Data Spaces Symposium

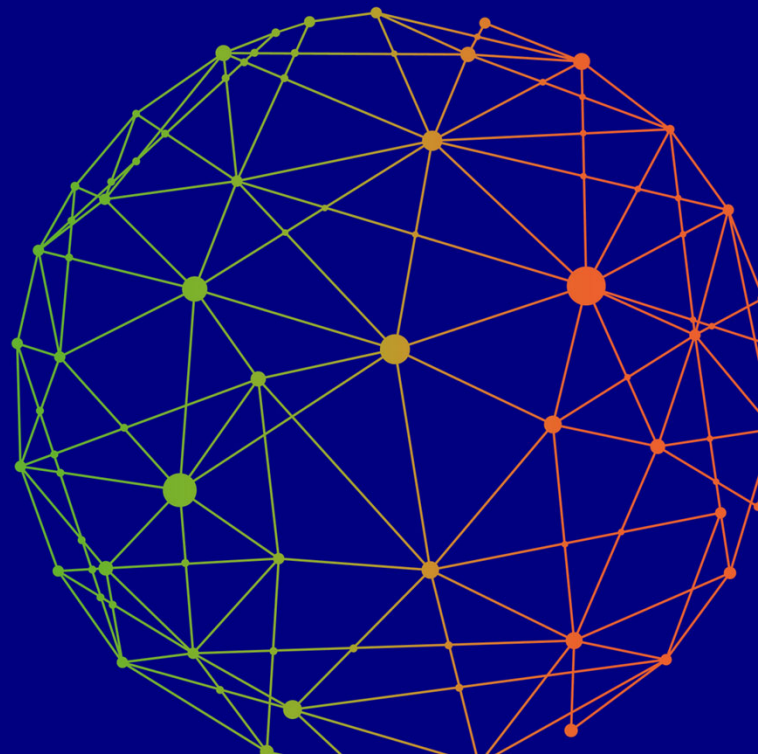
15:30

Designing and delivering the European single market for data

Data space tech [facilitated by the DSSC]

Designing and delivering the European single market for data (Part 2 of 2)

Questions? Use the QR-Code



Blueprint for European Data Spaces

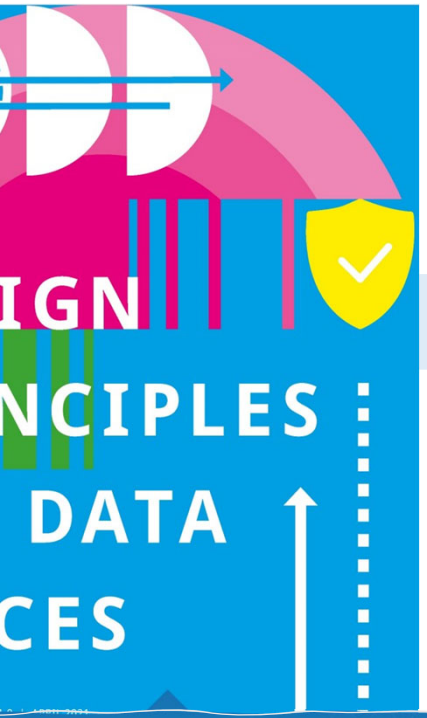
DATA SPACES SUPPORT CENTRE

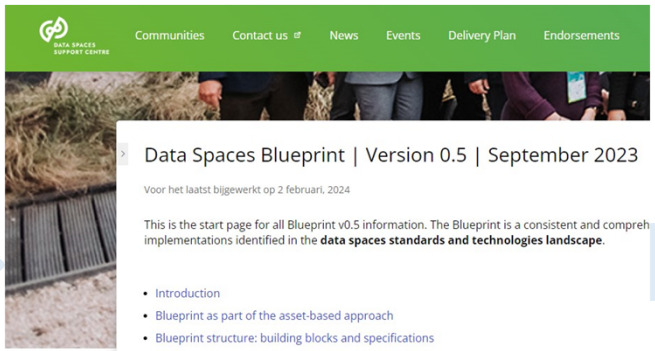
The Data Spaces Support Center receives funding from the European Union Digital Europe Programme under grant agreement n° 101083412.

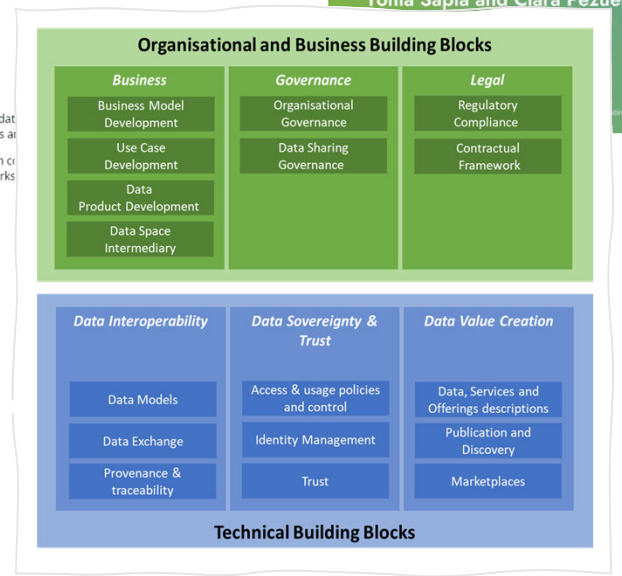
Funded by the European Union

Evolution

DATA SPACES SUPPORT CENTRE







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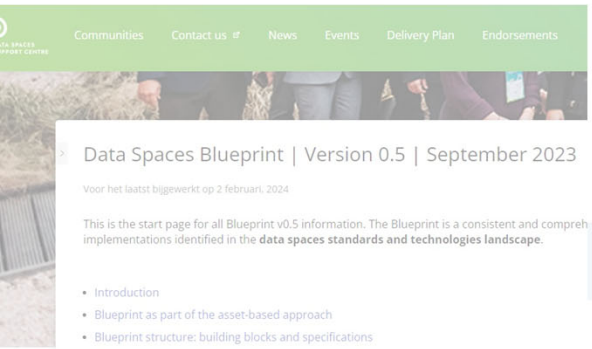
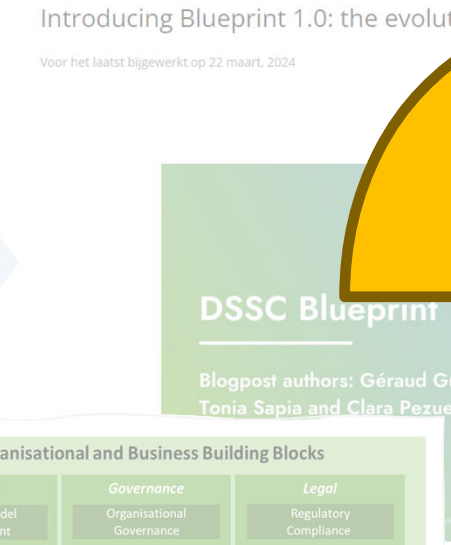
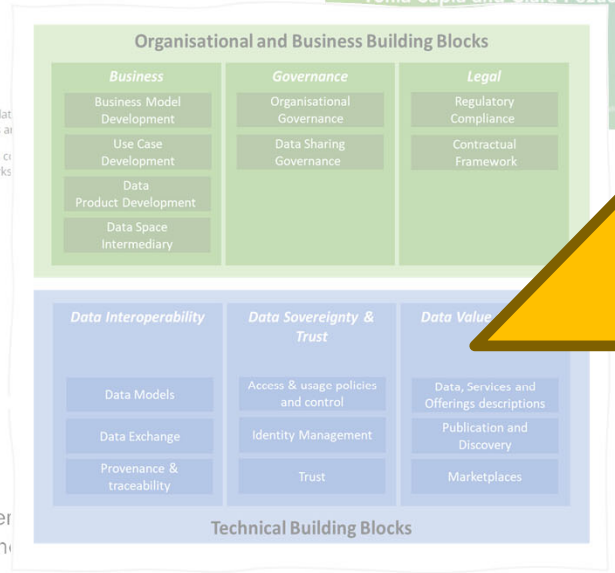
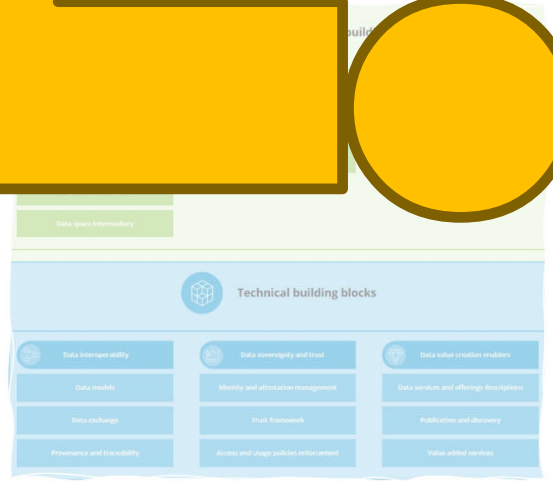
Evolution

DATA SPACES SUPPORT CENTRE









2.0

The Data Spaces Support Center
Union Digital Europe Programm

Funded by
the European Union

Evolution

DATA SPACES SUPPORT CENTRE

2.0

- ✓Alignment with regulatory & standardisation developments
- ✓New content in various building blocks
- ✓Convergence of technical standards & services
- ✓Cross-dataspace interoperability
- ✓Input & validation by our Community of Practice

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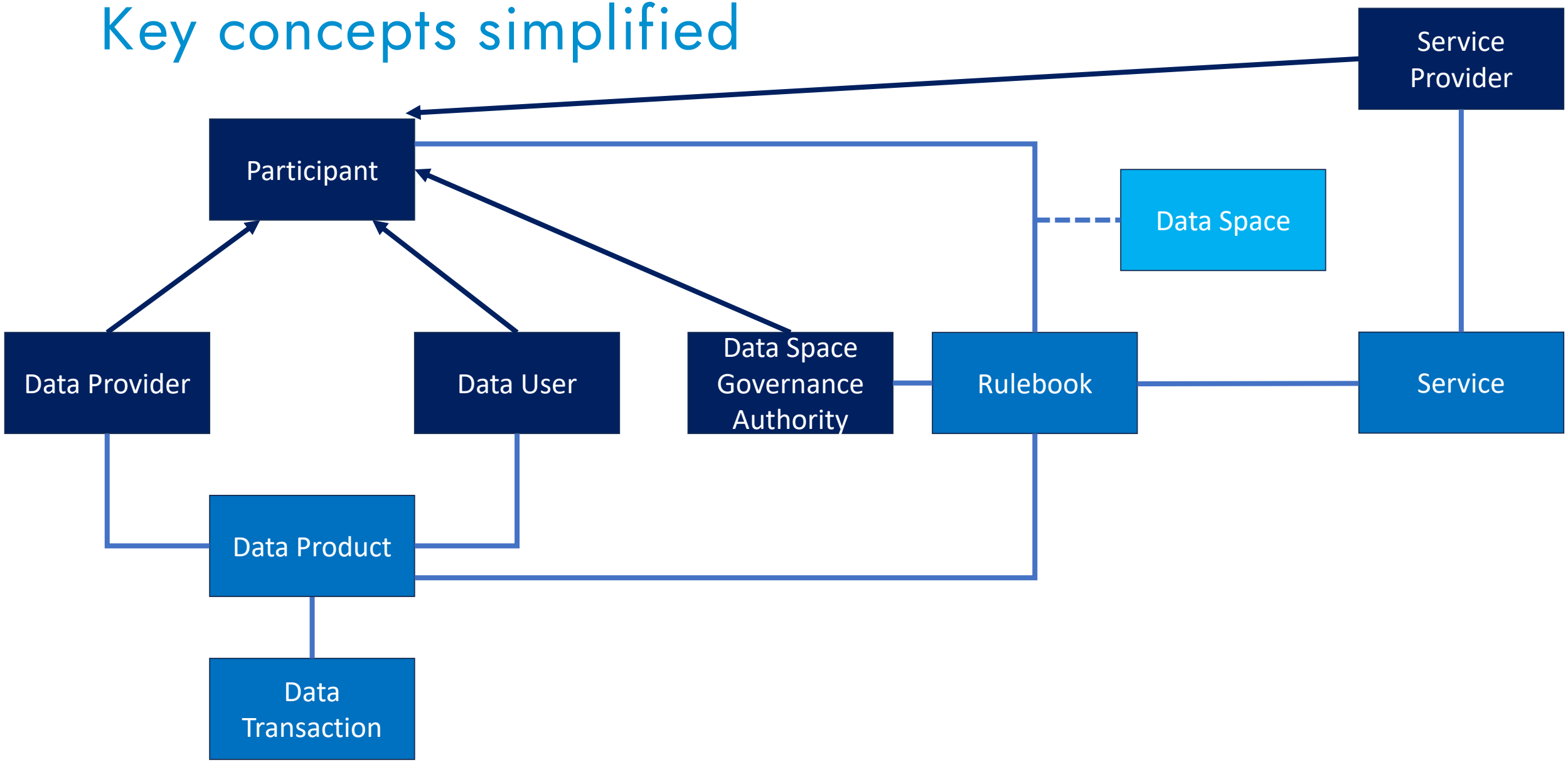
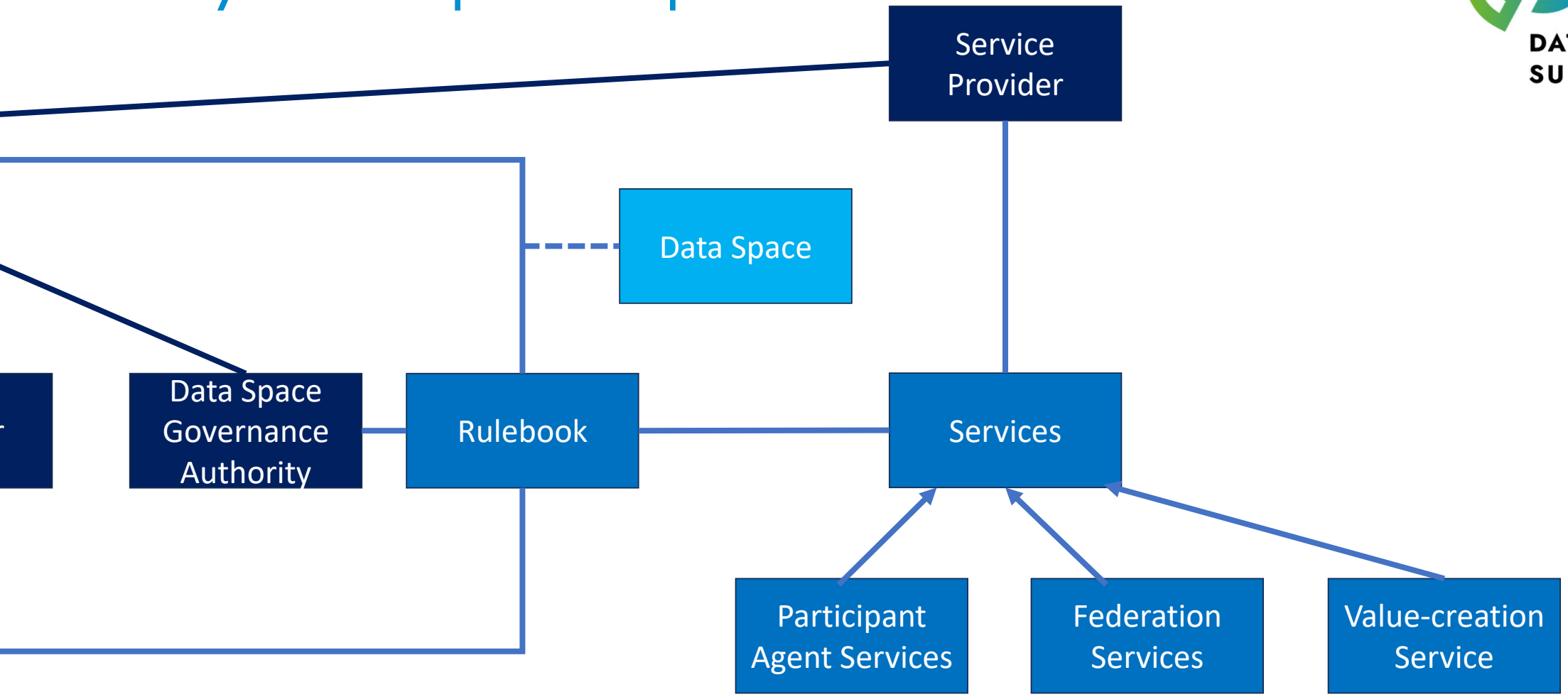
Key concepts simplified



Key concepts simplified

DATA SPACES SUPPORT CENTRE



The Glossary

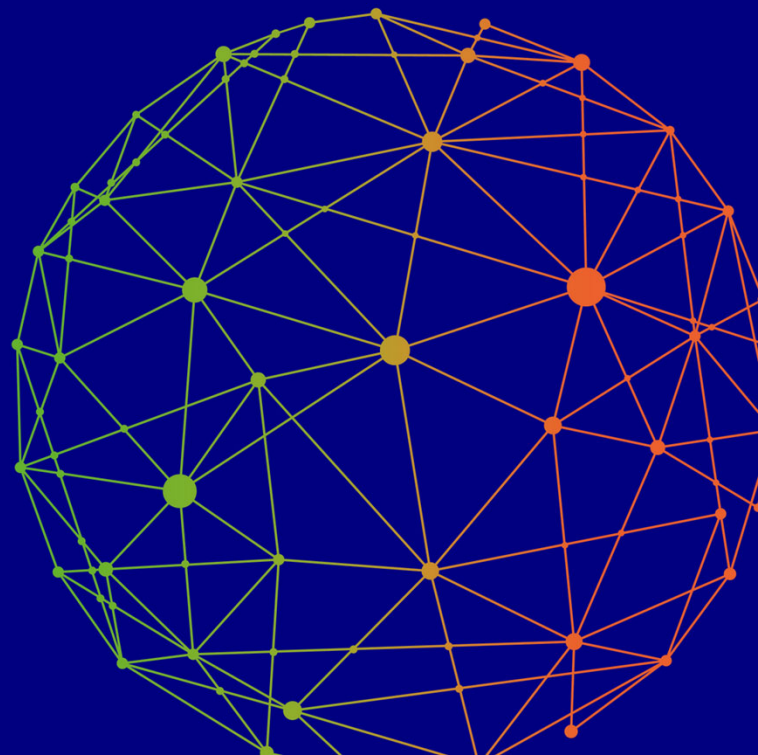
Designing and delivering the European single market for data

Data Spaces Symposium 2025

Our Guest:

Bert Verdonck
LNDS

Malte Beyer-Katzenberger
EC DG Connect



DSBA ■ BDV BIG DATA VALUE ASSOCIATION FIWARE FOUNDATION gaia-x INTERNATIONAL DATA SPACES ASSOCIATION

DATA SPACES SUPPORT CENTRE

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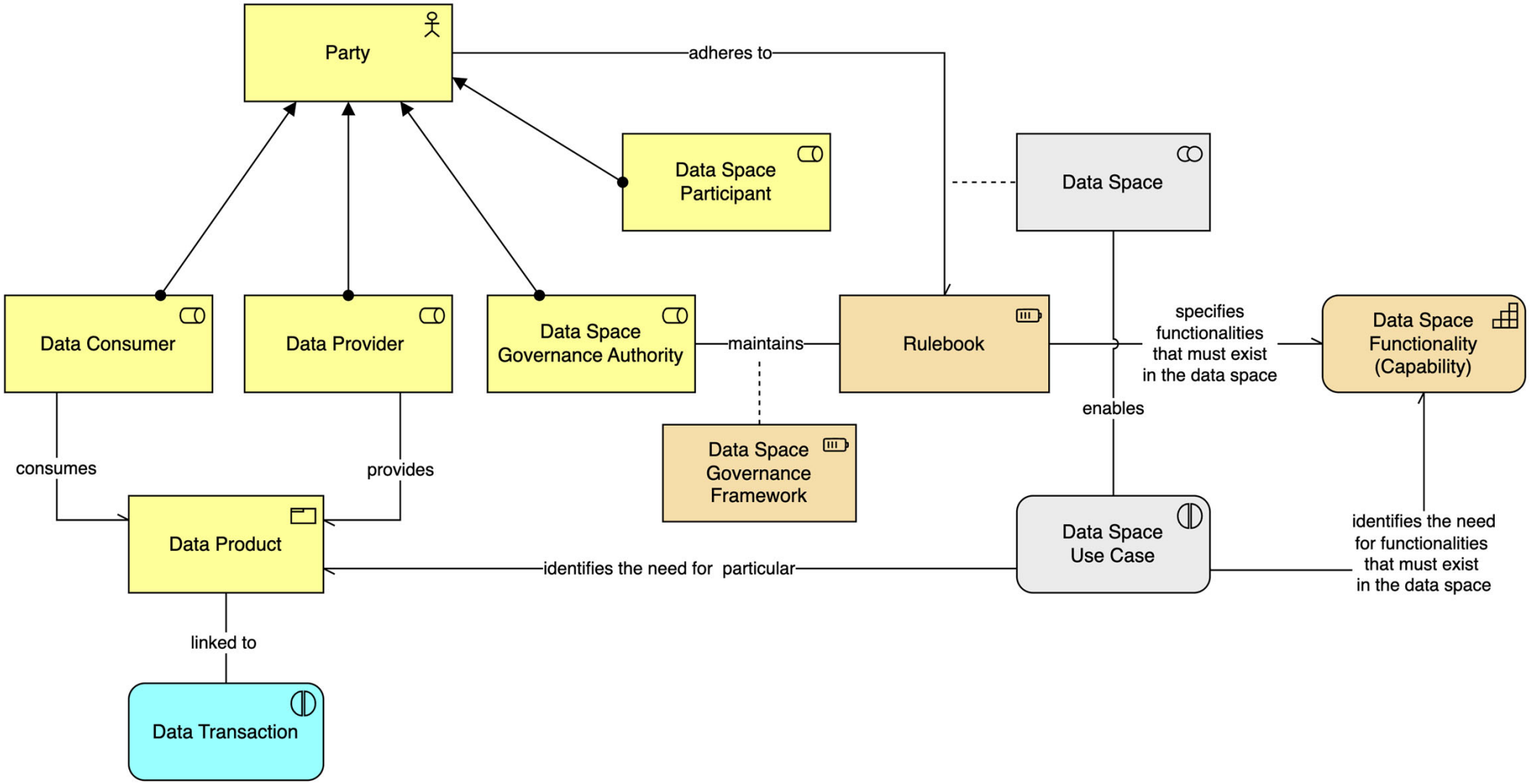
What are we talking about?

DATA SPACES SUPPORT CENTRE

Data Space

Interoperable **framework**, based on common **governance** principles, standards, practices and enabling **services**, that enables trusted **data transactions** between **participants**.

Conceptual model



How does it fly?

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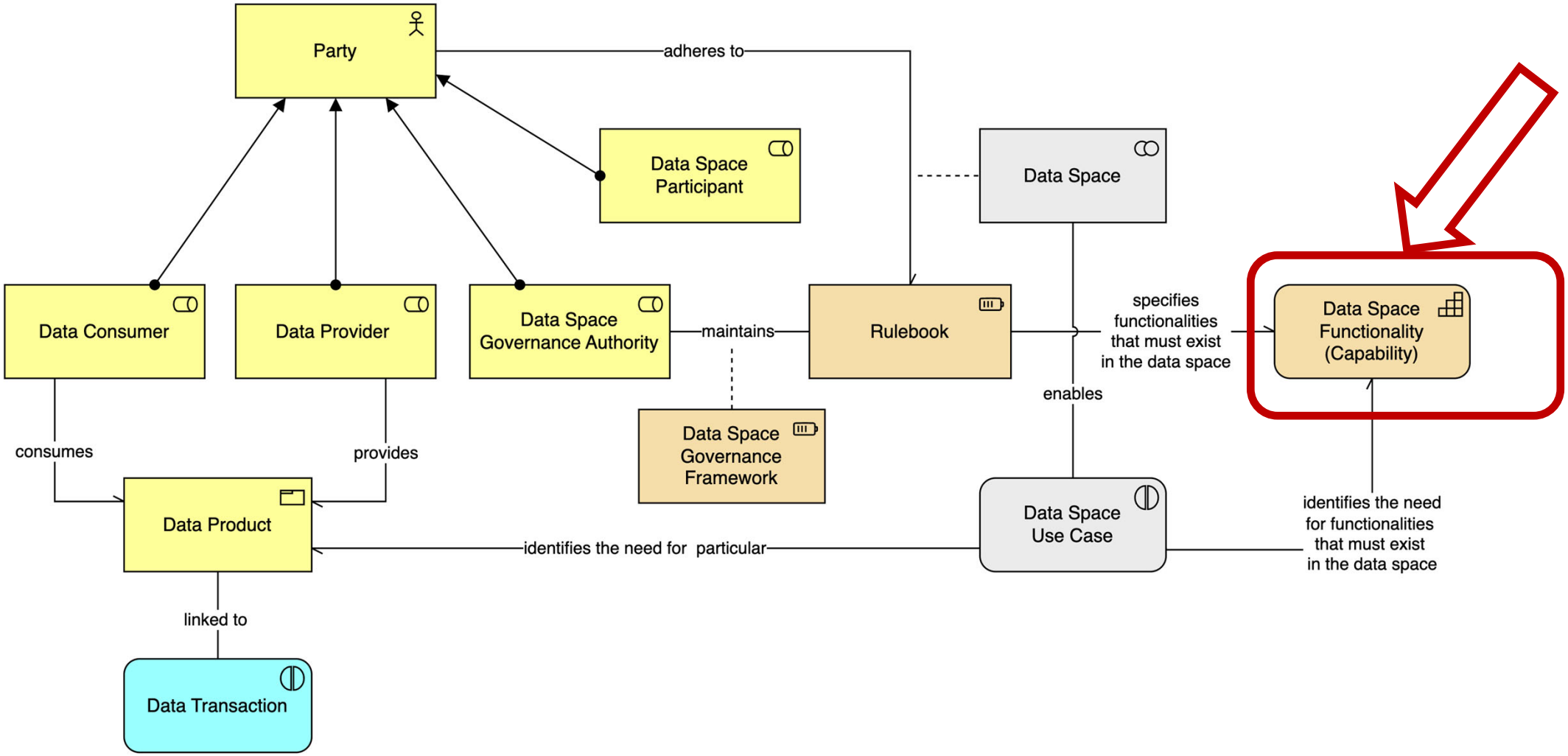
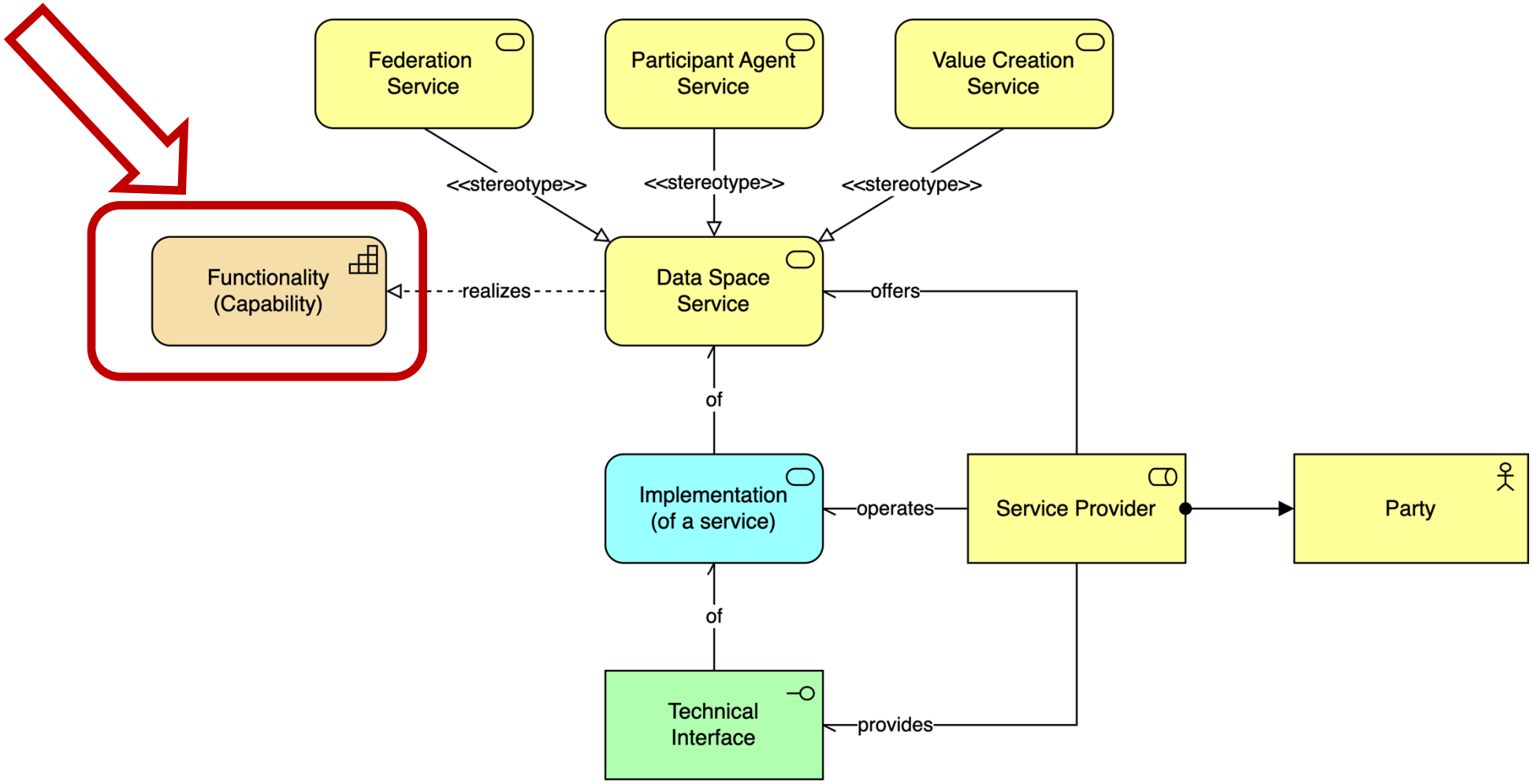
Conceptual model

DATA SPACES
PPORT CENTRE



Conceptual model – drilling down

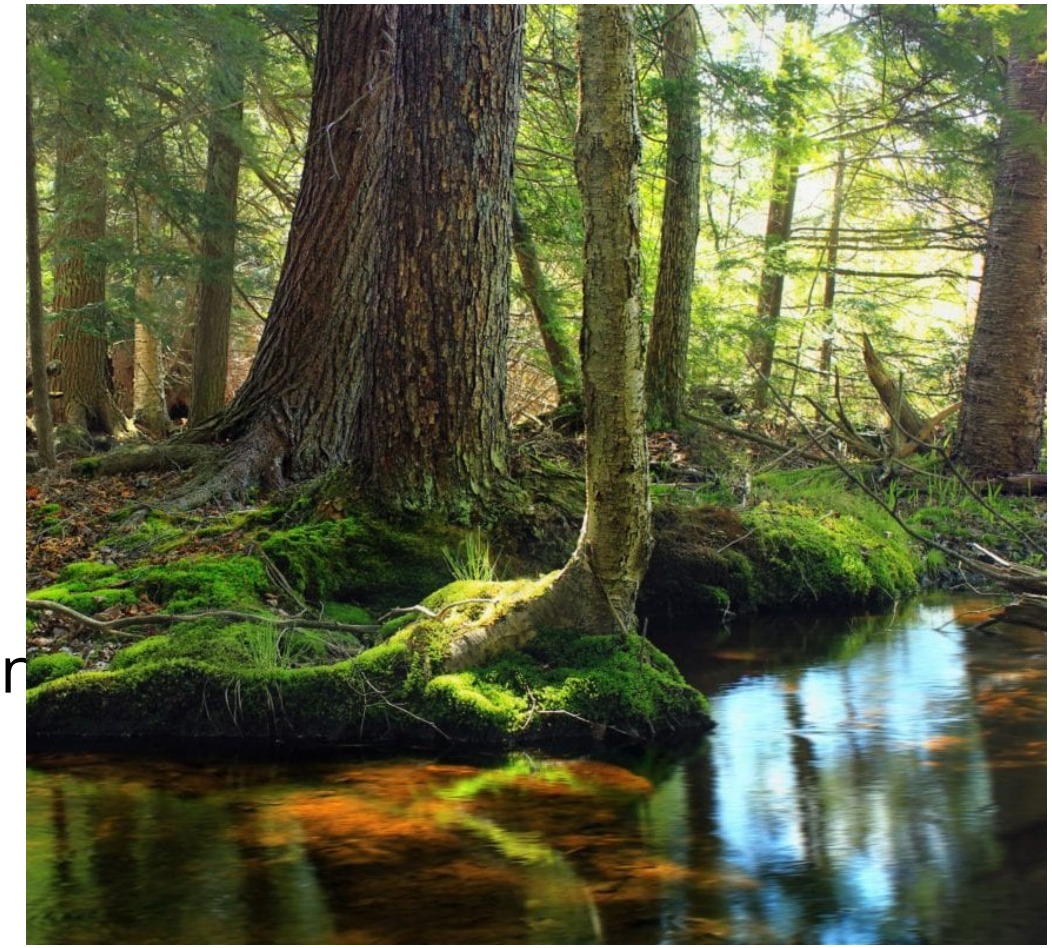
DATA SPACES SUPPORT CENTRE



What has changed in the glossary from v1.5 to v2.0?

DATA SPACES SUPPORT CENTRE

- Not much! Reaching stable ground.



- Data Product → Data Offering
- Data Transaction
- Customer → Consumer → User
- Data Space Rulebook
- Intermediary/Operator provides enablin
- Cross-data space interoperability

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We drive alignment

- Consistent language and concepts across the Blueprint
- Aligned with EU regulations
- Aligned with standardisation initiatives
- Be clear and practical for data space initiatives

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The Blueprint

Designing and delivering the European single market for data

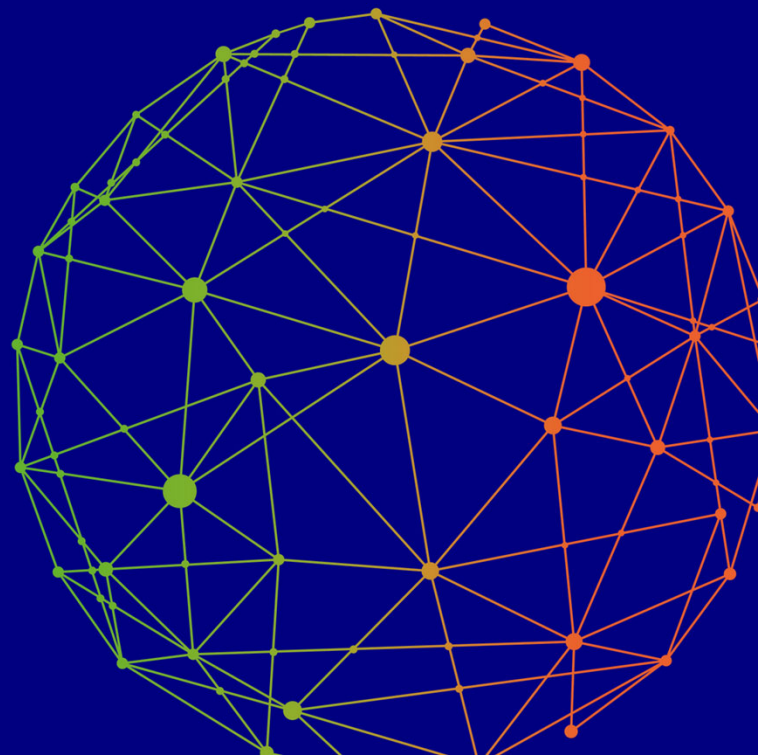
Data Spaces Symposium 2025

Heidi Korhonen
VTT / DSSC

Matthijs Punter
TNO / DSSC

Our Guests:

Luiza Brandao
Acatech / TEMS



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DATA SPACES SUPPORT CENTRE

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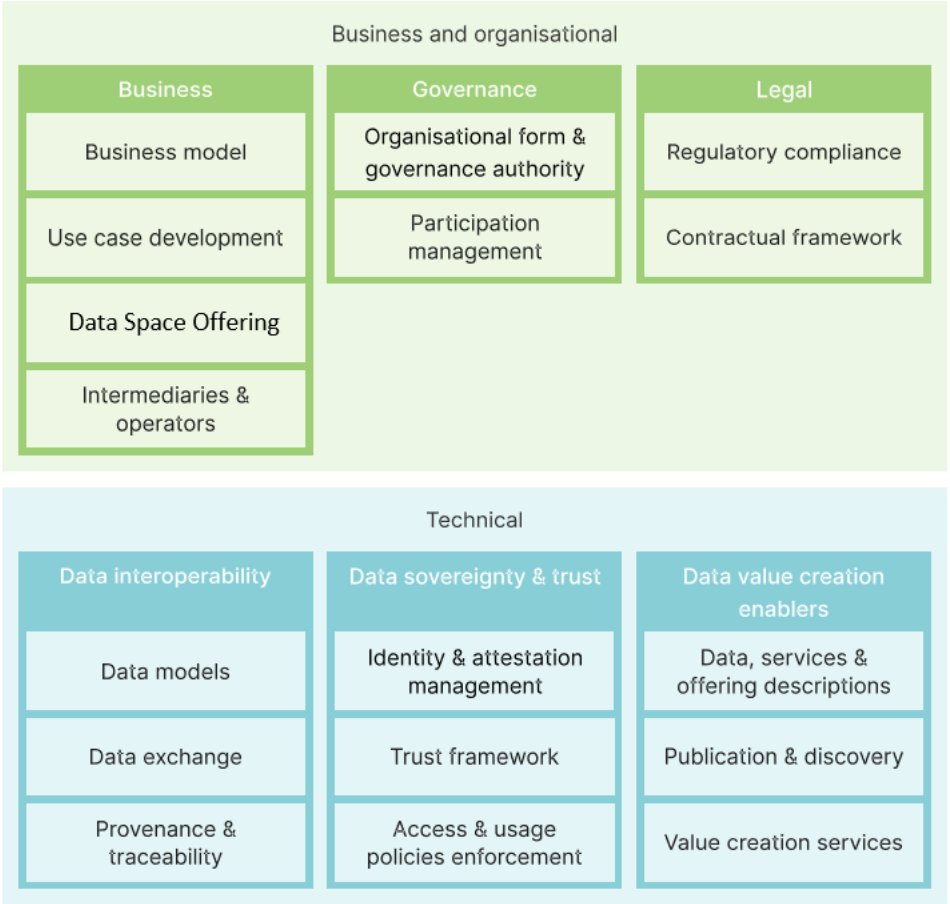
What is a blueprint?

DATA SPACES SUPPORT CENTRE

- Building block =
  required capability for a data space
  - Business & organisational
  - Technical
- Common specifications
- Co-Creation Method: design decisions for individual data spaces



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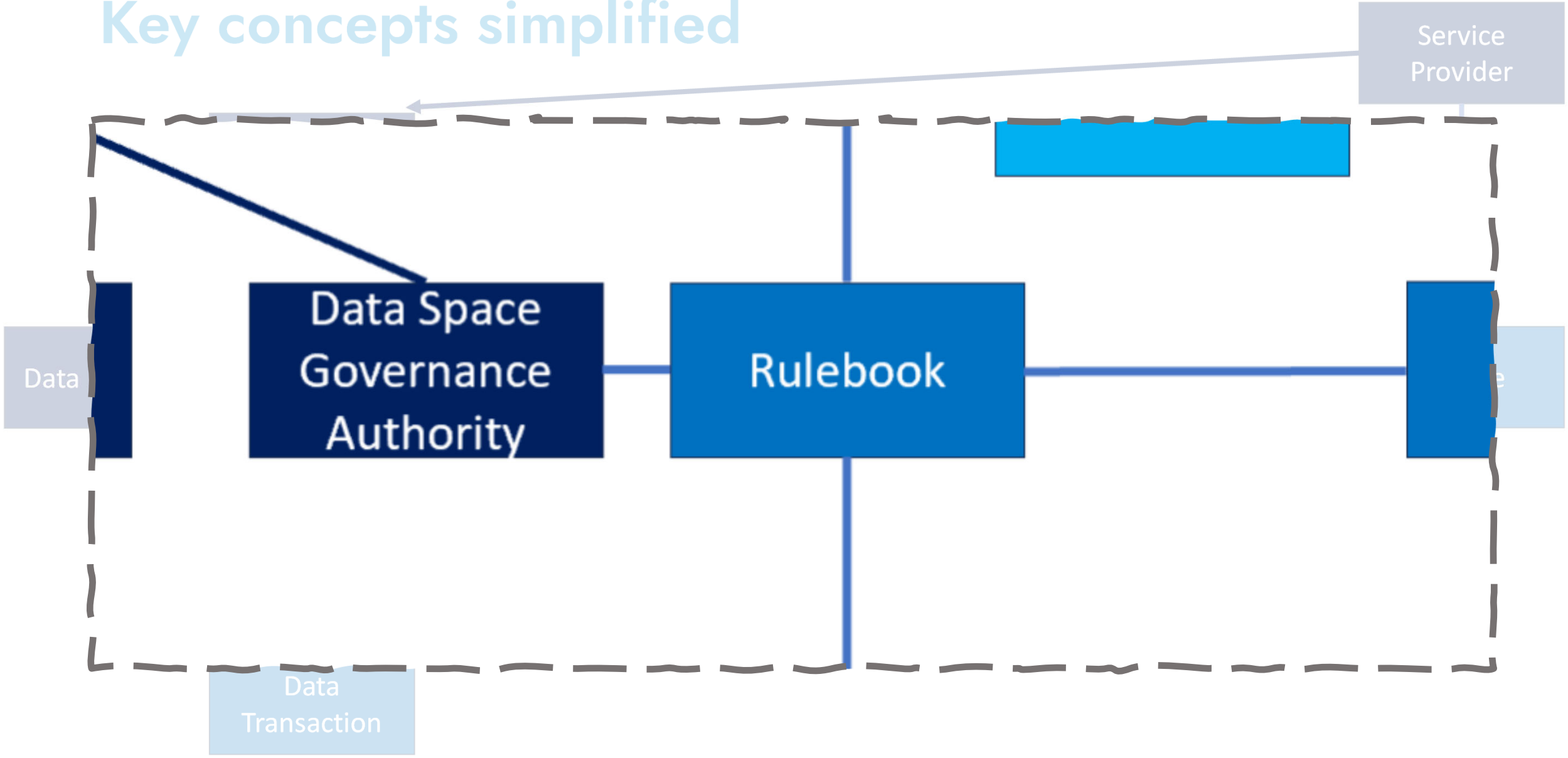
Key concepts simplified

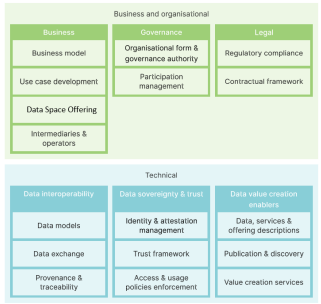


Building blocks feed into governance framework and rulebook

DATA SPACES SUPPORT CENTRE

Building Blocks

Capabilities



Principles, processes, standards, protocols, rules and practices

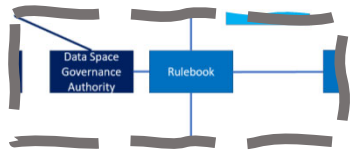
Governance Framework

Internal rules and policies applicable to all data space participants

Documentation

Rulebook

Documentation of the Governance Framework



Co-Creation Method

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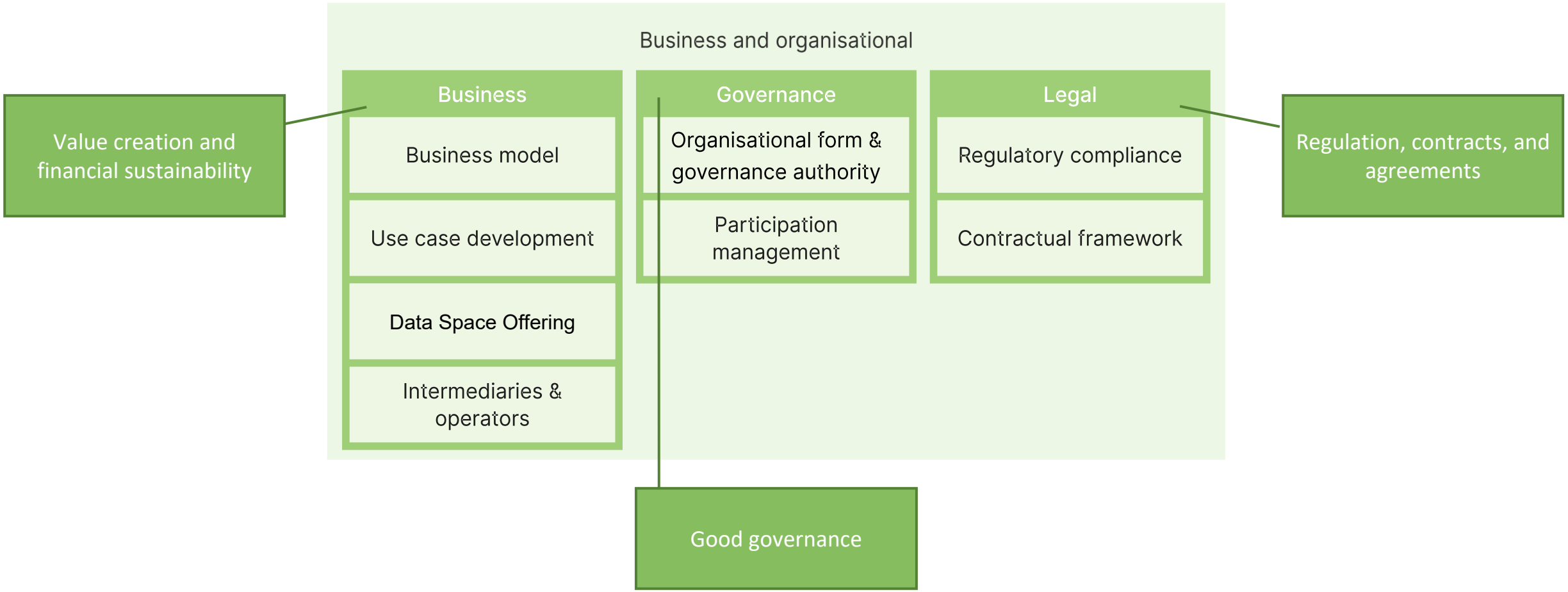
Business & organisational building blocks



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Data Space Offering

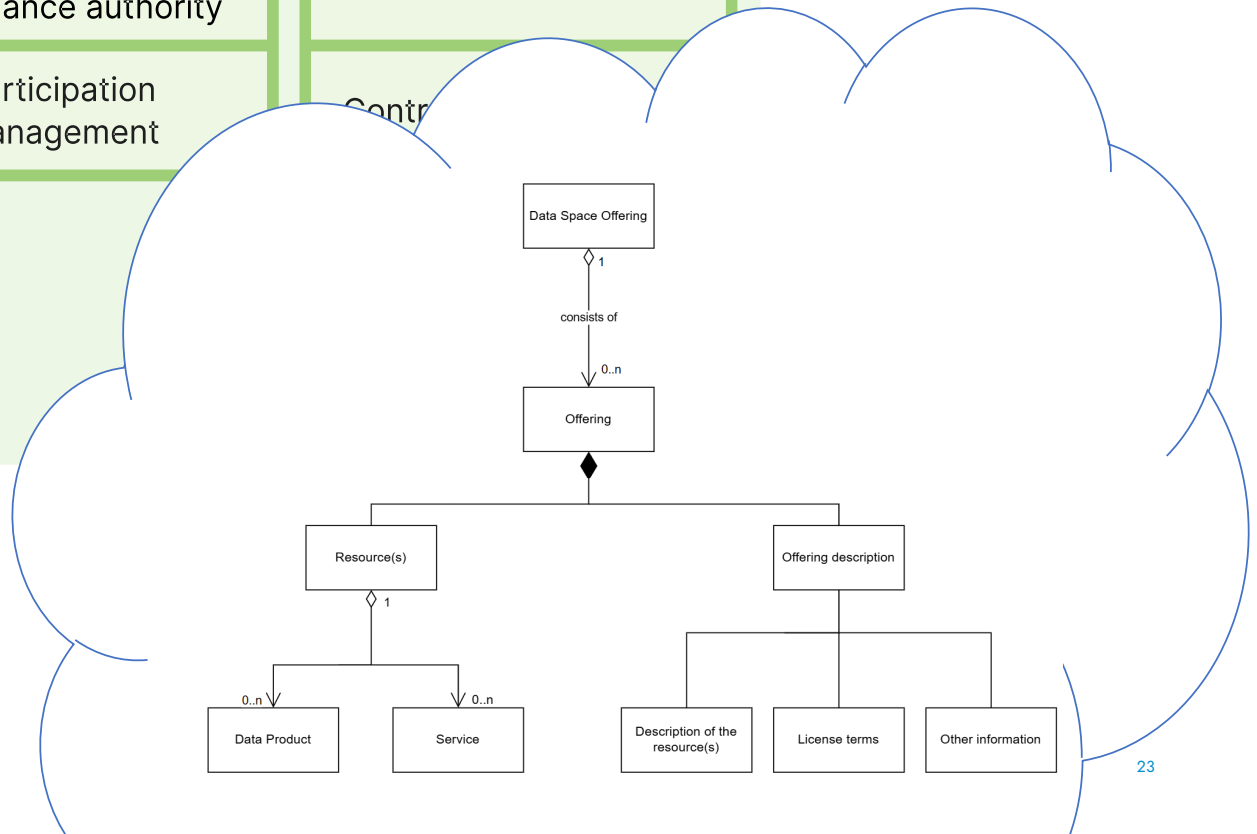
DATA SPACES SUPPORT CENTRE

Value creation and financial sustainability

Data space offering building block supports data spaces with the services and data products that are offered through a catalogue.

Business and organisational

Business	Governance	Legal
Business model	Organisational form & governance authority	Regulatory compliance
Use case development	Participation management	Contr
Data Space Offering		
Intermediaries & operators		



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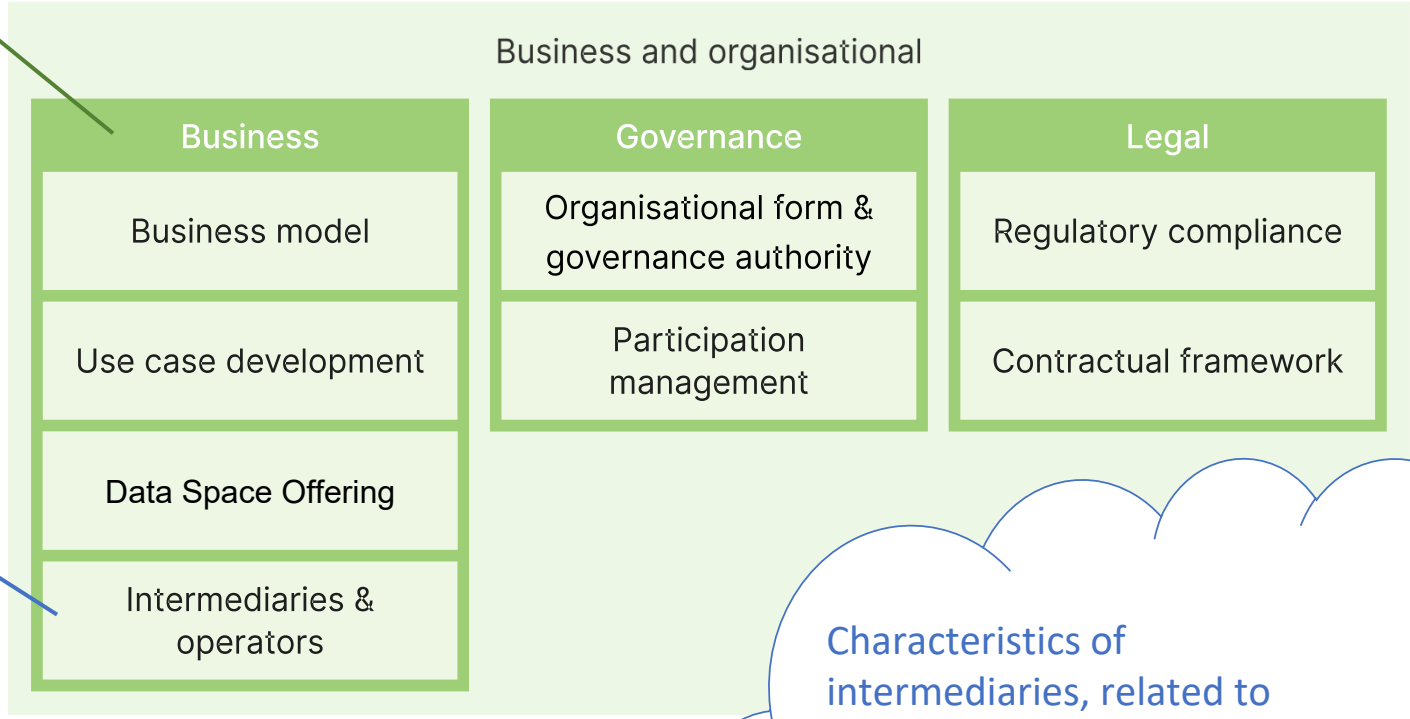
Intermediaries and Operators

DATA SPACES SUPPORT CENTRE

Value creation and financial sustainability



Intermediaries and operators building block helps data spaces to think of their options for using different kinds of intermediaries.

Characteristics of intermediaries, related to

- data space service model
- governance
- intermediary business and revenue model
- regulatory compliance
- risk management

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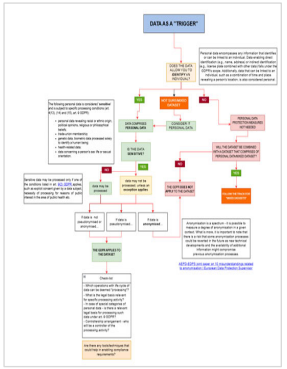
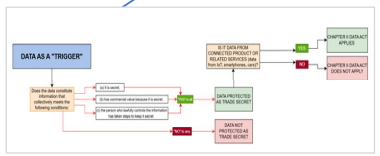
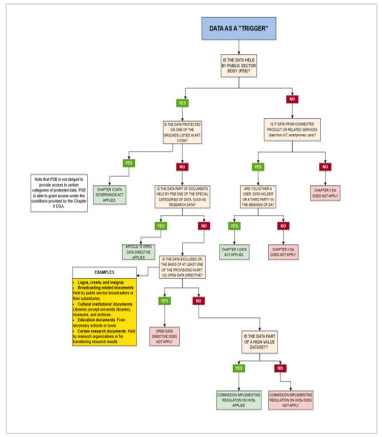
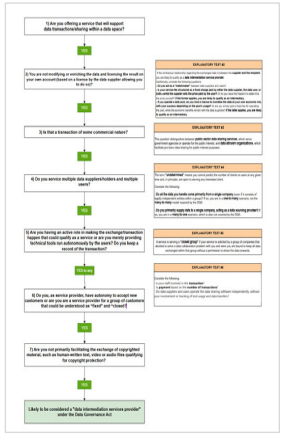
Regulatory Compliance







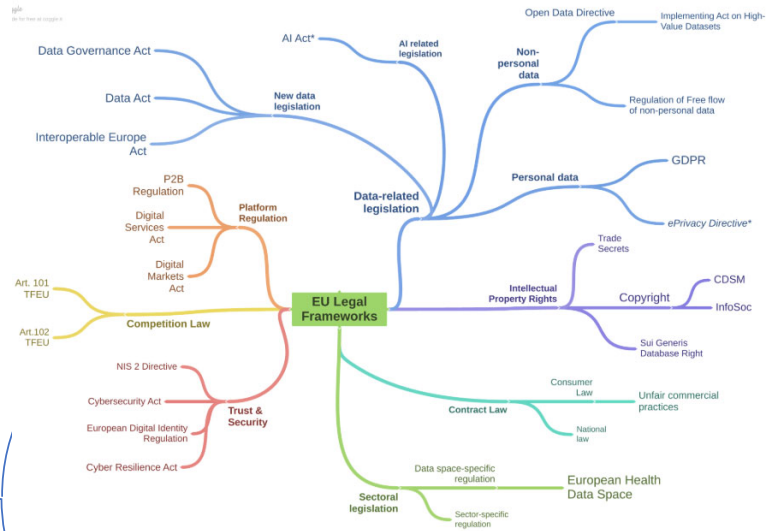


Business and organisational

	Governance	Legal
	Organisational form & governance authority	Regulatory compliance
	Participation management	Contractual framework

Regulation, contracts, and agreements

Regulatory compliance building block guides data spaces to apply legal rules and ensure compliance.



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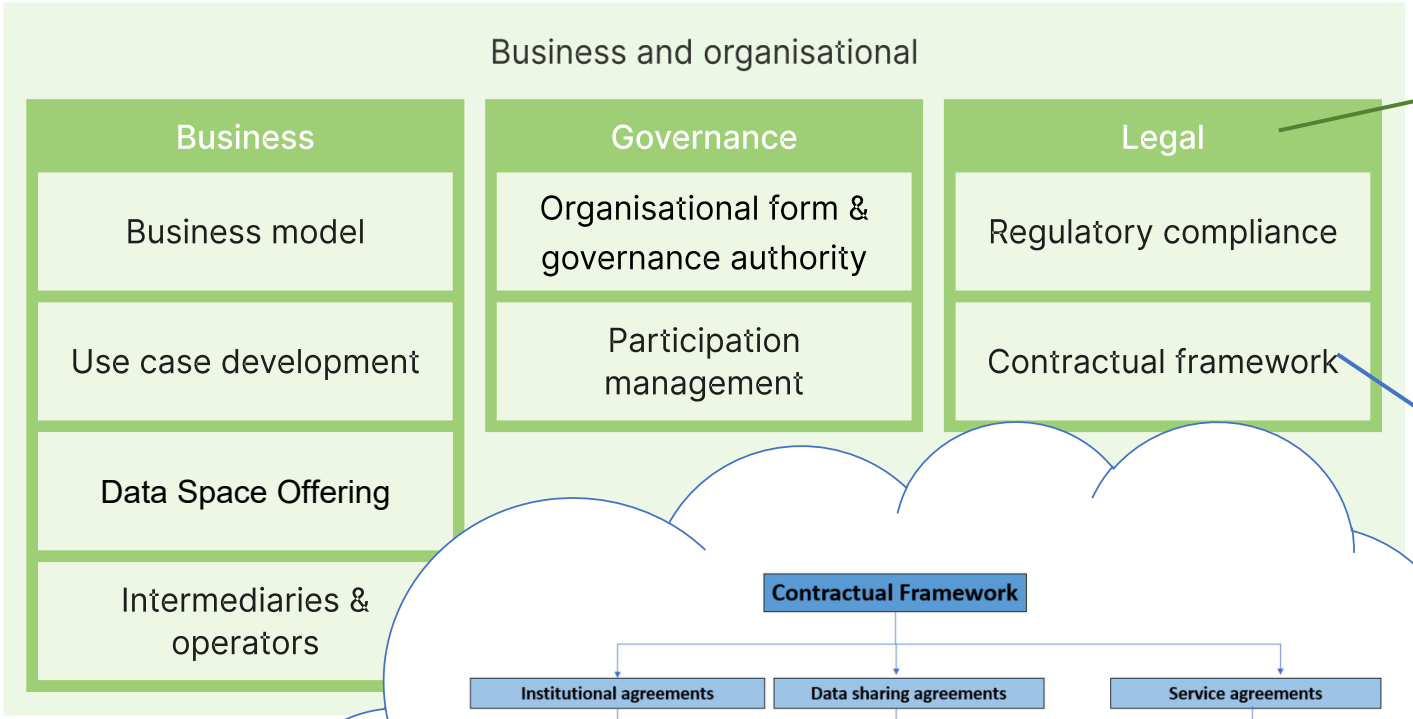
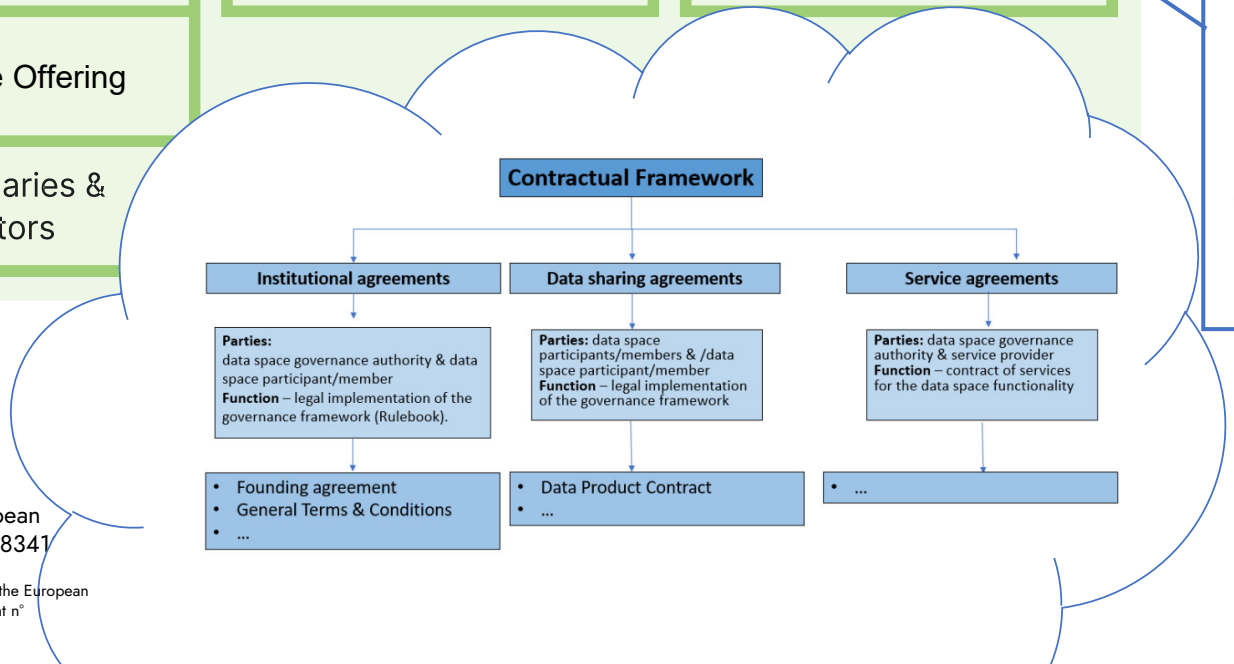
Contractual Framework



Regulation, contracts, and agreements



Contractual framework building block supports data spaces with the contracts and agreements needed.

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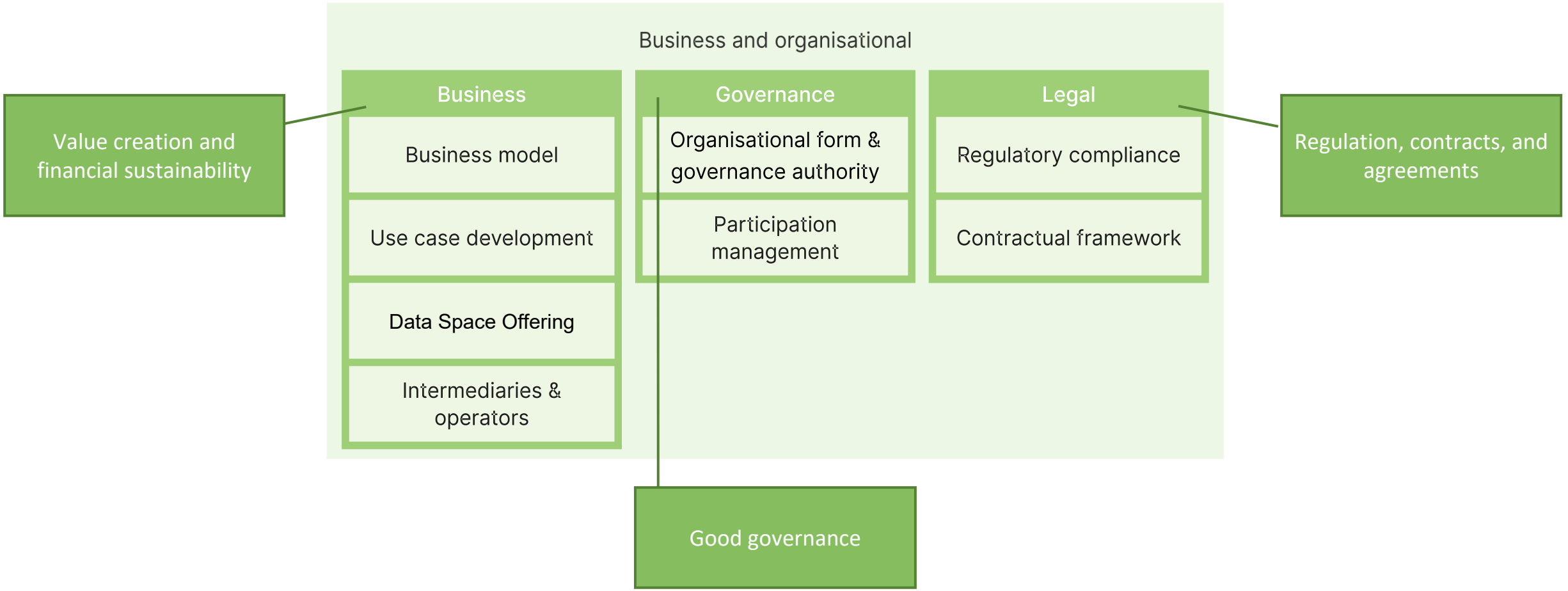
Business & organisational building blocks



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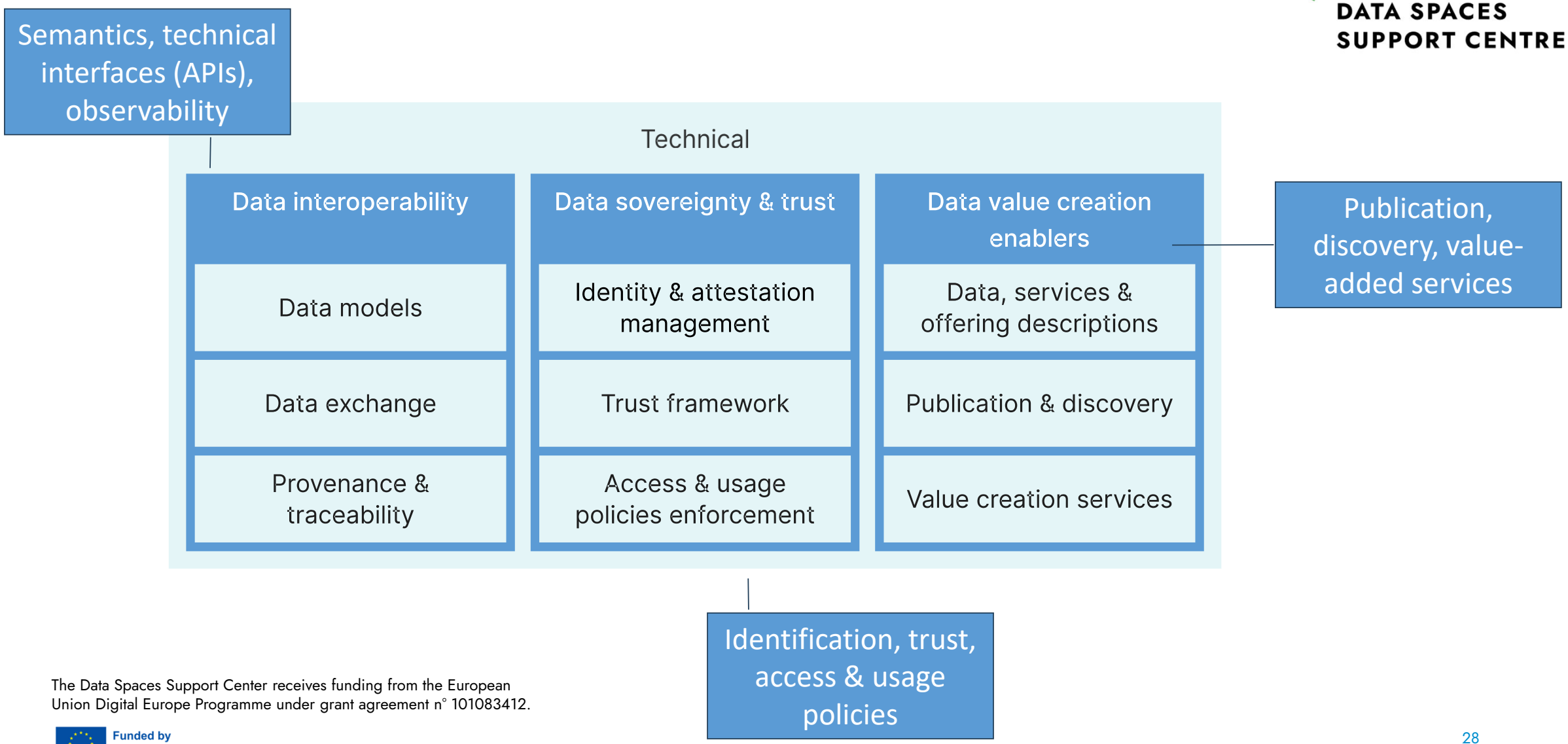
Technical building blocks



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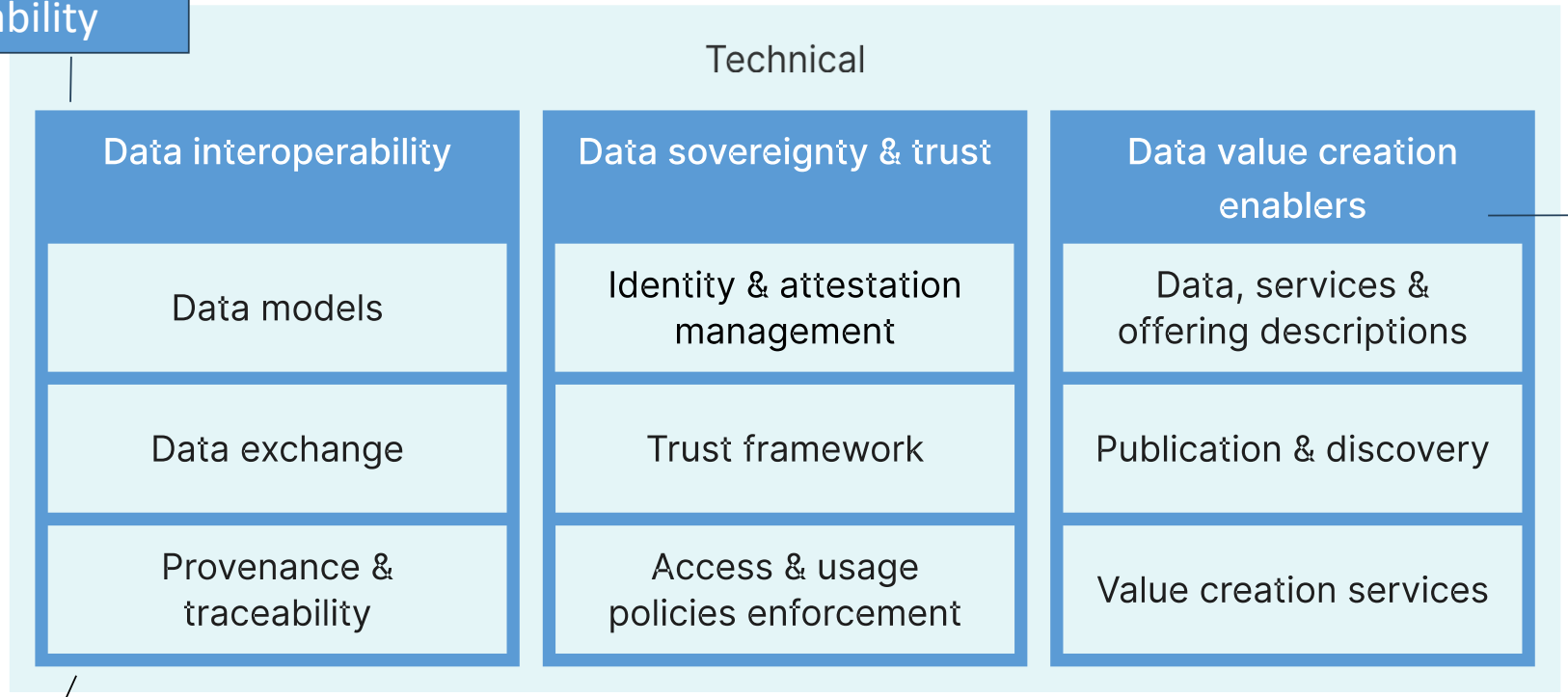
Technical building blocks

DATA SPACES SUPPORT CENTRE

Semantics, technical interfaces (APIs), observability



Publication, discovery, value-added services

Each domain should specify its own, however we promote interoperability (e.g article 33 Data Act)

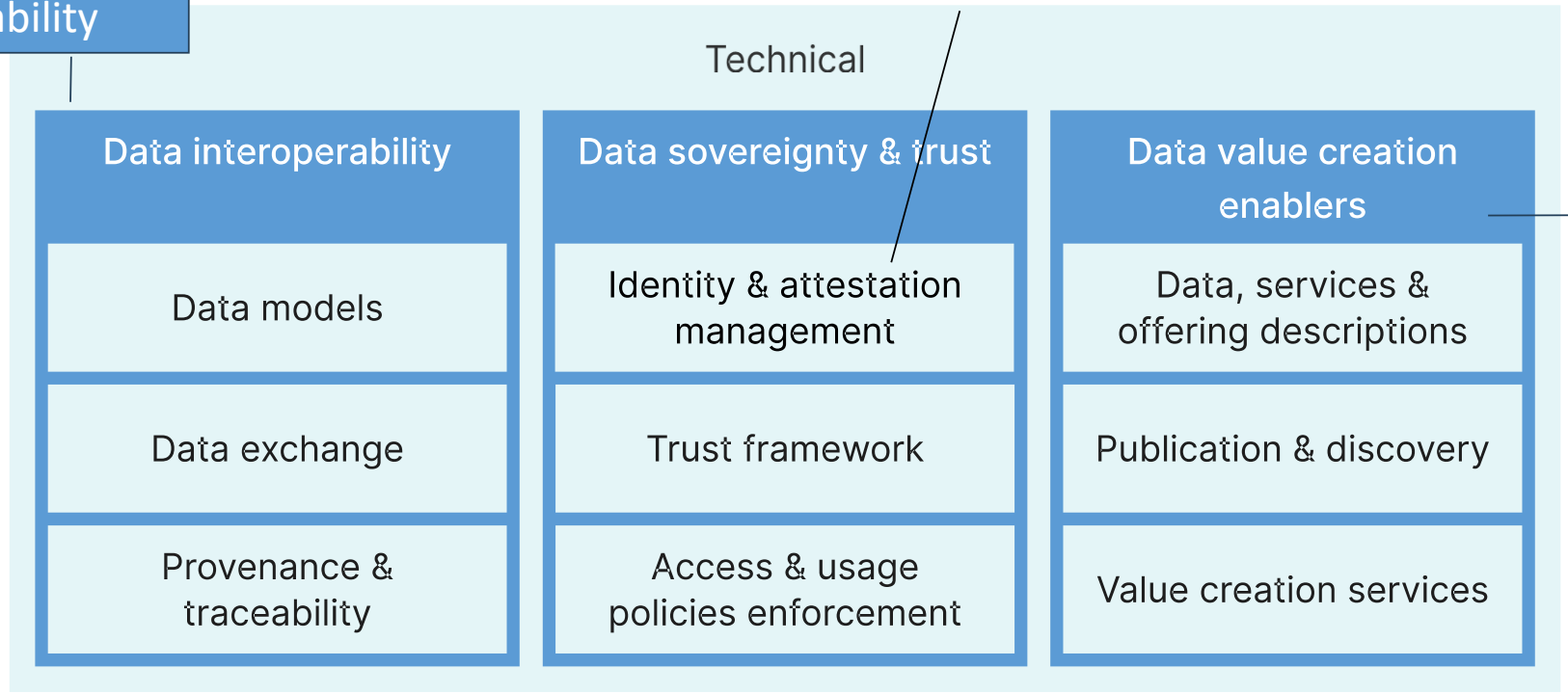
Identification, trust, access & usage policies

Funded by the European Union

Technical building blocks

Common technical standards (based on W3C VCs), but governance mechanisms will differ per data space

Semantics, technical interfaces (APIs), observability



Publication, discovery, value-added services

Identification, trust, access & usage policies

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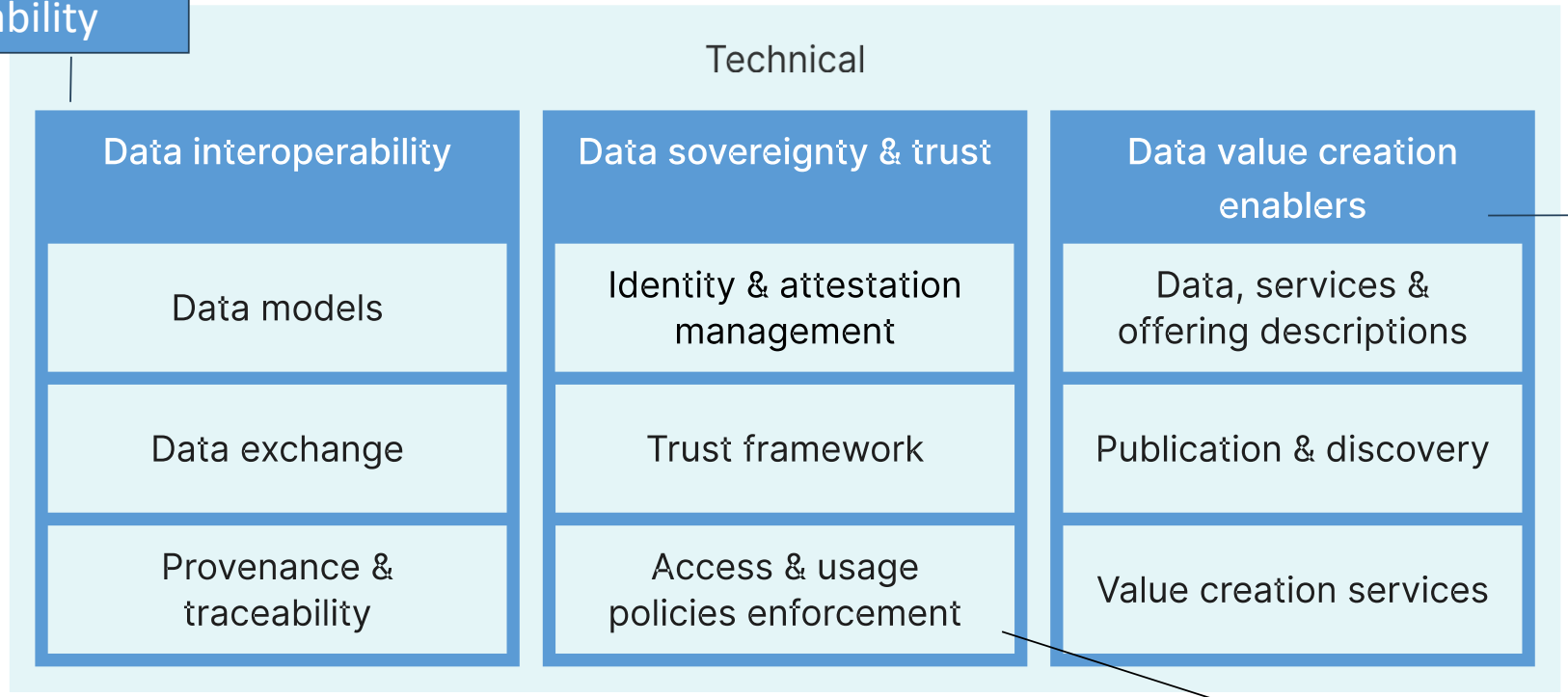
Technical building blocks

DATA SPACES SUPPORT CENTRE

Semantics, technical interfaces (APIs), observability



Publication, discovery, value-added services

Identification, trust, access & usage policies

Promote the use of ODRL for expressing policies

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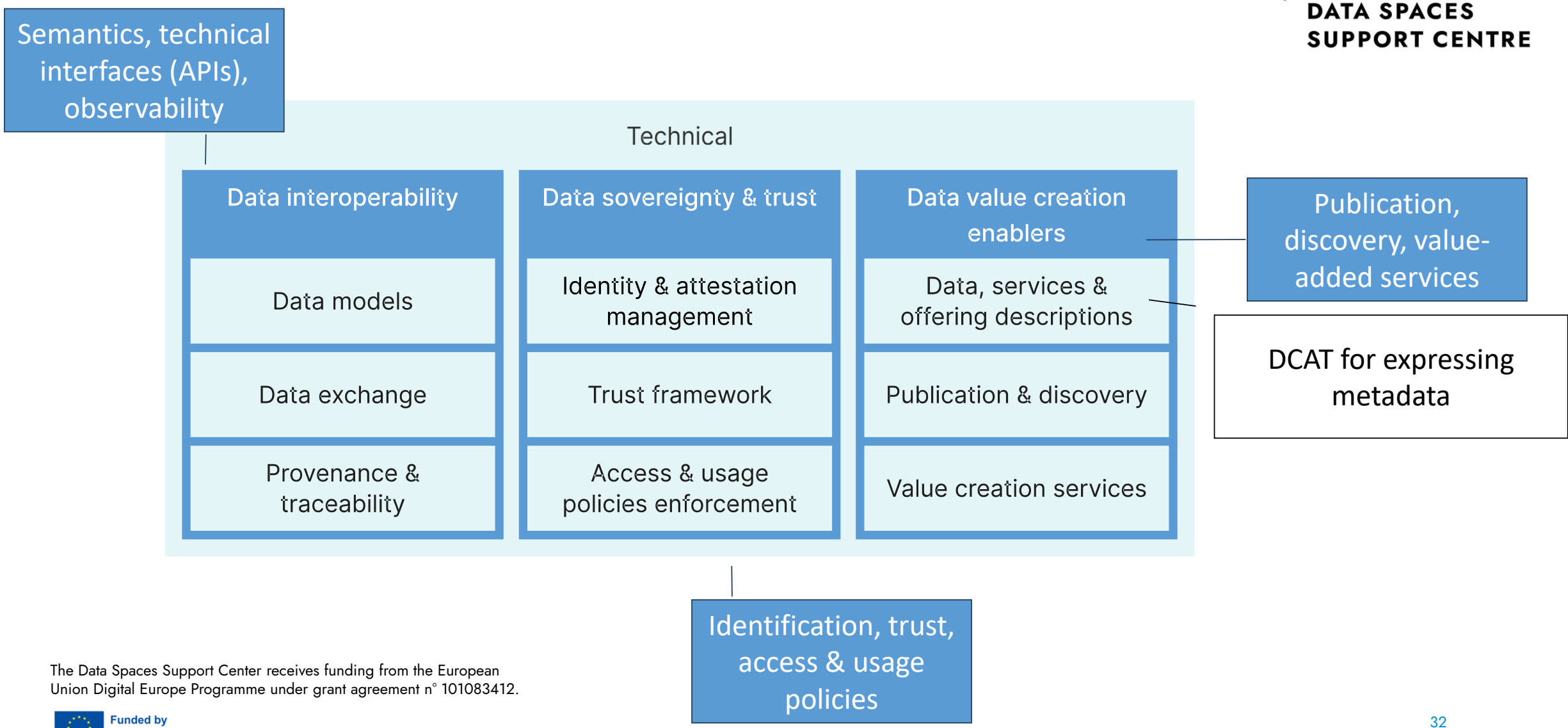
Technical building blocks



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Global & European Standards

DATA SPACES SUPPORT CENTRE

Foundational (global) technical standards

- W3C DCAT → for describing your datasets and services
- W3C ODRL → for defining (technical) access and usage policies
- W3C VC/VP → for the exchange of identities and attestations
- W3C RDF → for specifying semantic models

+

Protocols

- Dataspace Protocol (DCAT/ODRL)
- Identity/Claims Protocols (VC/VP)
- Conformity Assessment Policy and Credential Profile (VC/VP)

(IDSA, Gaia-X, Eclipse and others)

=

Key technical specifications for data space services

+

Legal requirements

- Data Act (e.g. article 33)
- eIDAS
- Data Governance Act

+

Harmonised EU Standards

- CEN/CENELEC + ETSI
- JTC25
- Data Act standardisation request

+

Domain specific choices

- Policies
- Data Models
- APIs

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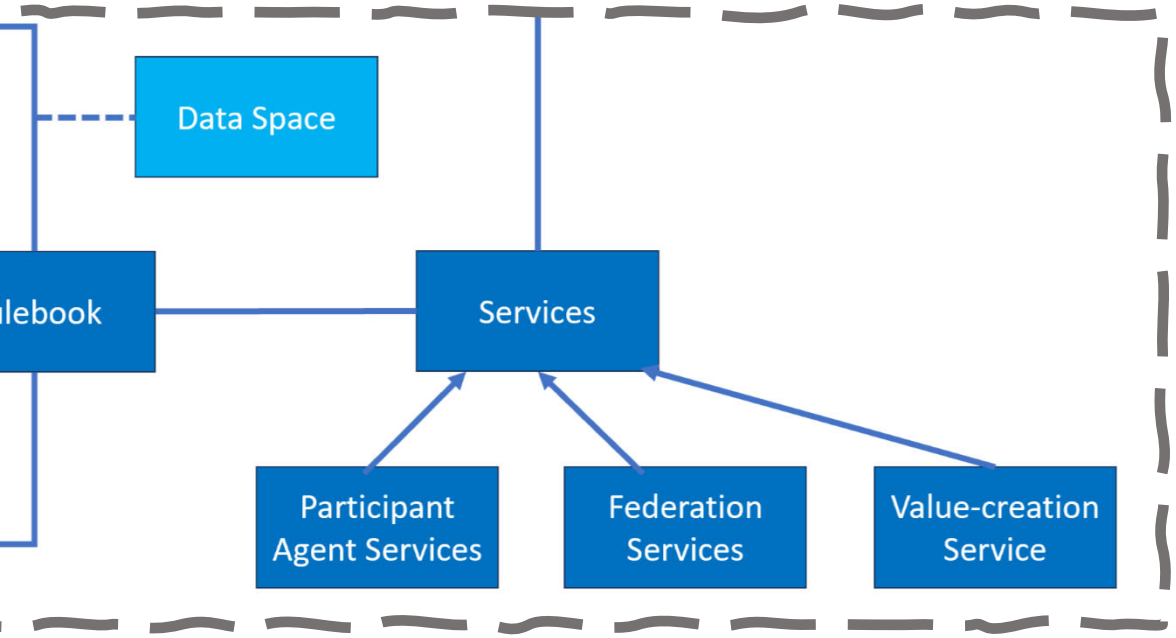
Technical rulebook for your data space initiative

Implemented using technical services



- **Participant Agent Services** → for participants to join a Data Space
- **Federation Services** → to support the interplay of participants
- **Value Creation Services** → services 'on top of' the Data Space

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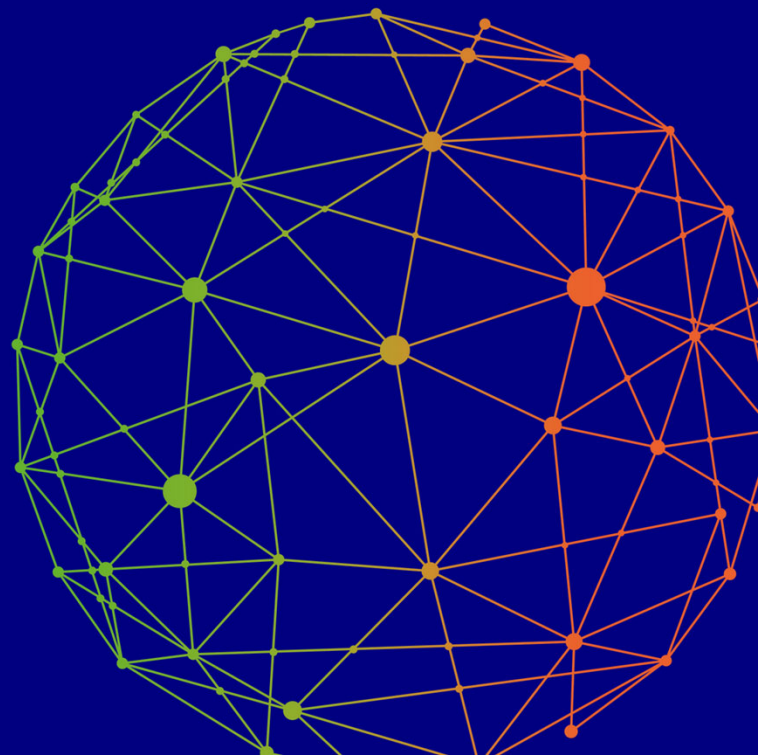
The Toolbox

Designing and delivering the European single market for data

Michiel Stornebrink, TNO

Data Spaces Symposium 2025



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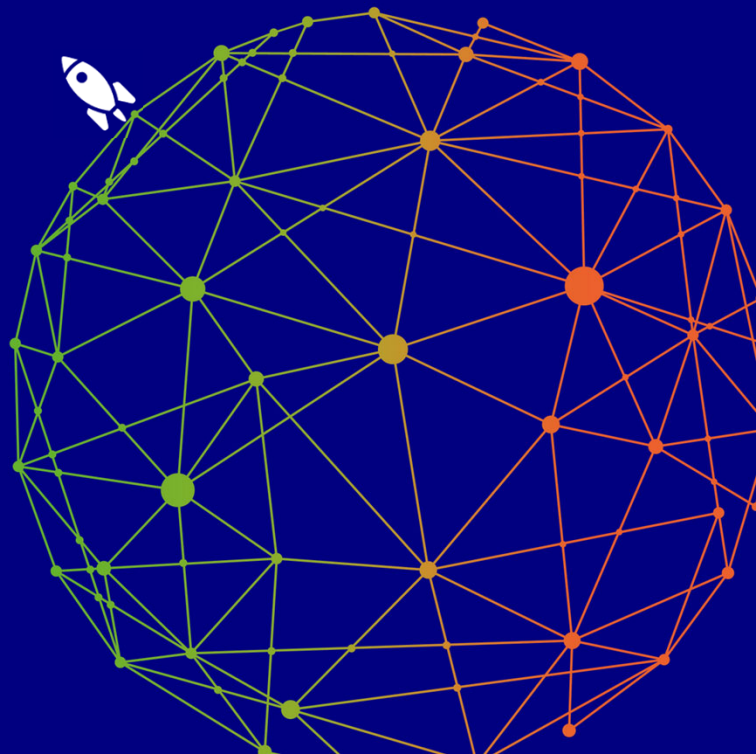
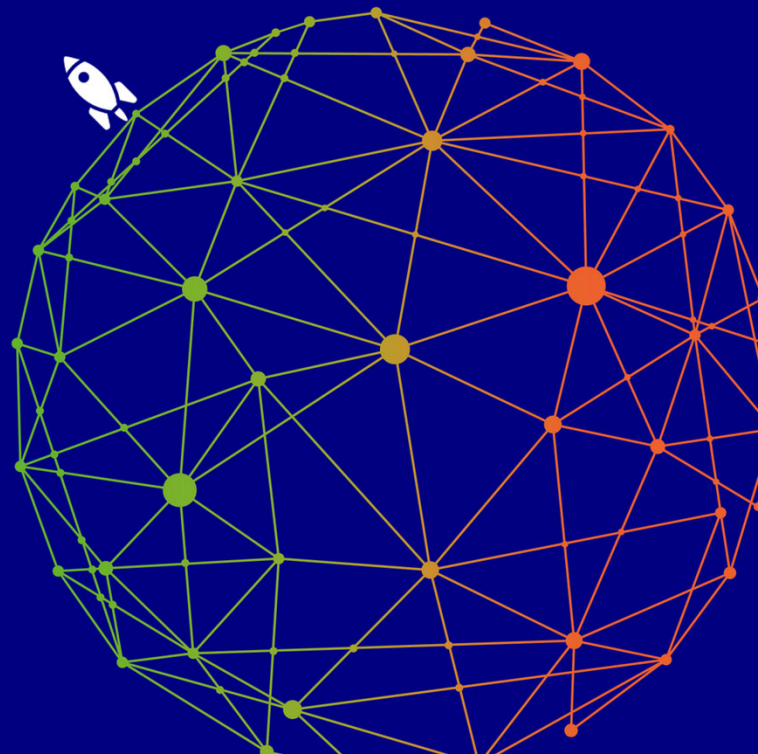
DSS 2024 | Announcing the DSSC Toolbox

European Space Operations Centre (ESOC)
Darmstadt, Germany

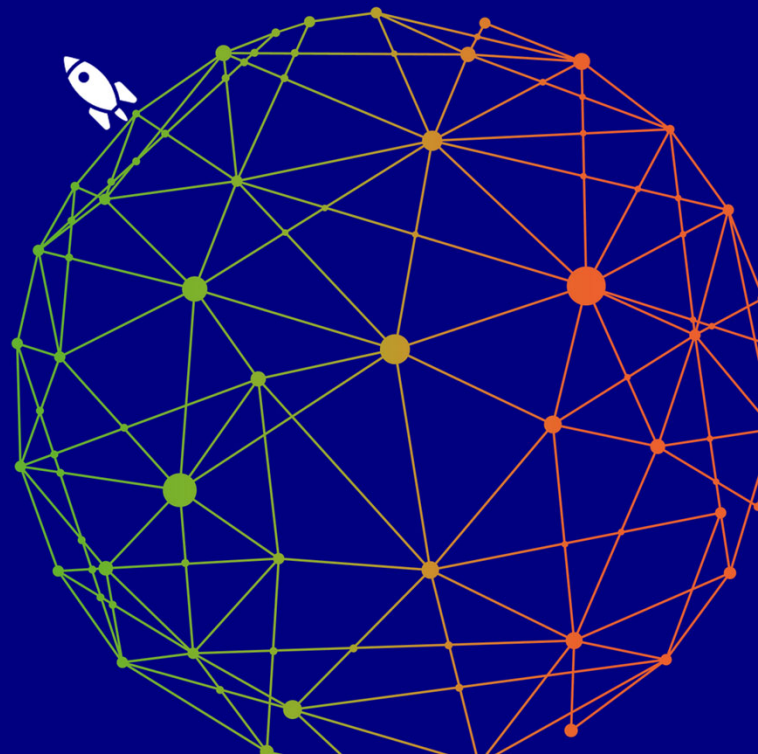


DSS 2025 | Launching the DSSC Toolbox



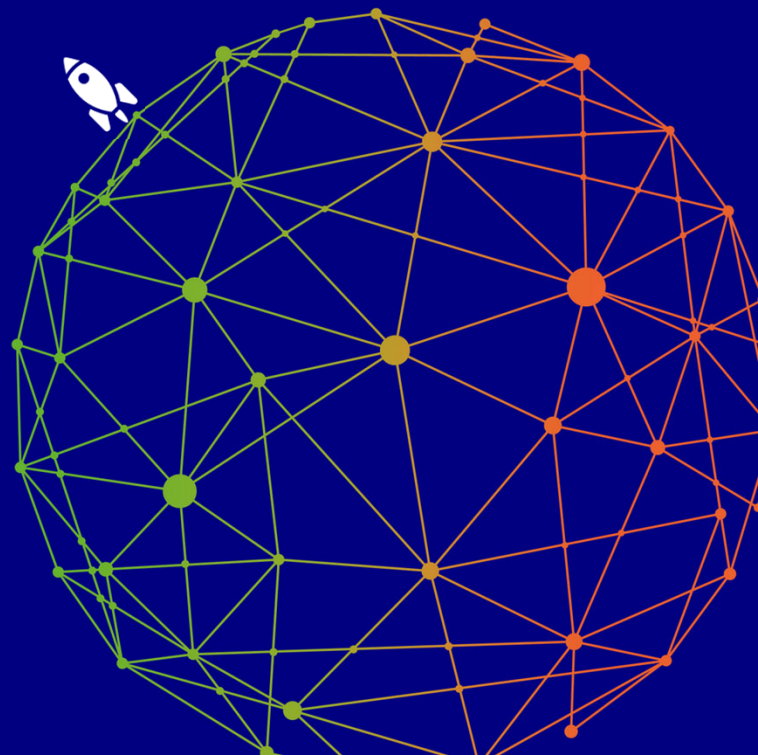
DSS 2025 | Launching the DSSC Toolbox

3



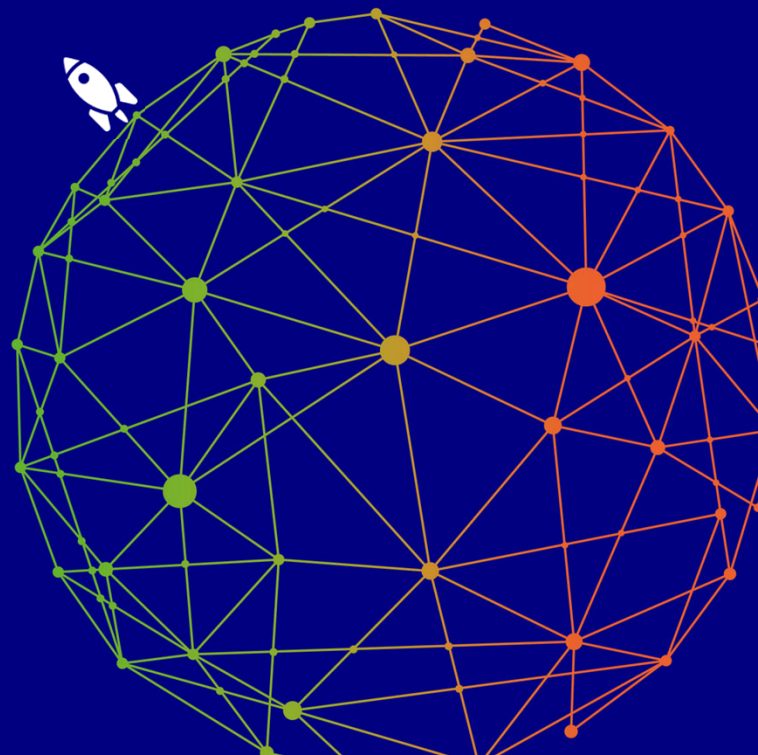
DSS 2025 | Launching the DSSC Toolbox

2



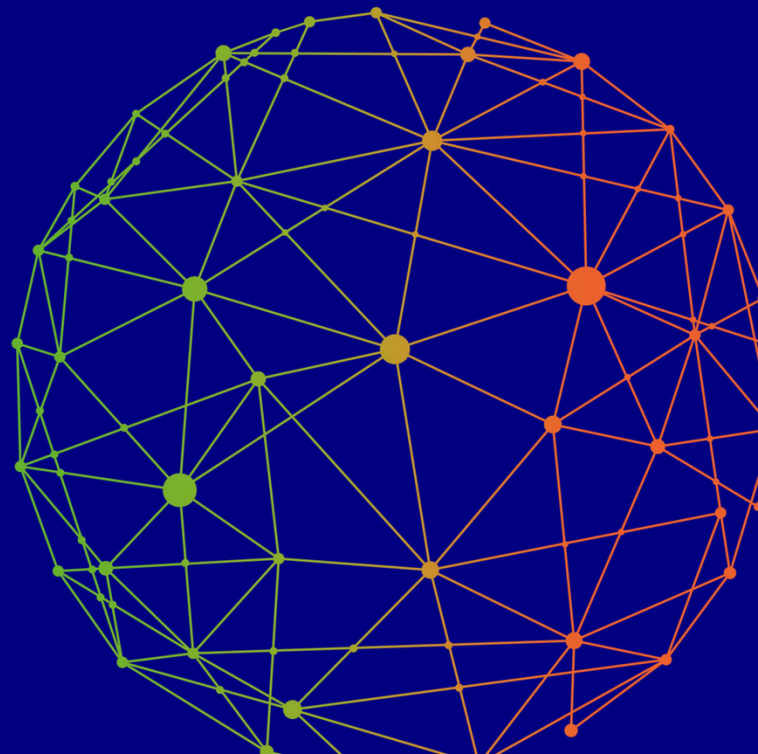
DSS 2025 | Launching the DSSC Toolbox

1



DATA SPACES
SUPPORT CENTRE

toolbox.dssc.eu



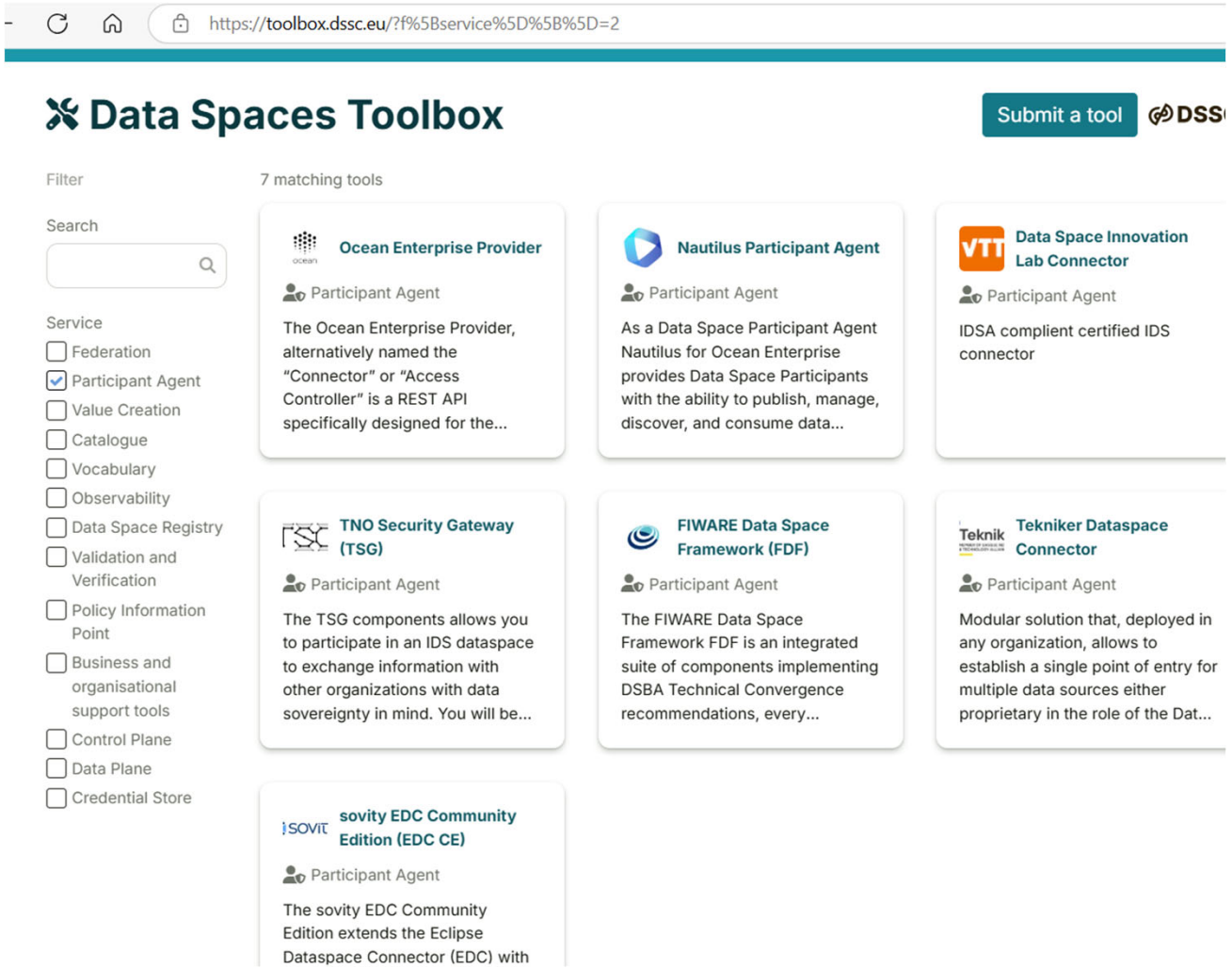
Tool overview

DATA SPACES SUPPORT CENTRE

Search

Filter

Explore



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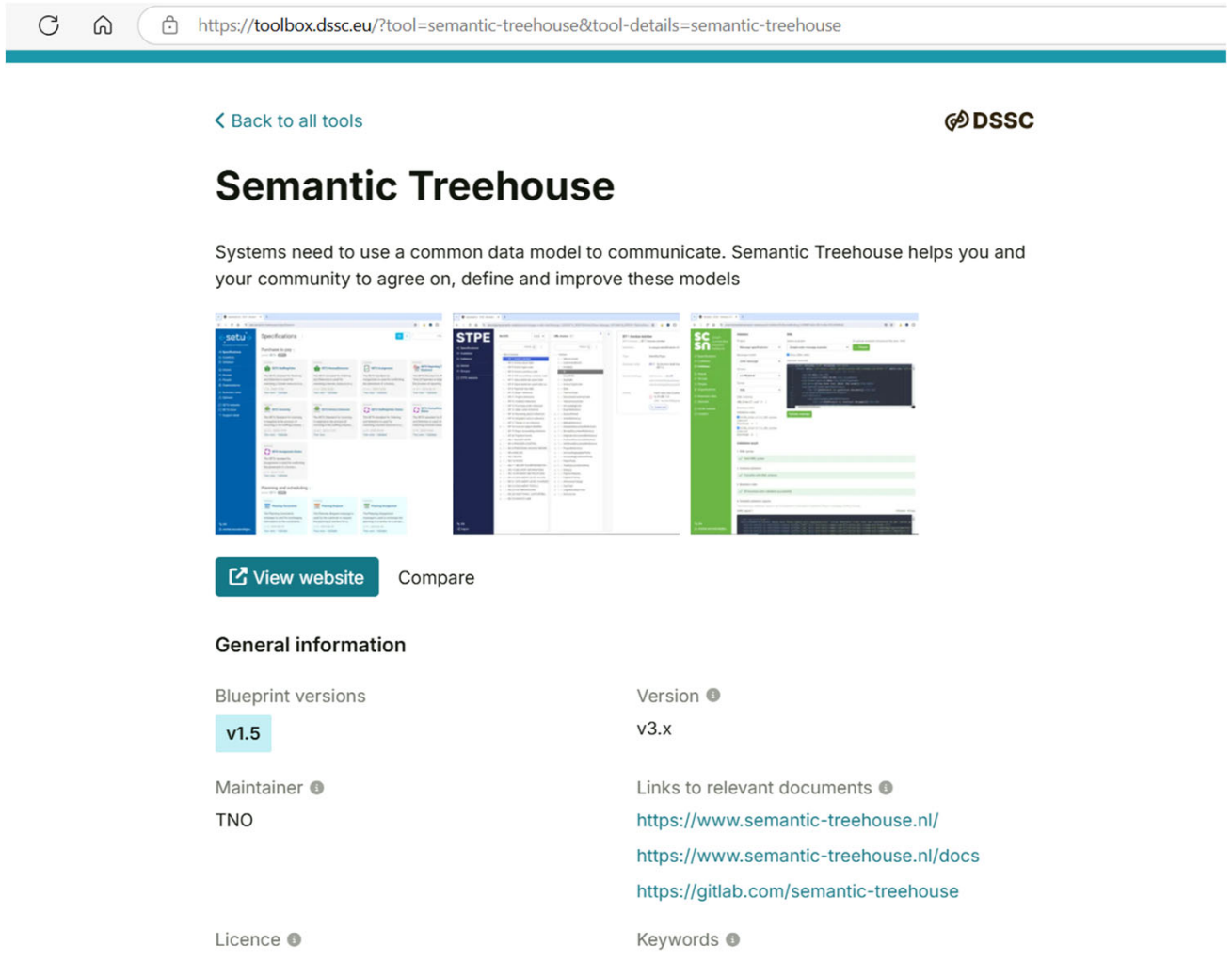
Tool details

View

Explore

Learn



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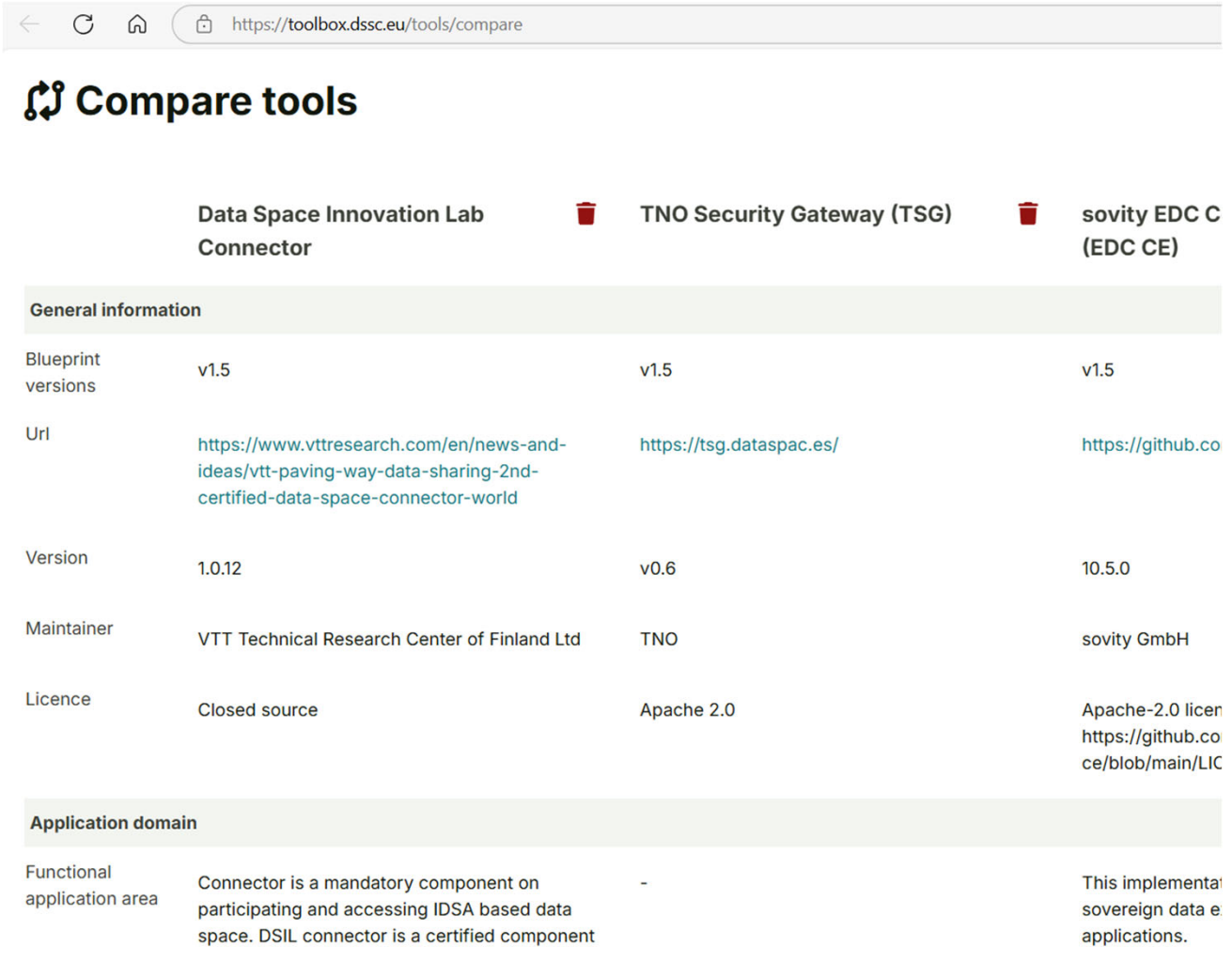
Tool comparison

DATA SPACES SUPPORT CENTRE

Select

Compare

Decide



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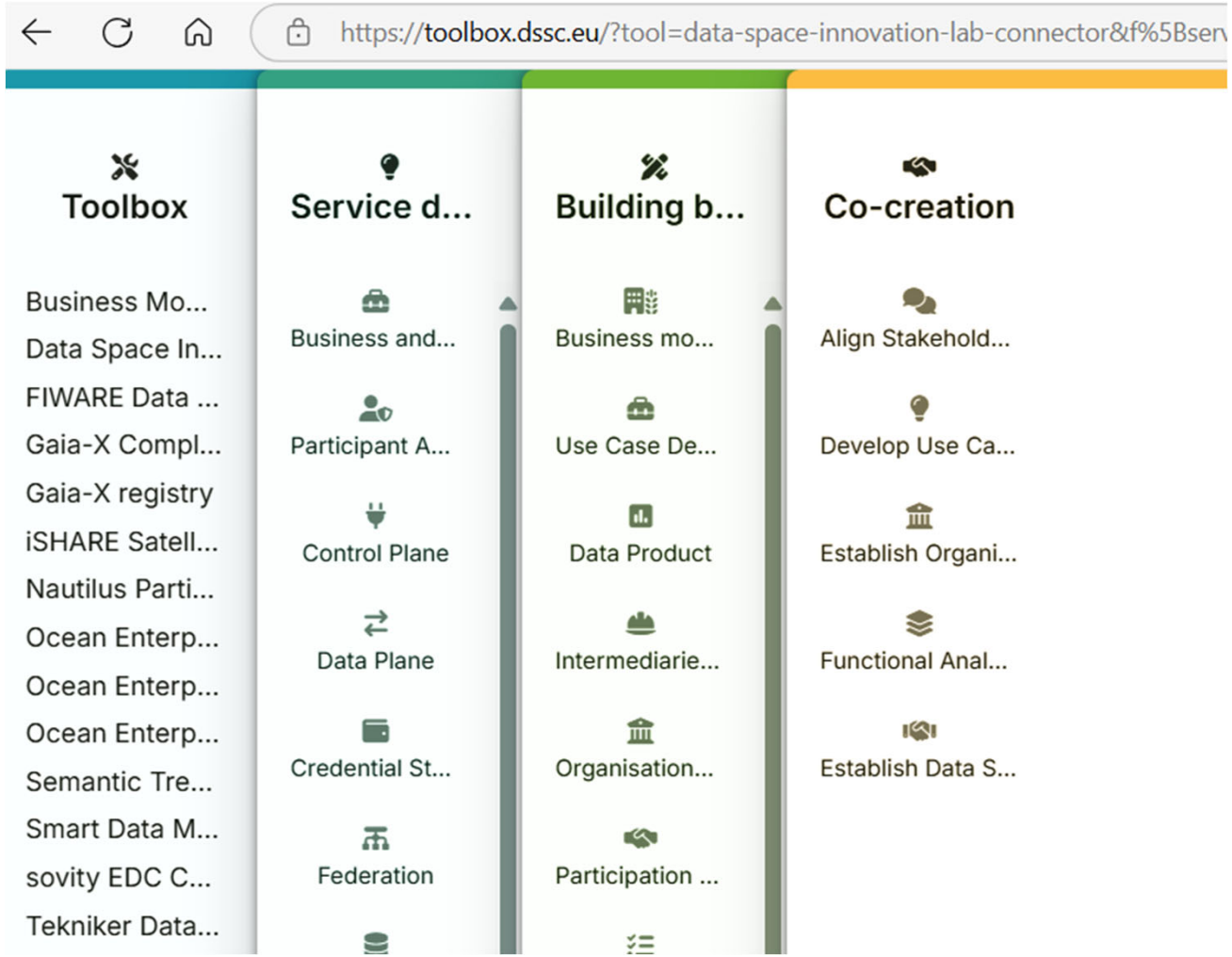
Relation to Blueprint

DATA SPACES SUPPORT CENTRE

Service definitions

Building blocks

Co-creation method



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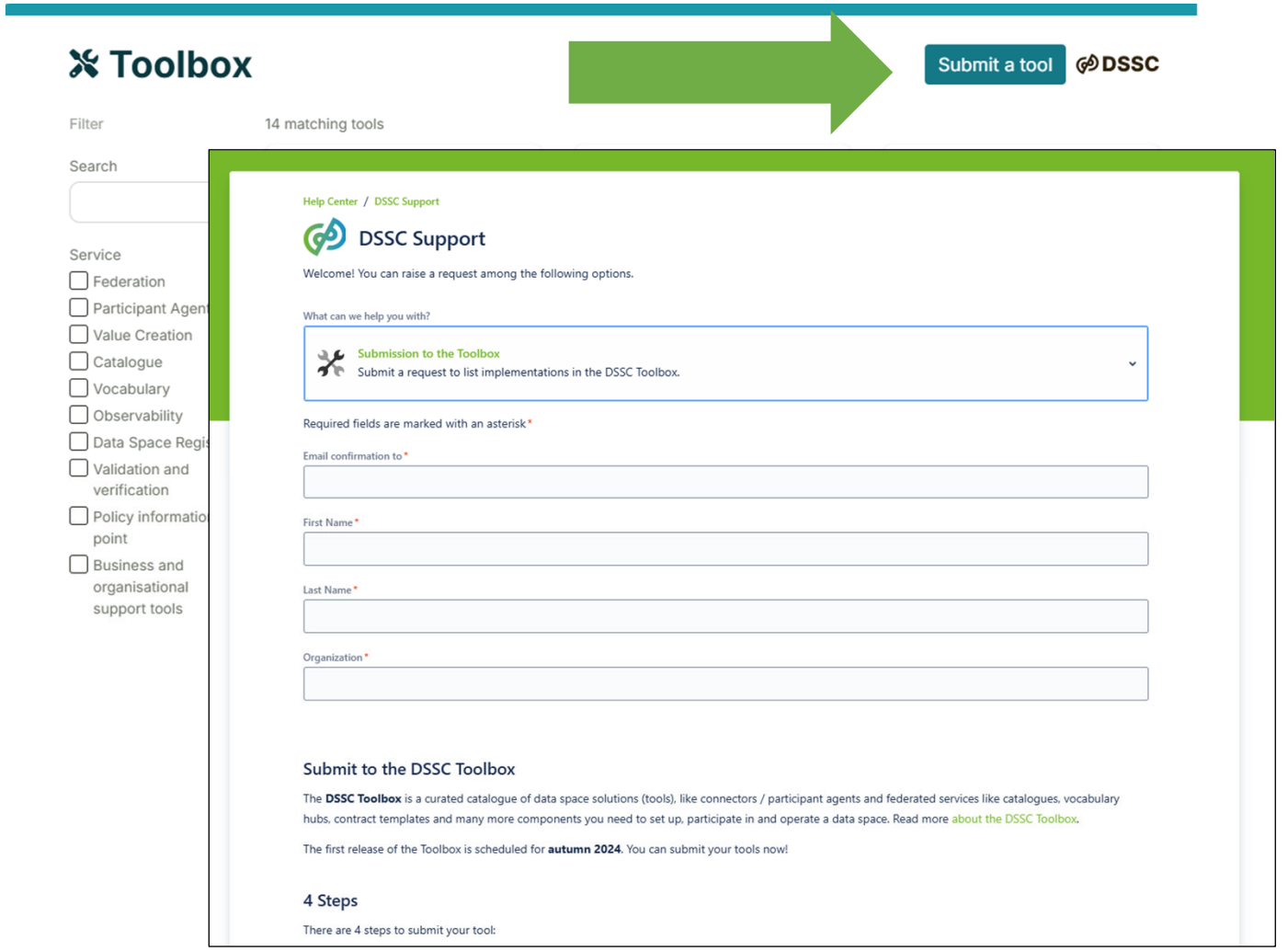
Submit your tool!

You can submit your solution via the DSSC support system.

Click on Submit a tool and follow the steps.

We'll continue to process submissions, also after the Symposium.



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Data Spaces Symposium

Share data. Unlock value. Boost impact.

Day 2 | track 3 | 13h

Pitch presentations of tools in the DSSC Toolbox

Tekniker Dataspace Connector

Participant Agent

Modular solution that, deployed in any organization, allows to establish a single point of entry for multiple data sources either proprietary in the role of the Dat...

Tekniker Dataspace
Connetor
Gonzalo Gil
Tekniker

Business Model Radar

Business and organisational support tools

The Business Model Radar provides a template to visually map key components of a business model in a circular and interconnected format. It helps c...

Business Model Radar
David Regeczi
TNO

Sitra rulebook tool

Business and organisational support tools

Sitra's fair data economy rulebook contains a framework, agreement templates and tools for creating and joining data networks. The rulebook describ...

Rulebook tool
Viivi Lähteenoja
My Data

WISEPHERE

Value Creation

WISEPHERE is a technological environment developed by ITI that, once deployed, allows organizations to manage, share and exploit data in a reliable and...

WISEPHERE
Daniel Sáez
ITI

Moderated by
Sonia Jimenez
IDSA

Data Spaces Symposium

Share data. Unlock value. Boost impact.

Day 2 | track 3 | 13h

Panel session on data space tools

Valentina Staveris
SIMPL

Gianfranco Cecconi
DSSC

Viivi Lähteenoja
My Data

Matthias De Bièvre
Prometheus-X

Moderated by
Michiel Stornebrink
TNO for DSSC

Data Spaces' Synergies

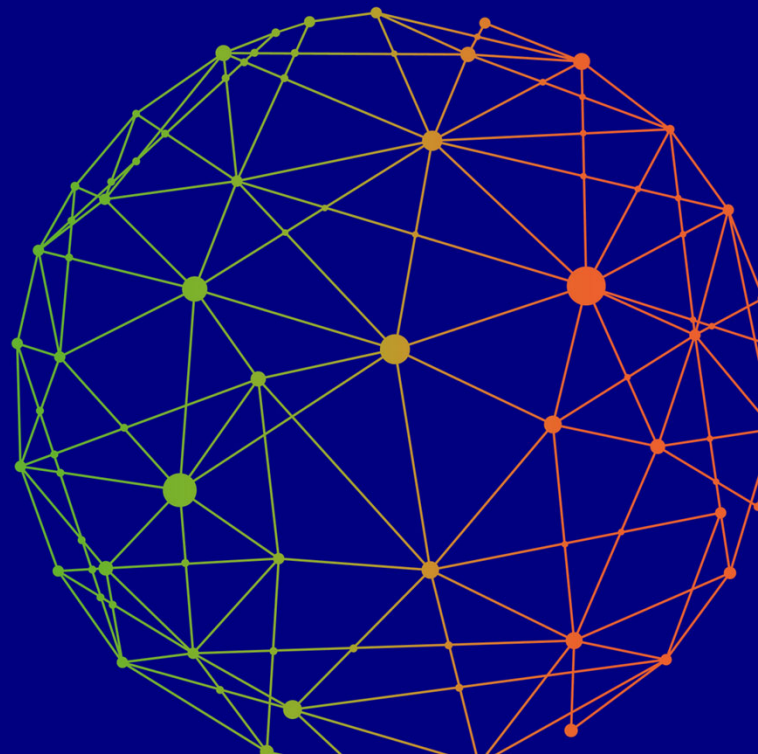
Designing and delivering the European single market for data

Data Spaces Symposium 2025

Our Guest:

Gabriella Laatikainen
VTT

Mark Dietrich
EGI Foundation



DSBA ■ BDV BIG DATA VALUE ASSOCIATION FIWARE FOUNDATION gaia-x INTERNATIONAL DATA SPACES ASSOCIATION

DATA SPACES SUPPORT CENTRE

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Synergies and interoperability between data spaces

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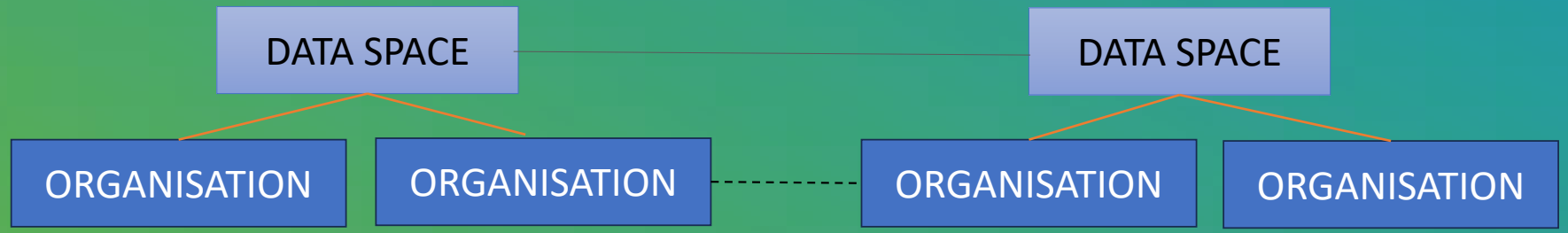


LEGEND
- The interoperability challenge
- Rulebook compliance
- Data transactions

Cross-data space interoperability

The ability of participants to seamlessly access and/or exchange data across two or more data spaces

enables

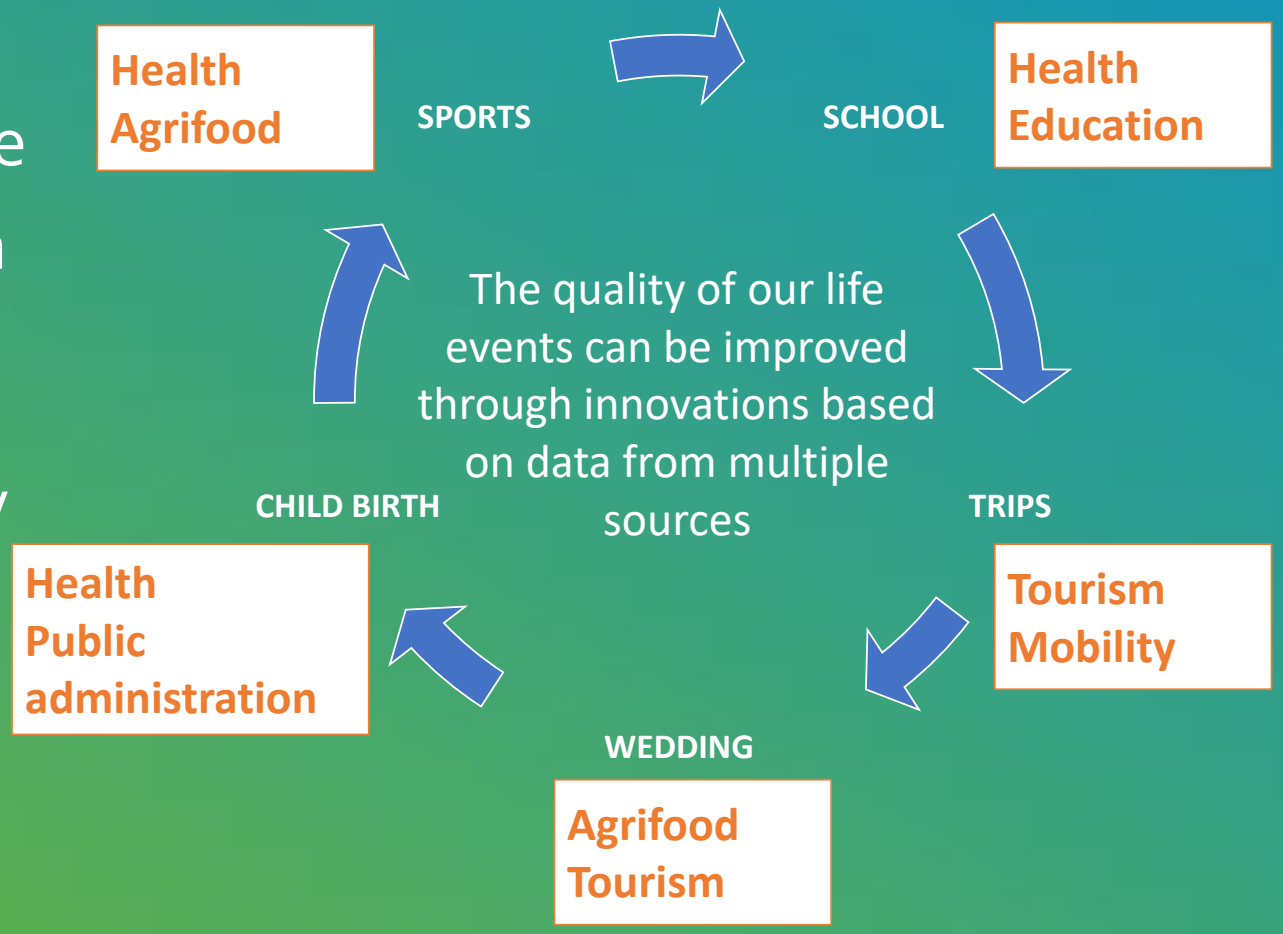
Synergies

The mutual benefits, gained efficiency or increased impact of two or more data spaces working together

Why should we care about cross-data space interoperability?

DATA SPACES SUPPORT CENTRE

- Innovations typically span the boundaries of a single data space
- Many users need to interact with and participate in multiple data spaces
- Cross-data space interoperability is a cornerstone of the digital single market



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How to achieve cross-data space interoperability?

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Interoperability-by-design

Interoperability governance

Co-development of common rules between the data spaces, and potentially solving the interoperability challenges

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Read more in the DSSC Assets…

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Data Spaces' Synergies

Synergies of data spaces

What: Discussion paper on the importance of synergies of data spaces

Who: Data space builders, policy makers, business managers, data space participants

Why: To understand synergies from multiple perspectives and to explore the role of synergies at different stages of data space development

Data Spaces' Synergies

Available in the DSSC Knowledge base

Cross-data space interoperability considerations in data space design and operation

1. Why do we need interoperable data spaces?
2. What is cross-data space interoperability and how to achieve that?
3. Collaboration between data spaces starts with a shared objective: a need for cross-data space use case(s)
4. Business considerations of collaborating data spaces
5. Technical considerations of collaborating data spaces
6. Legal aspects of collaborating data spaces
7. Future work
8. Conclusions

Part of Blueprint v2.0

… and work with us on this topic!

Cross DS Interoperability

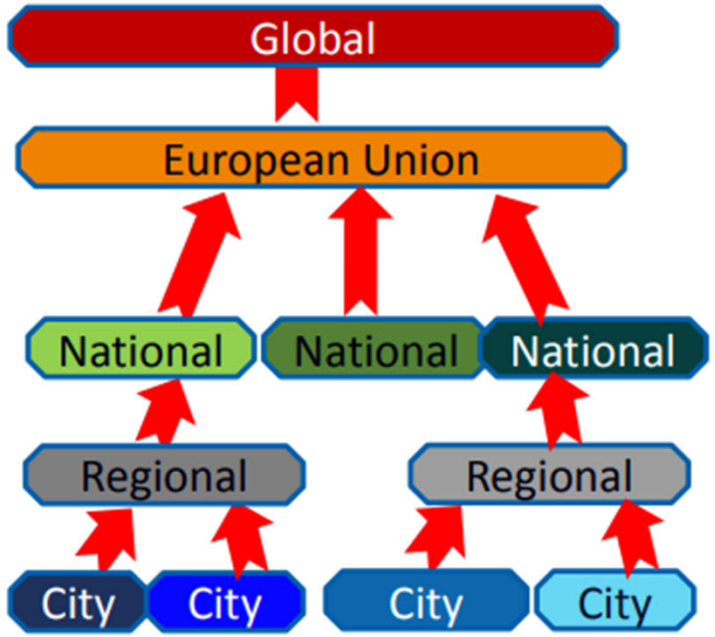
eosc | BEYOND

SAGE | The Data Space for a Sustainable Green Europe

Needed Data, Services Sit in Many Places, Possibly Duplicated.

And/Or

1 item of data must be exchanged many times with partners in a value chain.



Let's learn from the Web: build different kinds of businesses on top of well-defined technical foundation:

Data Ecosystem Business Model Governance Rules

Dataspace Protocols, Standards, Technical Compliance

Let's NOT overdo DSGAs!

There might be 1000s - millions of data spaces: we don't want DSGAs everywhere. Instead transparently define the rules for each data space. (DSaC*)

Meanwhile, let's build a solid technical foundation for data spaces.

For example, where are the connectors that can connect to multiple DS? Why is this not part of the MVP of SIMPL?

*DSaC – ask me if you don't get it

Dissemination and communications

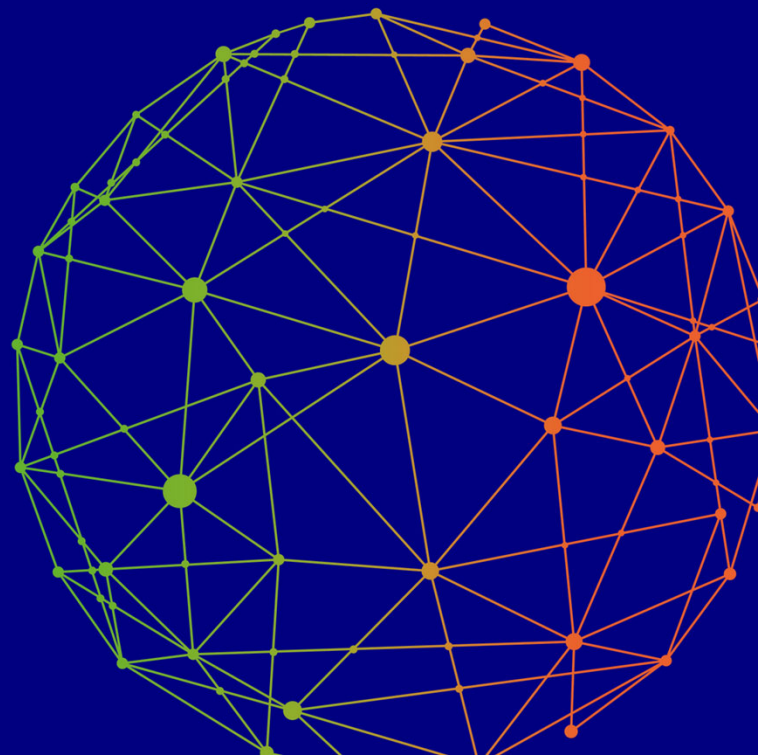
Designing and delivering the European single market for data

Our Guests:

Lydia Montandon
FIWARE Foundation

Marcin Baryn
European Commission

Valentina Staveris
European Commission



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DSSC Main Channels

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- Newsletters
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DSSC Relevant Materials

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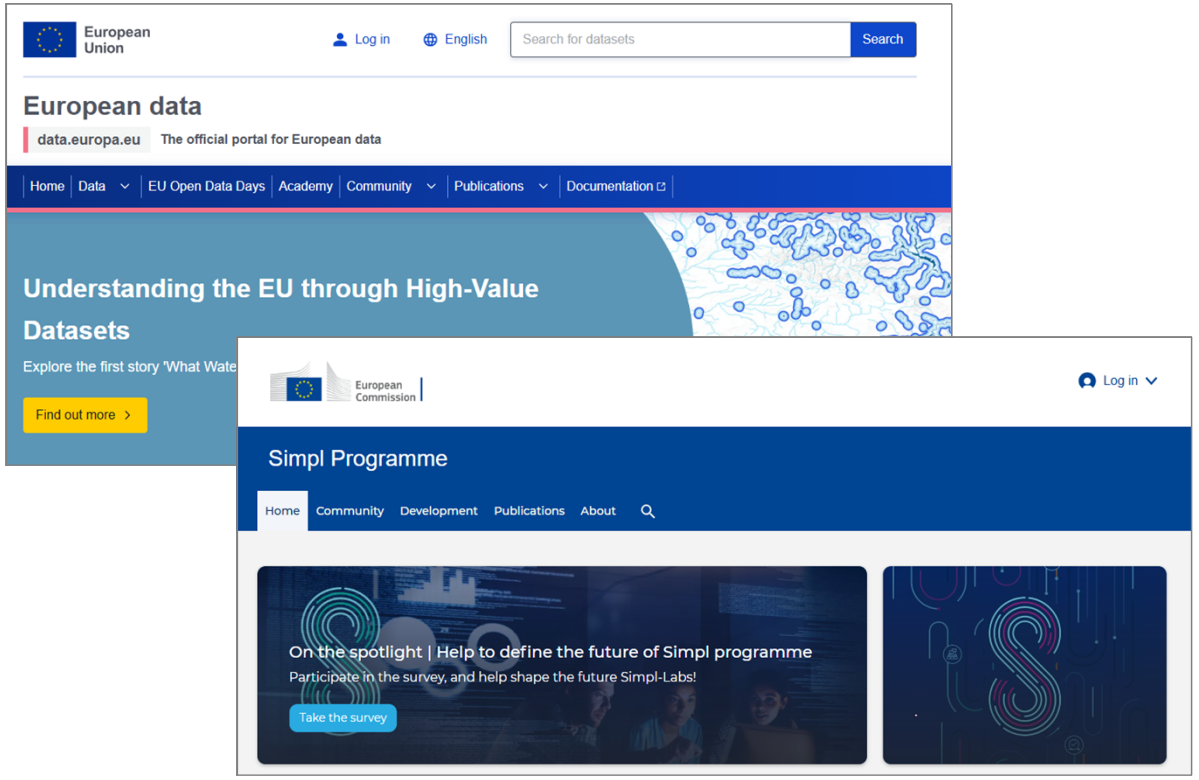
- Visuals

Synergies with EC initiatives



Website (dssc.eu)

DATA SPACES SUPPORT CENTRE

Blogs & News
Newsletters

Get Information
Get Support
Get Involved
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DATA SPACES SUPPORT CENTRE

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Community of Practice
Strategic Stakeholder Forum
Liaisons & Collaborations

Publications
Deliverables
Multimedia

Tools Shortcut

DSSC Toolbox

Find here our curated catalogue of data space solutions

Asset Shortcut

Offering

Blueprint 2.0

Dive directly into the latest version of the Blueprint h

Newsletters (every 2 months)

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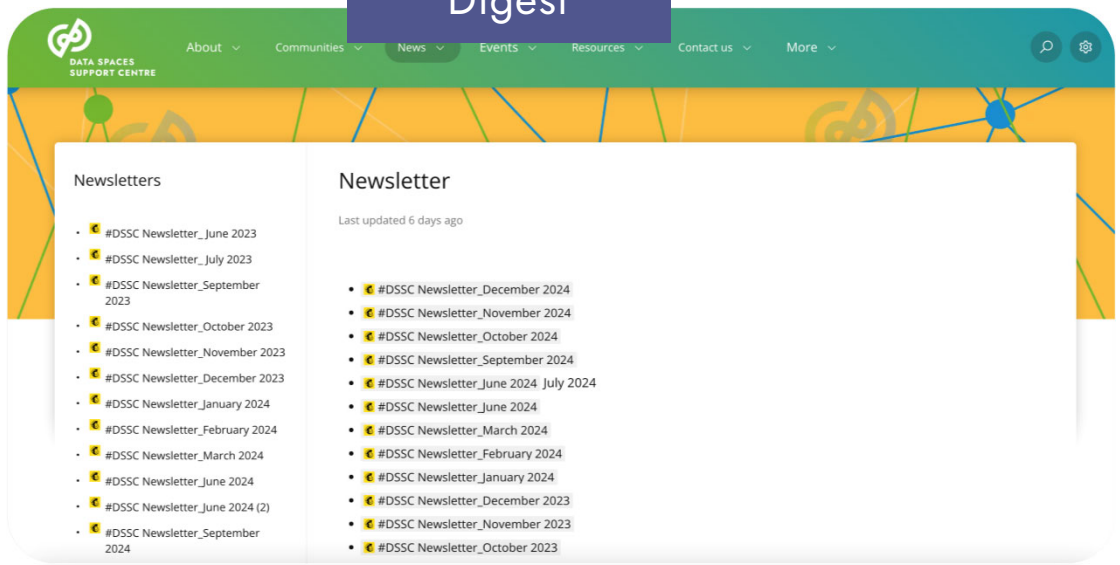
Digest



Mailing

LinkedIn (follow us)

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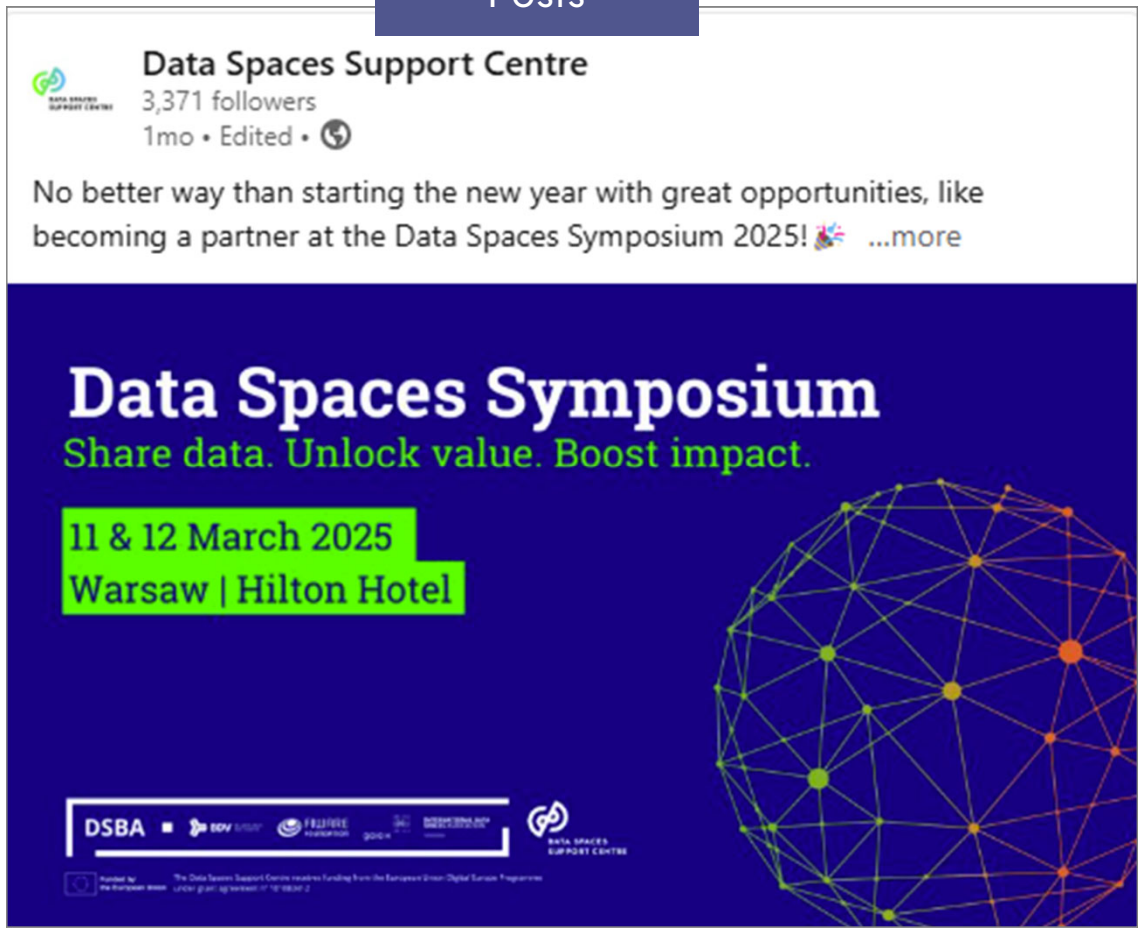
Posts



Articles

Events & Insight Series Webinars

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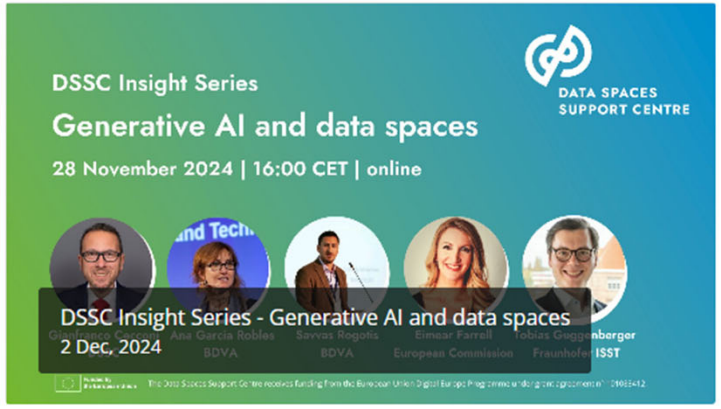
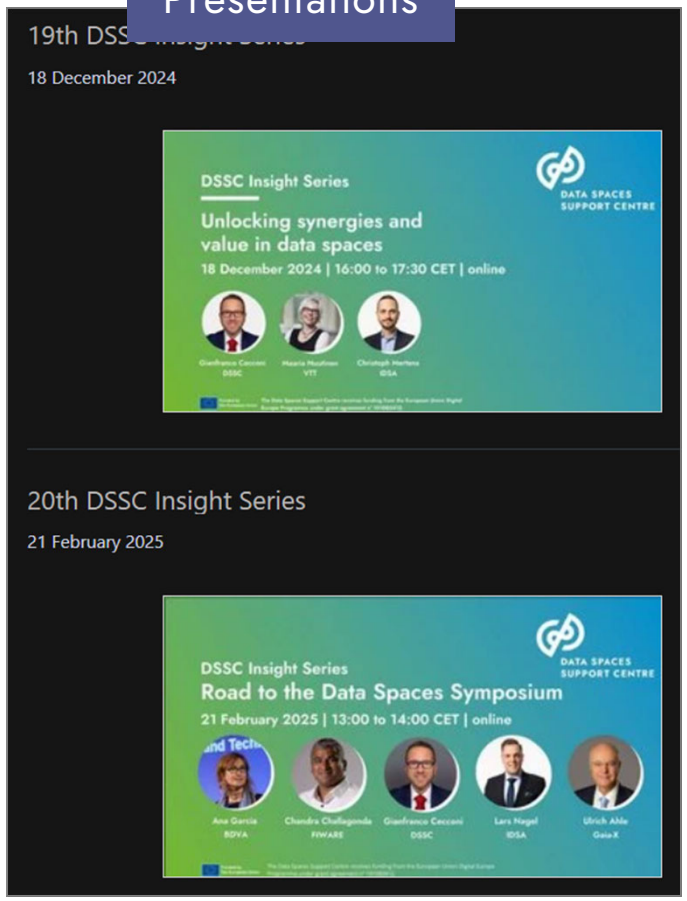


Presentations & Publications

DATA SPACES SUPPORT CENTRE

Presentations



Publications

Last updated 2 days ago

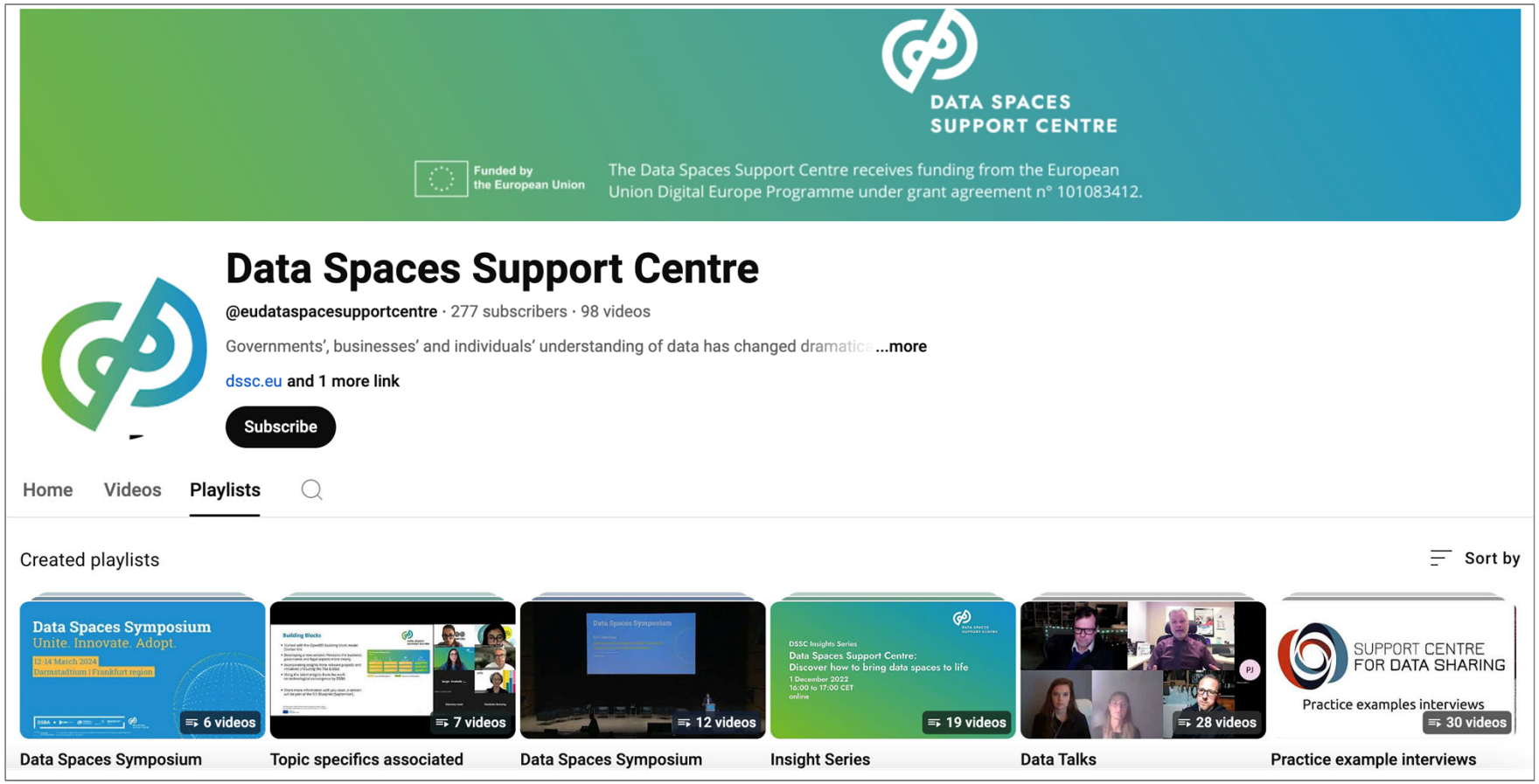
Generative AI and Data Spaces – White Paper

The "Generative AI and Data Spaces" white paper of the DSSC's Strategic Stakeholder Forum (SSF) explores the intersection of generative artificial intelligence (AI) and data spaces. It focuses on how combining these two fields can support innovative data-sharing ecosystems while adhering to principles, such as data sovereignty, trust, and interoperability. The white paper outlines key recommendations to enable more effective integration of generative AI into data spaces, fostering collaboration, transparency, and sustainable data management strategies within the European framework. (November 2024).

Why data spaces? A business and user's perspective – Discussion Paper

first collaborative discussion paper produced by Data Spaces Support Centre (DSSC) in collaboration with its Strategic Stakeholder Forum (SSF). The main target audience of this paper are organisations and initiatives enabling or implementing data spaces, and for the recommendations, also the DSSC team. Taking as a starting point existing bibliography, this paper reflects on outcomes of several workshops, interviews, individual and collective feedback gathering sessions with SSF members and DSSC partners. (October 2023).

Videos (YouTube)



- Insight Series
- Data Talk
- Blueprint, Toolbox
- DSS'24

Visuals (coming soon)

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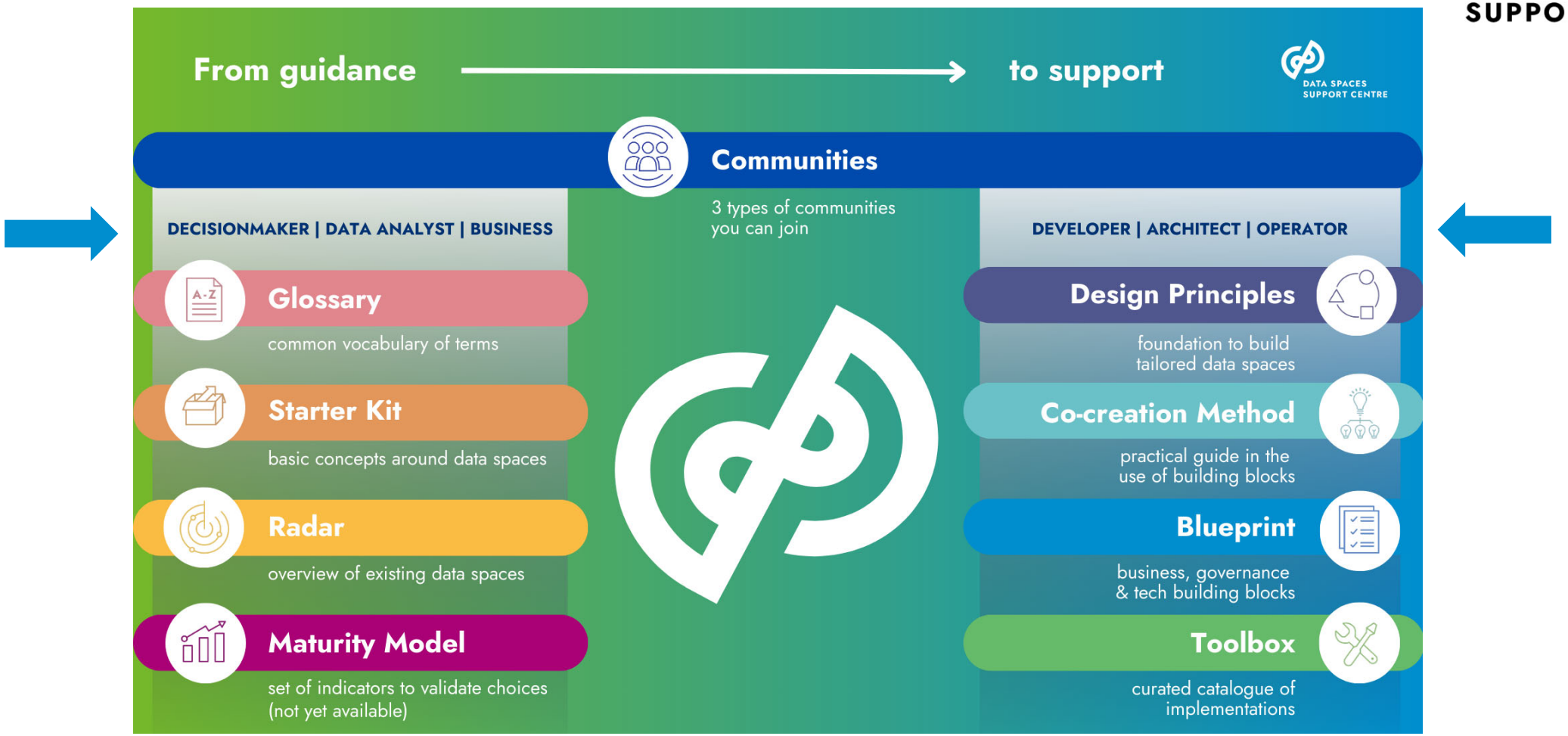


DATA SPACES SUPPORT CENTRE

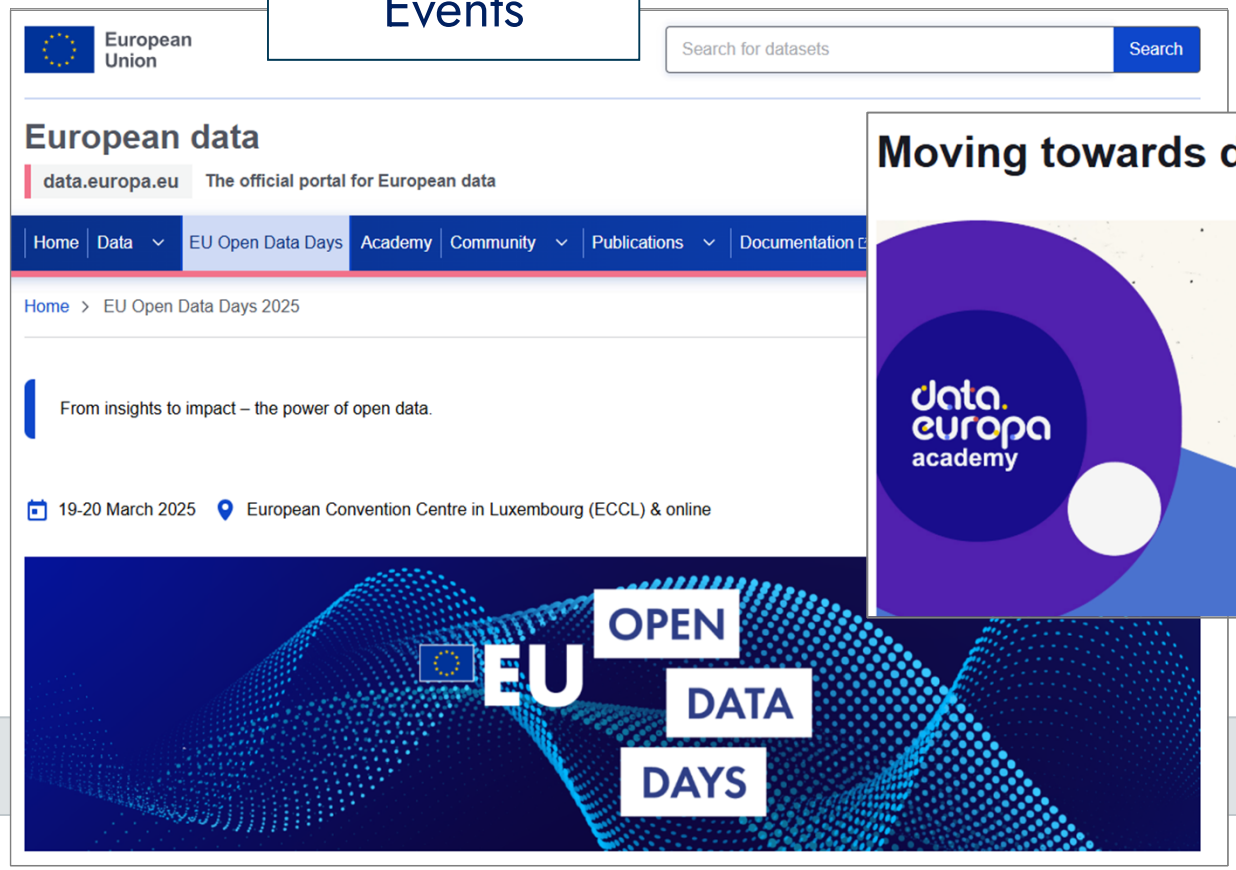
Synergies

With other EC initiatives

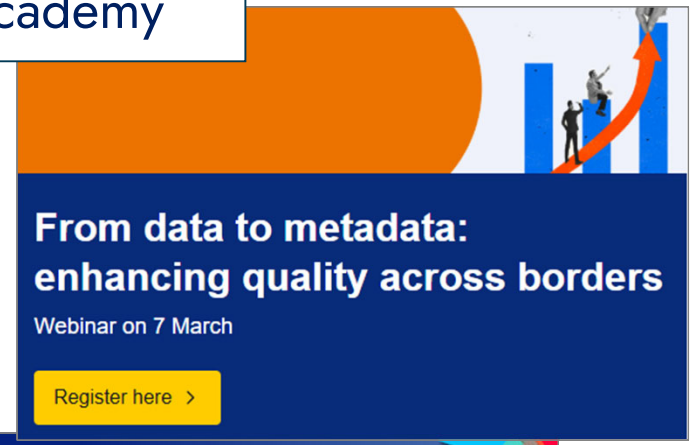
European data
The official portal for European data

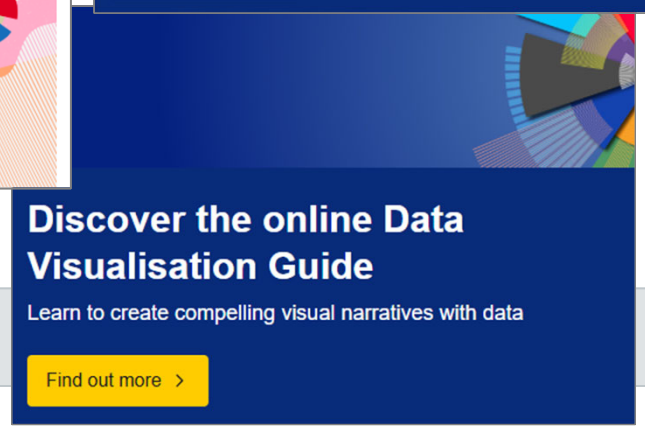
DATA SPACES SUPPORT CENTRE

Events



Academy



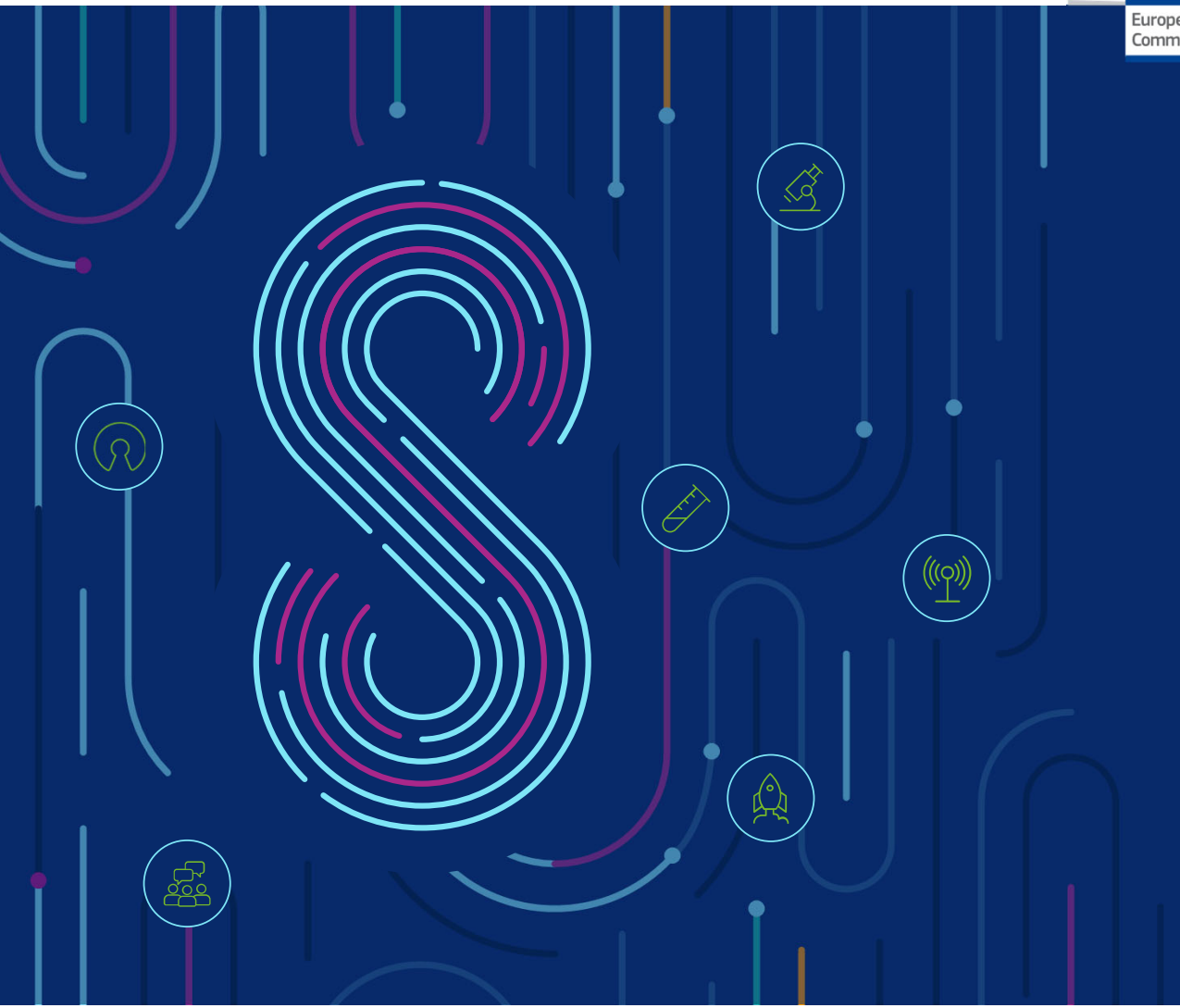


European data
The official portal for European data

DATA SPACES SUPPORT CENTRE

Publications

data.europa.eu



Communication & Community Engagement

- DSS Symposium

Get involved and participate

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Website
Visit our website for Simpl documentation, requirements and latest news.

Social Media
Join and engage with our growing community!

Forum
Keep a look out for Simpl's forum launch! Coming soon!

Webinars & Workshops
Join technical and business sessions, online and in person.

Surveys
Help us improve!

Code Repository
Check out and review the code!

Scan me for more information about Simpl