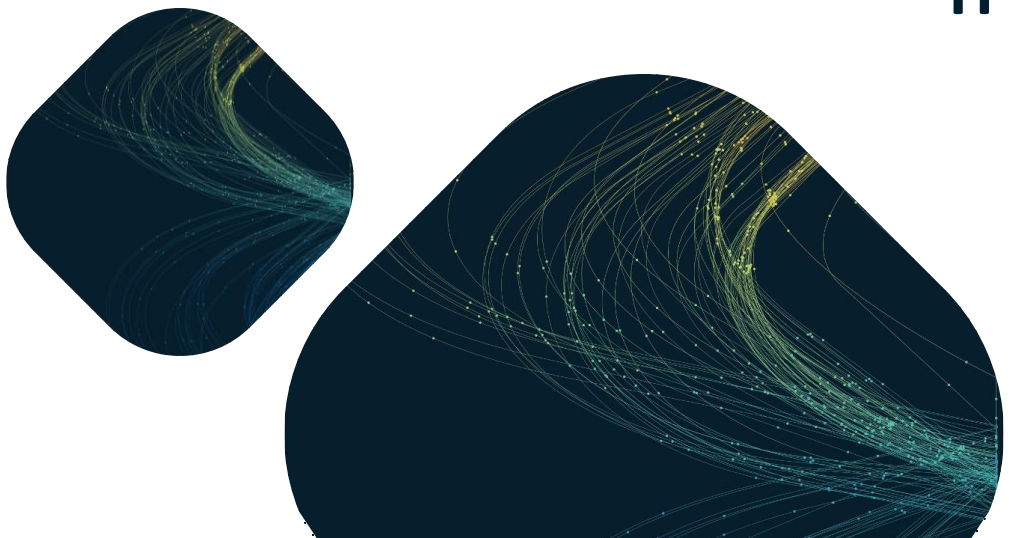




Service providers can serve …

… organisations
… individual people

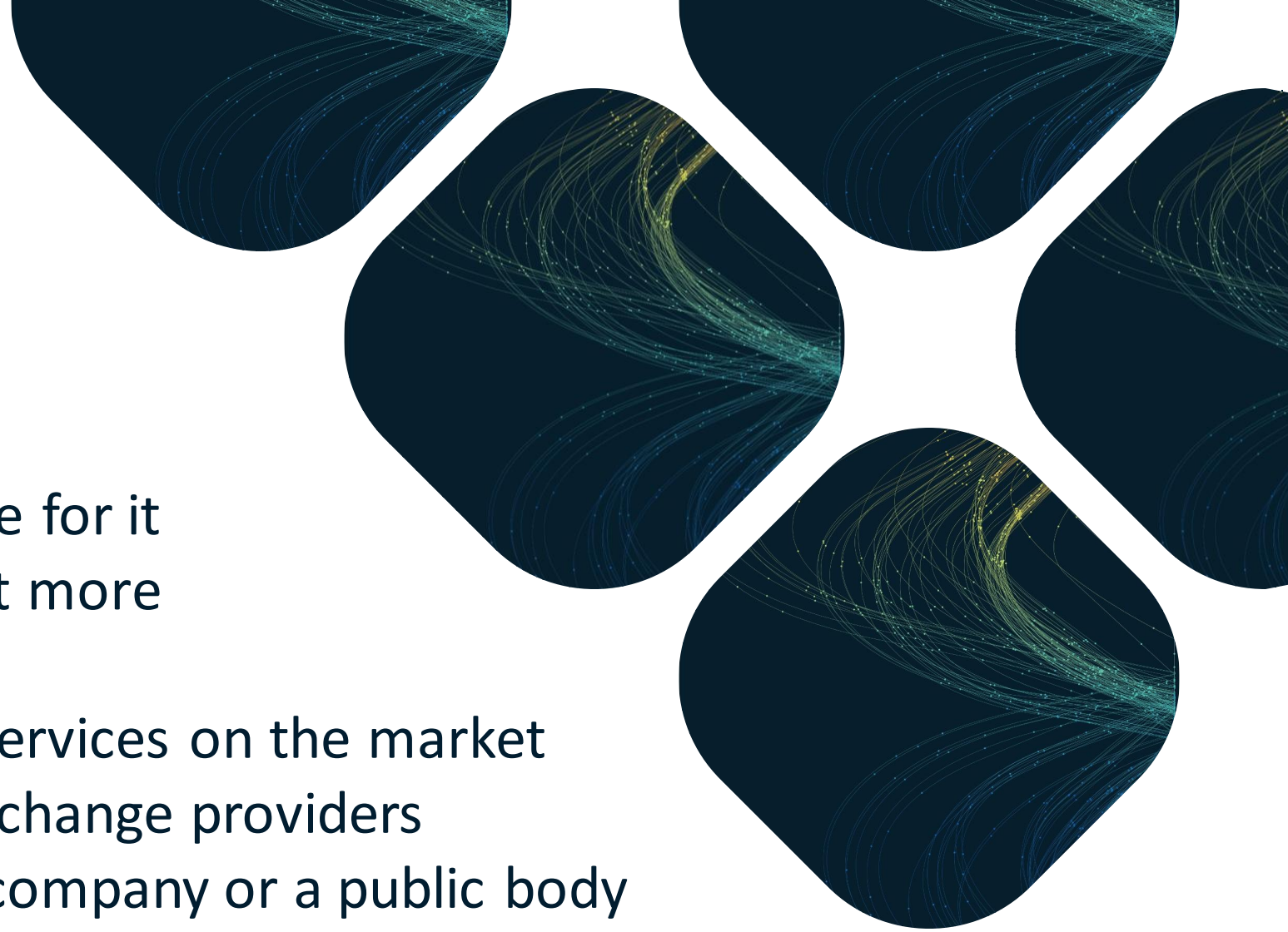




Personal data spaces are collaboration environments of interoperating organisations that include service providers for individual people.

What does a personal data space look like to an individual person?

Ideally, it **looks like** a service such as a bank account.



- I can have an app on my phone for it
- One is enough, but I may want more
- I can name the provider
- There are similar, competing services on the market
- It’s reasonably easy for me to change providers
- My provider can be a private company or a public body
- **… and so on.**

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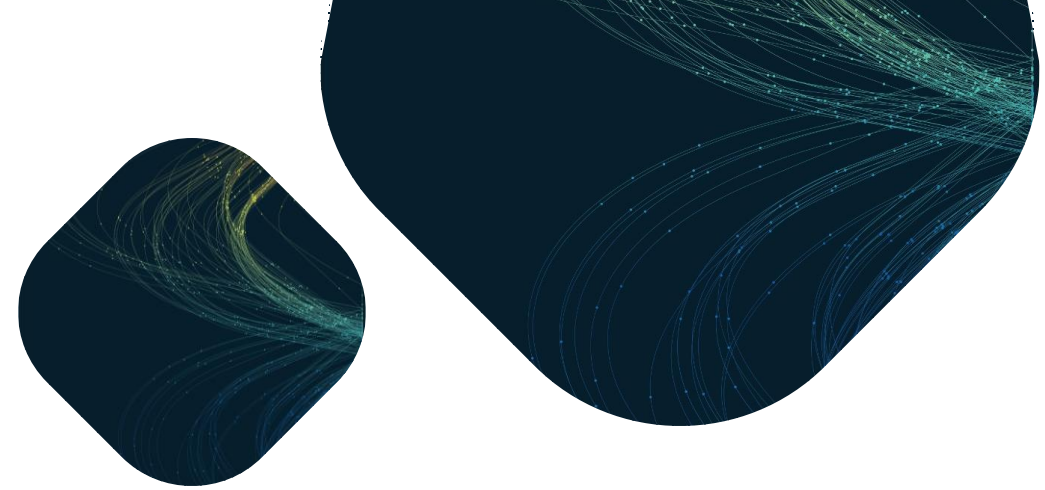

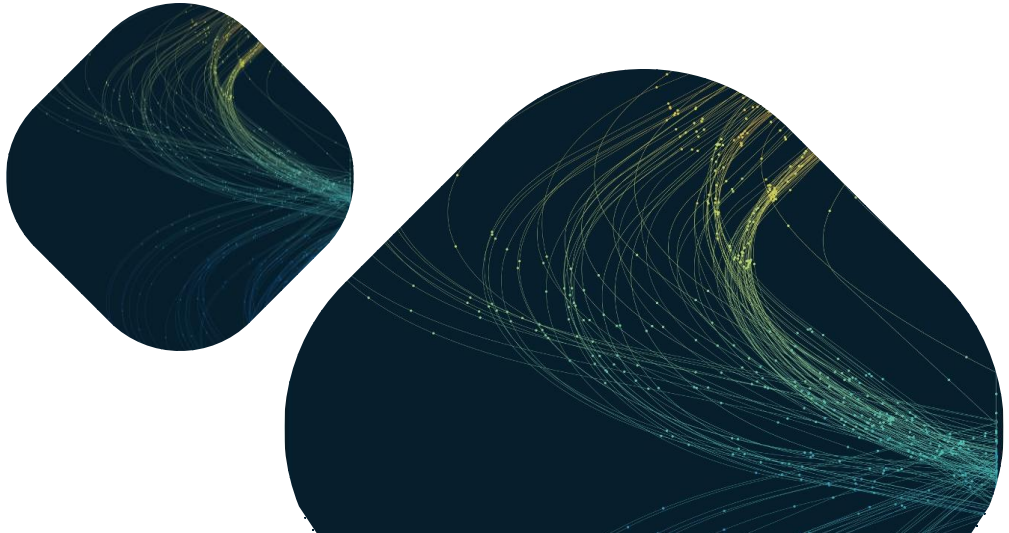

Different trust profiles
of different brands
in different communities require
interoperability.

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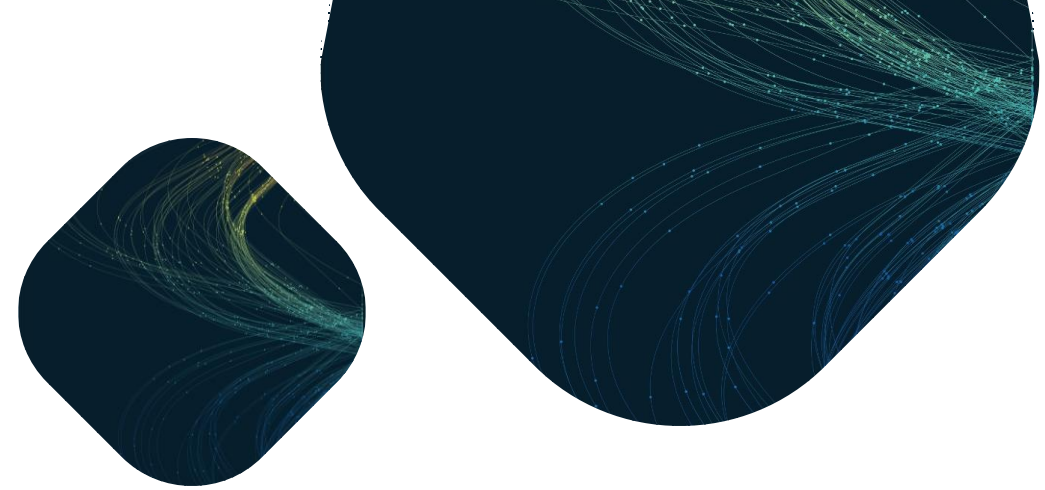

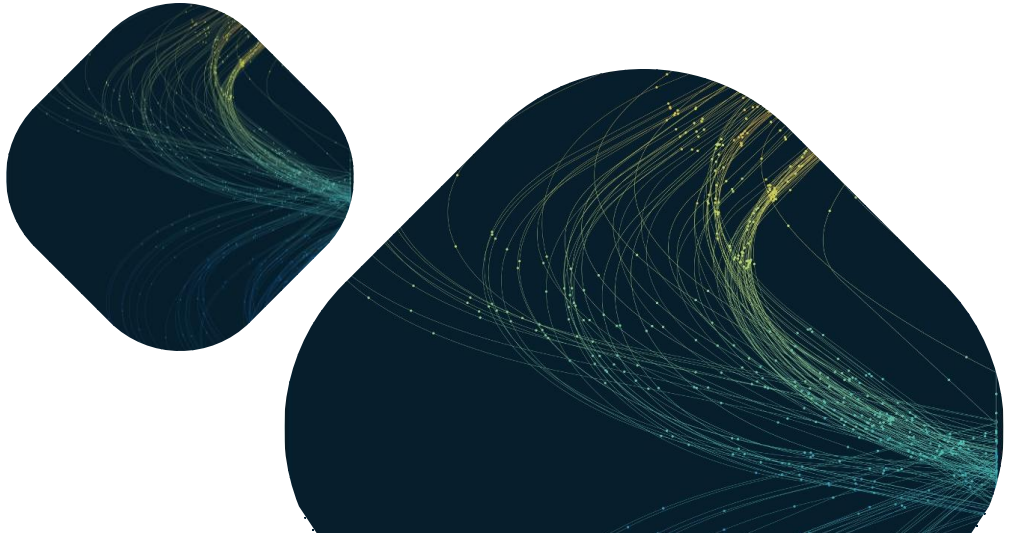

Interoperability without functionality

… is just as bad as …

functionality without interoperability.

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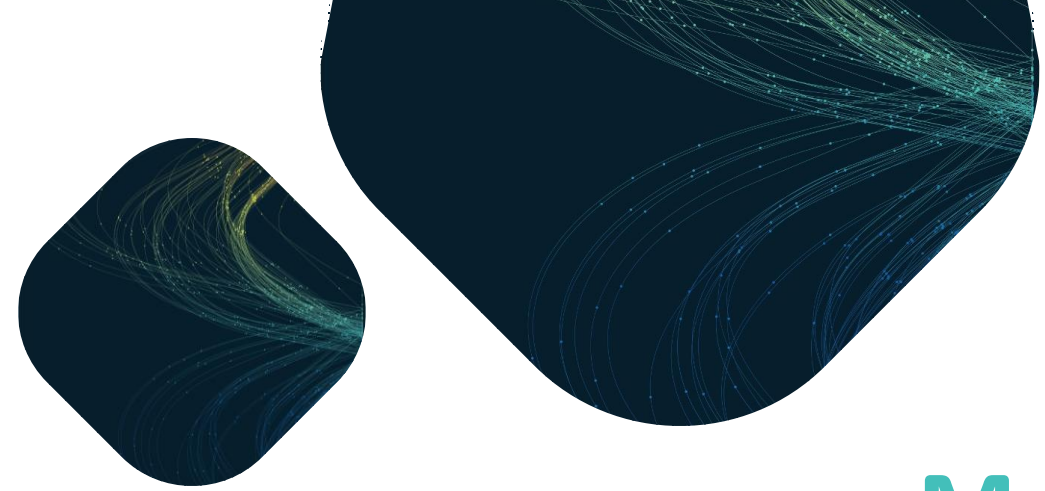
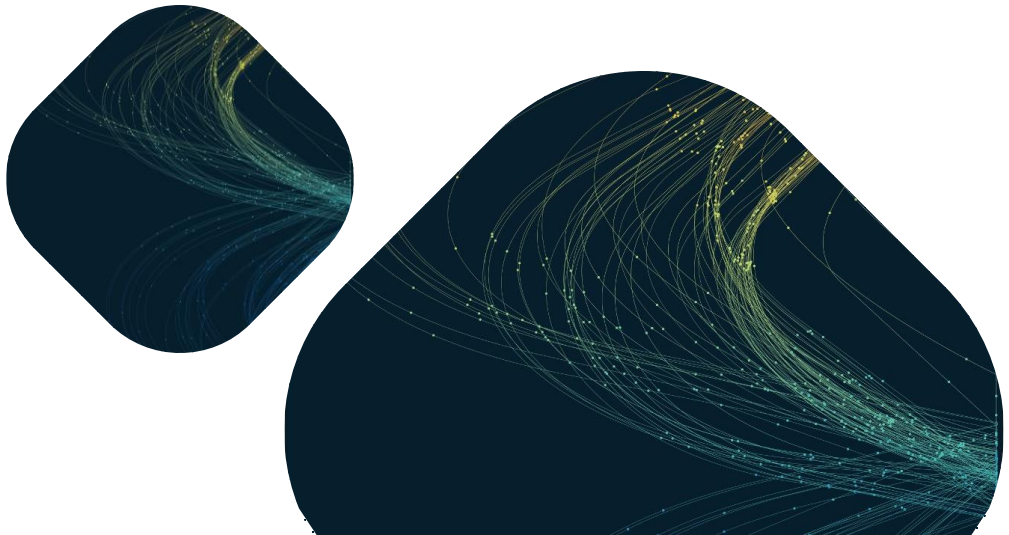
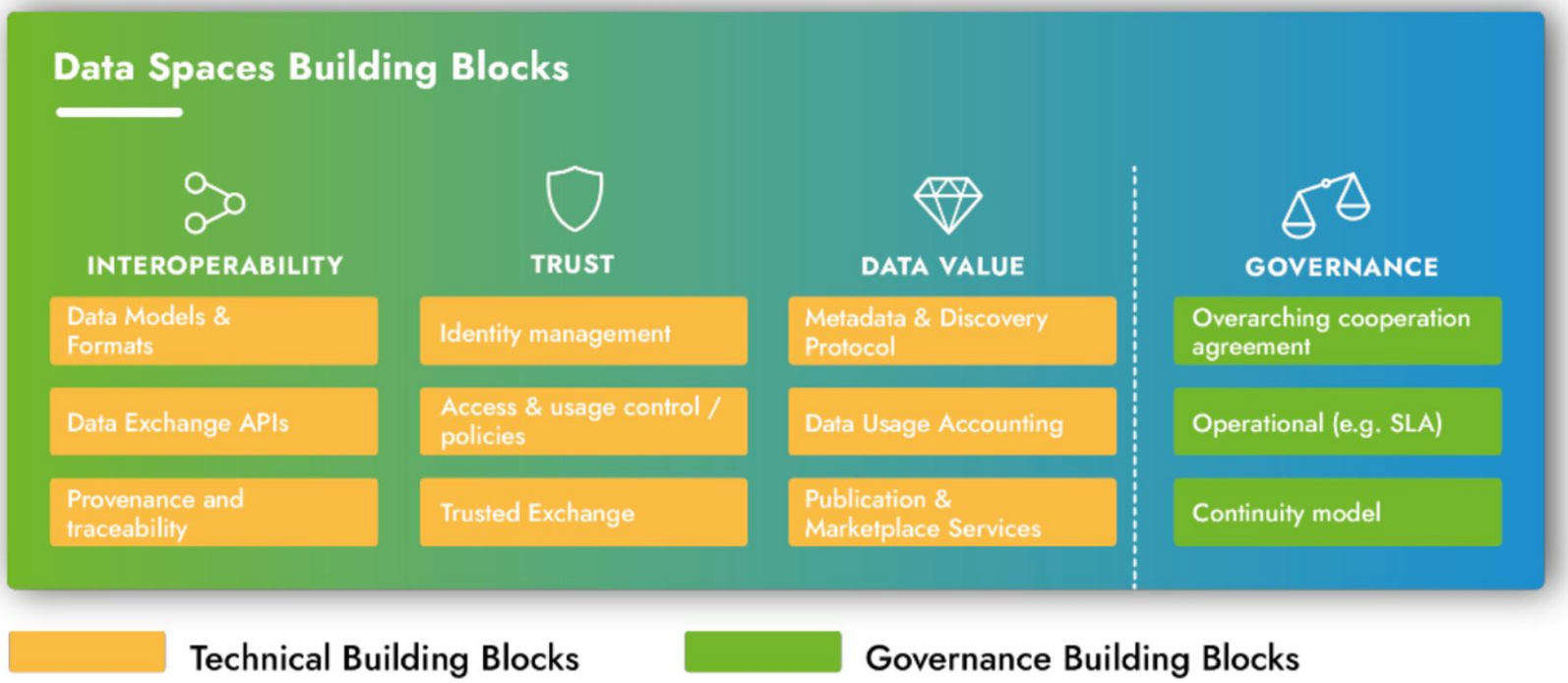




Modularity of functionalities – with both centralised and decentralised implementations possible – is key for interoperability.



Required*	Interfaces for individuals	**Optional***	Value exchange
Identity management	Interface for data sources	Data storage (e.g., pod)	Data model management
Permissions management (e.g. consent)	Interface for data using services	Data transfer	Identity wallet
Activity logging	Cybersecurity	Data source & service discovery	Data visualisation

Maturity is increasing in this space, and it's a **Journey we're on together,** not just a destination!

After the break: Check which breakout session you will be attending!

Marcello Grita
Arbetsförmedlingen – Sweden

Facilitated by: Paul Theyskens

Room: Firepit

Björn de Vidts
Data Utility Company – Flanders

Facilitated by: Esther De Loof

Room: Think

Mikko Rusama
City of Helsinki – Finland

Facilitated by: Viivi Lähteenoja

Room: Lounge

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Time for a Coffee break!

20 Minutes –
See you back at 11:30

Arbetsförmedlingen – Sweden

Marcello Grita

European Commission

Agenda

01 Tour de table

02 Use case pitch

03 Open discussion

04 Closing

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Tour de table

Please introduce yourself by your **name** and your **organisation**

European Commission

From a Reactive to a Proactive City on Citizens' Terms

Using personal data in digital services for the benefit of citizens

Helsinki

Personal Data Spaces 2023
Mikko Rusama, Chief Digital Officer @ City of Helsinki
Chairman of the Board @ Forum Virium Helsinki

City of Helsinki – Finland's largest service organisation with 39 000 employees

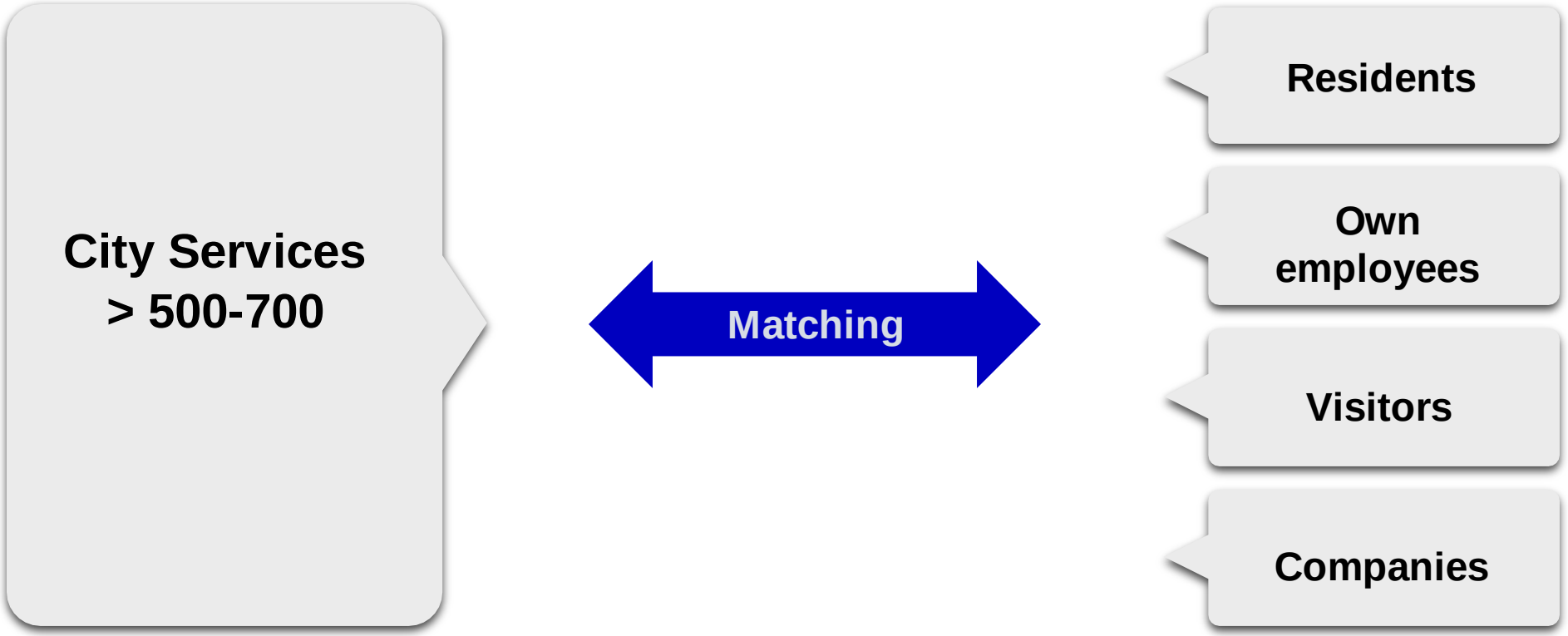
- Finnish law requires cities to provide 535 mandatory services*
- In addition, City of Helsinki provides 200-300 additional services

- **Healthcare**
- **Social services**
- **Education**
- **Infrastructure and land use**
- **Economic development**
- **Rule enforcement and inspections**

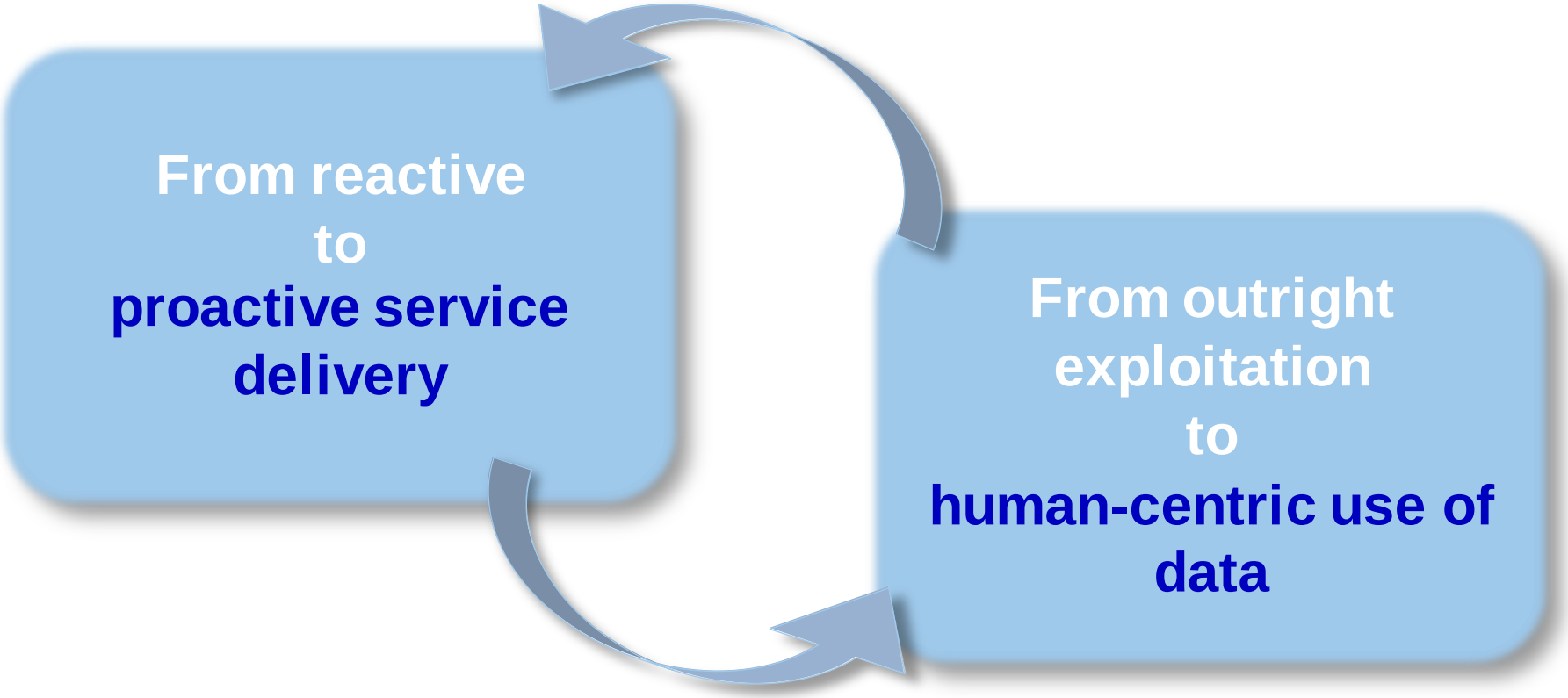
Helsinki

*study conducted by the Ministry of Finance in 2012

Service discovery and matching problem



Helsinki's ambitious vision addresses two interrelated paradigm shifts



From a reactive to a proactive service delivery

"Flipping the service delivery model from pull to push by anticipating needs and automatically triggering personalized services using context-awareness." (Linders, Liao, and Wang 2018)

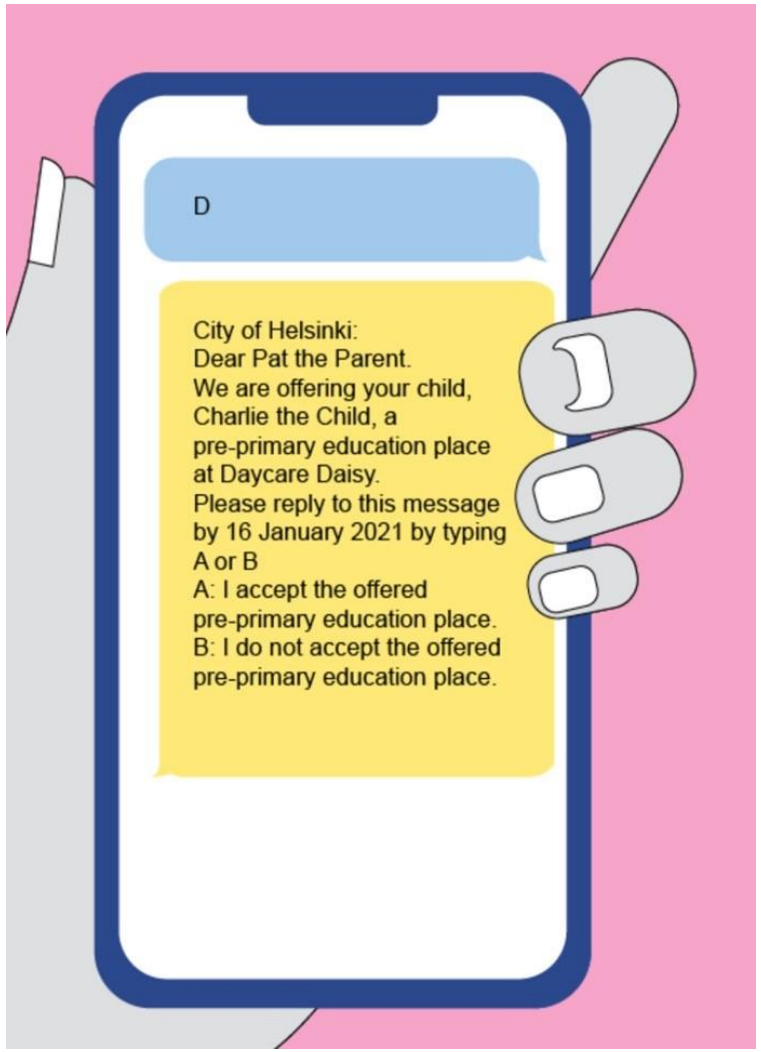
Helsinki

Flip the service model: The city should provide a service automatically or de minimis recommend the most suitable service if …

- The city has all the required personal data and information regarding the citizen's likely service need
- The city has the **permission** to use the data
- The city has an obligation to provide a statutory service
- A citizen is eligible for the service
- Proactive service delivery provides **benefits** both for the citizen (e.g. time savings or health benefits) and/or city (e.g. reduced costs)

Helsinki

Preschool placement for 6 year-olds with one SMS message in Helsinki



- Jan 2021 – scale up, all city regions
  - SMS sent to 5591 families
  - Response rate 93% (5201)
  - Acceptance rate 89% (4645)

- Jan 2022 via new Asti service
  - Email sent to 4 396 families
  - Response rate 95% (4185/4396)
  - Acceptance rate 89%
  - Satisfaction score 4,32/5 – “can it be this easy”?

Confirmation of the placement in 1 min
(Earlier, 2 months with paper and online forms)

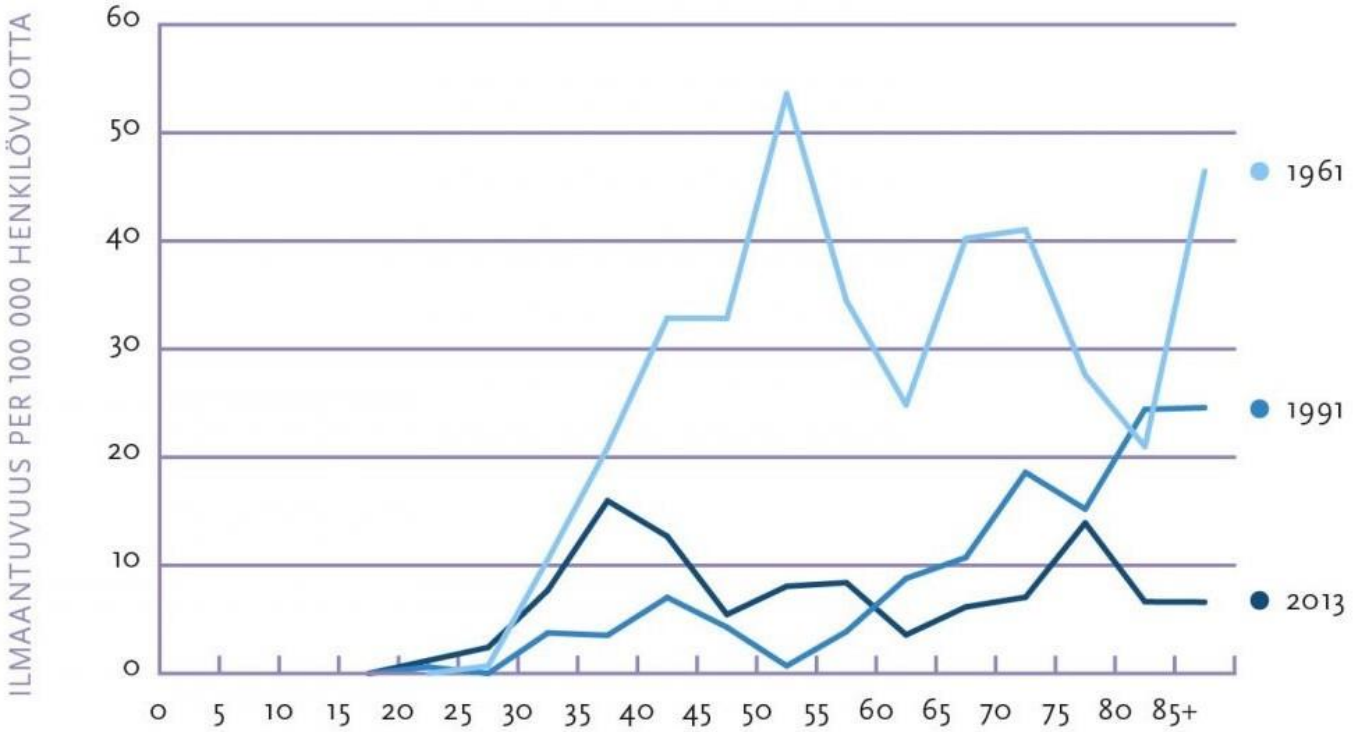
10% of people generate 80% of the social and health care costs

"Identifying and treating these people
well in advance
would be beneficial for the state economy"

HS 15.3.2019

Helsinki

Cervical cancer screening for 30-65 year-old women in Finland avoids 250 deaths each year



Health Benefits Analysis

Identify and proactively treat high-risk patients

- Analyse health care data of 640 000 patients using 300 approved criteria
- Identify care gaps and prioritize patients
- Invite patients with highest risks to doctor's appointment to get proper treatment.

Example use cases:

- Identify patients using central nervous system drugs to ensure they have a dedicated doctor who can follow-up on the patient's medication and condition
- Identifying patients with a high blood pressure and ensuring right medication to avoid heart and brain attack
- Proactively contacting risk groups for COVID-vaccinations (SMS)

From outright exploitation to human-centric use of data

Human centricity: to empower individuals with their personal data (MyData Declaration)

Helsinki

Why a human-centric approach?

- Personal data regulation already exists, e.g., GDPR
- However, do people **trust** us to use their data and AI for their benefit?
- Cities operate under a democratic mandate: accountability, **transparency,** citizens' rights and safety are key to trust – this also applies to a city's digital services

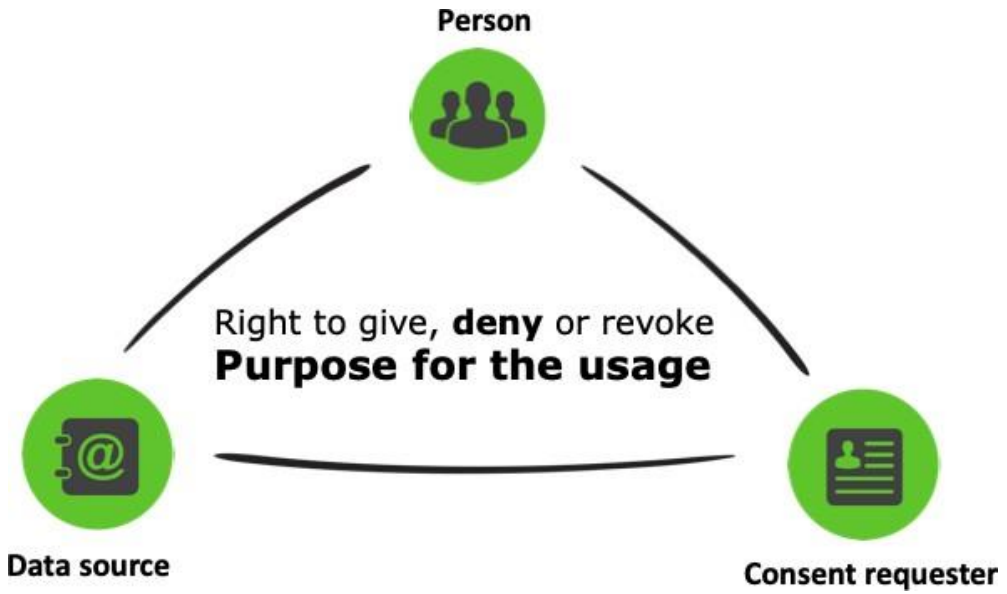
Without trust there is no use for AI

Helsinki

Permission, legal basis, for data processing

Human centricity: to empower individuals with their personal data (MyData Declaration)

Freely given consent as a cornerstone of MyData - imbalance of power?




Helsinki

Työterveys Helsinki (Röntgen)

Potilasasiakirjatilaus
tulostettu 03.01.2020

Vastaanottaja
Meilahti

Tilaaja
Työterveys Helsinki
Työterveys Helsinki (Röntgen)
PL 5600
00099 HELSINGIN KAUPUNKI
Puhelin

Paikka ja aika
HELSINGIN KAUPUNKI, 03.01.2020, Röntgenhoitaja [redacted]

Pyydämme lähettämään
Potilaan nimi
Mikko Henrik Rusama
Henk
190

Dokumentit	Huomautukset
Röntgenkuvat	VASEN LONKKA

Huomautukset
Radiologille vertailuun

Potilaan suostumus
Suostun ko. tutkimus- ja hoitotietojen antamiseen yllämainitun työterveys

Paikka ja aika

Minimum Viable Product for City of Helsinki's MyData Operator implementation

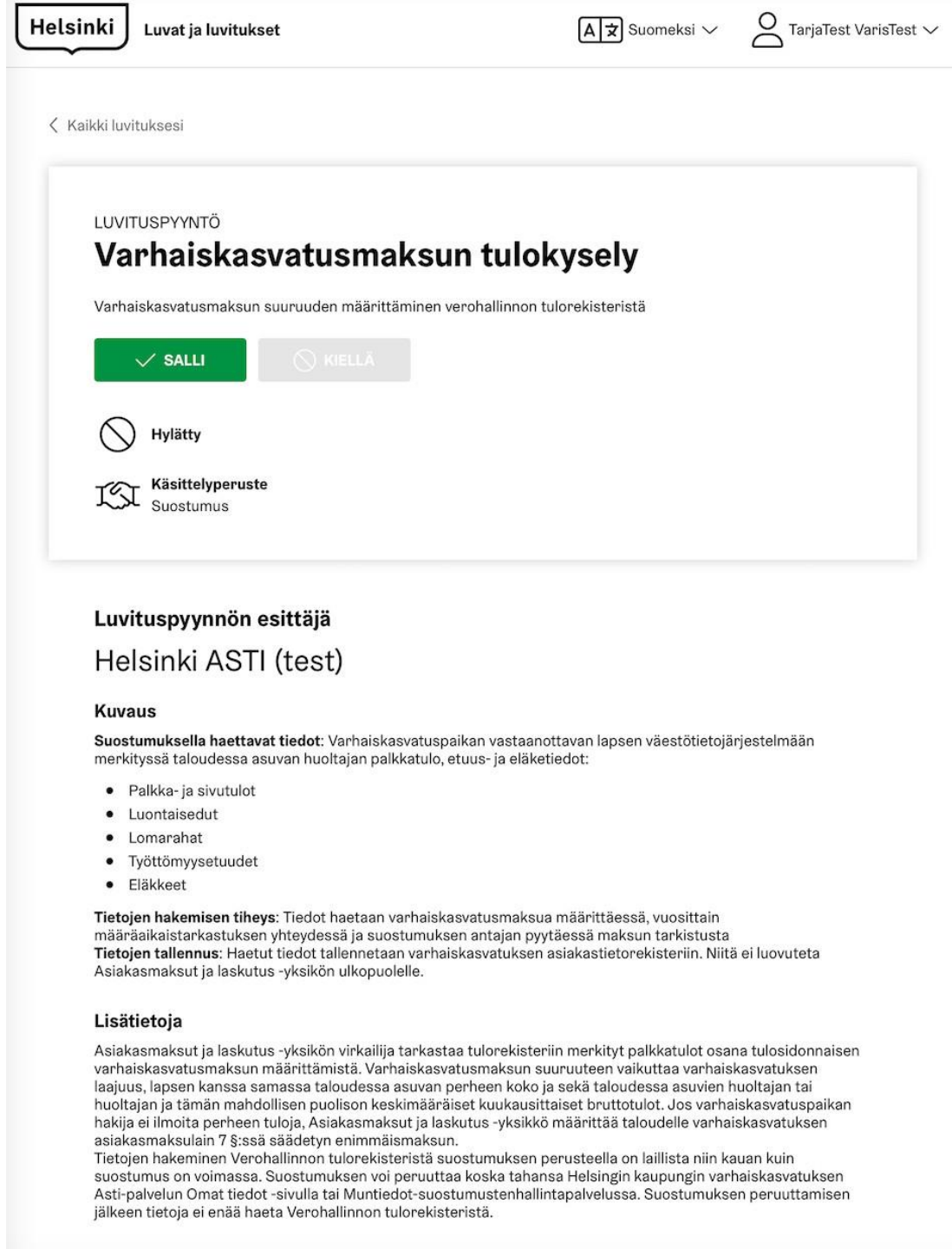
- Citizens can authenticate themselves to access a city service
- Citizens have a right to grant, deny or revoke consents on personal data use for a specified service
- User-friendly and accessible user interfaces support the human-centric approach
- Users understand for what purpose consent for data use is requested

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

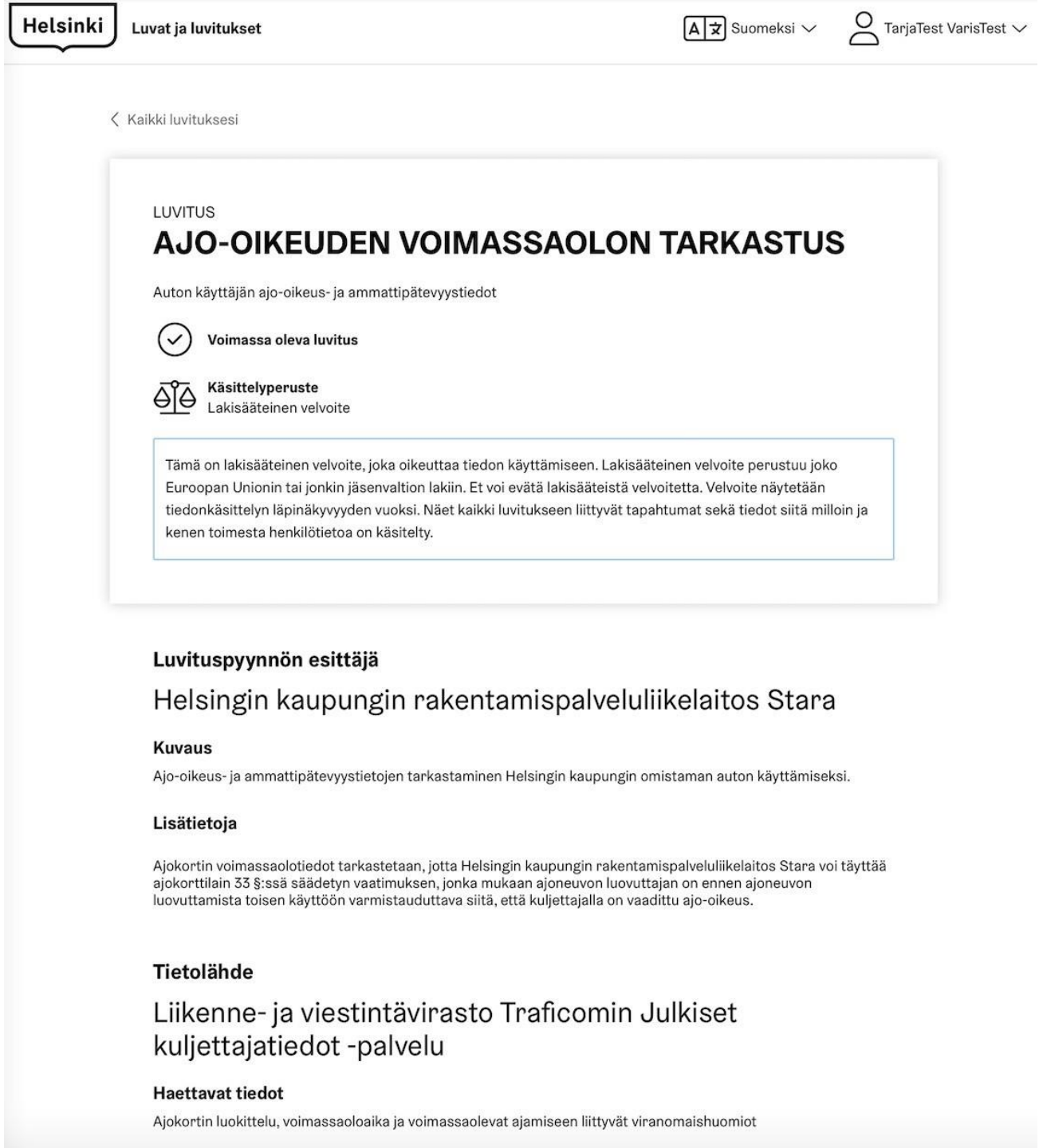
Current state (As-is):
Family income data has to be submitted by filling manual forms in pdf format either by mail or secure email to the City of Helsinki’s customer fee unit.

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 daycare fee with potential reductions for my child.


Helsinki
Luvat ja luvitukset
Suomeksi
TarjaTest VarisTest
Kaikki luvituksesi
LUVITUSPYYNTÖ
Varhaiskasvatusmaksun tulokysely
Varhaiskasvatusmaksun suuruuden määrittäminen verohallinnon tulorekisteristä
SALLI
KIELLÄ
Hylätty
Käsittelyperuste
Suostumus
Luvituspyynnön esittäjä
Helsinki ASTI (test)
Kuvaus
Suostumuksella haettavat tiedot: Varhaiskasvatuspaikan vastaanottavan lapsen väestötietojärjestelmään merkityssä taloudessa asuvan huoltajan palkkatulo, etuus- ja eläketiedot:
Palkka- ja sivutulot
Luontaisedut
Lomarahat
Työttömyysetuudet
Eläkkeet
Tietojen hakemisen tiheys: Tiedot haetaan varhaiskasvatusmaksua määrittäessä, vuosittain määräaikaistarkastuksen yhteydessä ja suostumuksen antajan pyytäessä maksun tarkistusta
Tietojen tallennus: Haetut tiedot tallennetaan varhaiskasvatuksen asiakastietorekisteriin. Niitä ei luovuteta Asiakasmaksut ja laskutus -yksikön ulkopuolelle.
Lisätietoja
Asiakasmaksut ja laskutus -yksikön virkailija tarkastaa tulorekisteriin merkityt palkkatulot osana tulosidonnaisen varhaiskasvatusmaksun määrittämistä. Varhaiskasvatusmaksun suuruuteen vaikuttaa varhaiskasvatuksen laajuus, lapsen kanssa samassa taloudessa asuvan perheen koko ja sekä taloudessa asuvien huoltajan tai huoltajan ja tämän mahdollisen puolison keskimääräiset kuukausittaiset bruttotulot. Jos varhaiskasvatuspaikan hakija ei ilmoita perheen tuloja, Asiakasmaksut ja laskutus -yksikkö määrittää taloudelle varhaiskasvatuksen asiakasmaksulain 7 §:ssä säädetyn enimmäismaksun.
Tietojen hakeminen Verohallinnon tulorekisteristä suostumuksen perusteella on laillista niin kauan kuin suostumus on voimassa. Suostumuksen voi peruuttaa koska tahansa Helsingin kaupungin varhaiskasvatuksen Asti-palvelun Omat tiedot -sivulla tai Muntiedot-suostumustenhallintapalvelussa. Suostumuksen peruuttamisen jälkeen tietoja ei enää haeta Verohallinnon tulorekisteristä.

Automated qualification check

- Helsinki City Construction Services (Stara) is providing services in the construction, environmental management and logistics sectors
- In order to drive City of Helsinki governed vehicles - cars, heavy trucks or others - the employee is required to **complete training and possess an applicable driving licence and applicable permits**
- Stara has developed **a digital driving journal with an integrated booking calendar for each vehicle**.
- Upon booking the vehicle, the validity of the driving licence and applicable permits is automatically verified directly from the data controller, i.e., the national agency responsible for maintaining records of driving licences, Traficom


Helsinki
Luvat ja luvitukset
Suomeksi
TarjaTest VarisTest
Kaikki luvituksesi
LUVITUS
AJO-OIKEUDEN VOIMASSAOLON TARKASTUS
Auton käyttäjän ajo-oikeus- ja ammattipätevyystiedot
Voimassa oleva luvitus
Käsittelyperuste
Lakisääteinen velvoite
Tämä on lakisääteinen velvoite, joka oikeuttaa tiedon käyttämiseen. Lakisääteinen velvoite perustuu joko Euroopan Unionin tai jonkin jäsenvaltion lakiin. Et voi evätä lakisääteistä velvoitetta. Velvoite näytetään tiedonkäsittelyn läpinäkyvyyden vuoksi. Näet kaikki luvitukseen liittyvät tapahtumat sekä tiedot siitä milloin ja kenen toimesta henkilötietoa on käsitelty.
Luvituspyynnön esittäjä
Helsingin kaupungin rakentamispalveluliikelaitos Stara
Kuvaus
Ajo-oikeus- ja ammattipätevyystietojen tarkastaminen Helsingin kaupungin omistaman auton käyttämiseksi.
Lisätietoja
Ajokortin voimassaolotiedot tarkastetaan, jotta Helsingin kaupungin rakentamispalveluliikelaitos Stara voi täyttää ajokorttilain 33 §:ssä säädetyn vaatimuksen, jonka mukaan ajoneuvon luovuttajan on ennen ajoneuvon luovuttamista toisen käyttöön varmistauduttava siitä, että kuljettajalla on vaadittu ajo-oikeus.
Tietolähde
Liikenne- ja viestintävirasto Traficomin Julkiset kuljettajatiedot -palvelu
Haettavat tiedot
Ajokortin luokittelu, voimassaoloaika ja voimassaolevat ajamiseen liittyvät viranomaishuomiot

Generic consent management checker

- Many needs identified at kindergartens and schools to request parental consent for:
  - Taking photos
  - Giving vaccination
  - Attending special events
  - ..

- Digital consent management system to maintain information on the consent attached to a particular event and child

Air Quality Research with the Helsinki University Hospital (HUS)

- Air cleaning equipment installed to 4 kindergartens at Viikki, Helsinki to study the impact of air quality
- Using City of Helsinki's digital consent management system 273 parents asked consent for
  - 1) attending research and
  - 2) collecting weekly information about their child's health
- Consent from reference group also collected

Consented recruitees after closure:

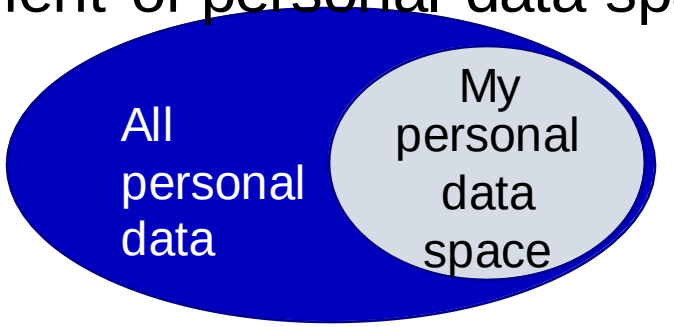
- Viikki group (**4** daycare units): 83 (out of 273) → 30.4% success rate
- Reference group (rest of the units in Helsinki): 484 (out of 18727) -> 2.6% success rate
- Final # of authentications on the study-specific recruitment page: 651

City of Helsinki's definition of Personal Data Space

- My Personal Data Space is a subset of my personal data that
  - I can access (independent of what the legal basis has been for collecting & using it)
  - I can further share or combine this data with another dataset if I want to (CONSENT or AGREEMENT as a legal basis)

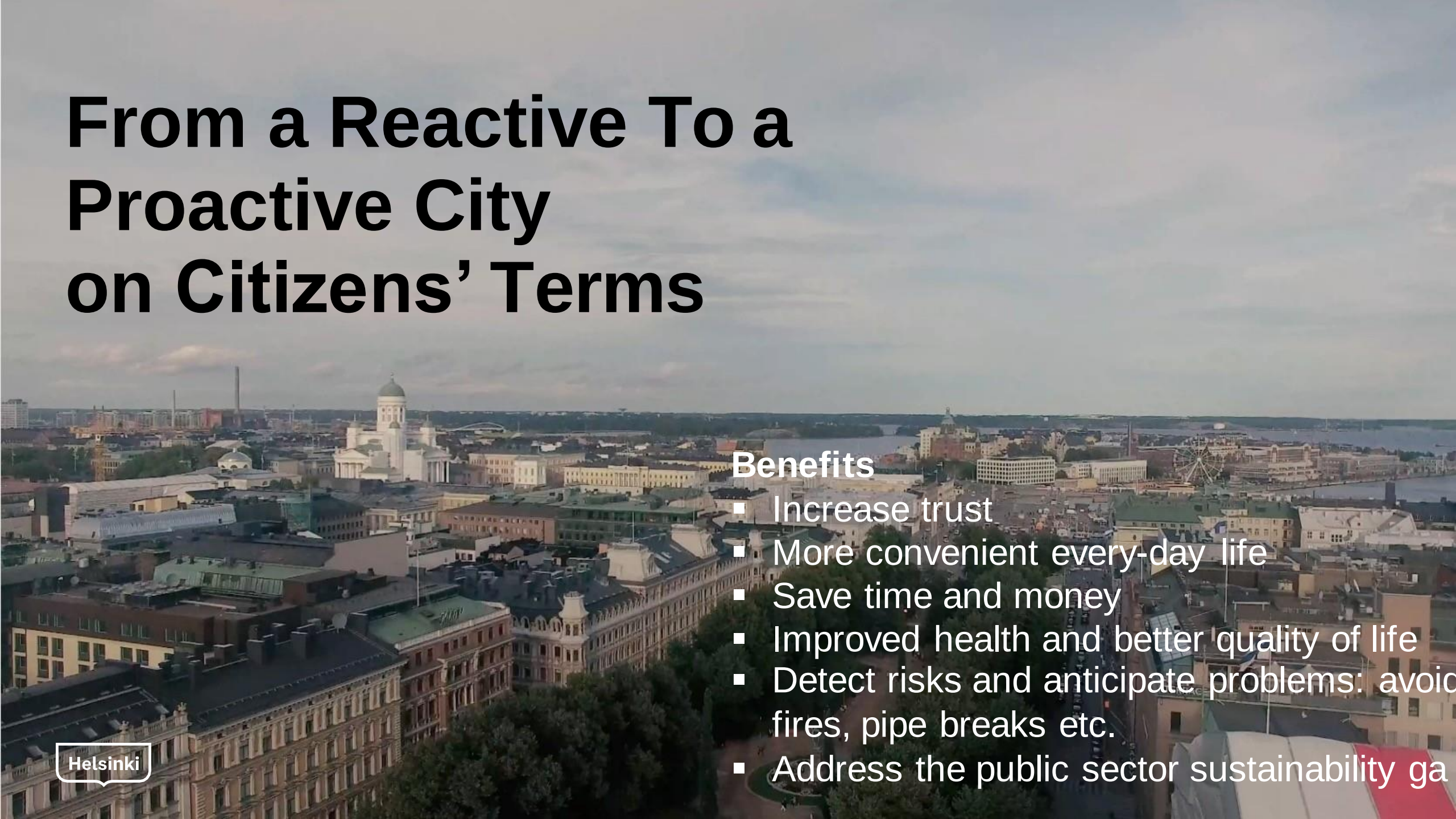
- Data of my Personal Data Space can be stored in a Personal Data Storage (PDS) but my personal data can also be distributed in different systems

- Digital Permission Management system and/or implementation of PDS inline with MyData Principles are key enablers to the management of personal data space



Helsinki

From a Reactive To a Proactive City on Citizens' Terms



Benefits

- Increase trust
- More convenient every-day life
- Save time and money
- Improved health and better quality of life
- Detect risks and anticipate problems: avoid fires, pipe breaks etc.
- Address the public sector sustainability ga

Helsinki

Thank you!

Mikko Rusama
Chief Digital Officer, City of Helsinki
Chairman of the Board, Forum Virium Helsinki

mikko.rusama@hel.fi
Twitter: @mikkohr
Blog: https://cdofromhel.fi
Podcast in Finnish: Maailman toimivin podcast

Helsinki

City of Helsinki's Digital Strategy 2022-2025:

Approved 12.4.2022

From a reactive to a proactive city on citizens' terms

Why?

City strategy

Most functional city in the world that makes the best use of digitalisation

What?

Strategic goals

- Productivity and cost savings: produce more and better services with less resources
- E-services are the primary option both in internal and external processes
- City services are easily accessible, no matter what the time and place
- Accelerate the development of proactive and preventative services
- Data-driven decision-making
- Resident can affect how their data is being utilised (MyData principles)

For Whom?

Impact on different stakeholders

- Residents are served proactively and more personalised way, often without filling-up forms. Health problems are prevented by proactively inviting at-risk groups to treatment
- Digital self-services are available 24/7.
- Employees have more time for customers. Operations can be targeted where the need is greatest. Manual tasks are automated.
- Management has real-time data to support decision-making. Predictive analysis applied to weigh different options.
- Businesses and communities are a more seamless part of the city's production of services. Businesses benefit from the open data city is sharing.
- Travellers find the city's services easier, also virtually.

How?

Change programs

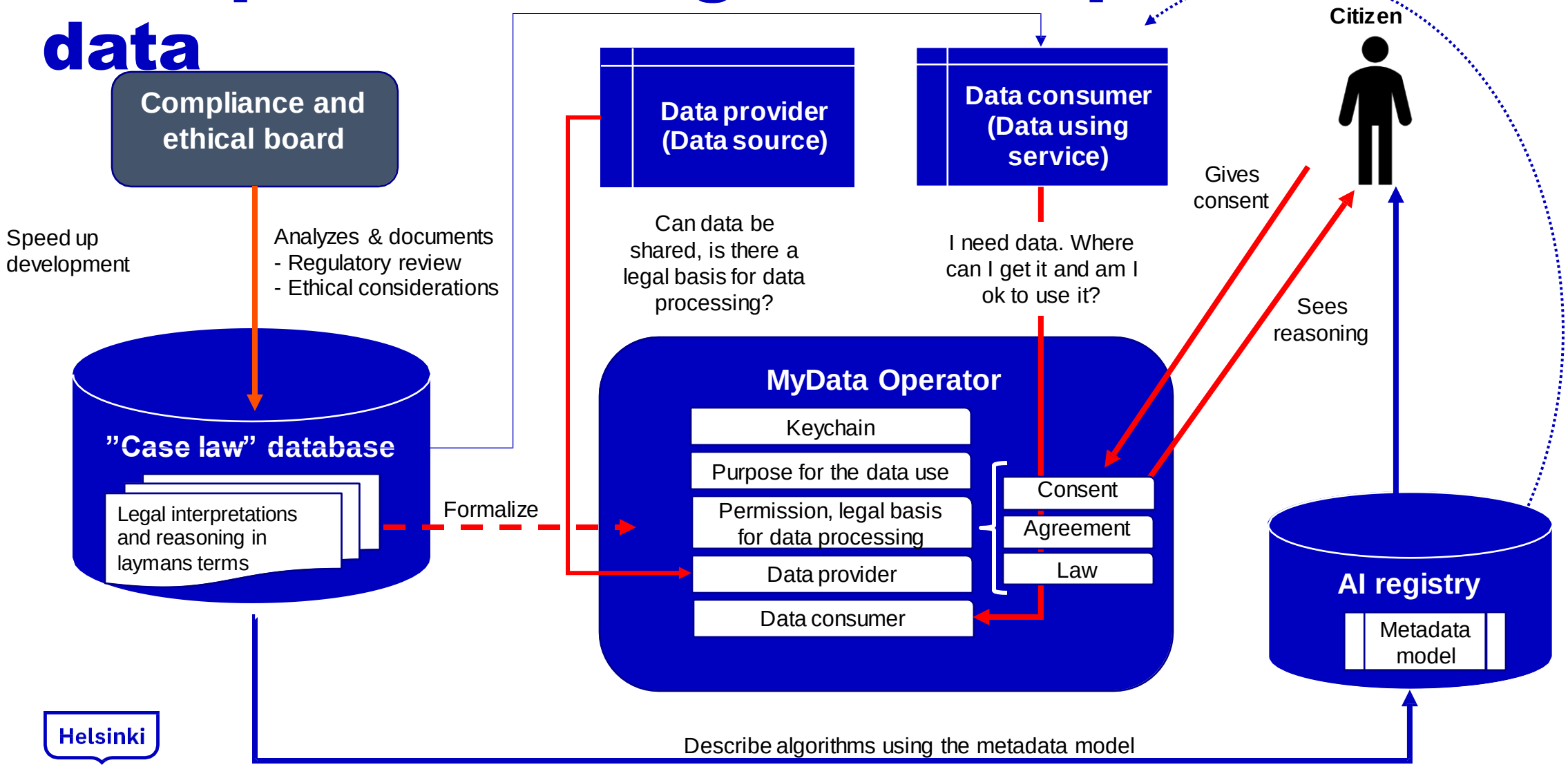
- Digital services and shared platforms
- Data strategy
- Implementation of the Information Management Act
- Shared city services
- Digital foundation
- Recovery program
- Agile experiments

Enablers, the conditions for success

Constantly evolving operating model and guiding overall architecture	Common platforms and components and application portfolio rationalization	Appropriate use of open source
Implementing a data strategy: ethical use of data and data interoperability	Solid Digital foundation	Strategic ability - the ability to respond to a changing environment
Competence development	Compliance with regulations	Advocacy and influencing the interpretation of legislation, especially on data privacy issues

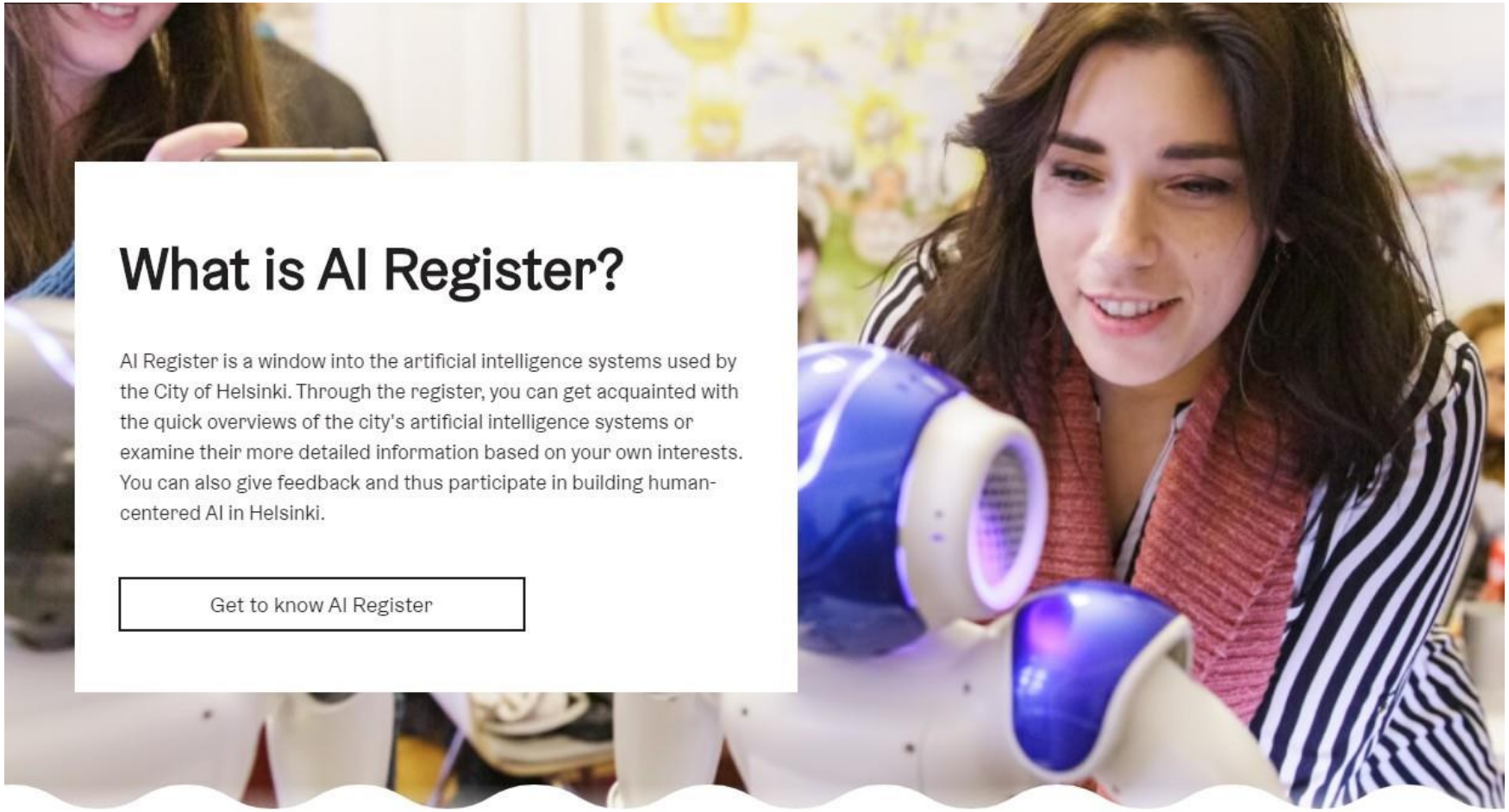
Helsinki

Helsinki's approach to ethical and transparent management of personal data



Helsinki

AI Register



Helsinki

https://ai.hel.fi/en/ai-register/

Open discussion

- What are the obstacles or risks you foresee?
- What are the opportunities or use cases you would most like to realise?

For the online participants, please join the discussion online via Mural

Closing

Especially in terms of technology, what is the one thing you would want to see solved next?

For the online participants, please join the discussion online via Mural

Data Utility Company – Flanders

Björn de Vidts

European Commission

Agenda

01 Tour de table

02 Use case pitch

03 Open discussion

04 Closing

European Commission

Open discussion

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European Commission

City of Helsinki – Finland

Mikko Rusam

Agenda

01 Tour de table

02 Use case pitch

03 Open discussion

04 Closing

European Commission

Tour de table

Please introduce yourself by your **name** and your **organisation**

European Commission

Human Centric Data Infrastructure

Marcello Grita

Project Leader

Swedish Public Employment Service - Jobtech unit

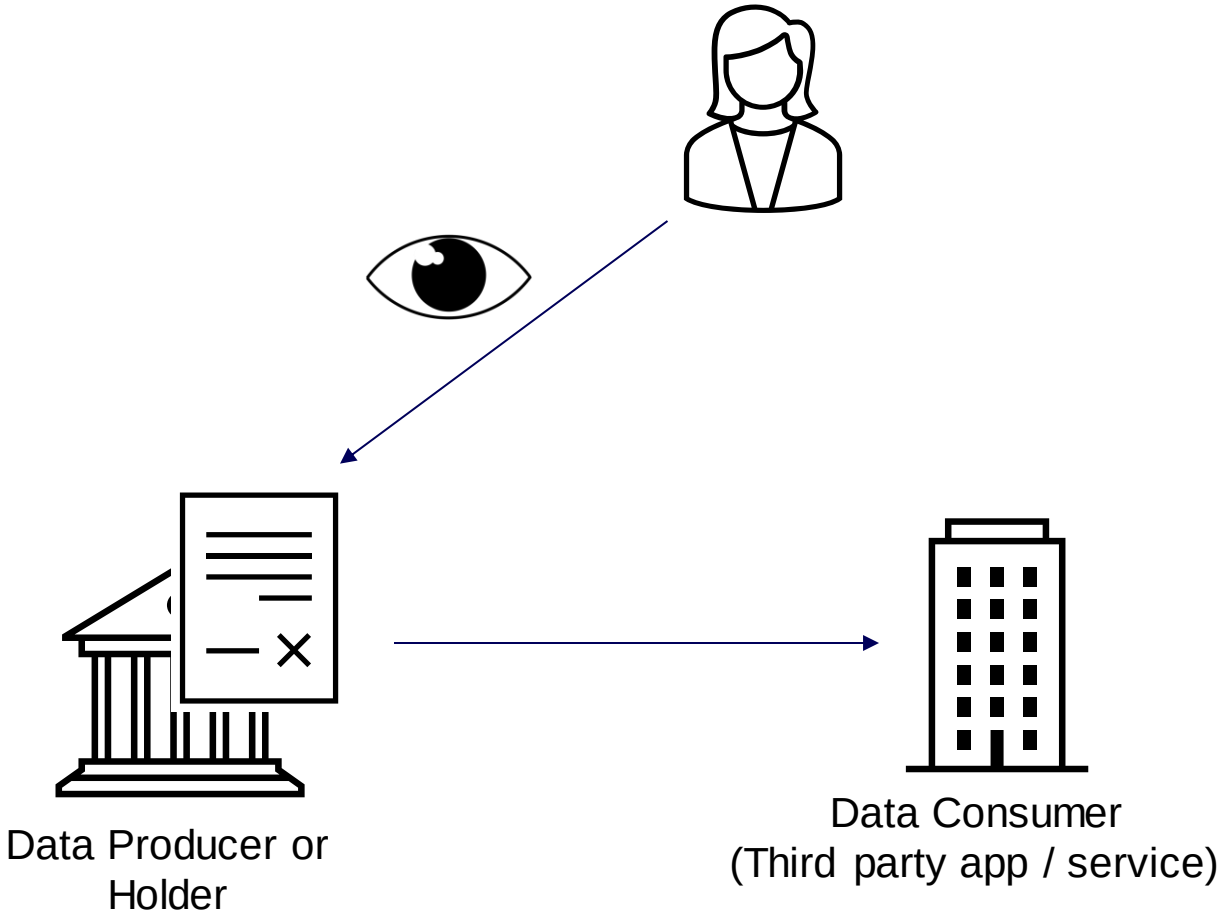
ARBETSFÖRMEDLINGEN
SWEDISH PUBLIC EMPLOYMENT SERVICE

Goal

Build a Governmental IaaS* allowing individuals to access and share personal information nationally and internationally.

** The mission required to build a data infrastructure for competence provision and lifelong learning. However the resulting infrastructure is data agnostic and can be used for any type of data.*

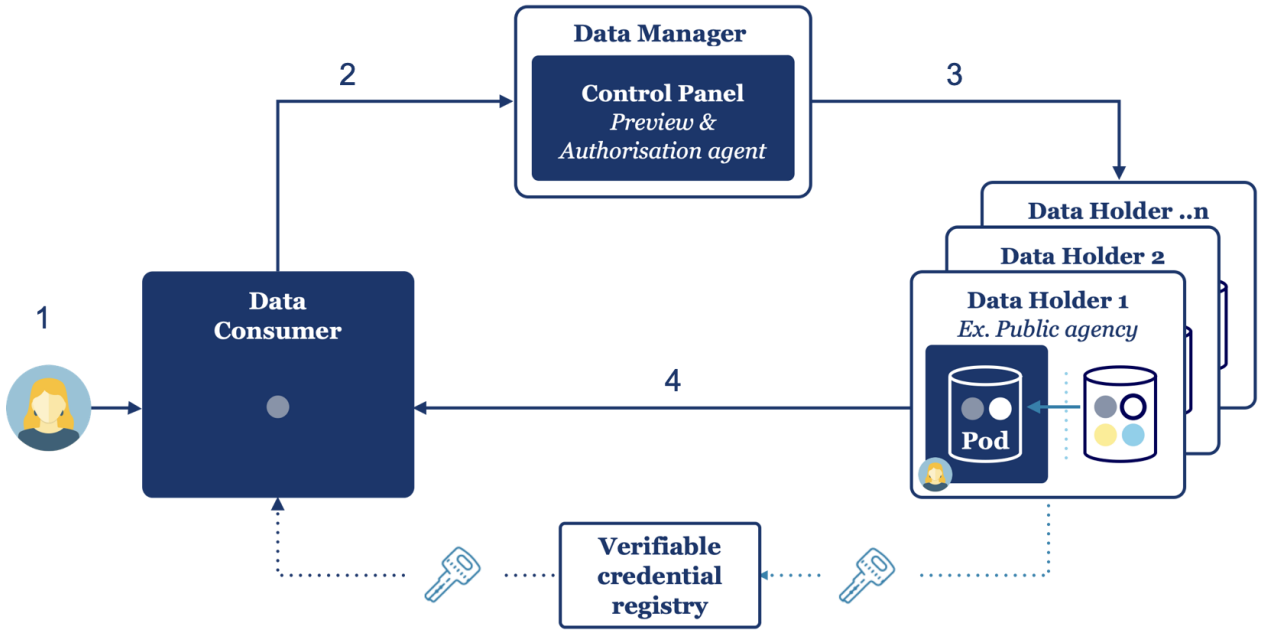
Our approach



- **What would the individual would want to do with the data?**
  1. Share
  2. Review
  3. Display
  4. Move / Store in personal device

- **Why would the user want to move / store data ?**
  1. Availability
  2. Holder cannot keep data
  3. Individual do not want holder to have the data

General case

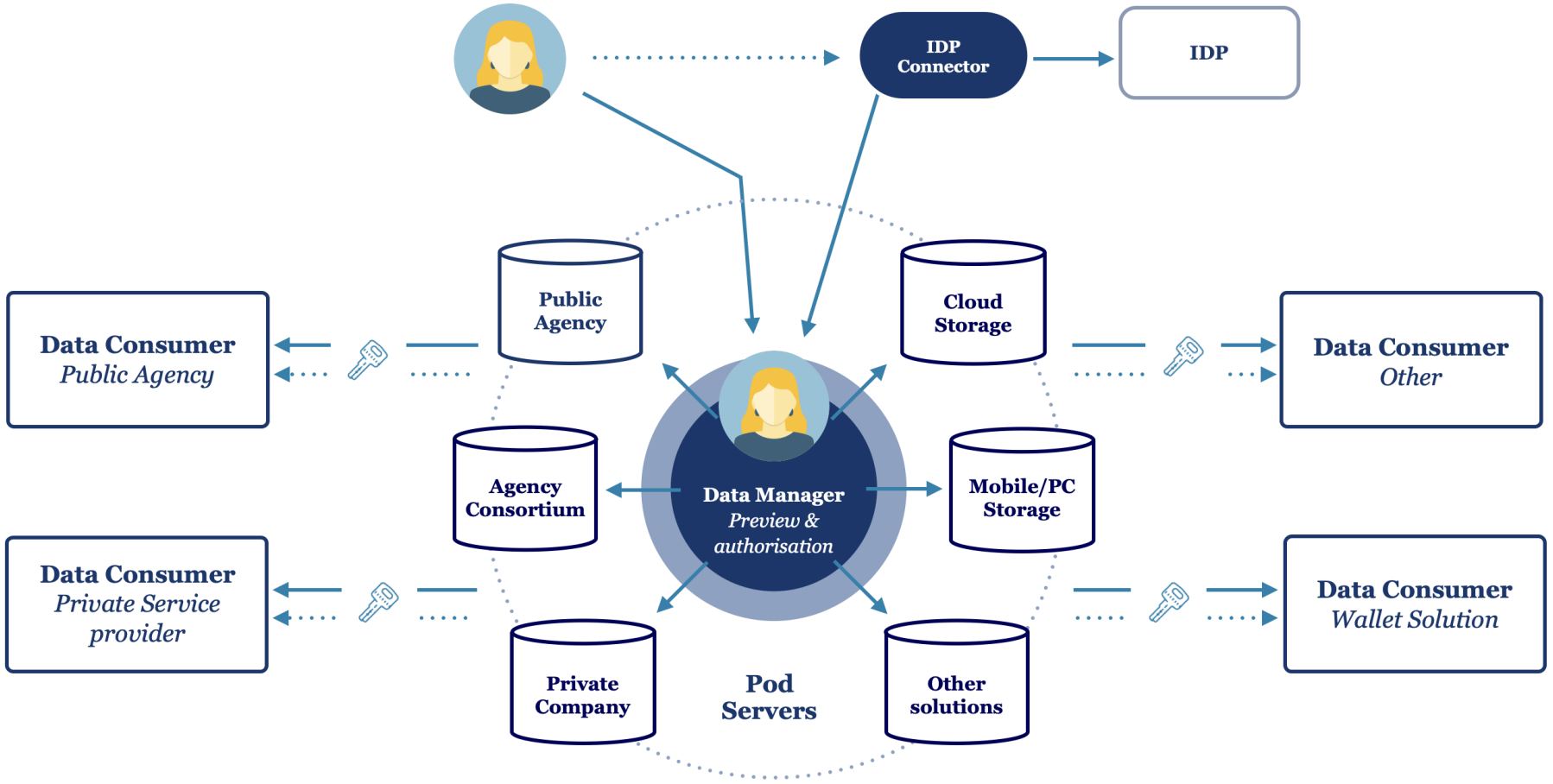


1. The individual goes to the data consumer/service provider's website to receive the desired service
2. The data consumer/service provider prepares a data request and redirects the individual to their control panel
3. After identification, the individual gets access to the Personal Data Space within the data holder and reviews the requested information
4. Once satisfied, the individual grants the data consumer/service provider access to the data and to the certificate of authenticity

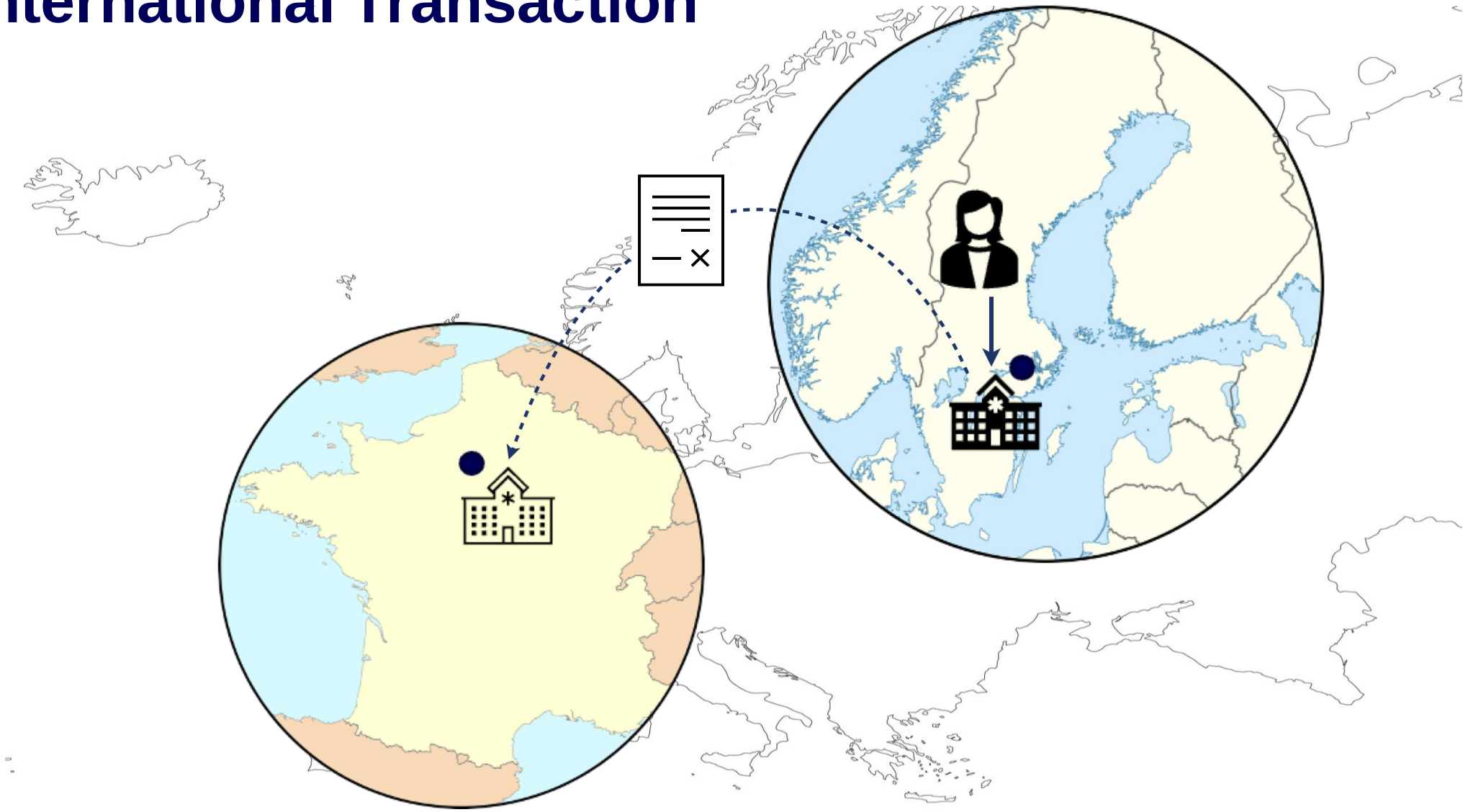
Use cases

- Show / share vaccination certificates
- Share grades / credentials with schools
- Store / show / share travel arrangements & bookings
- Share health information between hospitals
- Share data with app developers, machine vendors, AI training services
- Share data with advertisers (or not)
- Send criminal-record proof for visa purposes
- Show / share driving license (or passport, ID, etc.)
- Track progress of citizenship application
- Share new address with multiple parties at once
- Autofill online registration forms, or login info
- …

Human Centric configuration



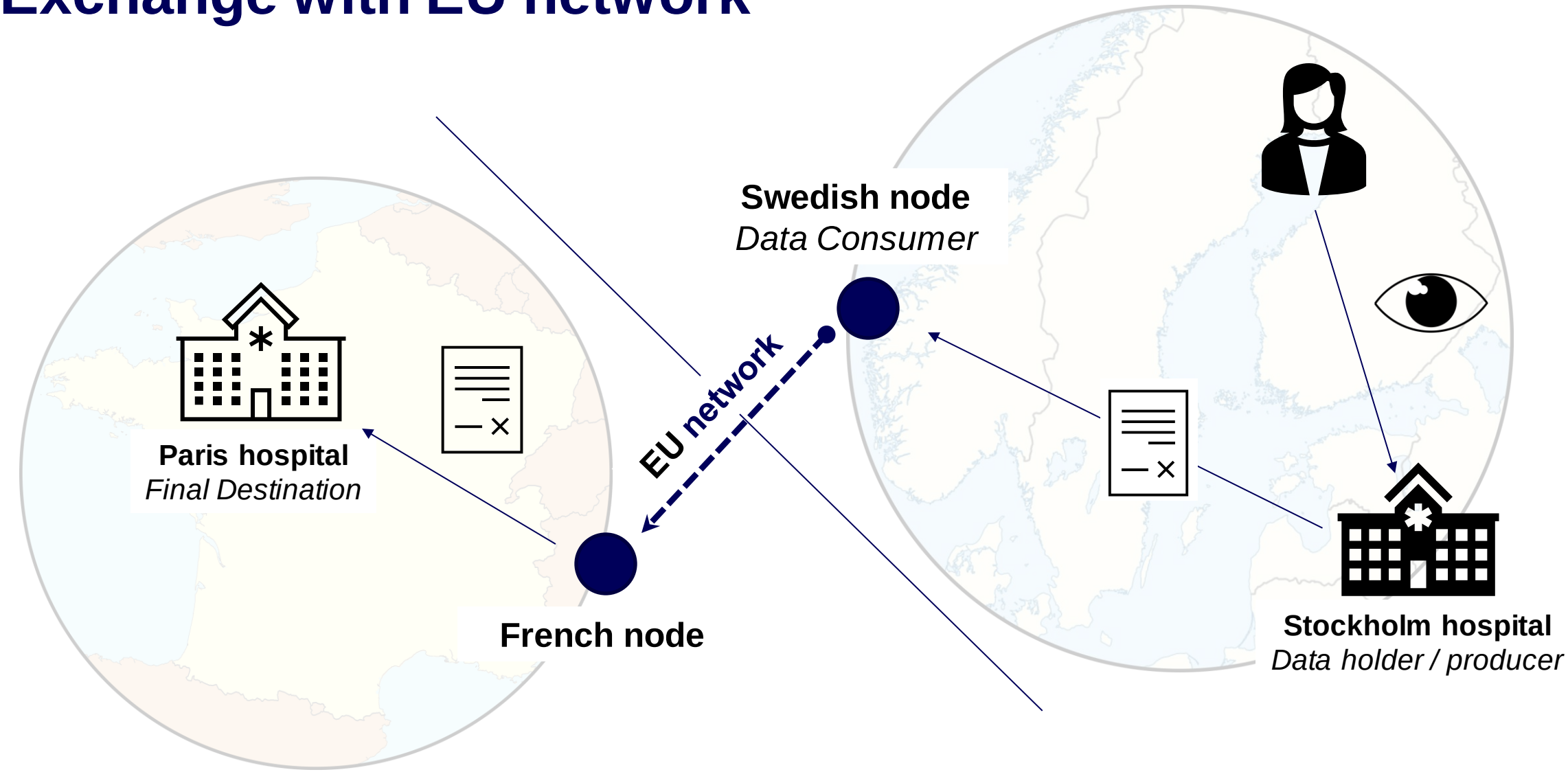
International Transaction



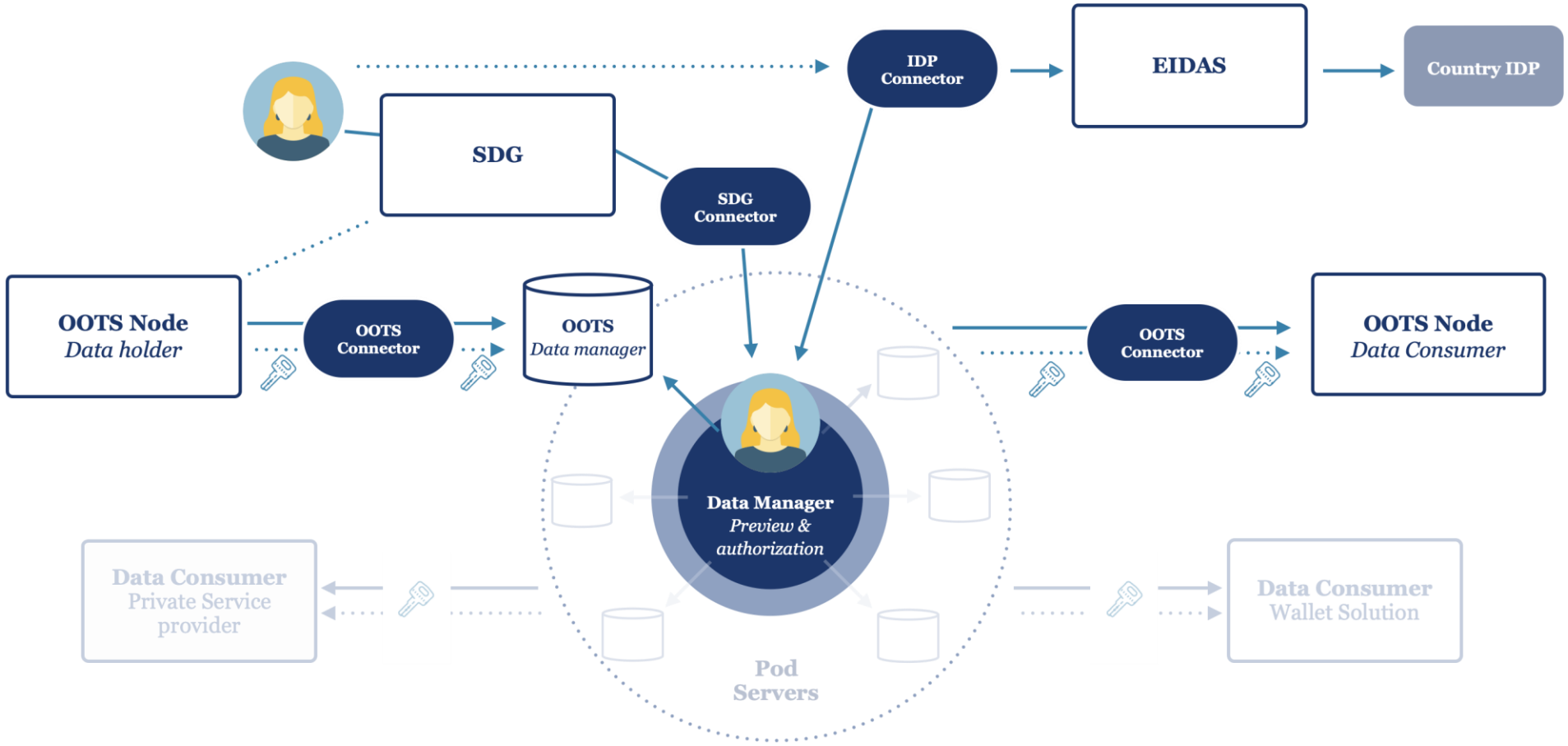
ARBETSFÖRMEDLINGEN
SWEDISH PUBLIC EMPLOYMENT SERVICE

JobTech Development

Exchange with EU network



International Configuration



Appendix

Mission

Build a coherent data infrastructure for competence provision and lifelong learning that gives individuals control over their data, allowing them to access personal information in public agencies and to share it with third parties, weather public or private.

Launching a real service

- Finding a real client is the only way to find meaningful solutions
- Delivering a real service helps looking at the project operationally and to explore issues associated with the launch, maintenance, governance, monetization, etc.
- Analyzing technical, legal and governance aspects together helps making important and timely decision which would otherwise be overlooked (Blockchain, Push v. Pull, centralized storage, approval process)
- Considering how the solution interacts with other parties and systems pushed to look into interoperability early on
- Interacting with clients, helps staying focus on target, and priorities execution trying to stay on budget and on time

Our Cases

- **Simple certificate exchange**
  - An individual requests a certificate from a public agency and shares it with the private company.
  - NOTE：The client needed an additional messaging / notification service allowing them to communicate with the individuals regarding the exchange.
- **Aggregation of data points & exchange – Internship program**
  - An individual collects information from both public and private sources and shares it with another agency for the creation of an authorization certificate.
  - NOTE: Some clients where able to interact with our solution leading us to consider creating connectors and onboarding tools.

Findings on Data

- Personal data has a loose definition and traverse many data domains
- The law treats personal data differently effecting technology and usability of solution
- Data is distributed and duplicated across multiple agencies
- Individuals do not own the data
- Data is (largely) inaccessible to the individual
- Data won't be deleted at source
- Some Data have an expiration date
- Data will most likely be copied at destination

Our focus*

- Put the individual at the center to maximize control
- Ensure portability of data
- Minimize duplication of data unless required by use case
- Create data spaces at source only accessible by the individual

NOTE:
Controlling data at source and allowing access to it, is more efficient than storing information in an intermediary application and posses less security and legal risks. This means that:

- The wallet and external data storages become use case driven
- Reusability of data is by default (unless expired)

Technical findings

The landscape of existing solutions seem fragmented:

- Different actors are developing different Building Blocks
- Some Building Blocks overlap in scope with other Building blocks or ‘extend’ their reach in other building blocks domain
- Building Blocks seem largely not interoperable due to lack of common standards
- Its hard to know which Building Blocks is needed or to puzzle them together without very concrete cases and guidance
- Too many Building block options with no plug-and-play or end-2-end solution readily available

Tech choice

Solid is a W3C standard / protocol focusing on data sovereignty & portability:

- Define how applications, resources etc. relate to each other
- It is opensource
- Has a growing community for support
- Offers a coherent approach
- It is data oriented (rather then service oriented)
- Allows for distributed application to be interoperable
- Allows for loos coupling of services (any BB is interchangeable)
- Do not impose specific configuration of the elements

[Placeholder slide(s) speaker]

Open discussion

- What are the obstacles or risks you foresee?
- What are the opportunities or use cases you would most like to realise?

For the online participants, please join the discussion online via Mural

Closing

Especially in terms of technology, what is the one thing you would want to see solved next?

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European Commission

Time for a lunch break!

60 Minutes –
See you back at 13:30

Understanding the business models

Panel discussion – Paul Theyskens

European Commission

Meeco

Katryna Dow

European Commission

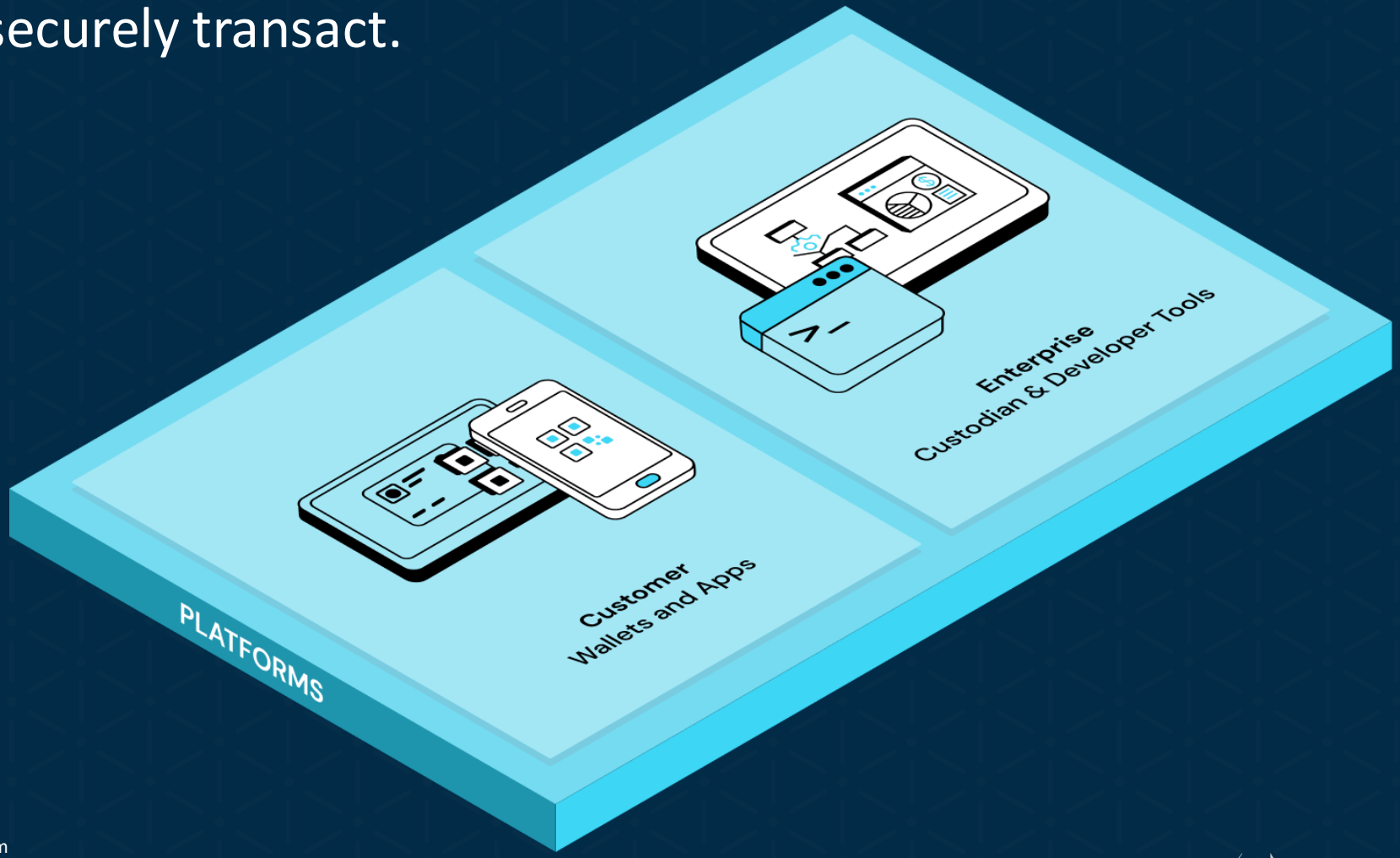
Meeco unlocks the power of permissioned personal data and digital assets with enterprise infrastructure, to enable people to securely access, control and exchange their data.

We help organisations reduce cost and meet data compliance requirements on a range of use cases, from decentralised identity to data exchange along with improving UX.

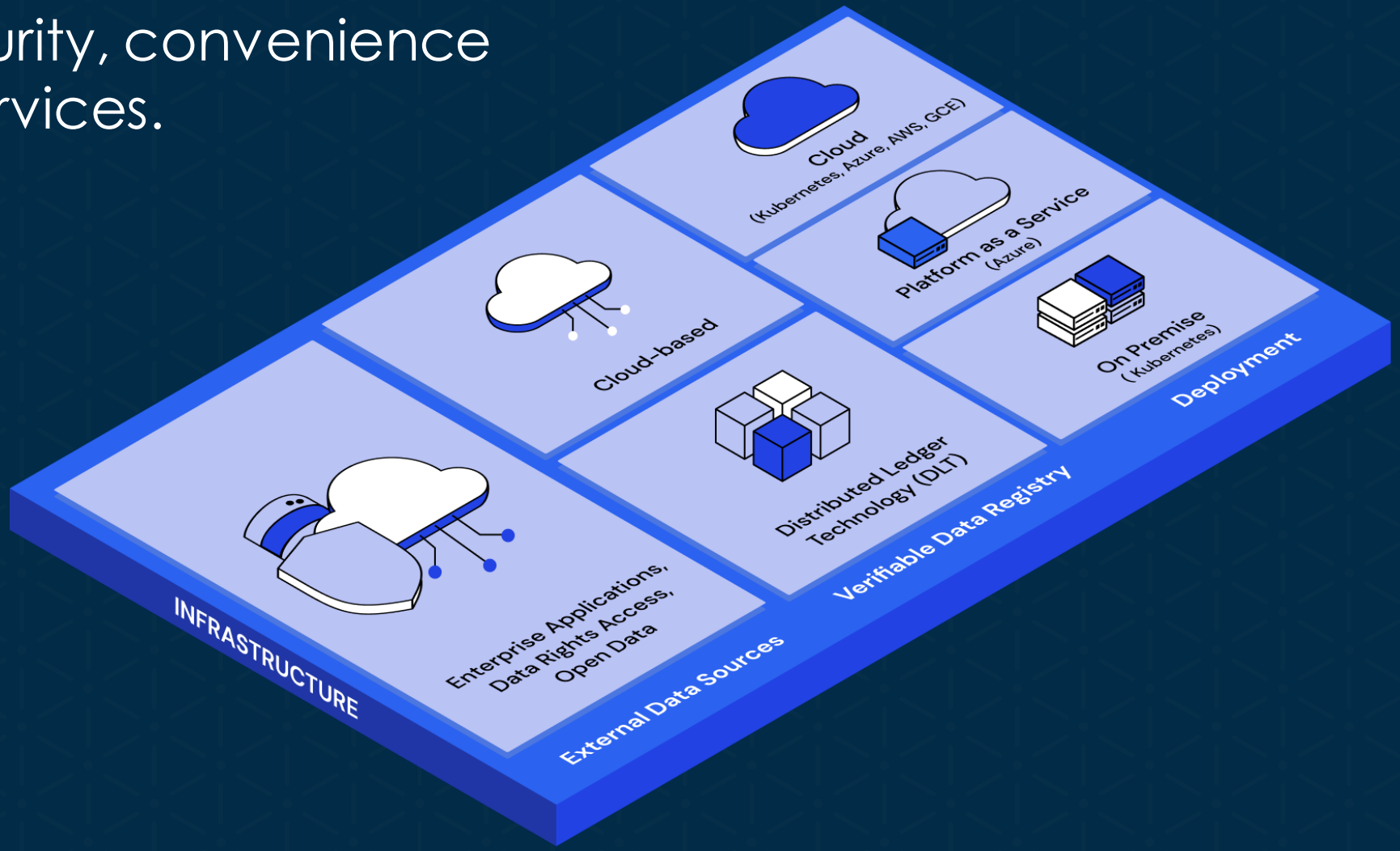
We focus on deploying new business models built on digital trust and evolve existing applications from Web2 to Web3.

For Applications: Trust is a key enabler of connected digital communities. It is central to delivering sustainable outcomes across financial services, mobility, health, education, environment, public administration, employment and eCommerce.

For Platforms: Seamless experiences require tools that deliver interoperability for citizens, customers, students, patients, employees and their service providers to securely transact.



For Infrastructure: Hybrid infrastructure will support the transition from Web2 to Web3, delivering security, convenience and decentralised services.



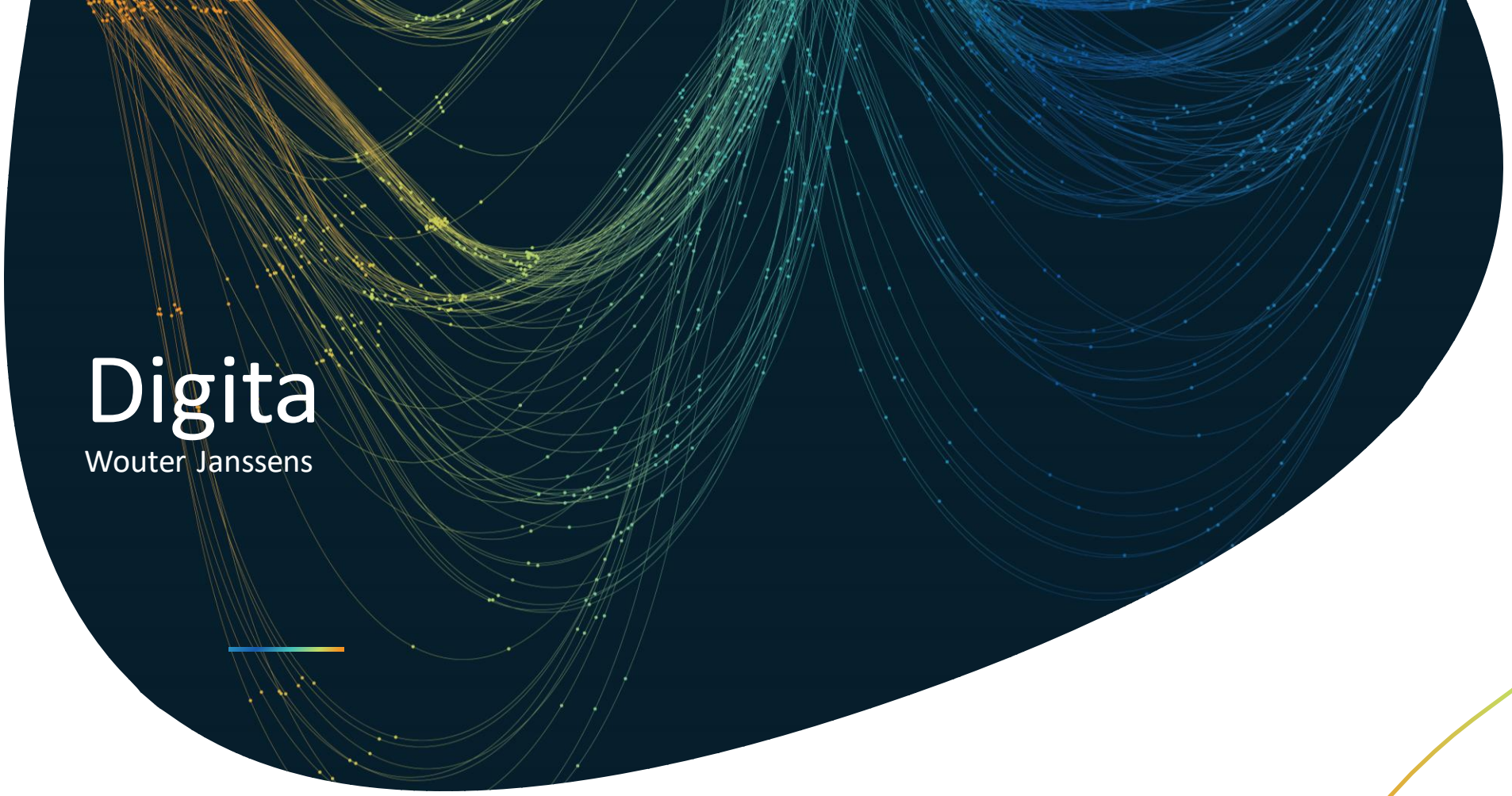
For Enablers: The key enablers for the development of personal data ecosystems, management of data compliance and Web3 are:

- Identity (increasingly decentralised)
- Security
- Privacy
- Governance; and
- Digital Asset Monetisation for Web3.

These new enablers will be the Foundation for Web3 in the same way that cloud was for Web2.

This evolution will also generate the next wave of commercial value across the digital economy.

European Commission



Digita

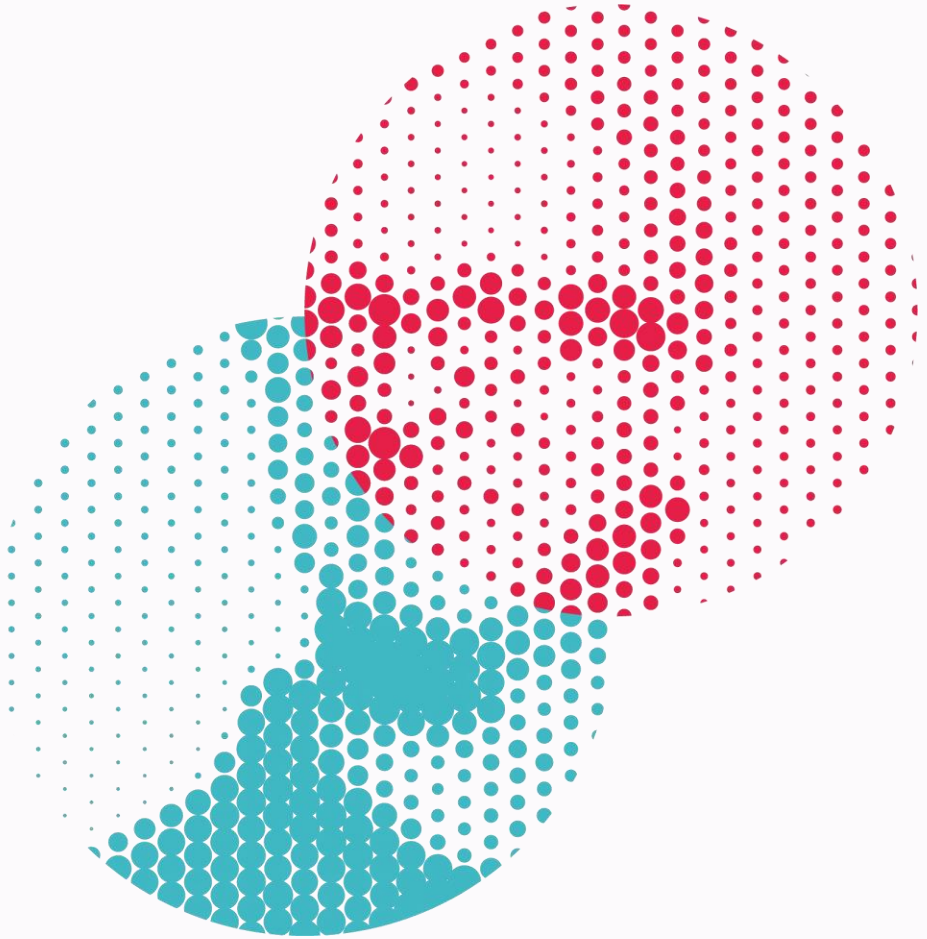
Wouter Janssens

European Commission

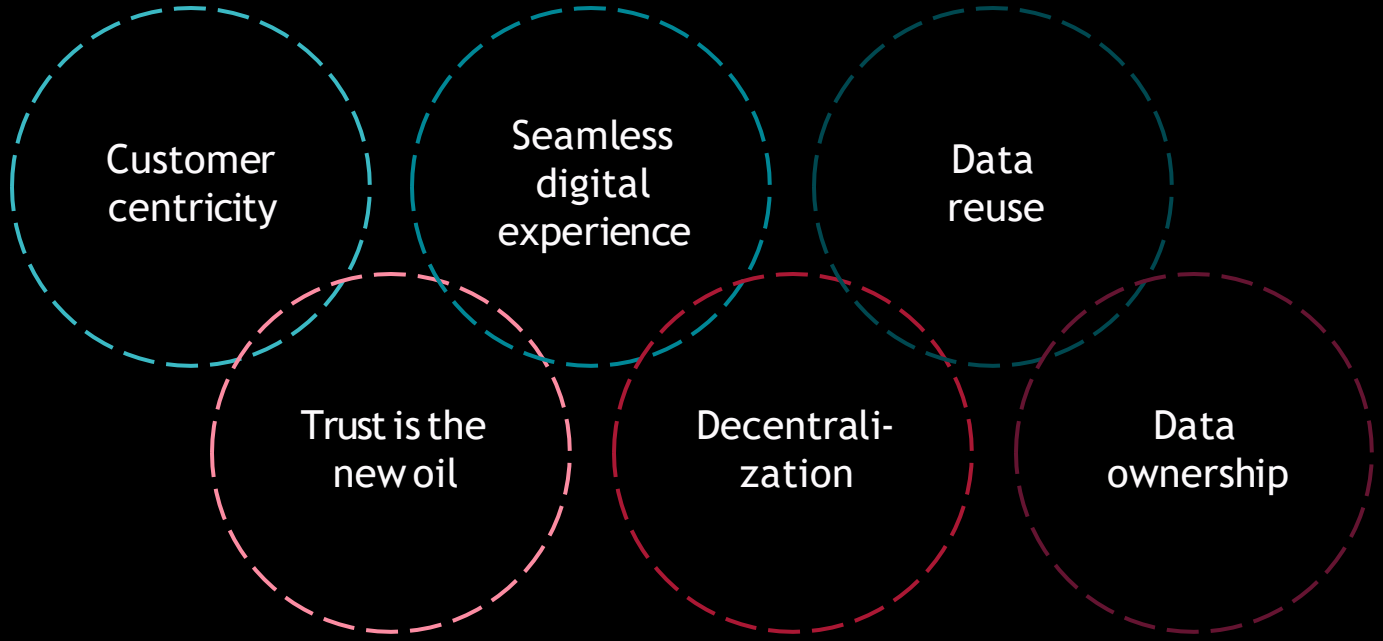
digita

Enabling people & organizations to share data without concerns

- Founded in 2018 and 4+ years experience with Solid-based data spaces
- Customers include (health) start-ups & public sector

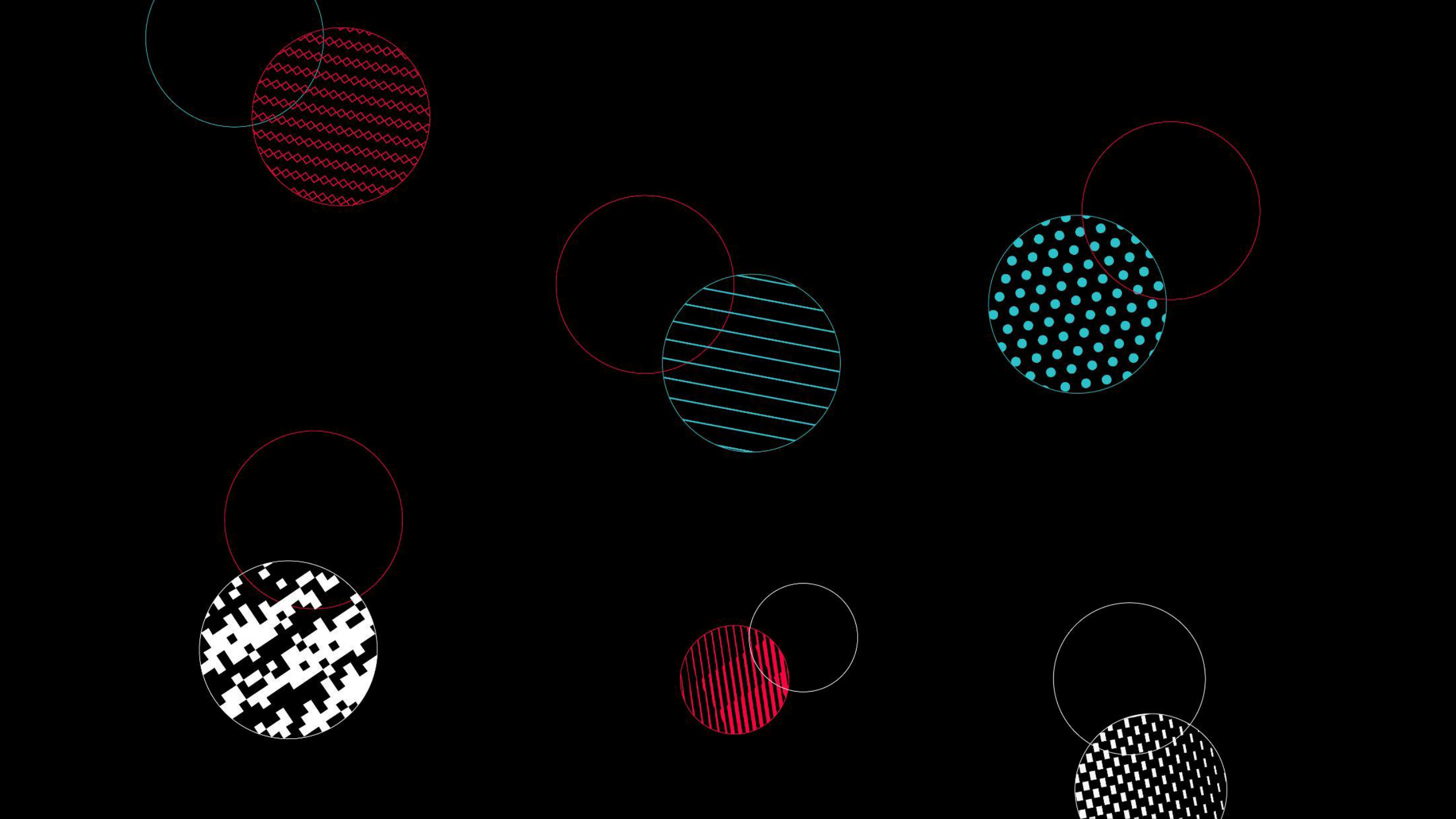


digita


Customer centricity
Seamless digital experience
Data reuse
Trust is the new oil
Decentrali-zation
Data ownership

digita

Solid-based (personal) data spaces in the cloud



Konsolidate

Tom Denhaene

European Commission

Konsolidate

konsolidate.eu

Konsolidate consists of a team of passionate developers, architects, strategists and analysts with one shared belief: people should gain control over their own personal data.

With that in mind, we guide your business through the decentralized web revolution, powered by personal data vaults, linked open data and the semantic web.

We co-create, accelerate and shape this decentralized future together with you and the best-in-class Solid development and consultancy.

Christophe Cop

Founder / Managing Partner - Konsolidate

christophe.cop@konsolidate.eu

Tom Denhaene

Founder / Managing Partner - Konsolidate

Tom.denhaene@konsolidate.eu

Ward Driesen

Full Stack Solid developer - Konsolidate

Tom.driesen@konsolidate.eu

De Cronos Groep - Solid ecosystem

De Cronos Groep

Cronos Public Services

Raccoons

Cymo

Debreuck-Neirynck

StarDust Dotdash.io

...

Partners (on speaking terms)

Digita

Inrupt (US/UK)

imec-UGent-IDLab

Datanutsbedrijf

Global Freelancers

Karamel.career

SolidLabVlaanderen

...

Market

HR — Karamel & a big employment agency

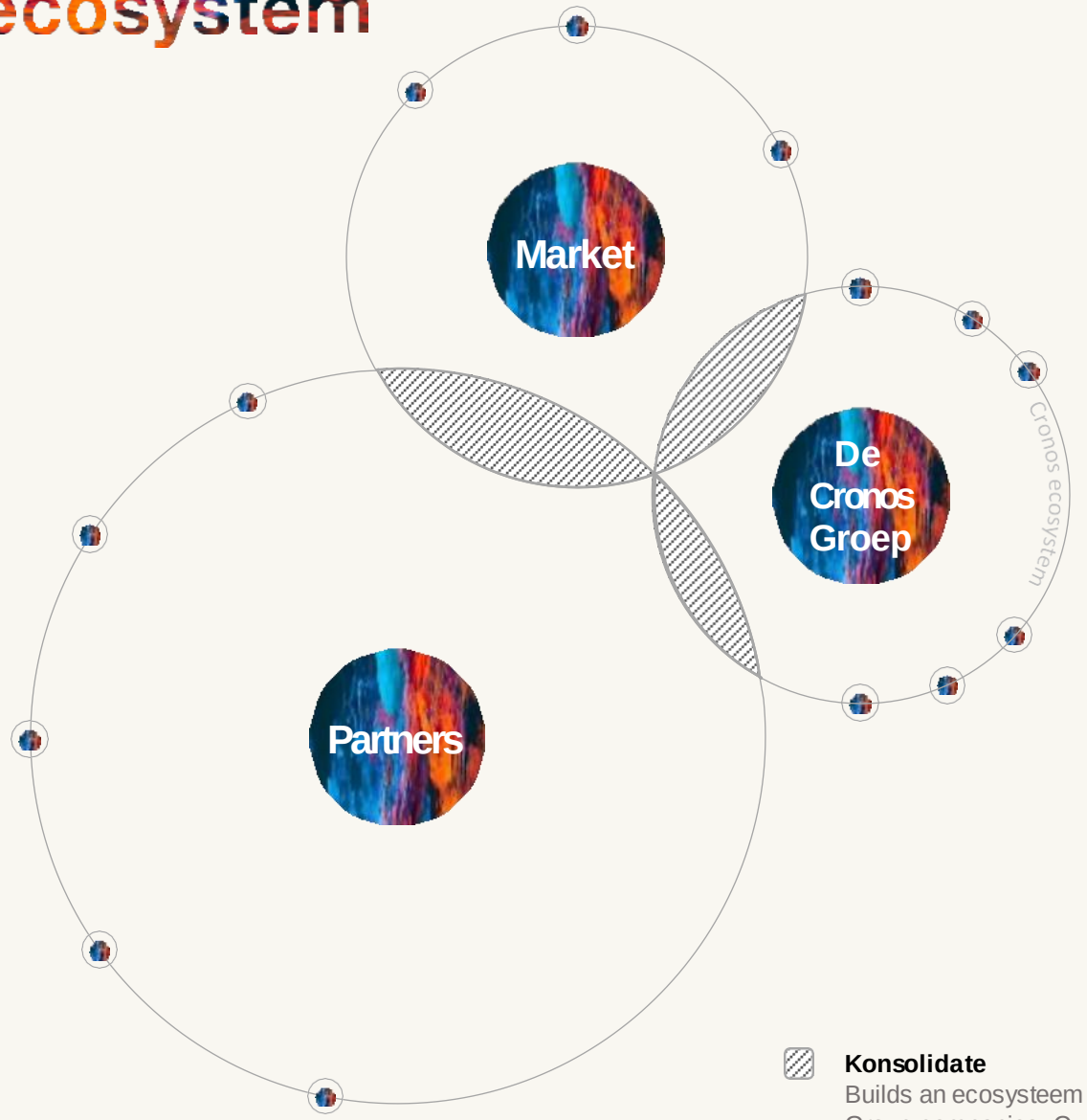
Banking & insurance — Belfius and KBC

Public — Doccle, Partena

Government — Fod BOSA, Fod Vvvl, Flanders

Retail

...



Konsolidate
Builds an ecosysteem between The Cronos Group companies, Customers & Partners

Konsolidate services

Konsolidate offers Solid consulting from A to Z

From thought leadership to scalable applications

Strategic workshops and advise of a data- driven approach

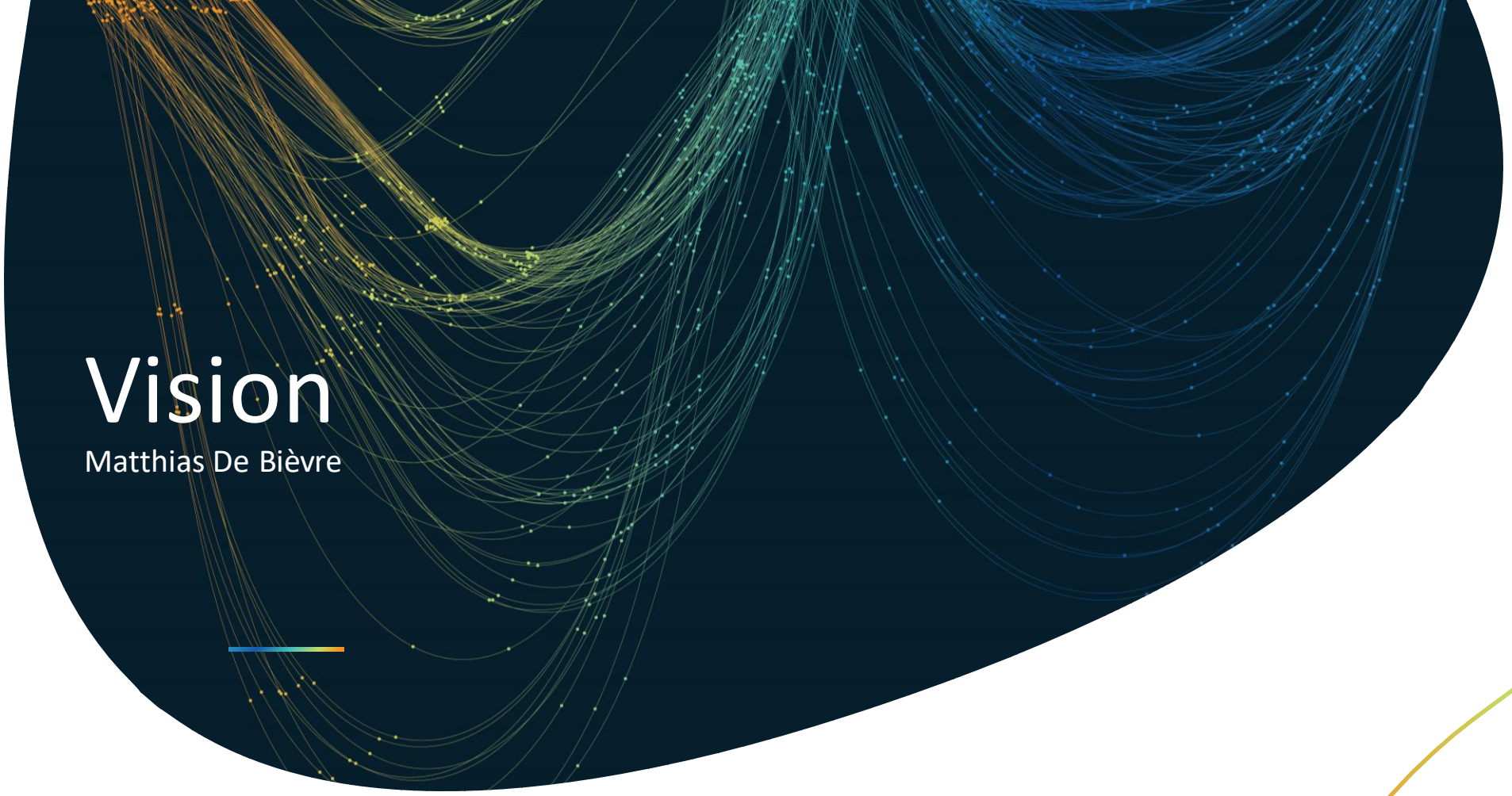
Identification of possibilities and use cases

Selection and implementation of POCs and MVPs

Selection and co-creation of ontologies

User experience, user interfaces and testing

Scalability and roll- our of business applications



Vision

Matthias De Bièvre

European Commission

VISIONS

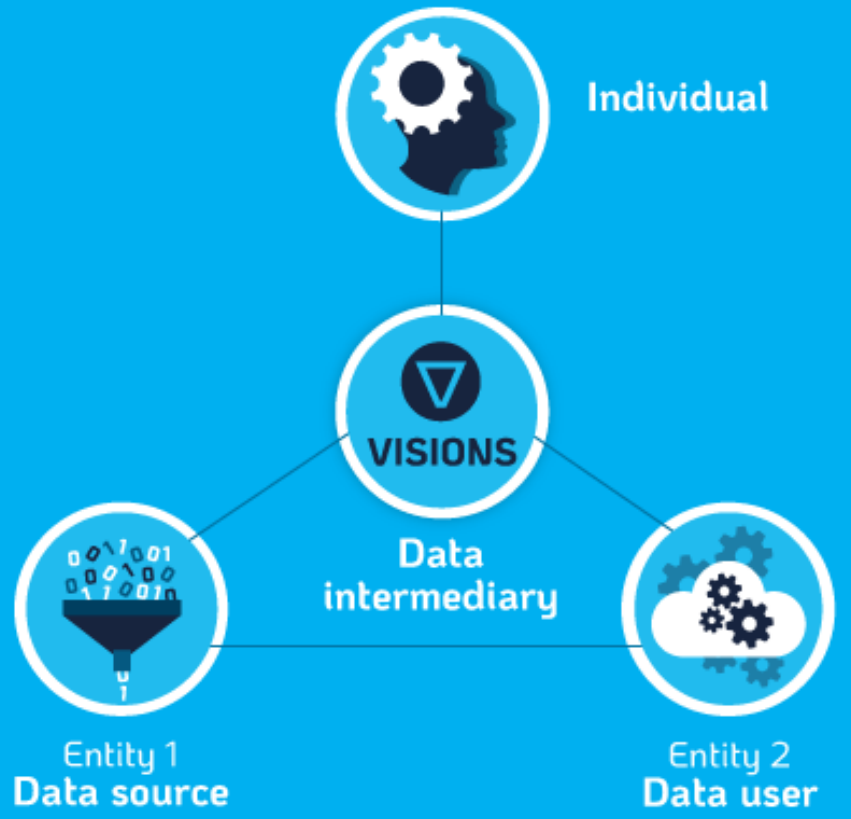
Human-Centric Data Intermediary

VISIONS - Data Intermediary

Visions architecture created in 2016

Human-centric data circulation

- ✓ Consents Dashboard
- ✓ Zero personal data stored
- ✓ **Separation of Powers Principle**
- ✓ Interoperable
- ✓ Open governance and standards
- ✓ Open and decentralized ecosystem



VISIONS

VisionsGalaxy

INDIVIDUALS (10 000)

- Uses tools
- Determines career
- Finds coaches
- Finds opportunities

COACHES & PUBLIC STRUCTURES (100)

- Find people to help
- Bring people to the ecosystem
- Have access to full profile
- Use innovative tools

EDTECH (25)

- Find users
- Get data
- Combine their services

Training orgs and employers (30)

Find people to recruit
Get more precise matchings

www.visionsgalaxy.com

dataspace.prometheus-x.org

PROMETHEUS-X

gaia-x

Public & research institutions

Universities, training organisations & employers

EdTechs

Building the skills data space with an international ecosystem

1001 Lakes

Marko Turpeinen

European Commission

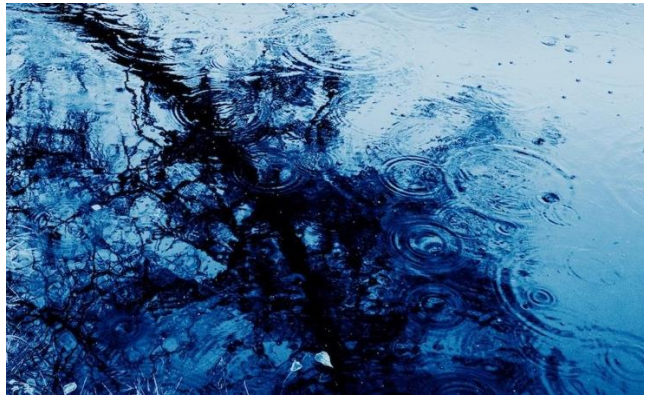
Personal Data Spaces

1001 Lakes Oy – Marko Turpeinen, CEO

1001 LAKES

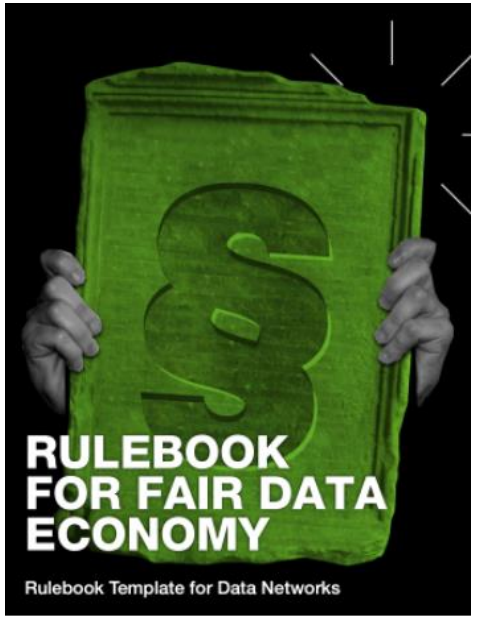
European Commission

1001 Lakes - Enabling data connectivity



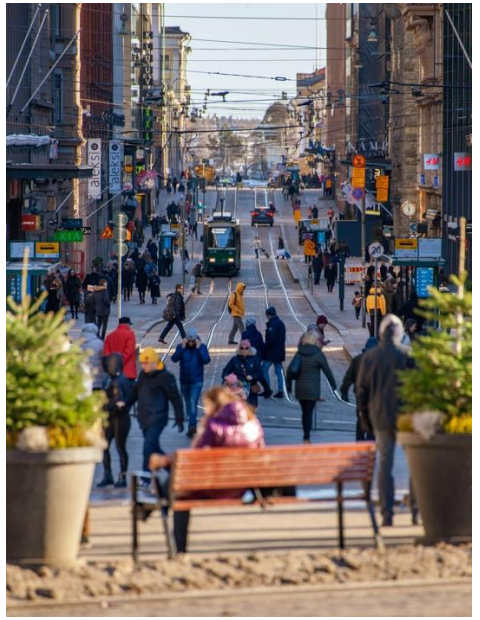
1001 Lakes was founded to facilitate data ecosystems by helping organizations to manage and share data more securely and efficiently, and to enable new insights and data-driven services benefiting everyone.

1001 Lakes collaborates actively with adesso SE.



DATA RULEBOOK

Sitra Fair Data Economy Rulebook is designed to guide forming of trust-based data sharing networks with a common mission, vision and values. 1001 Lakes is the author of the new Rulebook 2.0 version.



DATA ECOSYSTEMS

1001 Lakes Oy is focused on enabling data ecosystems and building data spaces and is a trusted advisor in data ecosystem matters across industries.

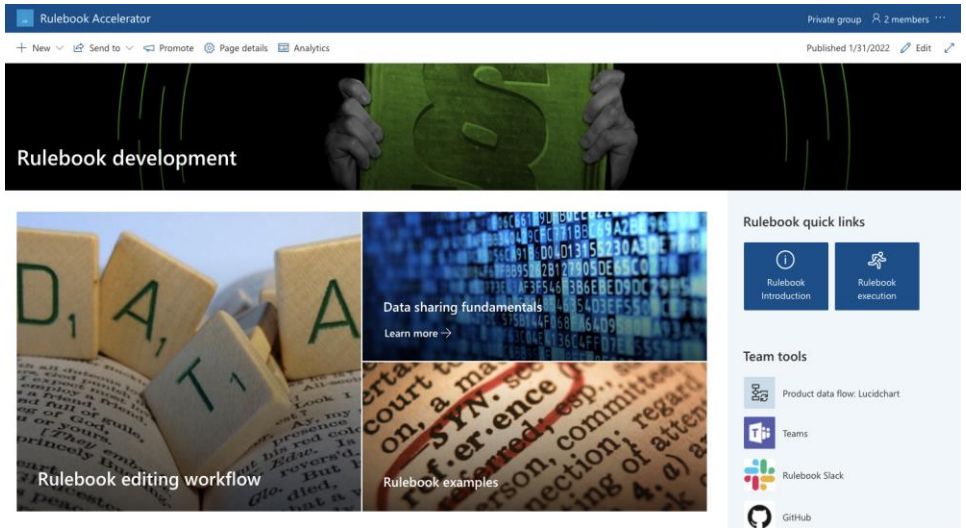
GAIA-X and IDSA

1001 Lakes is an actively contributing member for international data ecosystem & data spaces initiatives involving major global companies. For example 1001 Lakes is chairing the IDSA Rulebook Working Group.

Our Rulebook offering

We can leverage our extensive Rulebook experience to create a specific Rulebook tailored to your business needs

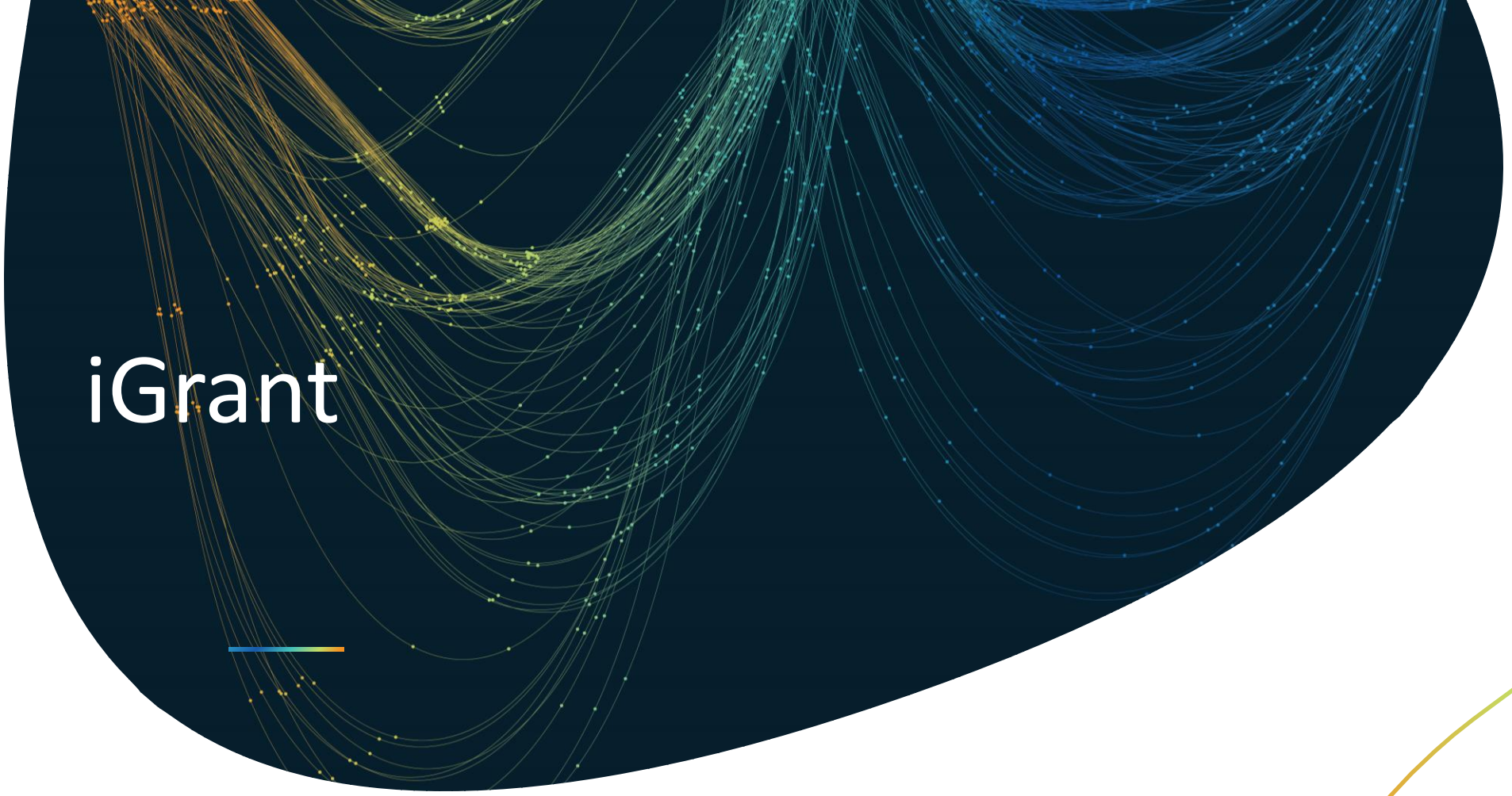
1. **Rulebook content experience**
   - How to apply the Sitra Rulebook Model
2. **Rulebook process experience**
   - How to develop a custom rulebook
3. **Rulebook development tools**



Your Custom Data Ecosystem Rulebook

BUSINESS | LEGAL | ETHICS | TECH | SECURITY

Your Data Ecosystem

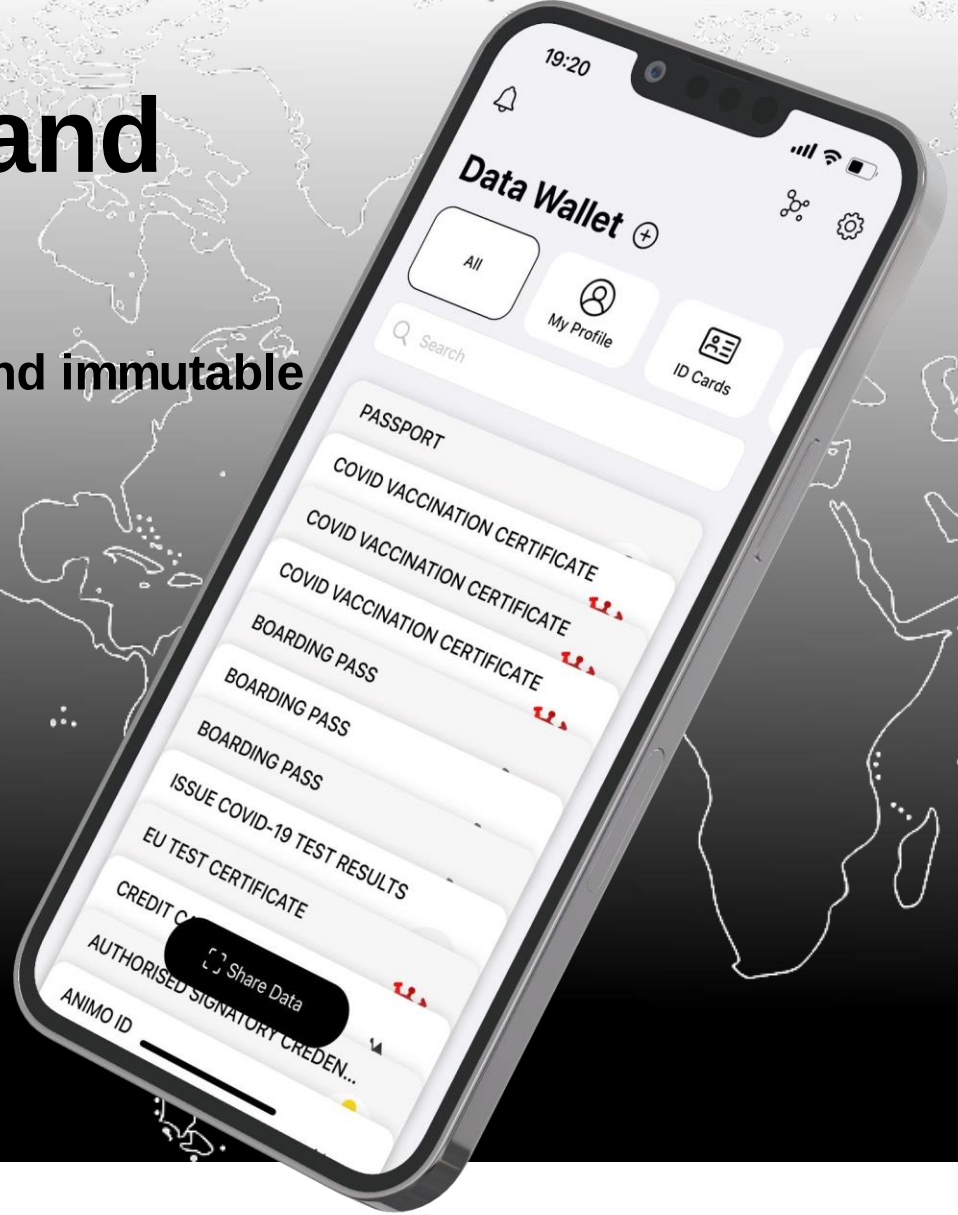


iGrant

European Commission

Consented Data Exchange and Verification Services

Making personal data transactions trustworthy, auditable and immutable

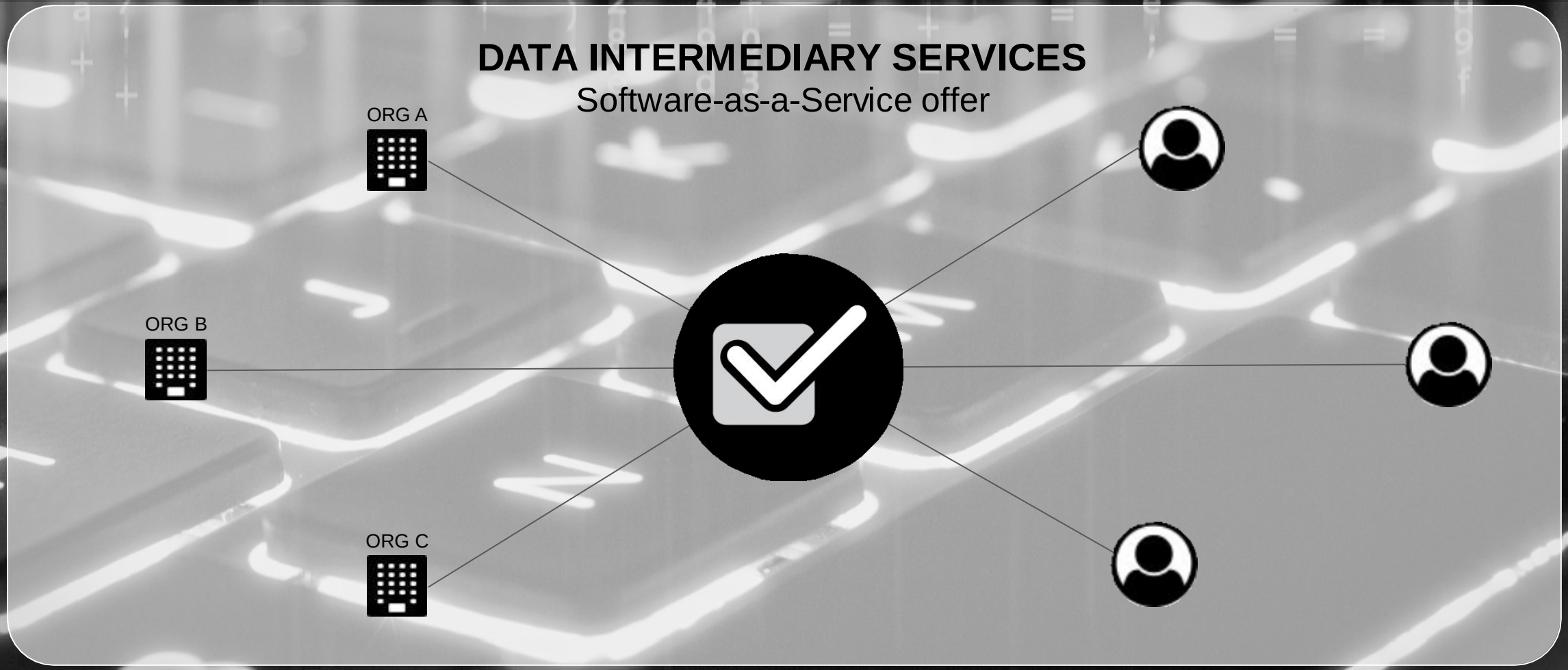


Introduction deck

MyData Operator 2022

iGrant.io®
Your data, your choice.

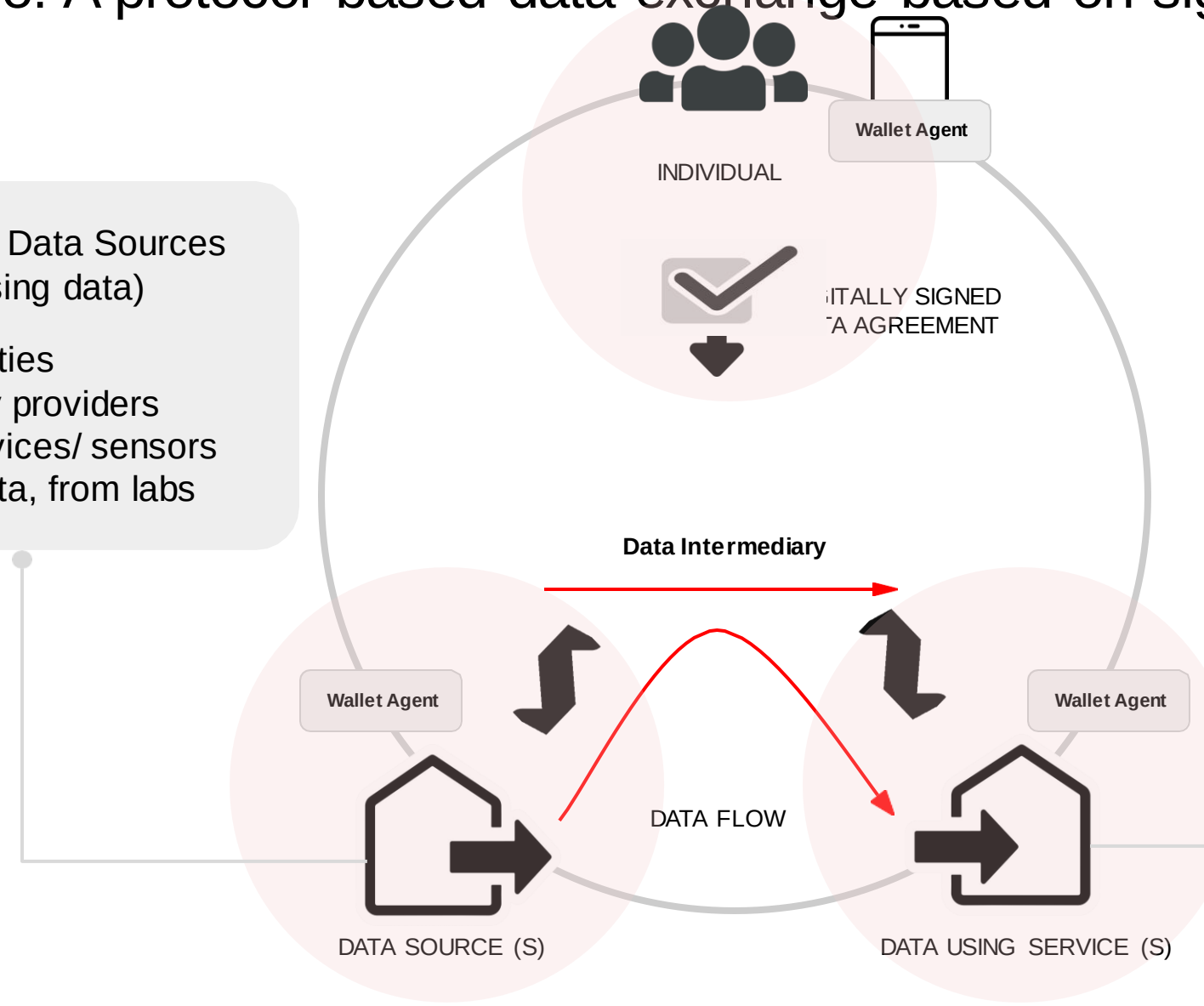
iGrant.io: Access to **right** data beyond org. boundaries



iGrant.io: A protocol based data exchange based on signed data agreements

Example of Data Sources (exposing data)

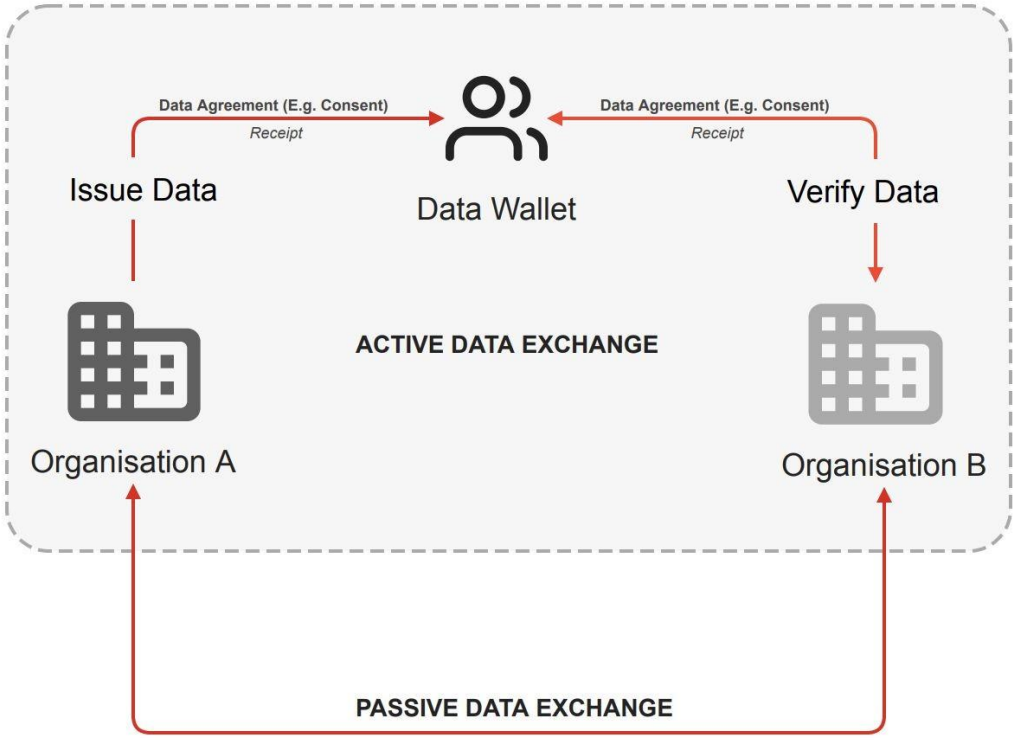
- Authorities
- Identity providers
- IoT devices/ sensors
- Any data, from labs



Data Using Services (consumes data)

- Private companies
- Research organisations
- Caregivers
- Society at large

iGrant.io platform: B2B solution offering



CONSENT MANAGEMENT

FOR REGULATORY COMPLIANCE

VERIFICATION SERVICES

FOR DATA EXCHANGE

DIGITAL WALLETS (DATA WALLET)

FOR END USER EMPOWERMENT

Data Intermediaries - powering the dataspaces

End-user Apps with embedded wallet SDKs (dApps)

A digital data marketplace

Operations & Governance

Marketplace portal

Domain specific applications (e.g. for healthcare, public sector)

Data Intermediation

Regulatory Compliance (via Data Agreement)

Data Issue and Verification

Digital Wallets

Trust Anchors (X.509 based)

Trust Anchors (Ledger/Blockchain based)

Developer Docs and APIs

iGrant.io®

Your data, your choice.

Office Address:
LCubed AB, Bössvägen 28, 192 55 Sollentuna, Stockholm, Sweden
Org nr: 559133-2720, VAT nr: SE559133272001

Understanding the business models

Panel discussion – Paul Theyskens

European Commission

Time for a

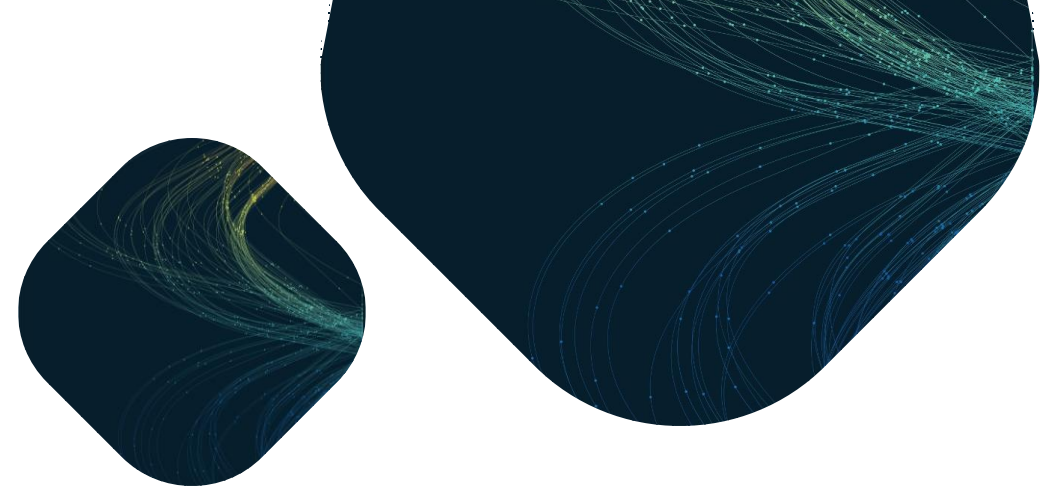
Coffee break!

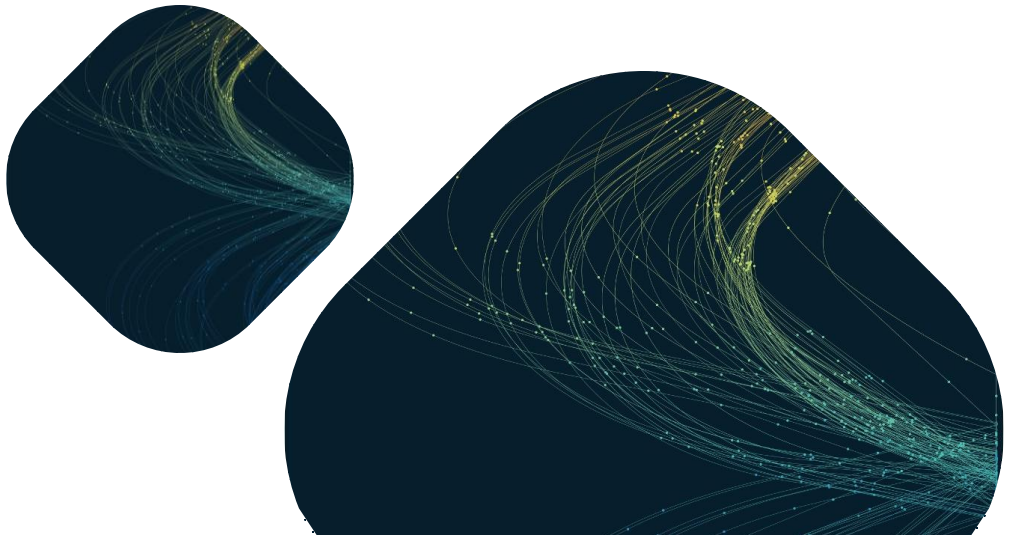
20 Minutes –
See you back at 14:50

Retrospective on the results

Viivi Lähteenoja – MyData Global & University of Helsinki

European Commission

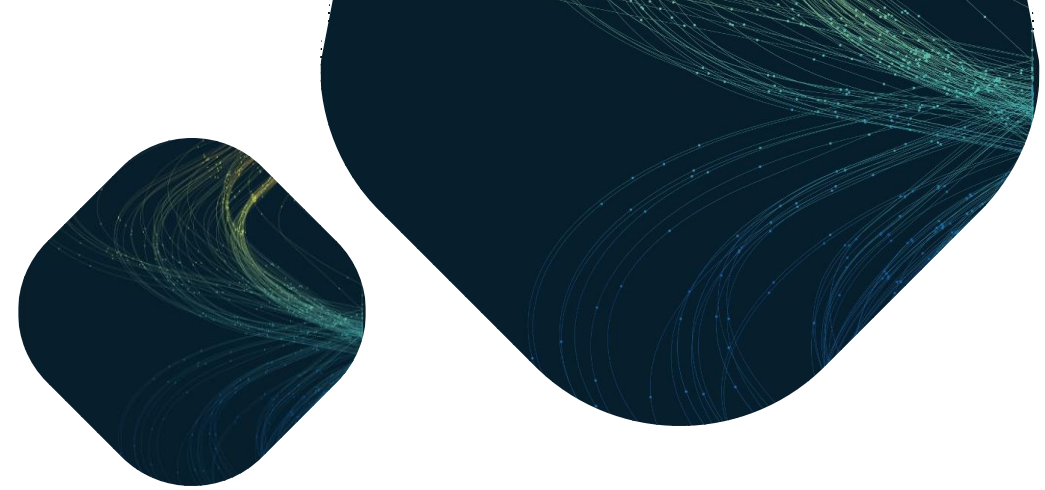


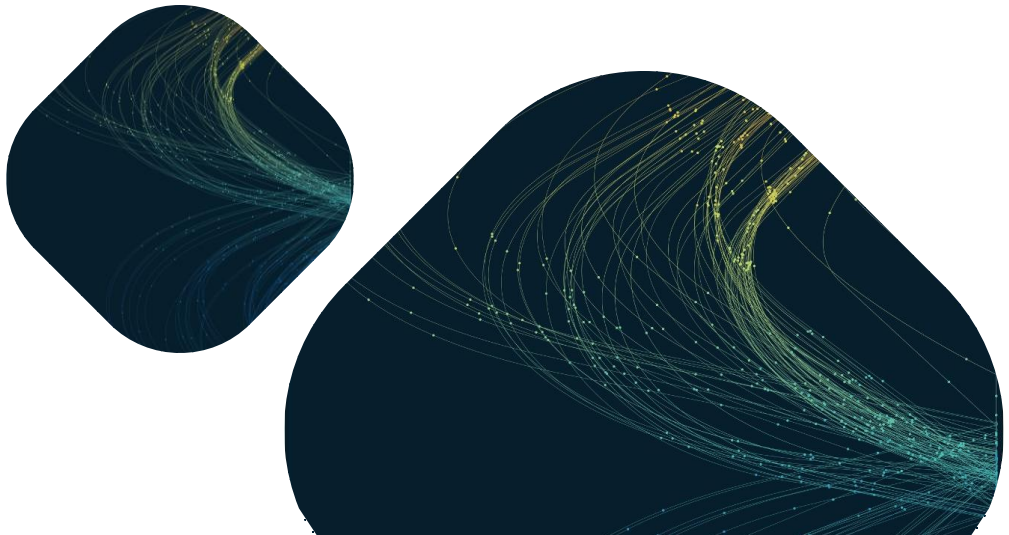


Data spaces have …

… participating organisations
… some of which can be data intermediaries

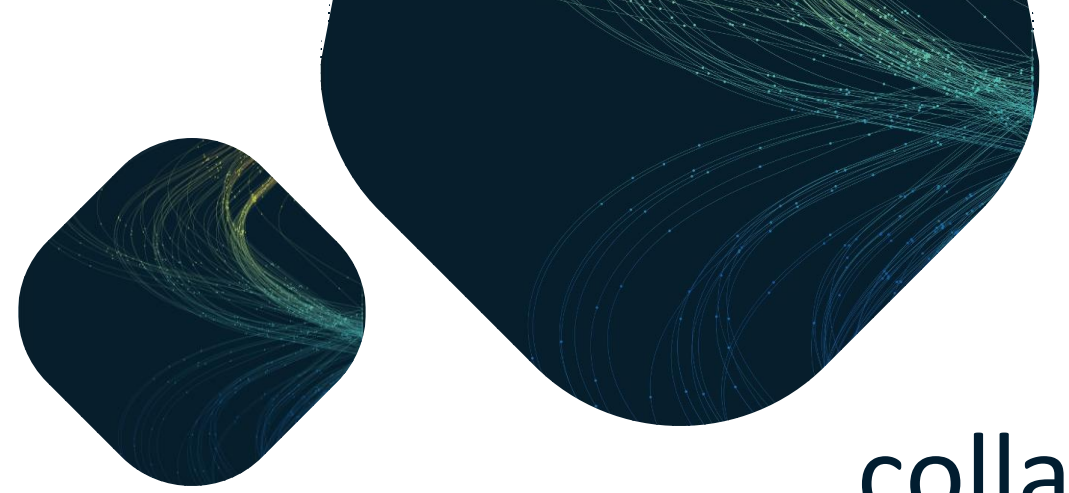
European Commission

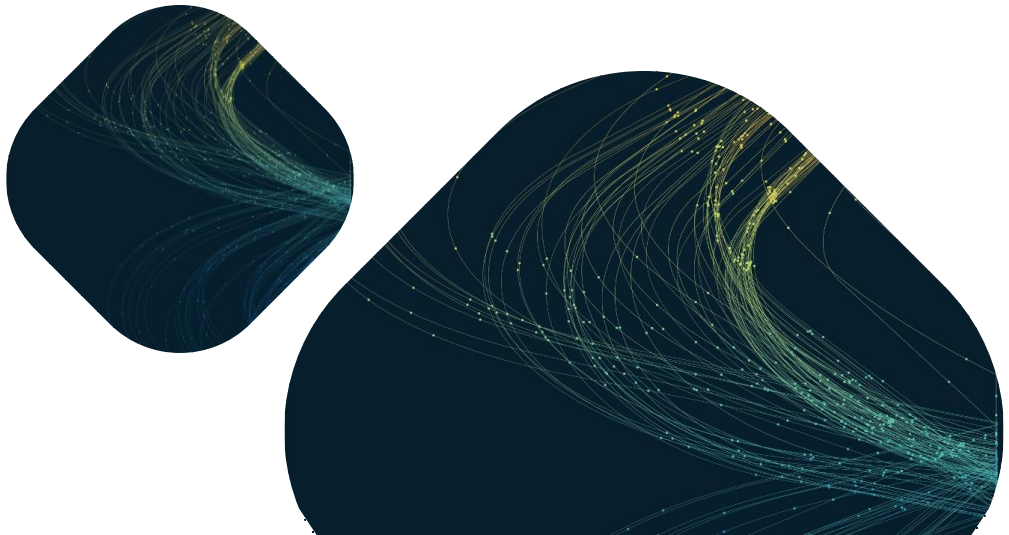




Data intermediaries can serve …

… ecosystems
… individual people





Personal data spaces are collaboration environments of interoperating organisations that include data intermediaries that provide services for individual people.

European Commission

1

The **policy and business landscape** of interoperable personal data spaces adoption and implementation: what are the key challenges for different stakeholders, public & private?

2

The **technical landscape** of personal data spaces: how can existing and potential technical approaches support addressing identified challenges in an interoperable way?

3

The co-creation of a **roadmap of future actions** as a joint work plan for the coming 5 years: what do we need to do next to promote interoperable personal data spaces?

Next workshops

Another event upcoming, the First International Workshop on Semantics in Dataspaces on April 30 / May 01, 2023. Online registrations and paper submission are open.


Thank you

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innovation ∞ govtech ∞ community

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