



**Smart Cities Marketplace Initiative within the Citizen Focus Action
“Citizen Control of Personal Data” 2nd Workshop**

Emerging models for the governance of personal data

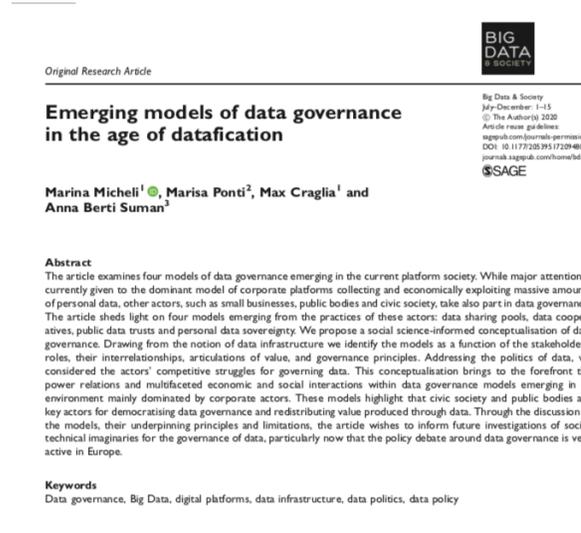
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Digitranscope project: Data governance

Research on emerging approaches for personal data sharing to identify **alternative data governance models**.

- Heuristic tool: Systematize current data practices through a “social science informed” definition of data governance.
- European data policy: Contribute informing policy for a fairer data economy.



The European Strategy for Data

Overview of data actions

[D] What data are we talking about?

[H] Who holds such data?

[A] What policy intervention?

Q4 20
Data
governance
Act

Good governance of data cannot wait

[D] Data voluntarily made available by data holders

[H] Public sector, business, individuals, researchers

[A] Make such data easier to share in a controlled manner (technical, legal and with organisational support); Build trust in data sharing; Ensure data interoperability across sectors

Q4 20
Digital Market
Act

Data: a key element of Big Tech's market power

[D] Data held by online platforms originating from the users (both businesses and individuals)

[H] Online platforms

[A] Among other policy options, identify appropriate data access and data portability remedies

Q1 21
Implementing
Act under
Open Data
Directive

High quality government data for SMEs & innovation

[D] 'High value' Open Government Data (core reference data)

[H] Public sector

[A] Make such data available for re-use free of charge

Q3 2021
Data Act

Better access to and control over data for a fair data economy

[D] Co-generated, IoT data from industry and individuals, Big Data sources held by business

[H] Business

[A] Ensure flexible use of Big Data sources by government for the common good; Establish fairness in use of co-generated, IoT data; Make sure that Europeans stay in control over their data vis-à-vis third country jurisdictions; Examine IPR legislation for possible obstacles

Data governance: a ‘social-science informed’ definition

The power **relations between actors** affected by, or having an effect on, the **way data is accessed, controlled, shared and used**, the various socio-technical arrangements set in place to **generate value** from data, and how such value is redistributed between actors”.



Data governance: analytical dimensions

Dimension	Definition
Stakeholders	The individuals, institutions, organisations or groups who are affected by, or have an effect on, the way data is governed and the value created.
Governance goals	The objectives held by actors who influence how data is governed.
Value from the data	The resources expected to be generated from the use of data and how these are distributed among actors and across society.
Governance mechanisms	The different instruments adopted to achieve specific governance goals, including the underlying principles.
Reciprocity	The power relation between stakeholders for data access and use.

Data governance: four emerging models

Table 2. Summary of data governance models.

Model	Key actors	Goals	Value	Mechanisms
Data sharing pools (DSPs)	<ul style="list-style-type: none"> • Business entities • Public bodies 	<ul style="list-style-type: none"> • Fill knowledge gaps through data sharing • Innovate and develop new services 	<ul style="list-style-type: none"> • Private profit • Economic growth 	<ul style="list-style-type: none"> • Principle of 'data as a commodity' • Partnerships • Contracts (e.g. repeatable frameworks)
Data cooperatives (DCs)	<ul style="list-style-type: none"> • Civic organisations • Data subjects 	<ul style="list-style-type: none"> • Rebalance power unbalances of the current data economy • Address societal challenges • Foster social justice and fairer conditions for value production 	<ul style="list-style-type: none"> • Public interest • Scientific research • Empowered data subjects 	<ul style="list-style-type: none"> • Principles from the cooperative movement • Data commons • 'Bottom-up' data trusts • GDPR Right to data portability
Public data trusts (PDTs)	<ul style="list-style-type: none"> • Public bodies 	<ul style="list-style-type: none"> • Inform policy-making • Address societal challenges • Innovate • Adopt a responsible approach to data 	<ul style="list-style-type: none"> • Public interest • More efficient public service delivery 	<ul style="list-style-type: none"> • Principle of 'data as a public infrastructure' • Trust building initiatives • Trusted intermediaries • Enabling legal framework
Personal data sovereignty (PDS)	<ul style="list-style-type: none"> • Business entities • Data subjects 	<ul style="list-style-type: none"> • Data subjects self-determination • Rebalance power unbalances of the current data economy • Develop new digital services centred on users need 	<ul style="list-style-type: none"> • Empowered data subjects • Economic growth • Private profit • Knowledge 	<ul style="list-style-type: none"> • Principle of 'technological sovereignty' • Communities and movements (e.g. MyData) • Intermediary digital services (personal data spaces) • GDPR Right to data portability

“Data sharing pools”

Stakeholder relations: horizontal joint initiatives among data holders to aggregate data from different sources to create more value through their combination.

Value: data-driven innovation, new services, and economic benefits for all the parties involved.

Main limitations: dominant actors, data subjects do not have a voice.



CONNECTED CITIZENS
by waze

The Waze Connected Citizens Program is a free, two-way data exchange empowering municipal decisions to achieve concrete community impact. Launched in October 2014 with 10 city partners, the program has expanded to 100 partners including city, state and country government agencies, nonprofits and first responders.

WAZE provides real-time, anonymous, proprietary incident and slow-down information directly from the source: drivers themselves

PARTNERS provide real-time and advance information on government-reported construction, crash and road closure data

The infographic features a blue background with a white line-art logo of a city skyline. At the bottom, there are several circular icons representing different data sources: a car, a construction barrier, a car crash, and a person. Arrows indicate the flow of data between these sources and the central program.

Example: Waze Connected Citizens Program

“Data cooperatives”

Stakeholder relations: data subjects voluntarily pool their data together, establishing a relationship of trust with a cooperative, keeping control over data and how it is managed and put to value.

Value: benefits for the members, public interest and social change (human rights, environmental causes or medical research).

Main limitations: niche initiatives, scaling up, financial sustainability.



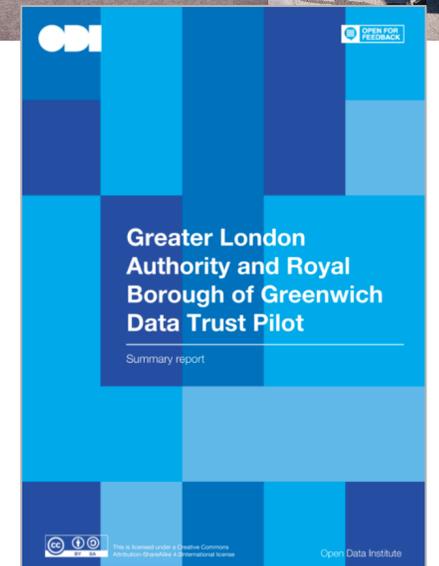
Example: Salus.Coop

“Public data trusts”

Stakeholder relations: a public actor establishes a relationship of trust with citizens and manages their data rights on their behalf pursuing the public interest.

Value: better public services, public interest.

Main limitations: pilots, incentives, trust-building mechanisms, data awareness.



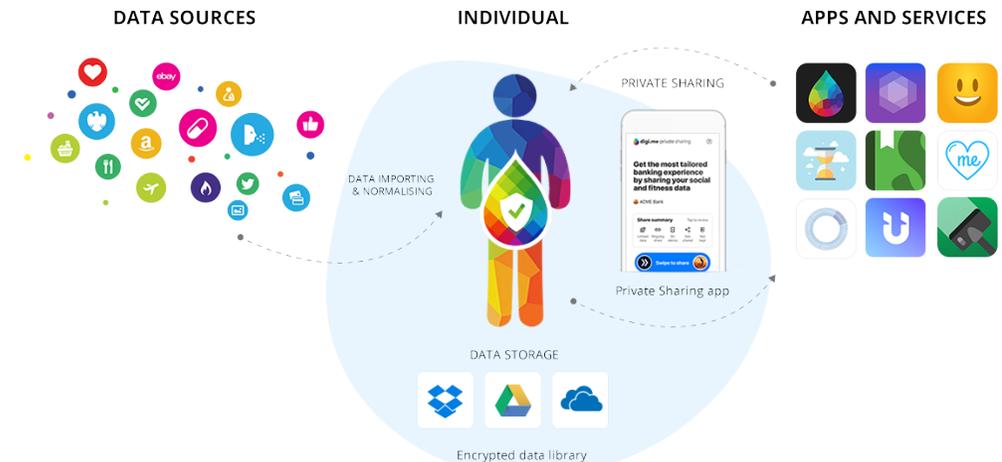
Example: City of London and Open Data Institute

“Personal data sovereignty”

Stakeholder relations: data subjects gain control of their personal data by choosing among ad-hoc digital services that allow them to manage, use and share their personal data.

Value: data subjects’ self-determination, knowledge, economic growth.

Main limitations: personal data spaces business models, network effects, data awareness.



Personal Data Spaces such as Digi.me

Alternative data governance models

Horizontal collaborations, but only among data holders.

DATA SHARING POOLS



A cooperative allows data subjects to collect, aggregate and collectively manage their data for the public interest.

DATA COOPERATIVES



Public bodies act on behalf of citizens and use data to inform policy-making and address societal challenges.

PUBLIC DATA TRUSTS



Digital services allow data subjects to use their personal data for other purposes.

PERSONAL DATA SOVEREIGNTY



Conclusions

1. There is **no “one size fits all”** data governance model.
2. The use cases are in their **early stages** (pilots, niche initiatives, etc.).
3. The models have an **heuristic** value: they support for empirical research and stimulate discussion on **desirable** futures for data societies.
4. Upcoming **policy interventions** will be decisive especially if informed by **lessons learned** from current practices of civic society and public bodies.

Thank you

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