B2G Data Sharing:
Governing data in the public interest

28 June 2023

The New Hanse

Welcome
Jan Pörksen

The New Hanse

The New Hanse
Francesca Bria

THE NEW INSTITUTE

Our Vision

The New Hanse

Hamburg

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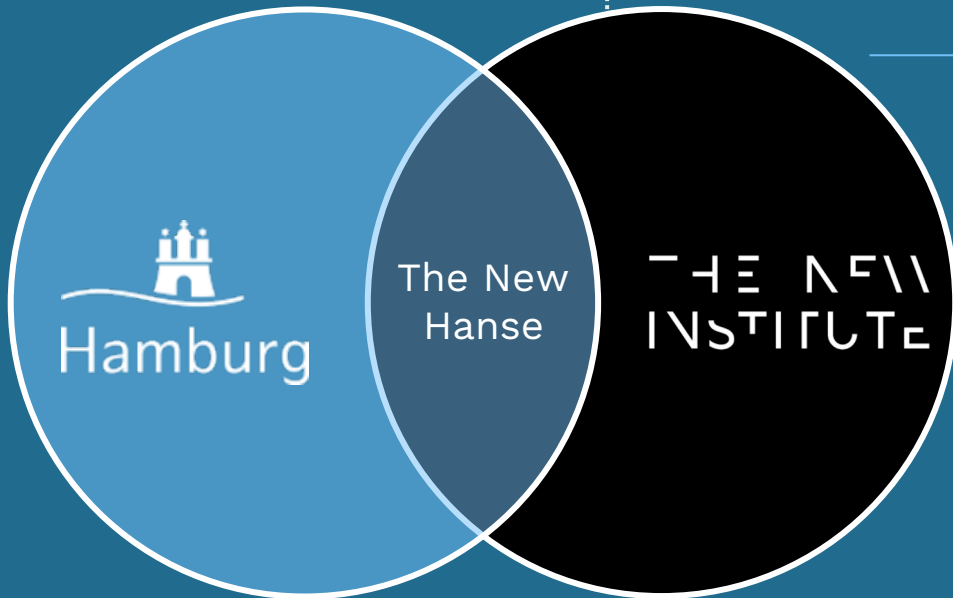
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The New Hanse is a collaborative urban innovation project exploring, testing and disseminating new data governance models for the public interest, enabling net zero policies. Headed by Jan Pörksen & Francesca Bria

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The goal is to support the City of Hamburg on its chosen path to becoming a model city for democratic digitalisation and net zero transformation

Cities are laboratories for new practices and democratic standards for data sharing that protect citizens digital sovereignty and enable the EU Green Deal.

Europe as Regulator of the Digital Age (Data, AI Act) and as Entrepreneurial State, with innovation rooted in democratic principles and values.

Hamburg

Data sharing for the public interest

We want to help cities leverage the transformative and democratic potential of data and digital infrastructures through data sharing for the public interest.

In this way, we hope to contribute to creating greener digital cities that are more inclusive, liveable and participatory.

We see data as public infrastructure, a public good that should create public value and be at the service of cities and citizens to take better decisions and actions.

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From Business to Government to Society (B2G2S): We aim to develop, test, and scale new collective, fair and democratic data management and governance models to stimulate the urban innovation ecosystem.

A win-win-win not winner-take-all: Businesses as well as governments and the citizens will benefit from a stronger data ecosystem, ensuring data protection, trust and fair competition.

A path towards progressive green digital cities: We will capture our insights in blueprints that enable cities to replicate and scale B2G2S data sharing frameworks, informing national and EU levels.
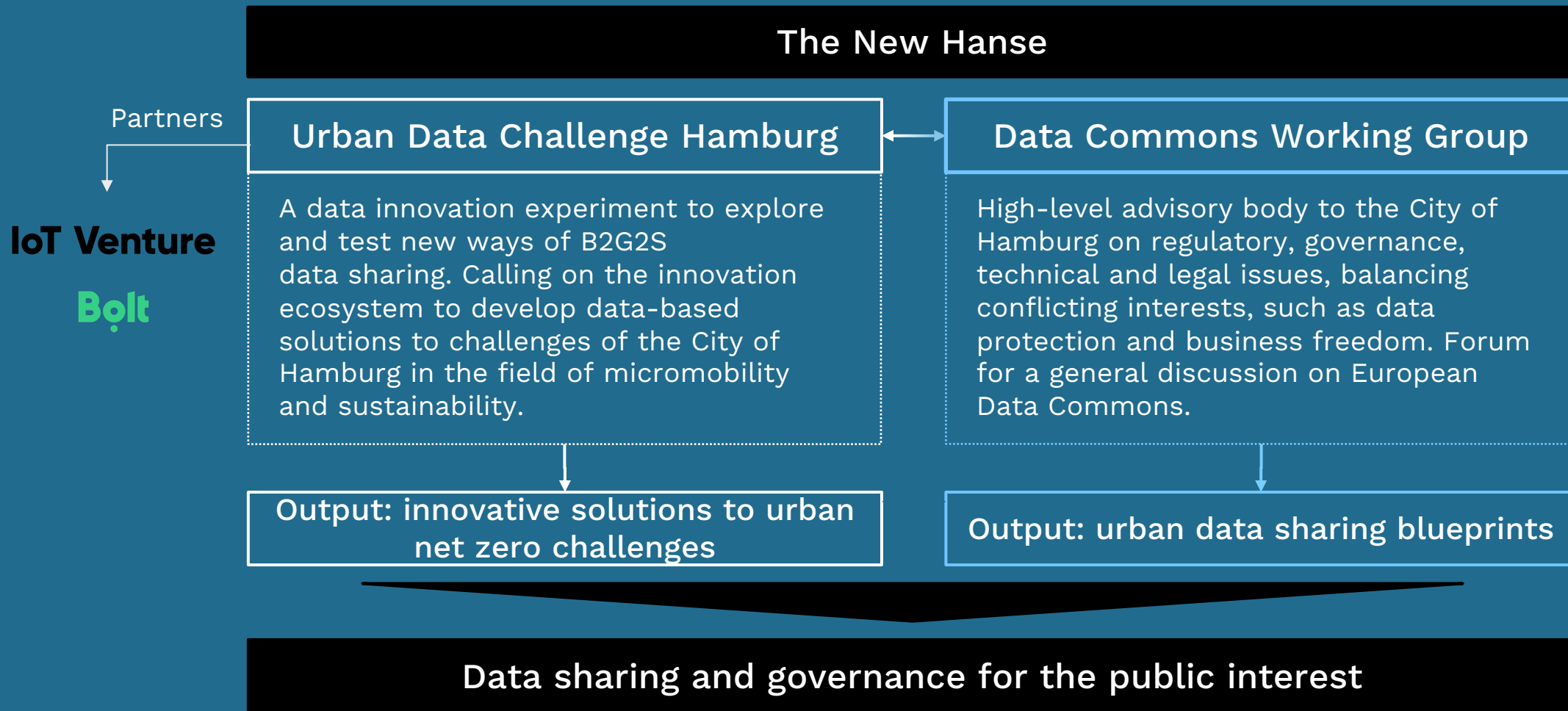
Hamburg

New models of data governance

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Our Project

The New Hanse

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Hamburg

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Partners

IoT Venture

Bolt

Urban Data Challenge Hamburg

A data innovation experiment to explore and test new ways of B2G2S data sharing. Calling on the innovation ecosystem to develop data-based solutions to challenges of the City of Hamburg in the field of micromobility and sustainability.

Data Commons Working Group

High-level advisory body to the City of Hamburg on regulatory, governance, technical and legal issues, balancing conflicting interests, such as data protection and business freedom. Forum for a general discussion on European Data Commons.

Output: innovative solutions to urban net zero challenges

Output: urban data sharing blueprints

Data sharing and governance for the public interest

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DCWG Chair & Stream Leads

Francesca Bria
Italien Innovation Fund &
The New Institute

Aline Blankertz
Wikimedia

Maximilian von Grafenstein
UdK Berlin Career College,
Einstein Center Digital
Future

Fernando Fernandez-Monge
Bloomberg Havard CIty
Leadership Initiative

Kattel Rainer
UCL London

Olegur Sagarra
Dribia Barcelona

Boris Otto
Fraunhofer ISST

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Thank you!

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DG CONNECT:
Data governance for the public interest
Javier Orozco-Messana

Hamburg

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Governing data in the public interest
EU Smart Cities and Communities

Business-to-Government Data Sharing

The new Hanse project

Javier Orozco, DG CNECT

Unit C3 Technologies for smart communities

28th June 2023

Digital Europe Program

- Reinforcing trust: certification
- Data discoverability and reuse: HVDSs
- Sectorial approach: role for Smart Communities
- Digital EU infrastructures:
  - Cloud based delivery
  - EU Data Spaces
  - Federation of data and services
- EU principles:
  - Data altruism
  - Transparent governance
  - Once only approach
  - Value creation

European Commission

| Low-trust data sharing | Data for common good | Technical obstacles |

Limited data sharing despite economic and social potential

| Breaking data market control | Unlocking value from data | Cross-border data driven innovation | Avoiding vendor lock-in | Dominant market actor's power |

- B2G, B2C and B2B data sharing
- Data-holders' obligations
- Unfair terms prohibited
- Portability
- Standards setting

Speed
Visibility
EU market
Innovative services
Business centered
Flexibility
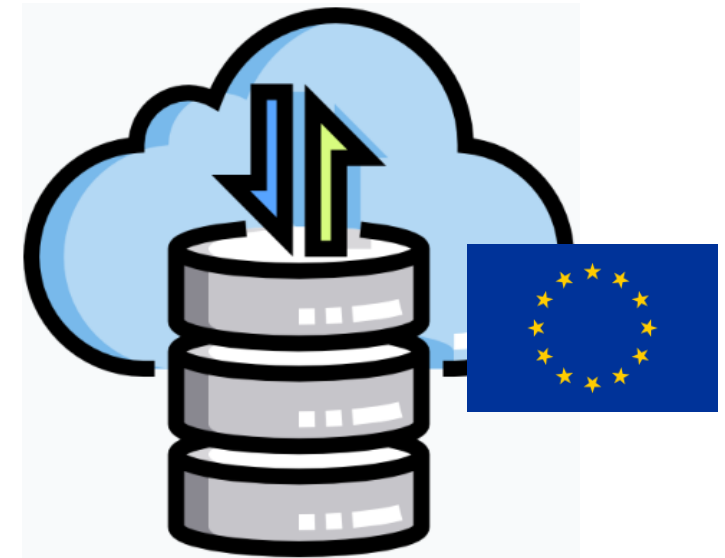Efficiency
Time to market
Escalability
Cost-sharing
Market driven innovation

European Commission

Categories for High value Datasets:

- *Geospatial*
- *Earth observation and environment*
- *Meteorological*
- *Statistics*
- *Private Companies and ownership,*
- *Mobility*

Requirements for HVDs:
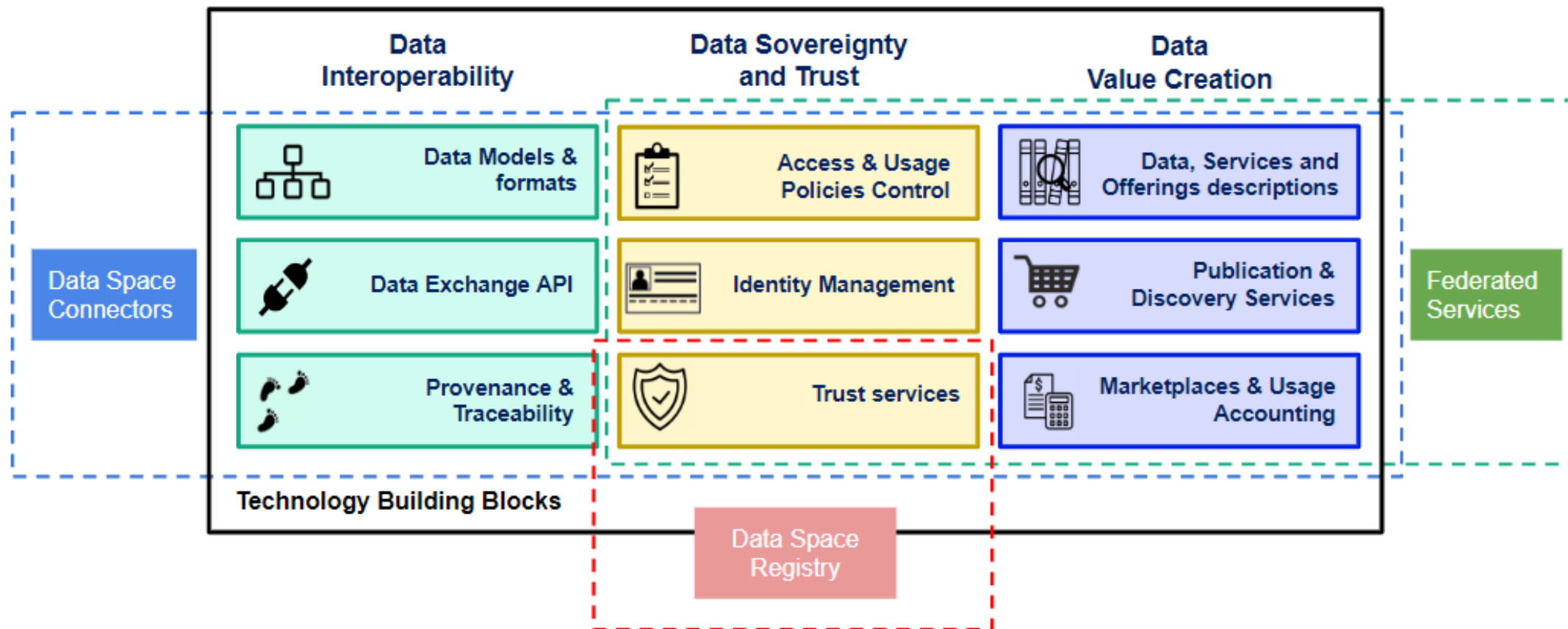
- *Available free of charge*
- *Machine readable*
- *Provided via APIs. For bulk download, where relevant*
- *Provisions for publication and re-use compatible with open data licenses*

https://op.europa.eu/en/publication-detail/-/publication/6aa0e08c-d0d9-11ea-adf7-01aa75ed71a1/language-en
https://op.europa.eu/en/publication-detail/-/publication/5b20f52a-db7e-11ea-adf7-01aa75ed71a1/language-en

THE EUROPEAN DATA STRATEGY

European Commission

Data Interoperability	Data Sovereignty and Trust	Data Value Creation
Data Models & formats	Access & Usage Policies Control	Data, Services and Offerings descriptions
Data Exchange API	Identity Management	Publication & Discovery Services
Provenance & Traceability	Trust services	Marketplaces & Usage Accounting

Data Space Connectors

Federated Services

Technology Building Blocks

Data Space Registry

Smart Middleware Platform

1 pilot on DS Smart Communities

Resilience
SMP's architecture components must be fault tolerant, so that failures have minimal impact

Discoverability
All services provided by the SMP must be publicly exposed and discoverable in a service registry or catalogue

Security, privacy & trust
The SMP must provide a secure and trustworthy environment while complying with relevant regulations

Scalability & elasticity
The SMP must provide means to accommodate larger workloads and assure correct resource pooling & allocation while allowing new entities and users without impacting performance

Interoperability
The SMP must ensure that all participants will be able to interact with each other and exchange data and resources in a well-specified way.

Federation
SMP will serve as a federation of both data and infrastructure, enabling interoperability and decentralization

Modularity
The SMP architecture must be defined in a modular way and with open-source technologies

Loose coupling
The implemented components should be loosely coupled to minimize dependencies between them

Openness and agnosticism
SMP's components must be designed following open specifications and standards and implemented using open-source technologies

Composability & extensibility
The SMP architecture must allow for open to iterative growth while allowing the addition of new services and capabilities

ARCHITECTURE PRINCIPLES

Architecture principles

LDT toolbox

The following objectives correspond to the services procured:

1. Map EU-based technology providers and users active in the development and/or deployment of components of (local) digital twins (LDT).

2. Identify and collect performance requirements to form a complete and consistent set of technical requirements for the LDT toolbox.

3. Propose and validate the concept design for the LDT toolbox and the deployment scenarios.

4. Draft the detailed technical specifications and composition of the LDT toolbox based on the best deployment scenario.

5. Propose and validate a plan and a roadmap for the large-scale adoption of the LDT toolbox across the EU.

Architecture principles

CitiVERSE

- Exploit the long tradition of EU in cultural and media content

- Implement CitiVerse prototypes

- Leverage the latest EU technology providers

- Propose legal framework for a robust, open and interoperable CitiVerse

https://digital-strategy.ec.europa.eu/en/events/info-day-developing-citiverse

THE EUROPEAN
DATA STRATEGY

European
Commission

Innovative Massive Public Administration inter-Connected Transformation Services

European Cybersecurity Skills Academy

SKILLS

Language technologies

GOVERNMENT

INFRASTRUCTURES

European Blockchain Partnership

Copyright Infrastructure

Mobility and Logistics Data

Human genome

BUSINESS

Networked Local Digital Twins Towards CitiVerse

European
Commission

EDIC Networked Local Digital Twins

- European Digital Infrastructure Consortium (EDIC): Non-benefit public entity established by EU member states recognized by EU law for:
  - Receiving direct public funding, digital content, and physical infrastructures from the European Commission for its management and exploitation
  - Shaping and implementing EU policy

- Possible benefits:
  - Taxation benefits as a non-profit public entity
  - Joint investment to address digital infrastructure investments collaboratively
  - Shared maintenance and update costs of joint infrastructures and resources
  - Enabling big-buyers benefits through commercial agreements and joint procurements.
  - European data utilities and services company for smart cities and communities

- Built-in sustainability mechanisms:
  - Shared risks
  - Benefits reinvestment
  - Market leader
  - High trust certification and capacity building

Thank you!

European Parliament Think Tank - Artificial Intelligence and Urban Development (fresh from the print):

https://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL_STU(2021)690882

Does a Universal Data Sharing Law solve the value for risk dilemma in data sharing?

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Main challenges

Regulatory dimension

Process dimension

Technological dimension

Data contributor

Data recipient

Data subject
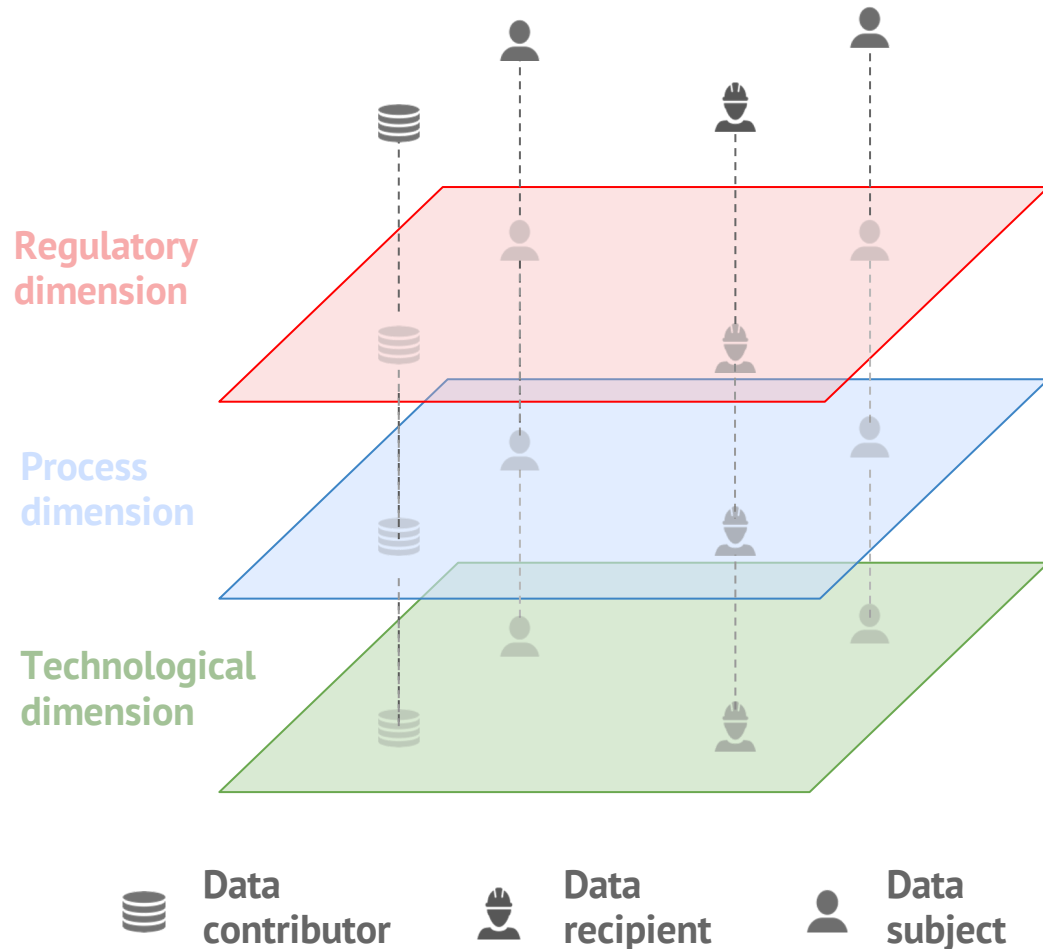
- Many different laws (often conflicting each other) are applicable to the sharing of data according to the type of actors involved, their data in question and the respective data usage purposes

- Regulatory, technical and organisational/business aspects are tightly interwoven → **too complex, too burdensome (too high compliance risks/costs)**

- Dynamic assessment, since these aspects constantly change according to new data usages

Basic approaches for data sharing

Voluntary
data sharing

Mandatory
data sharing
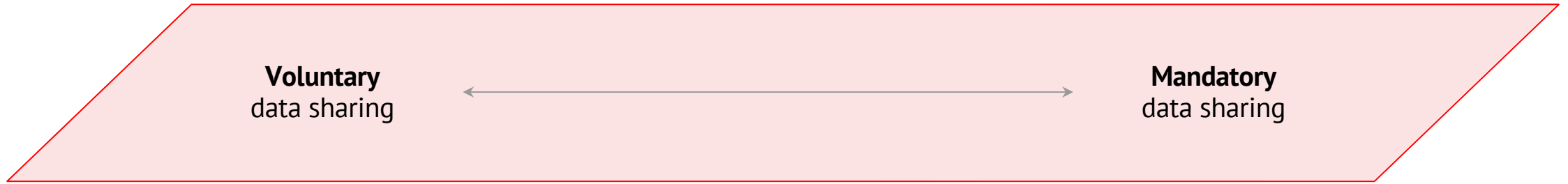
Voluntary approach: When is data sharing worthwhile?

Voluntary
data sharing

| Value of data (use) | > | Risk of data (use) | + | Costs of |

Voluntary approach: Here comes the problem

Voluntary
data sharing

Value of data (use)

?

>

Risk of data (use)

+

Costs of

Voluntary approach: Here comes the problem

Voluntary
data sharing

Value of data (use)		Risk of data (use)		Costs of
?	**>**	- **Data protection** - **Trade secrets** - **IT security**	**+**	

Voluntary approach: Here comes the problem

Voluntary
data sharing

Value of data (use)		Risk of data (use)		Costs of
?	**>**	- **Data protection** - **Trade secrets** - **IT security**	**+**	- **exploiting the value** - **minimising the risks**

Voluntary approach: Here comes the problem

Voluntary
data sharing

Value of data (use)

?

<

Risk of data (use)

- **Data protection**
- **Trade secrets**
- **IT security**

+

Costs of

- **exploiting the value**
- **minimising the risks**

Voluntary approach: So, what would it take to get data shared?

Voluntary
data sharing

Value of data (use)		Risk of data (use)		Costs of
?	<	- Data protection - Trade secrets - IT security	+	- exploiting the value - minimising the risks

Voluntary approach: So, what would it take to get data shared?

Voluntary
data sharing

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Voluntary
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+

Costs of

- **exploiting the value**
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Voluntary approach: How to specify and increase the value?

Voluntary approach: How to specify and increase the value?

Voluntary
data sharing

Value of data (use)		Value for data user		Sharing with holder
?	**=**	**?**	**+**	

Voluntary approach: How to specify and increase the value?

Voluntary
data sharing

Value of data (use)	=	Value for data user	+	Sharing with holder
?		**?**		- **a market price !**

Voluntary approach: How to specify and increase the value?

Voluntary
data sharing

Value of data (use)		Value for data user		Sharing with holder
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Voluntary approach: How to specify and increase the value?

Voluntary
data sharing

Value of data (use)

?

=

Value for data user

?

+

Sharing with holder

- **a market ?**

Voluntary approach: How to specify and increase the value?

Voluntary
data sharing

Value of data (use)		Value for data user		Sharing with holder
?	**=**	**?**	**+**	- **a market ?**

compliance risks may be too high

Voluntary approach: How to specify and increase the value?

Voluntary
data sharing

Value of data (use)

?

=

Value for data user

?

+

Sharing with holder

- Services for free
- Quid pro quo-sharing
- Moral satisfaction

Voluntary approach: How to specify and increase the value?

Voluntary
data sharing

Value of data (use)

?
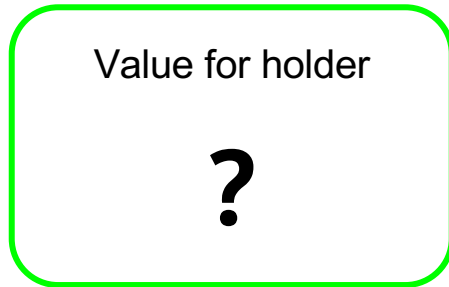
=

Value for data user

?

+

Sharing with holder

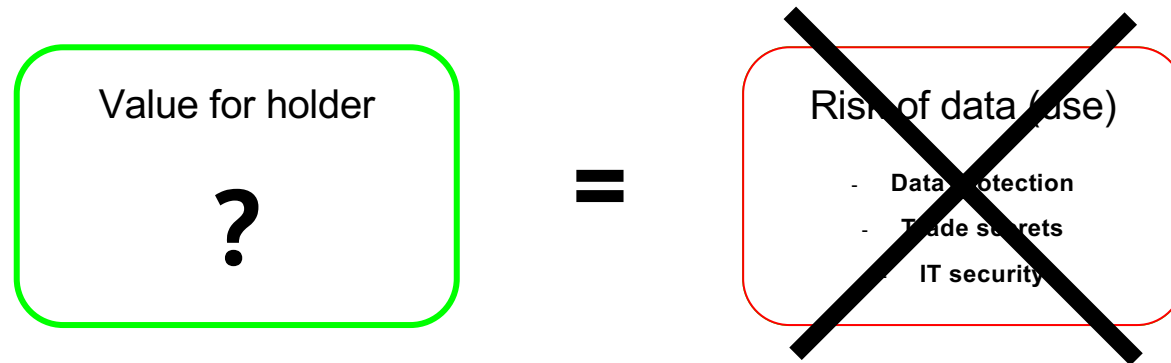- Services for free
- Quid pro quo-sharing
- Moral satisfaction

solutions may remain in niches

Let's wait a second: Why should value be shared with data holder?

Value for holder

?

=

Let's wait a second: Why should value be shared with data holder?

Value for holder

?

=

Risk of data (use)

- Data protection
- Trade secrets
- IT security

Let's wait a second: Why should value be shared with data holder?

Value for holder

?

=

Risk of data (use)
- Data protection
- Trade secrets
- IT security

+

Costs of
- exploiting the value
- minimising the risks

Let's wait a second: Couldn't be "no-risk and no-cost data" be a common?

Data as a Common = Risk of data (use)
- Data protection
- Trade secrets
- IT security

+ Costs of
- exploiting the value
- minimising the risks

Let's wait a second: Couldn't be "no-risk and no-cost data" be a common?

Factual control of data holder → **Mandatory** data sharing

Data as a Common = ~~Risk of data (use)~~
- ~~Data protection~~
- ~~Trade secrets~~
- ~~IT security~~

+ ~~Costs of~~
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- ~~minimising the risks~~

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Factual control of data holder → **Mandatory** data sharing

Data as a Common = Risk of data (use)
- Data protection
- Trade secrets
- IT security

+ Costs of
- exploiting the value
- minimising the risks

at least **for data generated through the use of public infrastructures** (e.g. through the use of public roads or public funds)

and **in favour of public authorities acting in the public interests** (B-G)

Data sharing laws: what are the legal and political requirements?
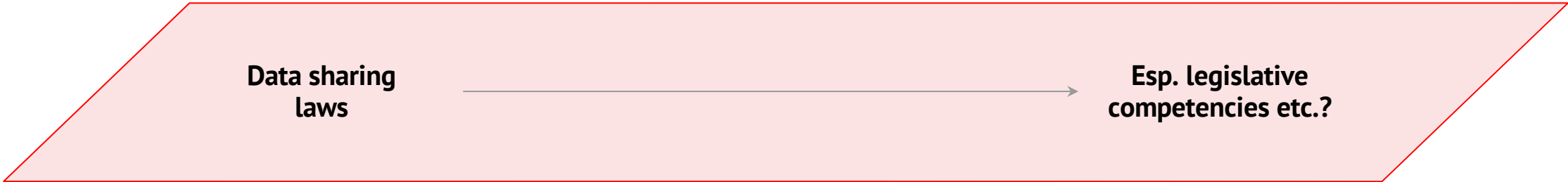
Data sharing laws → **Esp. legislative competencies etc.?**

Data as a Common = Risk of data (use) + Costs of

- Data protection
- Trade secrets
- IT security

- exploiting the value
- minimising the risks

at least for

data generated through the use of public infrastructures

(e.g. through the use of public roads or public funds)

B2G Data Sharing for the public interest: what are the legal and political requirements?

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Food and drinks!

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