

# Data Spaces Symposium

13:30

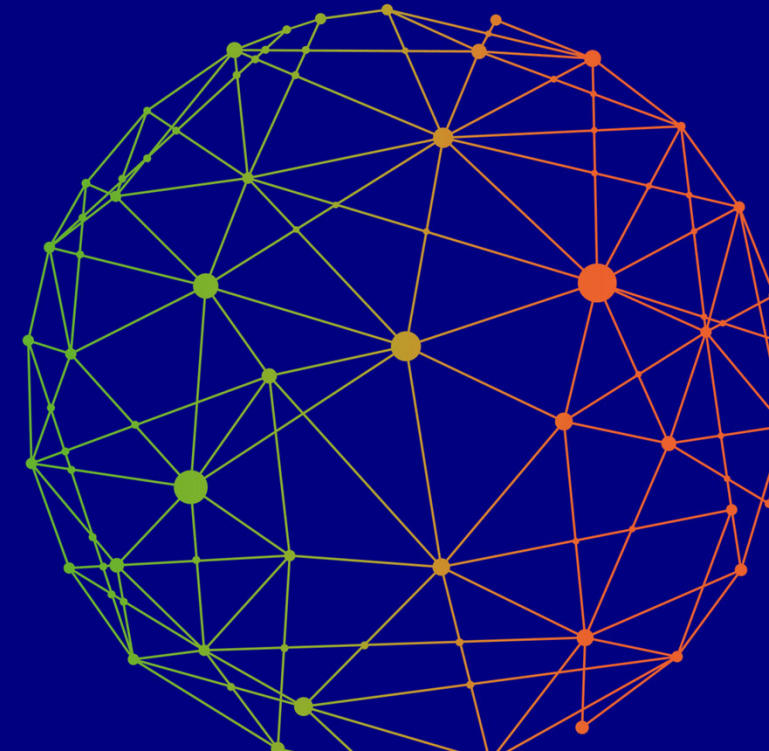
Capabilities you need to make  
a data space a success

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Data space tech [facilitated by the DSSC]

# Capabilities you needed to make a data space a success

Questions? Use the QR-Code



# Capabilities you need to make a data space a success

1.- DSSC Validation scheme and Toolbox

2.- Data space tools in action

3.- Insights from Toolbox users



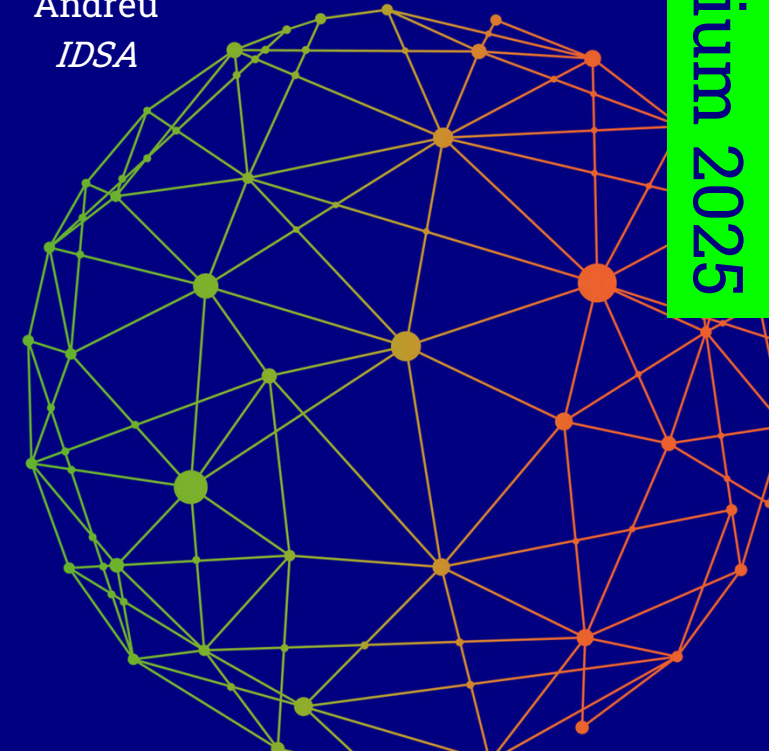
Mariano Blaya-  
Andreu  
*IDSA*



Sonia Jiménez  
Moreno  
*IDSA*



Michiel Stornebrink  
*TNO*



# Why a Toolbox (curated catalog)



Data spaces are being implemented

Matching offer and demand

Technical and organisational

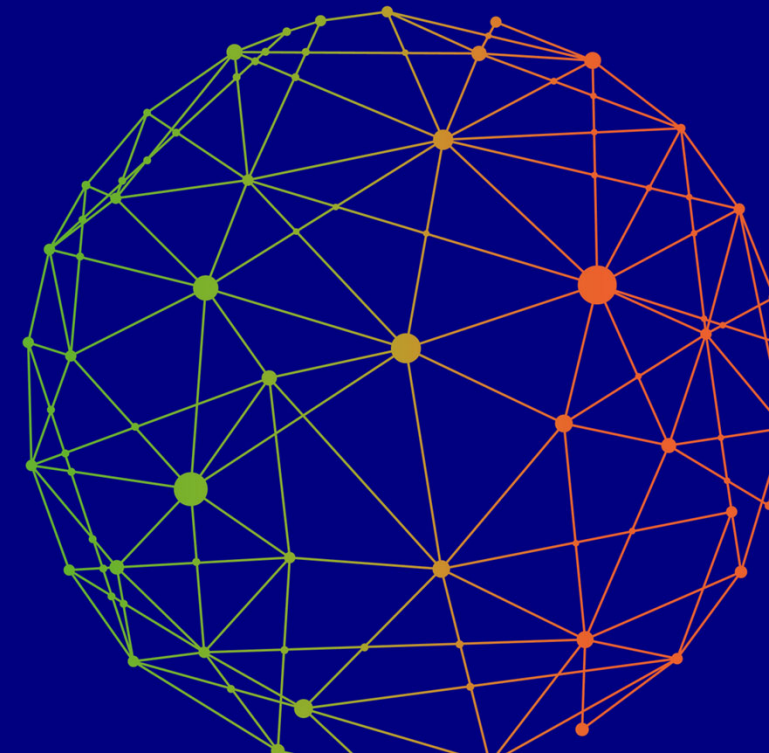
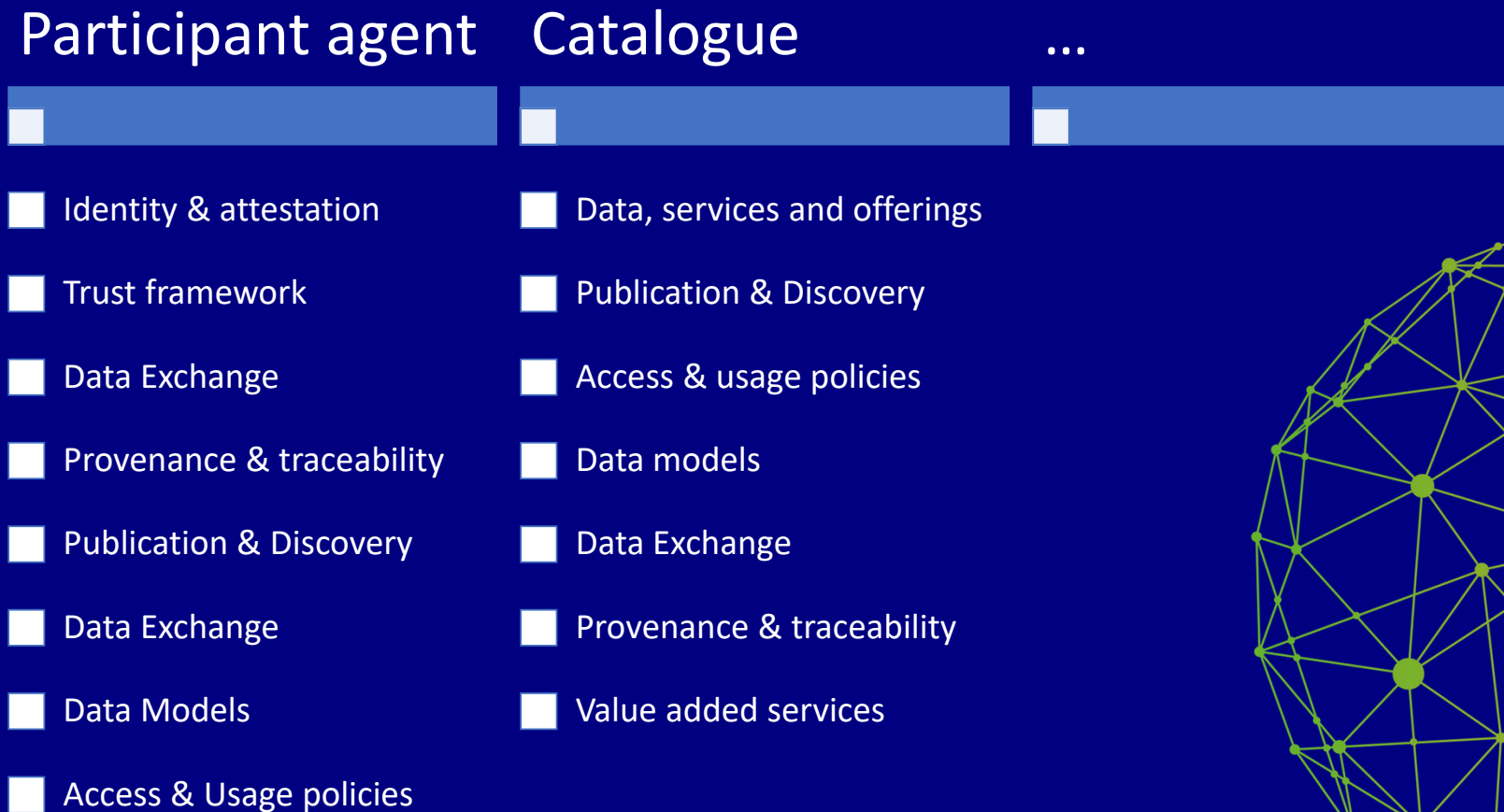
Aligned with the Blueprint





# Relationship with the Blueprint

Service implementations rather than building block implementations



# Value added by the Toolbox

Solution  
providers

Alignment to the  
Blueprint

Stamped by  
DSSC (and  
indirectly by EC)

Data Spaces  
authorities

Organisational  
and business

Data space  
participants

Find validated  
implementations



# Submission process

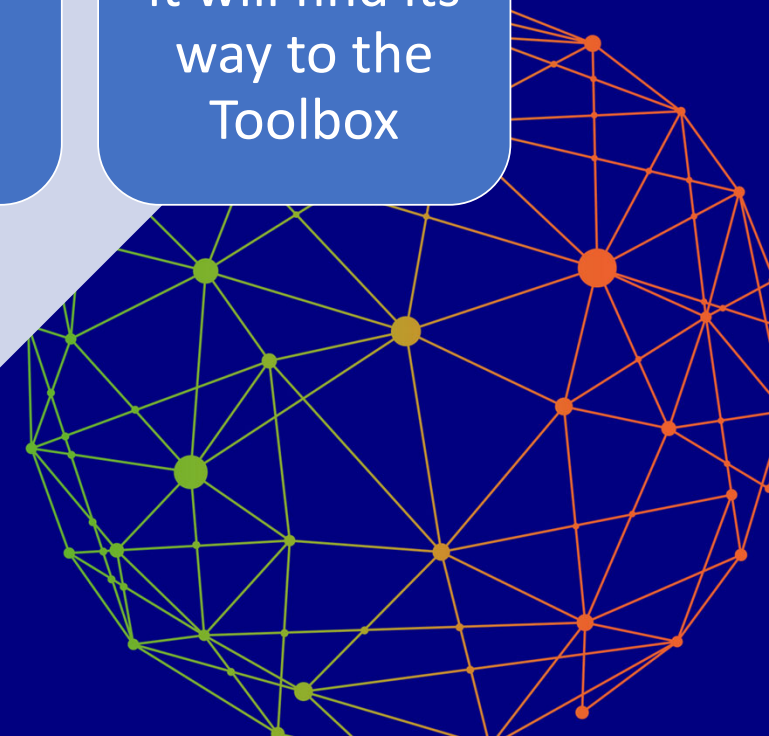
Familiarise  
yourself with  
the Blueprint

Fill the  
metadata  
template

Fill the self-  
assessment  
questionnaire

Submit them  
both to the  
DSSC

All going well,  
it will find its  
way to the  
Toolbox





# Data Spaces Toolbox

Submit a tool DSSC

Filter

16 matching tools

Search

Service

- ☐ Federation
- ☐ Participant Agent
- ☒ Value Creation
- ☐ Catalogue
- ☐ Vocabulary
- ☐ Observability
- ☐ Data Space Registry
- ☐ Validation and Verification
- ☐ Policy Information Point
- ☐ Business and organisational support tools
- ☐ Control Plane
- ☐ Data Plane
- ☐ Credential Store



## Ocean Enterprise Provider

Participant Agent

The Ocean Enterprise Provider, alternatively named the "Connector" or "Access Controller" is a REST API specifically designed for the...



## Ocean Enterprise Market

Value Creation

The Ocean Enterprise Market or Ocean Enterprise Portal is a Graphical User Interface (GUI) which provides Data Space Participants with the ability to...



## Nautilus Participant Agent

Participant Agent

As a Data Space Participant Agent Nautilus for Ocean Enterprise provides Data Space Participants with the ability to publish, manage, discover, and consume data...



## Ocean Enterprise Catalogue and Aquarius Catalogue Cache

Catalogue

The Ocean Enterprise Catalogue allows the distributed, tamper-proof, self-sovereign storage of Data, Services, and Offerings Descriptions. Metadata records...



## Data Space Innovation Lab Connector

Participant Agent

IDS compliant certified IDS connector



## Gaia-X Compliance Service

Validation and Verification

The service takes as input the W3C Verifiable Presentations provided by the participants, checks them against shapes using the the W3C SHACL format,...



## Gaia-X registry

Validation and Verification

The Gaia-X registry is an open-source software with decentralisation at its core.

The Gaia-X registry is the



## Semantic Treehouse

Vocabulary

Systems need to use a common data model to communicate. Semantic Treehouse helps you and your community to agree on, define and implement these models



## TNO Security Gateway (TSG)

Participant Agent

The TSG components allows you to participate in an IDS dataspace to exchange information with other organizations with data

## Service d...

Business and...

Participant A...

Control Plane

Data Plane

Credential St...

Federation

Data Space R...

Catalogue

Validation an...

Policy Inform...

Vocabulary

## Building b...

Business mo...

Use Case De...

Data Product

Intermediar...

Organisation...

Participation ...

Regulatory c...

Contractual fr...

Data Models

Data Exchange

Provenance ...

## Co-creation

Align Stakehold...

Develop Use Ca...

Establish Organi...













Functional Anal...

Establish Data S...

## Data space tools

Examples of tools are data space connectors, catalogues, but also business and organisational support tools like templates and canvases.

These tools help organisations to set up, participate in and operate a data space.

 <b>sovity EDC Community Edition (EDC CE)</b> Participant Agent The sovity EDC Community Edition extends the Eclipse Dataspace Connector (EDC) with additional open-source enhancements, providing a read...	 <b>TNO Security Gateway (TSG)</b> Participant Agent The TSG components allows you to participate in an IDS dataspace to exchange information with other organizations with data sovereignty in mind. You will be...	 <b>Data Space Innovation Lab Connector</b> Participant Agent IDSA compliant certified IDS connector
 <b>Gaia-X Compliance Service</b> Validation and verification The service takes as input the W3C Verifiable Presentations provided by the participants, checks them against shapes using the the W3C SHACL format,...	 <b>Semantic Treehouse</b> Vocabulary Systems need to use a common data model to communicate. Semantic Treehouse helps you and your community to agree on, define and improve these models	 <b>Tekniker Dataspace Connector</b> 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...
 <b>FIWARE Data Space Framework (FDF)</b> Participant Agent The FIWARE Data Space Framework FDF is an integrated suite of components implementing DSBA Technical Convergence recommendations, every...	 <b>WISEPHERE</b> 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...	 <b>Nautilus Participant Agent</b> Participant Agent As a Data Space Participant Agent Nautilus for Ocean Enterprise provides Data Space Participants with the ability to publish, manage, discover, and consume data...
 <b>Ocean Enterprise Catalogue and Aquarius</b>	 <b>Gaia-X registry</b>	 <b>Smart Data Models</b>

Submit now to be part of this next release

You can submit your solution via the DSSC support system.


Go to [dssc.eu](https://dssc.eu) and navigate to the toolbox. There you'll find the steps to submit.

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

[contact@dssc.eu](mailto:contact@dssc.eu)


Please, welcome Sonia

Help Center / DSSC Support

 **DSSC Support**

Welcome! You can raise a request among the following options.

What can we help you with?

 **Submission to the Toolbox**  
Submit a request to list implementations in the DSSC Toolbox.

▼

Required fields are marked with an asterisk \*

Email confirmation to \*

First Name \*

Last Name \*

Organization \*

**Submit to the DSSC Toolbox**

The **DSSC Toolbox** is a curated catalogue of data space solutions (tools), like connectors / participant agents and federated services like catalogues, vocabulary hubs, contract templates and many more components you need to set up, participate in and operate a data space. Read more [about the DSSC Toolbox](#).

The first release of the Toolbox is scheduled for **autumn 2024**. You can submit your tools now!

**4 Steps**

There are 4 steps to submit your tool:



# Data Spaces Symposium

Share data. Unlock value. Boost impact.

Pitch presentations of Tools in the DSSC Toolbox



Tekniker Dataspace  
Connetor  
Gonzalo Gil  
Tekniker



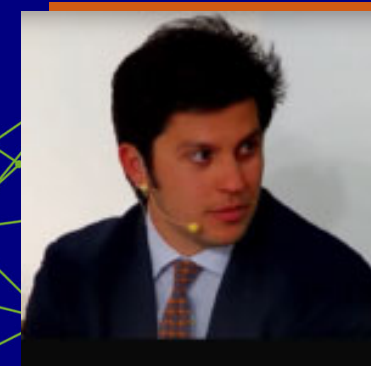
Business Model Radar  
David Regeczi  
TNO



Rulebook tool  
Viivi Lähteenoja  
My Data



WISEPHERE  
Daniel Sáez  
ITI



Tool  
Carlos Mazo  
NTT Data



# Tekniker DataSpace Connector

## DataSpace Tools in Action

Data Spaces Symposium 2025

Dr. Gonzalo Gil Inchaurrea  
Data Spaces Team Lead at Tekniker

DSBA



BDV  
BIG DATA VALUE  
ASSOCIATION



FIWARE  
FOUNDATION



gaia-x



INTERNATIONAL DATA  
SPACES ASSOCIATION

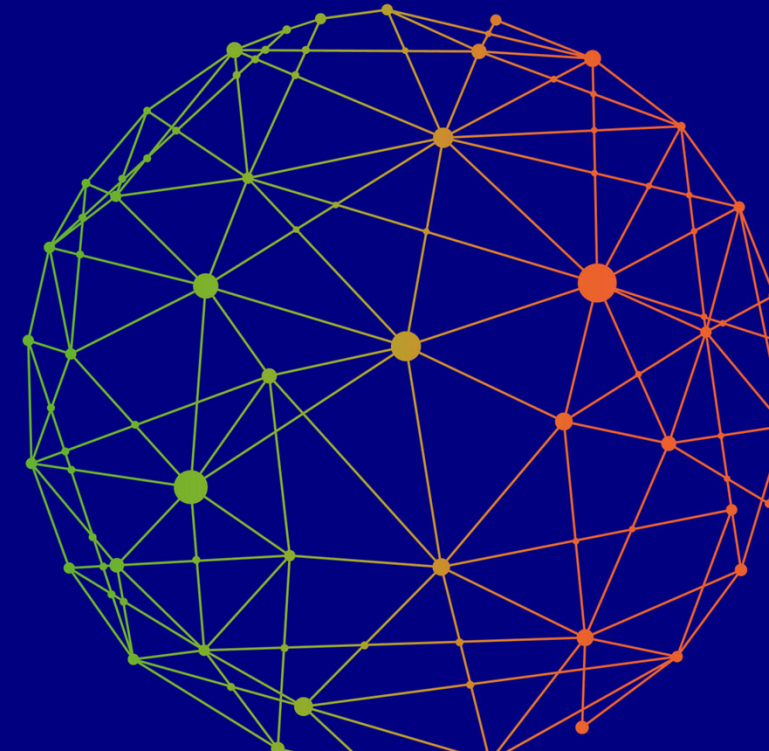


DATA SPACES  
SUPPORT CENTRE



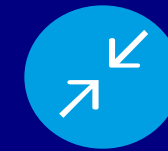
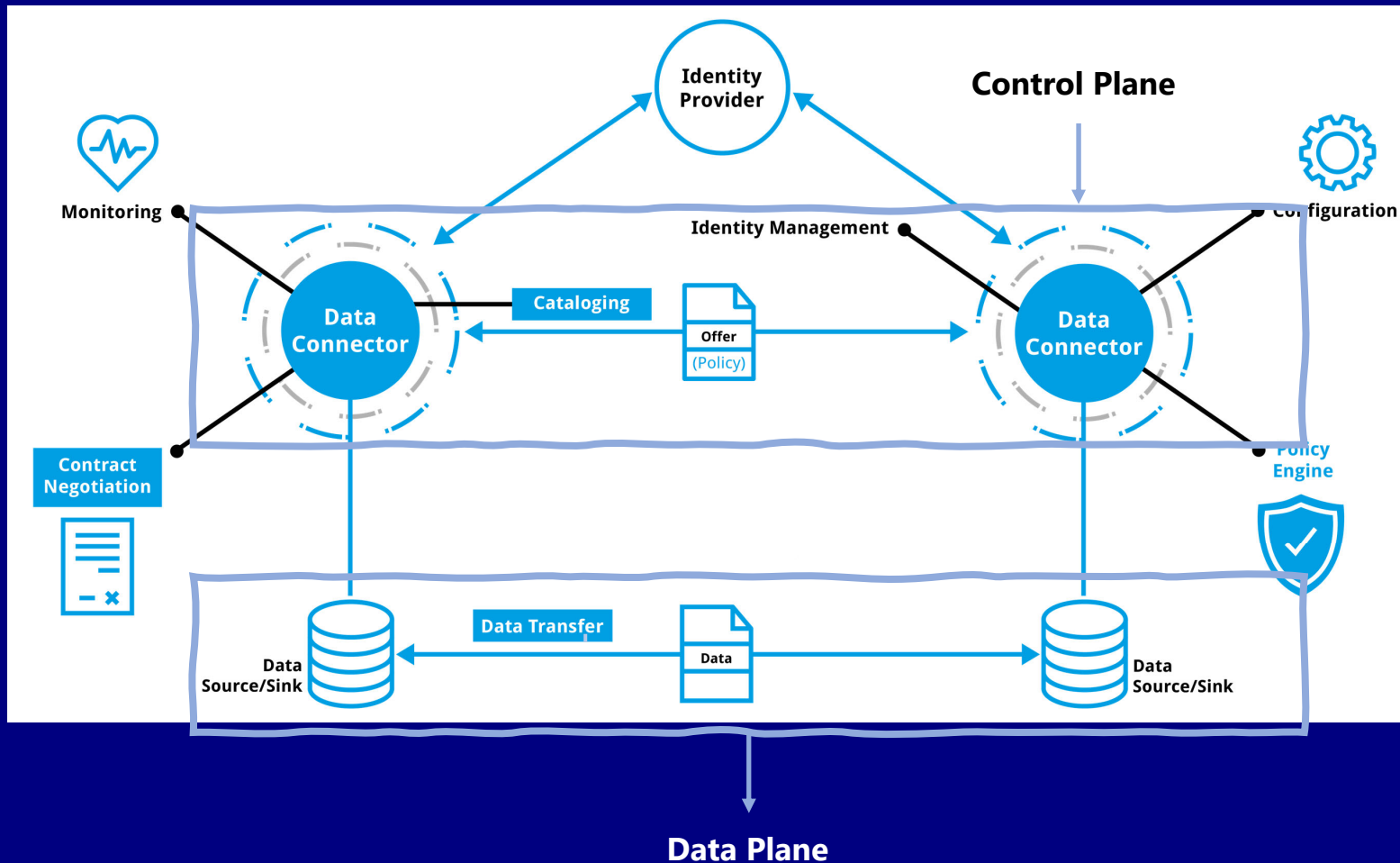
Funded by  
the European Union

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

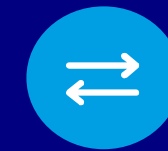


# The need for DataSpace Protocol

## Ensuring Data Space Interoperability



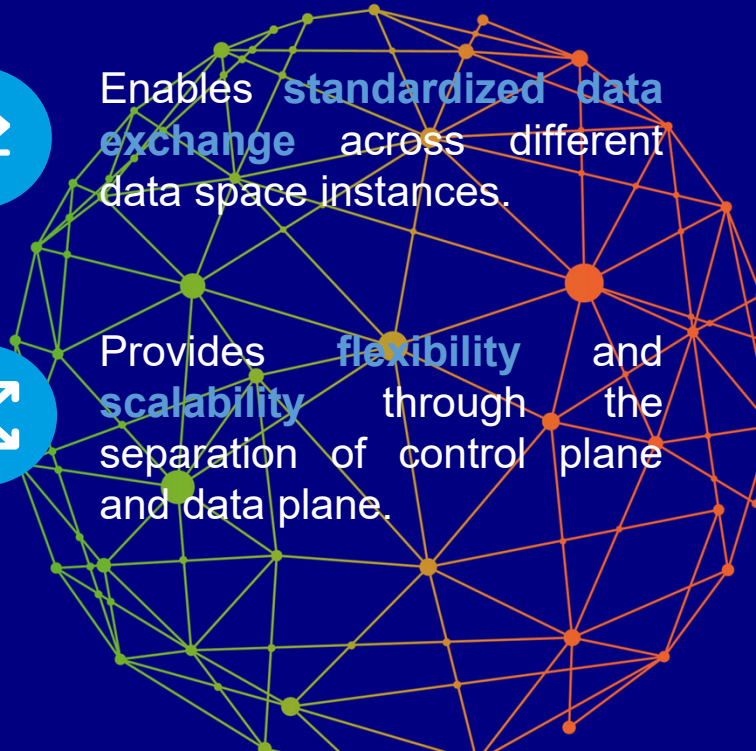
Promotes seamless technical **interoperability**, while addressing certain aspects of **semantic interoperability**.



Enables **standardized data exchange** across different data space instances.



Provides **flexibility** and **scalability** through the separation of control plane and data plane.



# Dataspace Protocol

*Collaborators defining and embracing the Dataspace Protocol*

## Who co-defined it?



IONOS



TNO



## Who is currently using it?



IONOS



amadeus



Cofinity-X



T Systems



truzzt





# Tekniker Dataspace Connector

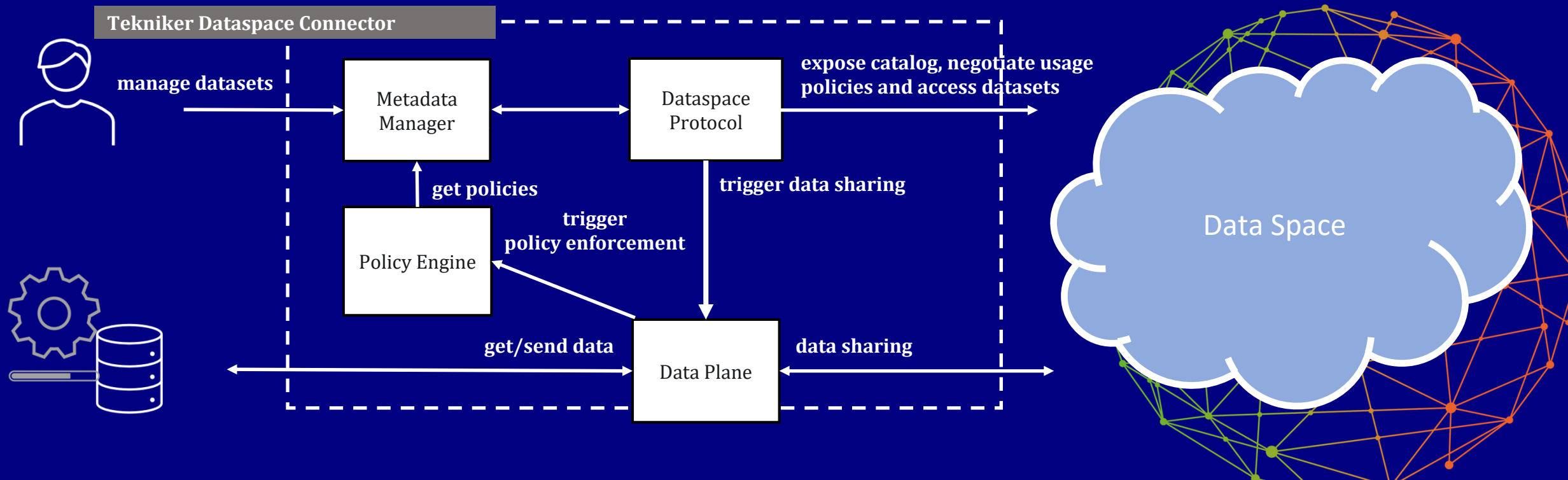
## What is it?

Modular solution that allows companies to establish a single point of entry to the data offered and requested through a data space:

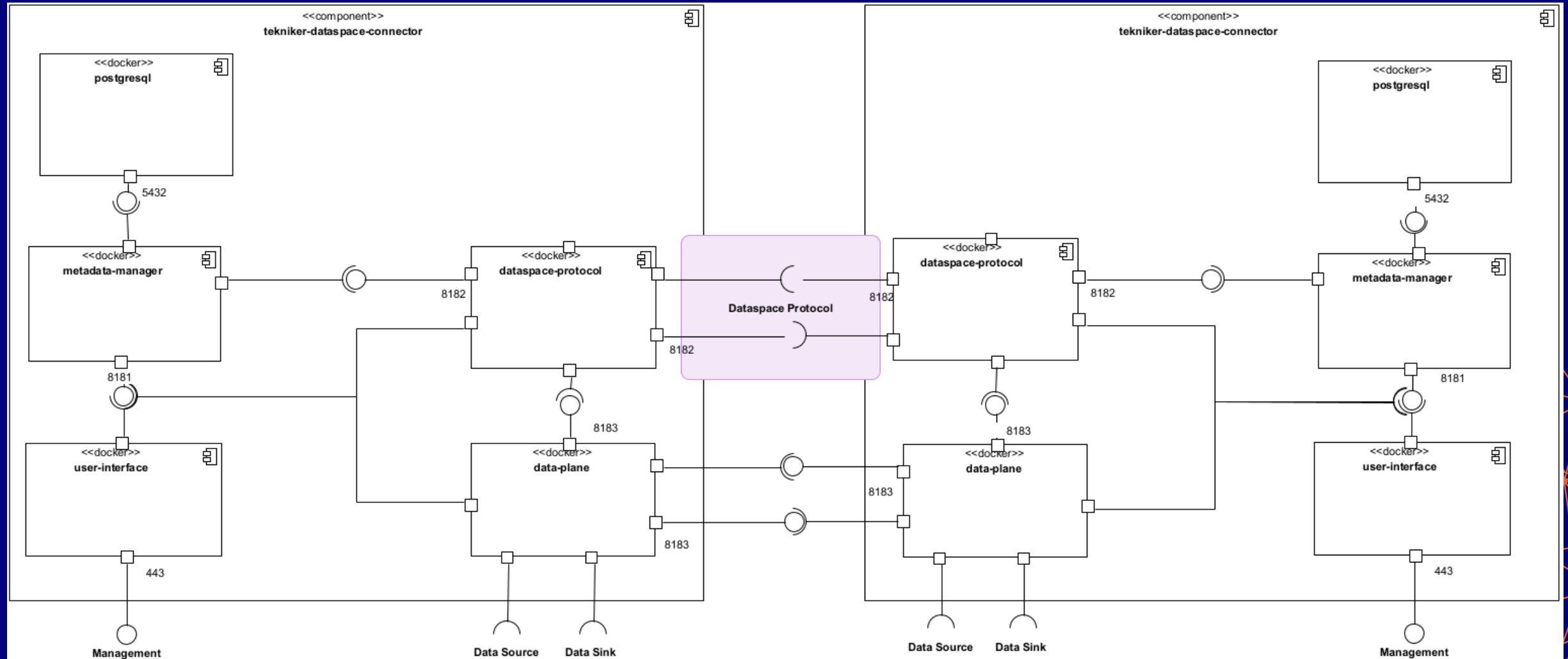
- Interoperability at data sharing
  - Dataspace Protocol 2024-1 & Data Correctness
- Data Sovereignty throughout its life-cycle
  - Usage Control

## How does it work?

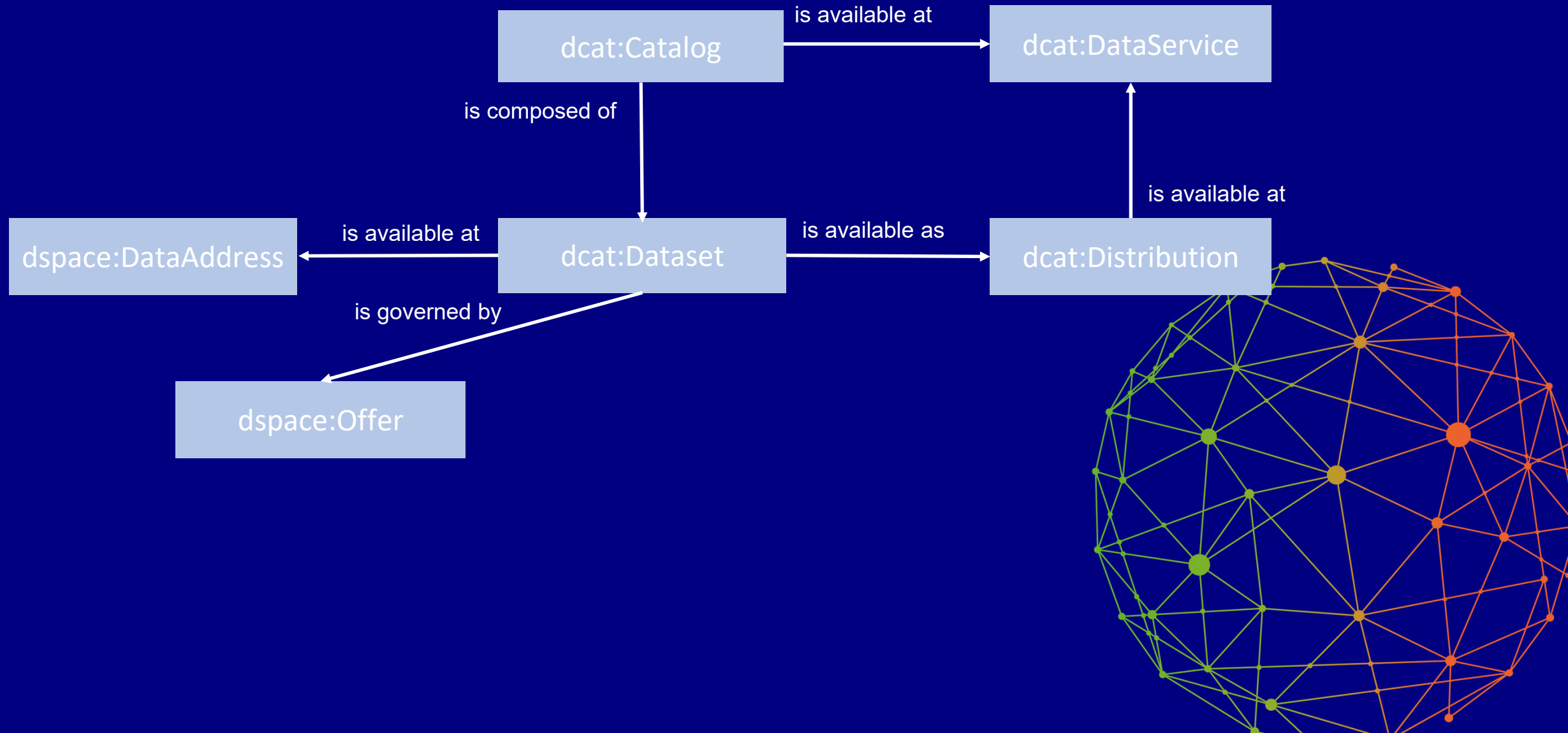
1. **Metadata Manager:** management of datasets offered and requested through the data space
2. **Dataspace Protocol:** description of catalogs, negotiation of use agreements and standardized access to datasets
3. **Data Plane:** data transfer through different protocols adapted to the requirements of the use cases
4. **Policy Engine:** enforcement of usage control policies



# Tekniker Dataspace Connector



# Publish a Catalog





TEKNIKER Dataspace Connector

Catalog

	Title	Description	Participant	Keywords	
+	Tekniker Catalog	This is the Catalog of Tekniker	participant1	Catalog, Tekniker	

Datasets

	Title	Description	Keywords	Dataset ID	
+	Json Data Example	This is an example Dataset for JSON data	Example	35d426dc-f11f-4f92-b1ec-7d61228e44a7	
-	PDF Dataset Example	This is an example Dataset for PDF data	Example	d75c6665-9f7b-40e3-ab18-0461d29aceeb	

Distribution

Media Type	Access Service	URL	
application/pdf	Tekniker Dataspace Connector Endpoint	<a href="http://participant1-tdc:8182/api/dsp/v1/server">http://participant1-tdc:8182/api/dsp/v1/server</a>	

DataAddress

Endpoint

HttpData

Properties

#	Name	Value
1	<a href="https://w3id.org/edc/v0.0.1/ns/baseUri">https://w3id.org/edc/v0.0.1/ns/baseUri</a>	<a href="https://internationaldataspaces.org/wp-content/uploads/dlm_uploads/IDSA-Data-Connector-Report-84-No-16-September-2024-1.pdf">https://internationaldataspaces.org/wp-content/uploads/dlm_uploads/IDSA-Data-Connector-Report-84-No-16-September-2024-1.pdf</a>

Permissions

#	Action	
1	odrl:use	

Constraints

#	Left Operand	Operator	Right Operand
1	odrl:dateTime	odrl:lteq	2026-01-01T00:00:00Z

Add Dataset



**TEKNIKER** Dataspace Connector

## Request a Catalog from Provider

## Catalog

	Title	Description	Participant	Keywords
+	Tekniker Catalog	This is the Catalog of Tekniker	participant1	Catalog, Tekniker

## Datasets

	Title	Description	Keywords	Dataset ID
+	Json Data Example	This is an example Dataset for JSON data	Example	35d426dc-f11f-4f92-b1ec-7d61228e44a7
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## Distribution

Media Type	Access Service	URL
application/pdf	Tekniker Dataspace Connector Endpoint	<a href="http://participant1-tdc:8182/api/dsp/v1/server">http://participant1-tdc:8182/api/dsp/v1/server</a>

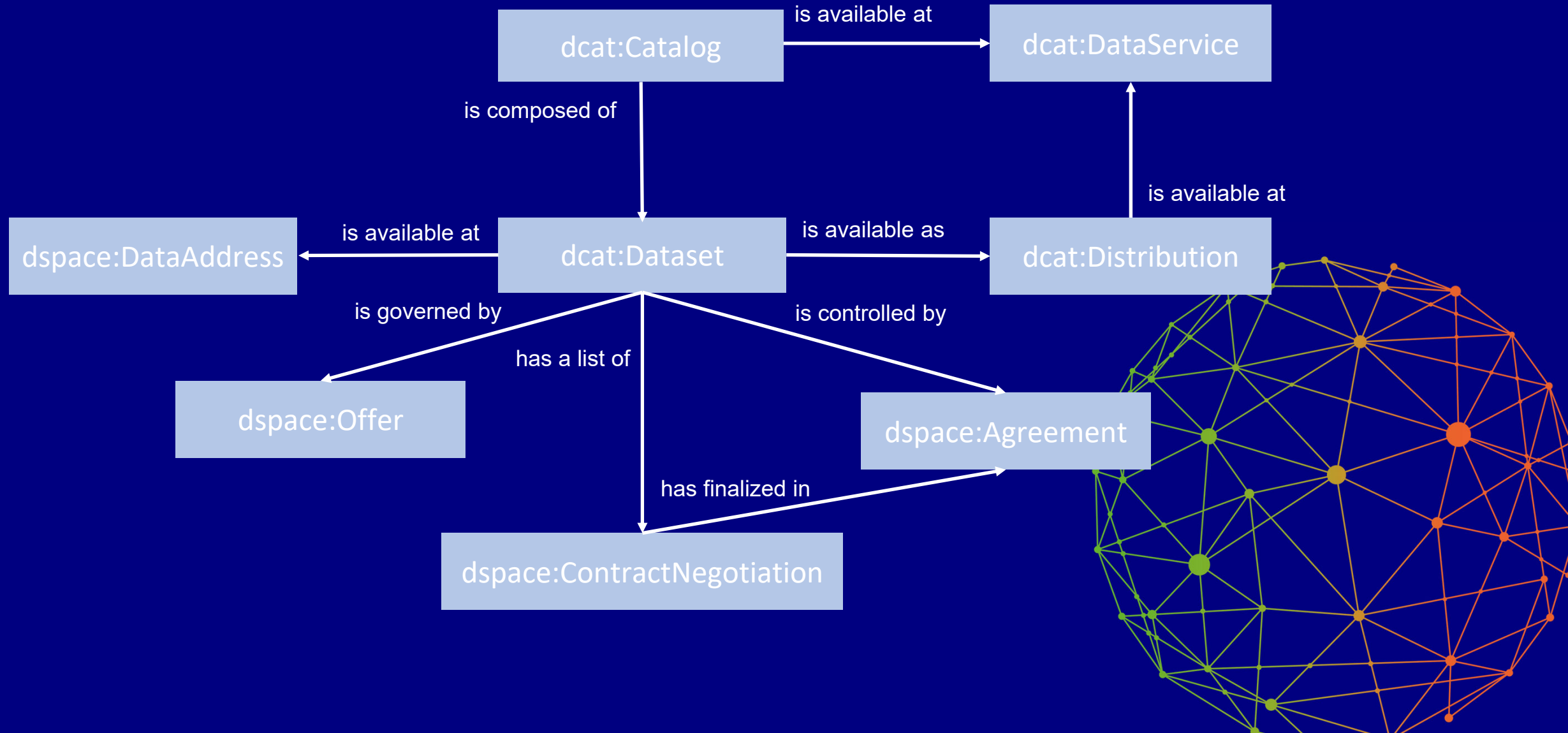
## Permissions

#	Action
1	odrl:use

## Constraints

#	Left Operand	Operator	Right Operand
1	odrl:dateTime	odrl:lteq	2026-01-01T00:00:00Z

# Negotiate Usage Policies





**TEKNIKER Dataspace Connector**

Request a Catalog from Provider

**Catalog**

	Title	Description	Participant	Keywords
+	Tekniker Catalog	This is t	participant1	Catalog, Tekniker

**Datasets**

	Title	Description	Dataset ID
+	Json Data Example	This is an exam	35d426dc-f11f-4f92-b1ec-7d61228e44a7
-	PDF Dataset Example	This is an exam	d75c6665-9f7b-40e3-ab18-0461d29aceeb

**Distribution**

Media Type	Access Service
application/pdf	Tekniker Dataspace Connector Endpoint


<http://participant1-tdc:8182/api/dsp/v1/server>

**Permissions**

#	Action
1	odrl:use

**Constraints**

#	Left Operand	Operator	Right Operand
1	odrl:dateTime	odrl:lteq	2026-01-01T00:00:00Z



Contract negotiation has been started.

Success!



TEKNIKER Dataspace Connector

Datasets

	Title	Description	Keywords	Dataset ID
	PDF Dataset Example	This is an example Dataset for PDF data	Example	d75c6665-9f7b-40e3-ab18-0461d29aceeb

Contract Negotiations

	Provider PID	Consumer PID	Callback Address	State
	747f6c1f-5e5d-4f0b-ab45-fe671f3412f1	5f931325-7277-40ef-b8e5-62142738d8a7	http://participant1-tdc:8182/api/dsp/v1/server	dspace:FINALIZED

Agreements

	Timestamp	Assigner	Assignee
	2025-03-05T09:06:38Z	participant1	participant2

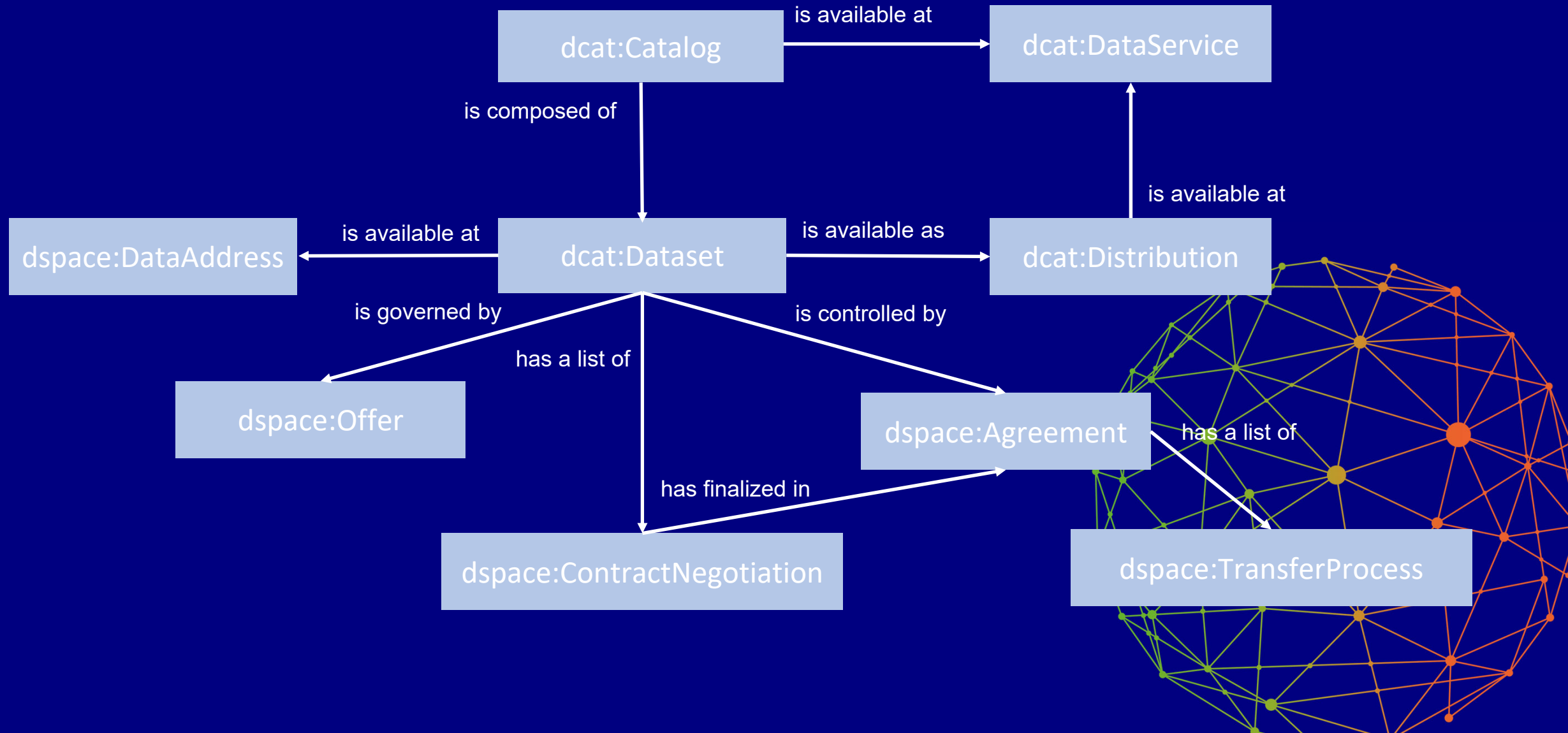
Permissions

#	Action
1	odrl:use

Constraints

#	Left Operand	Operator	Right Operand
1	odrl:dateTime	odrl:lteq	2026-01-01T00:00:00Z

# Data Access





TEKNIKER Dataspace Connector

Datasets

	Title	Description	Keywords	Dataset ID	
	PDF Dataset Example	This is an example Dataset for PDF data	Example	d75c6665-9f7b-40e3-ab18-0461d29aceeb	

Agreements

	Timestamp	Assigner	Assignee
	2025-03-05T09:06:38Z	participant1	participant2

Permissions

#	Action
1	odrl:use

Constraints

#	Left Operand	Operator	Right Operand
1	odrl:dateTime	odrl:lteq	2026-01-01T00:00:00Z



**TEKNIKER** Dataspace Connector

connector

Datasets

Title

+ PDF Dataset Example

9e3-ab18-0461d29aceeb

Select request type

Request type: ☐ PULL ☒ PUSH

Endpoint type: HttpData


Add property

#	Name	Value	
1	https://w3id.org/edc/v0.0.1/ns/baseUrl	Value	Remove




Accept






 **TEKNIKER** Dataspace Connector

Datasets

	Title	Description	Keywords	Dataset ID	
	PDF Dataset Example	This is an example Dataset for PDF data	Example	d75c6665-9f7b-40e3-ab18-0461d29aceeb	 



Tranfer proccess has been started.

Success!

OK



TEKNIKER Dataspace Connector

DataSets

	Title	Description	Keywords	Dataset ID
	PDF Dataset Example	This is an example Dataset for PDF data	Example	d75c6665-9f7b-40e3-ab18-0461d29aceeb

Agreements

	Timestamp	Assigner	Assignee
	2025-03-05T09:06:38Z	participant1	participant2

Transfers

#	Provider PID	Consumer PID	Callback Address	State
1	1020d1b7-d6f6-469f-a383-8064862dc63e	13a3c563-31d3-46c5-9065-ff582b61f98b	http://participant1-tdc:8182/api/dsp/v1/server	dspace:STARTED



# Dataspace Protocol

*Collaborators defining and embracing the Dataspace Protocol*



## R&D Projects Adopting DSP



Tec4MaaSEs

DISC

RE4DY  
MANUFACTURING DATA NETWORKS



HEDGE-IoT

Ω omega-x



DigiChecks has received funding from the European Union's Horizon Europe Research and Innovation Programme under GA ID: 101058541.



Tec4MaaSEs has received funding from the European Union's Horizon Europe Research and Innovation Programme under GA ID: 101138517.



CircPlastX has received funding from the European Union's Digital Europe Research and Innovation Programme

# Tekniker DataSpace Connector

## DataSpace Tools in Action

Data Spaces Symposium 2025

Dr. Gonzalo Gil Inchaurrea  
Data Spaces Team Lead at Tekniker

DSBA



BDV  
BIG DATA VALUE  
ASSOCIATION



FIWARE  
FOUNDATION



gaia-x



INTERNATIONAL DATA  
SPACES ASSOCIATION

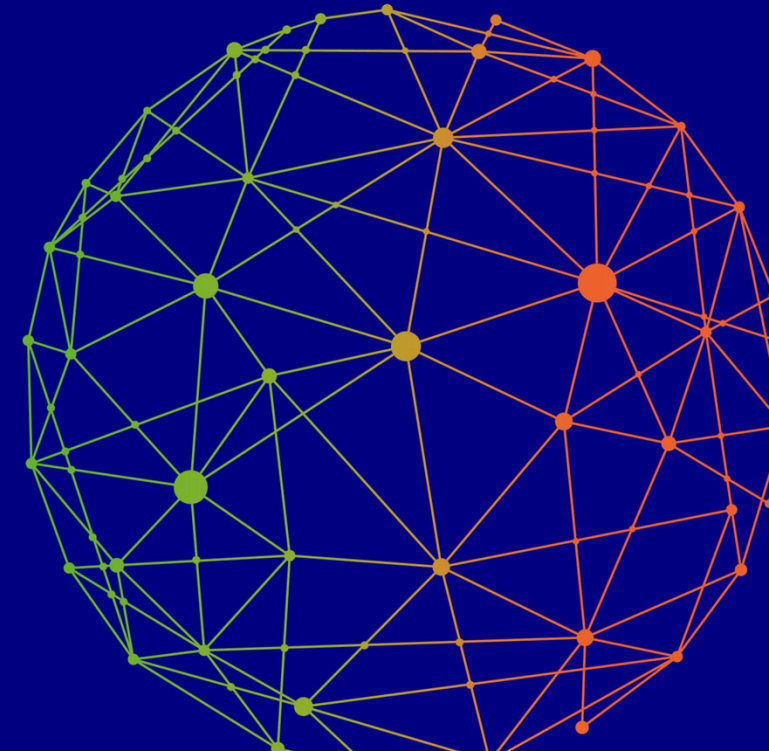


DATA SPACES  
SUPPORT CENTRE

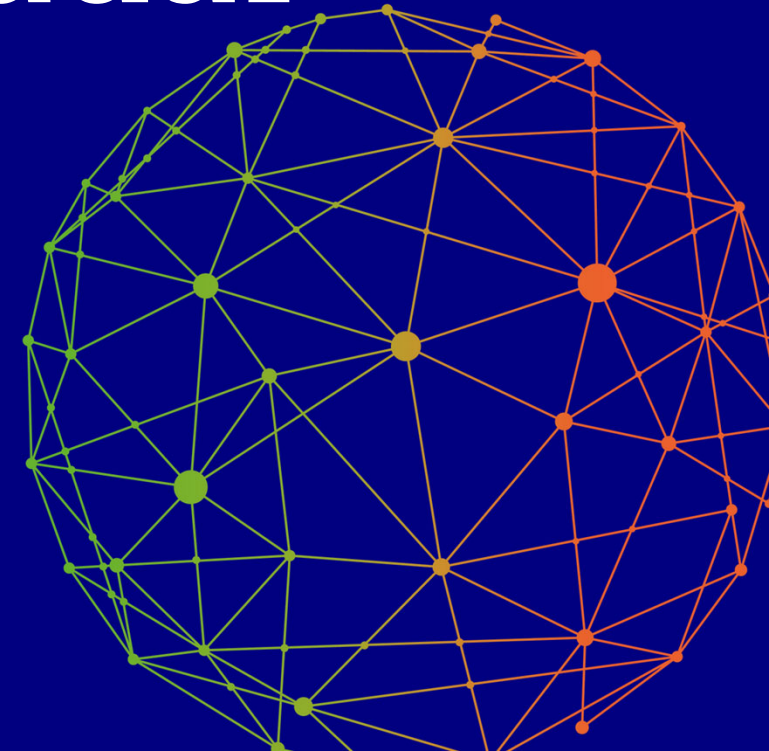


Funded by  
the European Union

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



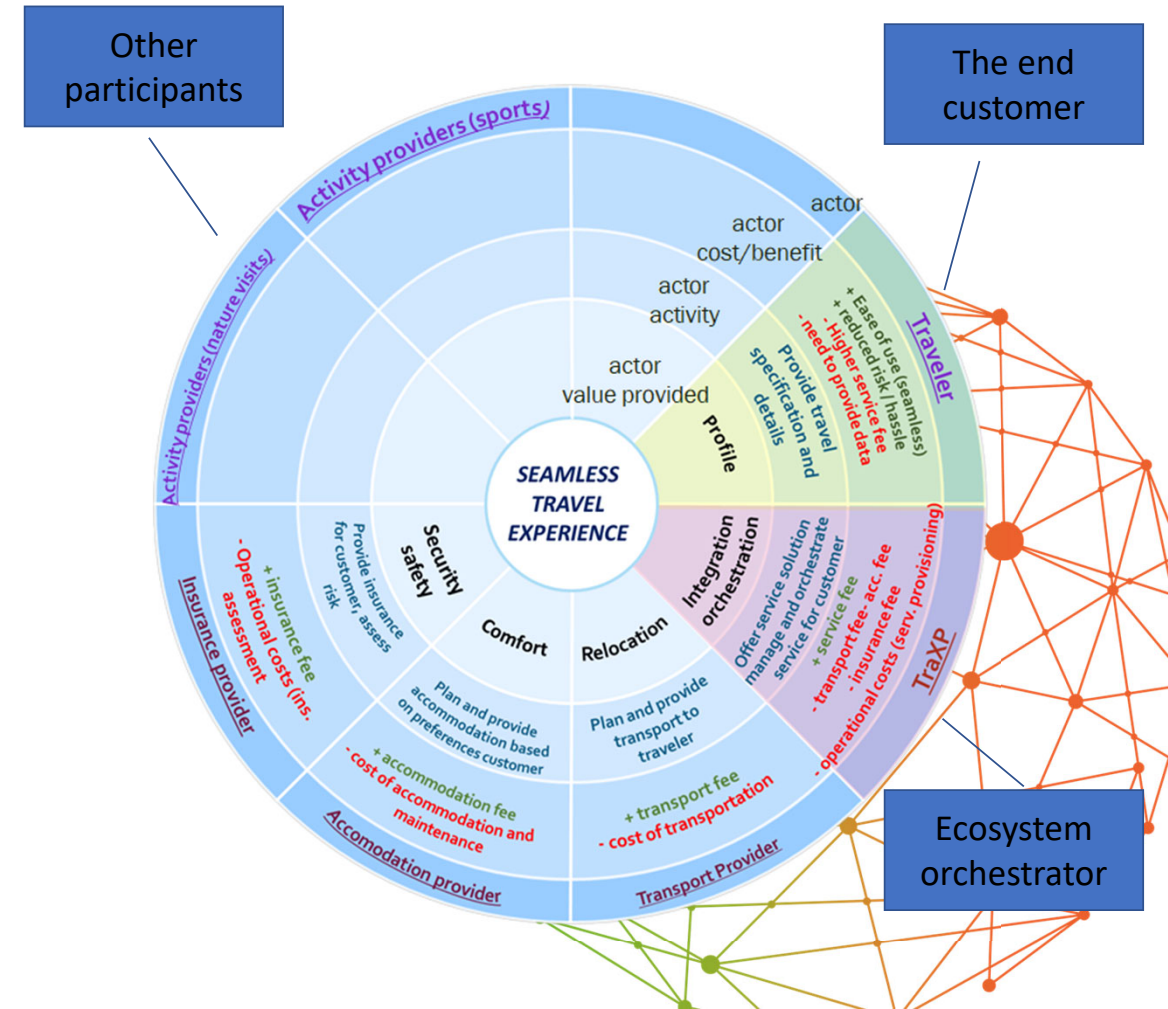
# Business model radar





# What is a business model radar

- The business model radar is a variation on the business model canvas
- The focus is more on the value created as a part of a network of organisations
- Visualising all actors and what they offer in a way that emphasises relationships and flows – reciprocity
- In cases where there is not a single organisation that ‘orchestrates’ the way that the data space should be shaped, this kind of template also helps avoid putting one organisation in the centre

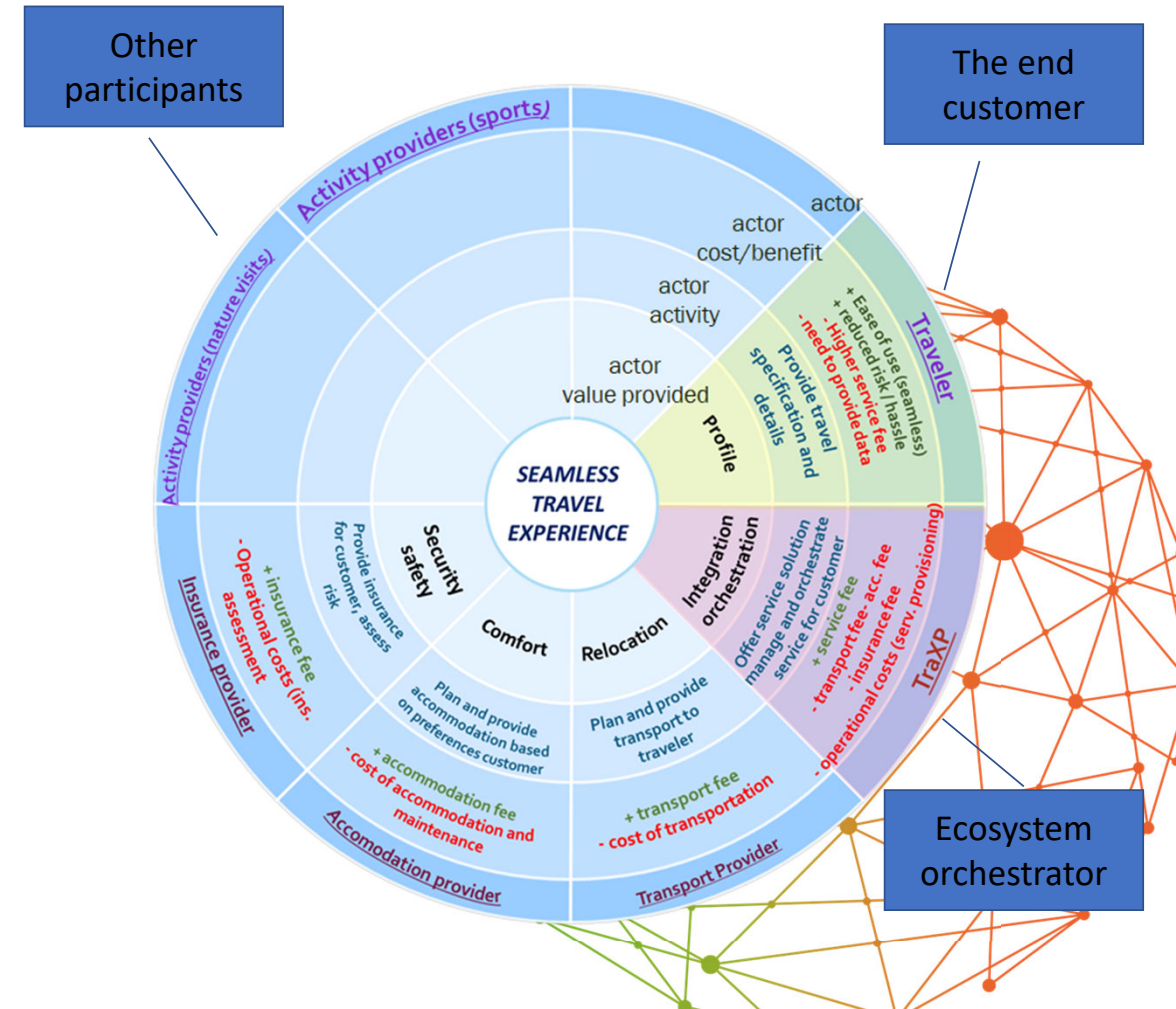


# How to use the Radar

- Work from the middle to the periphery looking at each key stakeholder
- Start with the value that each actor brings to the data space
- Next examine what the actor brings to the data space
- And finally, look at both the costs and benefits for each participant

Keep in mind the participants can be types of companies or key, individual organisations

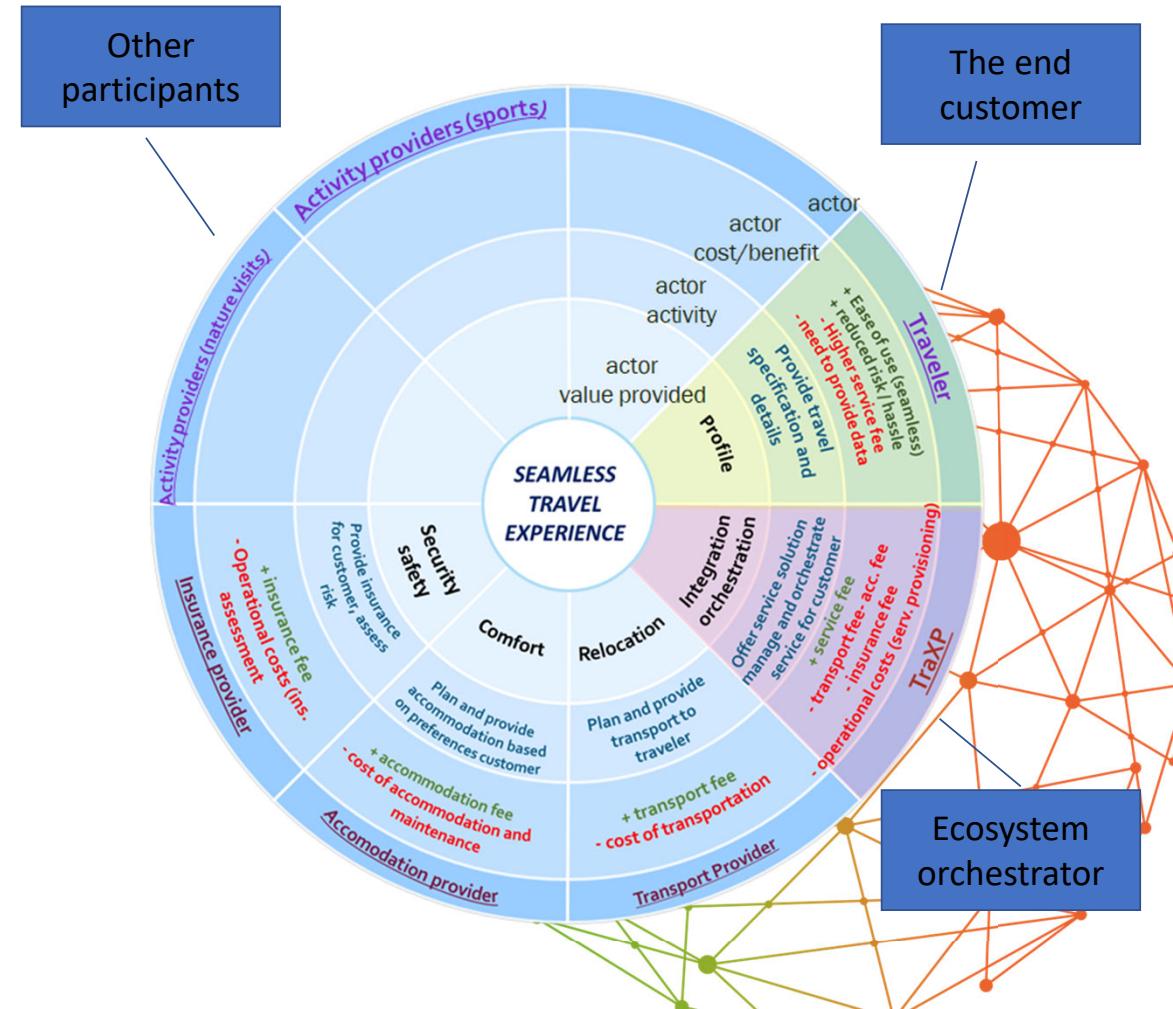
[Business Model Pattern List](#) | [Business Model Navigator](#)





# Follow-up on the radar

- The radar is a starting point for discussion, and you will want to capture specific interdependencies and map joint journeys
- This can mean nested radars or journey maps



# Data space rulebook tool

Viivi Lähteenoja

# TECHNOLOGY

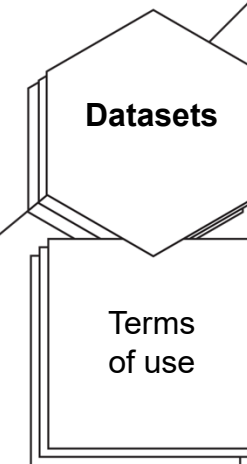
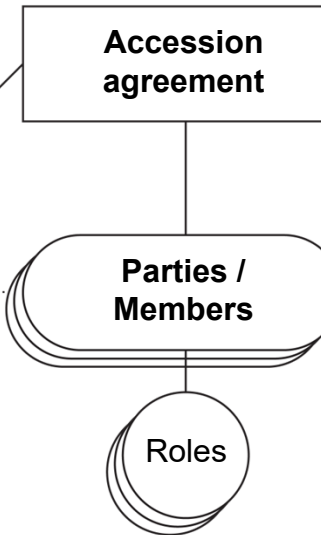
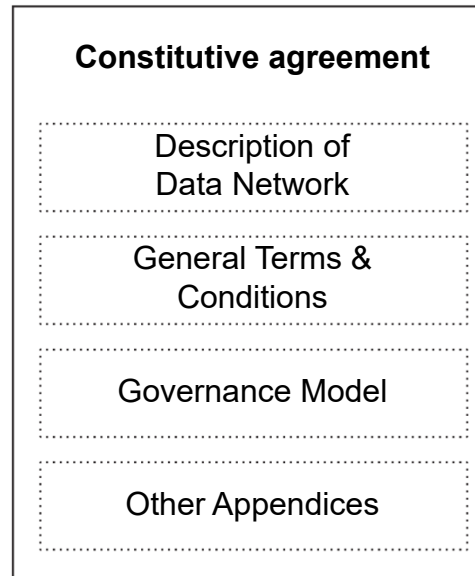
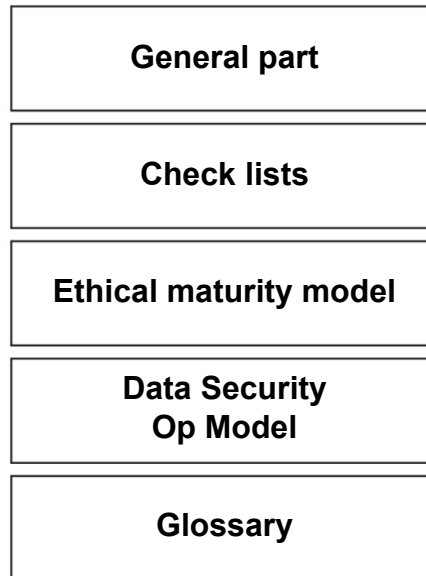
## Data space – Rulebook

### EXTERNALS

- Individuals
- Legal entities
- Others

- Data sources
- Data subjects
- Subscribers

LEGAL



ETHICS

BUSINESS

# Sample Checklist Question

## B1. Purpose and core needs

### 1. Key purpose and scope (CCM1.1)

#### Key questions:

- What is the business context driving the need for data sharing?
- What is the thematic scope of the data space?
- What is the key problem it addresses, and what objectives does it aim to achieve?

#### Guidance:

- Clearly define the thematic focus of the data space (e.g., supply chain optimisation, maintenance services, or data marketplaces).
- Identify the specific problem being solved and its potential impact.

#### Examples:

- Media industry: “Create a secure and reliable data space for collaboration and joint innovation.
- Manufacturing: “Streamline supply chain logistics.”
- Energy industry: “Provide a research platform for open innovation in renewable energy.”

Answer:

Aligned with DSSC Co-Creation Model questions: overlapping topics use same formulations and reference the relevant CCM step

# DATA SPACE CANVAS

## 1. Purpose and core needs

**Business context & problem:** What is the business context that creates the need for data sharing? What is the key problem it solves?

**Motivation & objectives:** What is the motivation for participants to join the data sharing ecosystem? What are their main objectives for participation?

**Added value:** What is the added value from data sharing for participants? What makes this data sharing ecosystem so valuable it will succeed?

**Use cases:** What are the key use cases for data sharing among the participants? Now and next?

## Open issues and questions

## 2. Key participants and stakeholders and their roles

**Participants now:** Who are the committed participants involved in this data sharing ecosystem? What are each their roles?

**Participants later:** Whom would you still like to include or add as participants? In what roles? Sooner or later?

**Stakeholders:** Who else are relevant stakeholders? Why?

## 7. Infrastructure and interoperability

**Service infrastructure:** What services are needed in the data sharing ecosystem? Who provides these services? Partners, stakeholders, neutral / other third-party service providers?

**Technical infrastructure:** What technical infrastructure (such as storage) is needed for the data sharing ecosystem? What type of architecture model is used (distributed / (de)centralised / federated)?

**Interoperability:** How is legal, organisational, semantic, and technical interoperability addressed within the data sharing ecosystem? Which concepts, languages, ontologies, standards, formats, or methods are used? Are some compulsory and some optional? Which ones?

## 3. Ecosystem scope and resources

**Scope:** What is in and what is out of scope for this data sharing ecosystem? What will it do and what won't it do?

**Resources:** What organisational resources are required for this data sharing ecosystem to operate in a sustainable way? What resources are available in partner organisations?

## 4. Business model and value flows

**Ecosystem level business model:** What is the business model of the ecosystem as a whole (with current partners)? Is it self-contained or does it rely on revenue from non-partners? What value does it offer to generate this revenue?

**Value flows between ecosystem partners:** What are the value flows among partners? Who gives and who gets what kind of value? Who pays whom and for what? Who profits?

## 5. Data and control layers

**Data resources:** What data (sets, products) are shared: accessed or transmitted?

**Data flows:** Technically, where are the data resources and where do they go (if they move at all)?

**Control and permissions:** Who has which rights to which data? How do they give permission for others to use that data and for which purposes? How are permissions checked and enforced?

## 6. Ecosystem governance

**Governance:** Who makes the rules for the data sharing ecosystem as a whole? Who can change them? What are the basic principles of participating in the ecosystem? How is the ecosystem governed based on these rules? How is compliance with agreements monitored and/or enforced?



## Checklist



### Constitutive Agreement

- Founders draft and sign
- Defines the ground rules of the data network

### General Terms & Conditions

- Standard across networks – provides compatibility between networks and makes it easier to start a network
- Attached as is

### Governance Model

- Defines how decisions in the network are made, how new members are accepted, how rules are changed, etc.

### Accession Agreement

- New members join the data network by signing an accession agreement and thus announcing that accept the constitutive agreement and its appendices

### Data Set Terms of use

- Defines what the others can do with the data, who can use it, etc.
- Can be different for different data sets

Cluster A roles: Data space governance perspective

Type	Full decision-making rights	Responsibility to commit to the rulebook	Right to be represented in the governance	[Right A / Responsibility B]
Founding member	Yes as defined in the rulebook	Define the rules, draft the contracts, sign the	Yes as defined	
Members	Yes as defined in the rulebook			
Additional membership categories	As defined in the rulebook			

Table 2: Cluster A roles

This tool is:

- **Pre-structured** with the three membership rights and responsibilities that di

Cluster B roles: Data space use case perspective

Type	Sub-type	Right to provide data	Right to use data	Right to impose conditions on the use of data	[Right A / Responsibility B]
Transaction participant	Data provider	Yes			
	Data user		Yes		
Data rights holders	Data rights holder				
Service provider	value adding services on top of Data or Datasets			Yes for purpose service providing	

Cluster A and Cluster B mapping matrix

		Founding member	Member	Additional membership categories
Data transaction participant	Data provider			
	Data user			
Data rights holders	Data rights holder			
Service provider				
Operator				

Table 4: Cluster A and Cluster B mapping matrix

## Servicebook [TOOL]

The purpose of this tool is to support the business design of the data space regarding services required and offered. It suggests a classification of different technical services that follows the DSSC Blueprint v1.5<sup>2</sup>, but others may be adopted. Using this tool will help define key aspects of service governance in a data space, namely: which services are considered “core” or mandatory for the data space to function, who can provide each type of services, what additional policies apply to the provision of specific services (such as whether the costs of the service are covered by the Governance authority or by individual participants), and possibly other aspects of governing different types of services.

Type	Service	“Core” service designation	Approved provider (s)	Applicable policies	[Condition A]
Federation services	Data space registry services				
	Validation and verification services				
	Policy information point services				

# Data space tools in action

## Data space tech

Data Spaces Symposium 2025



# WISEPHERE

Daniel Sáez-Domingo – ITI ([dsaez@iti.es](mailto:dsaez@iti.es))

DSBA



BIG DATA VALUE  
ASSOCIATION



FIWARE  
FOUNDATION

gaia-x



INTERNATIONAL DATA  
SPACES ASSOCIATION

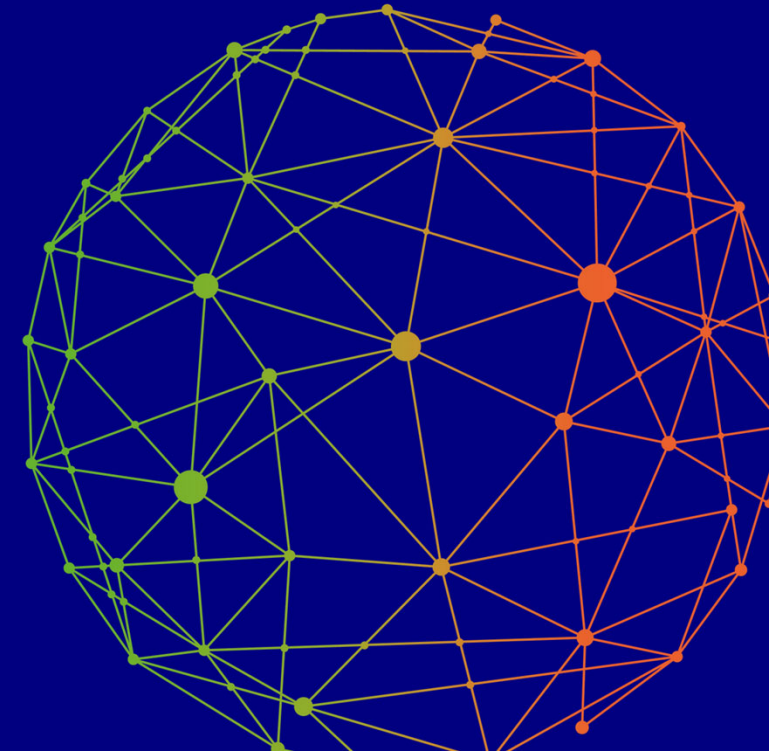


DATA SPACES  
SUPPORT CENTRE



Funded by  
the European Union

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





# ACCELERATING THE ADOPTION OF INNOVATIVE DATA & AI TECHNOLOGIES

The largest Technology Centre focused on Data & AI

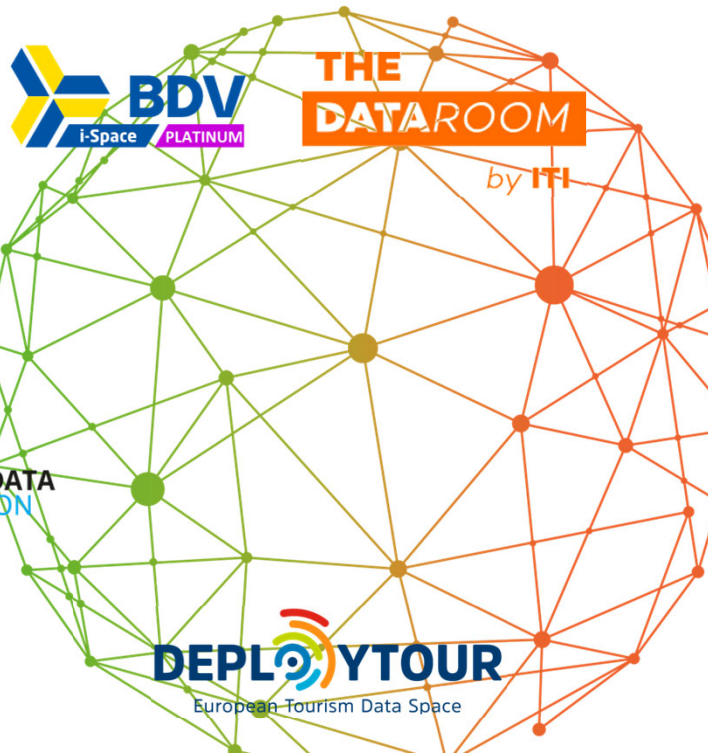
Key player in eDIHs, AI Networks & Data Spaces

Own technology stack for data Exploitation and Sharing

Experimentation and Demonstration Labs

**250+** companies formally linked

**500+** companies in our ecosystem





SMES In Europe > 99%

Lack of **computing power**

Poor **Quality of Data**

**Diversity** of platforms and tools

Lack of knowledge in **data ethics**

Lack of consolidated **business models**

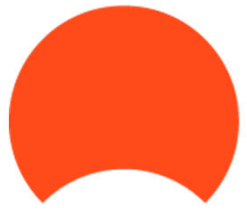
Data owners (really big data holders) need  
**incentives to share**

**Fair data value chains** still need to be invented

New AI and Data **regulations** bring challenges  
for innovators

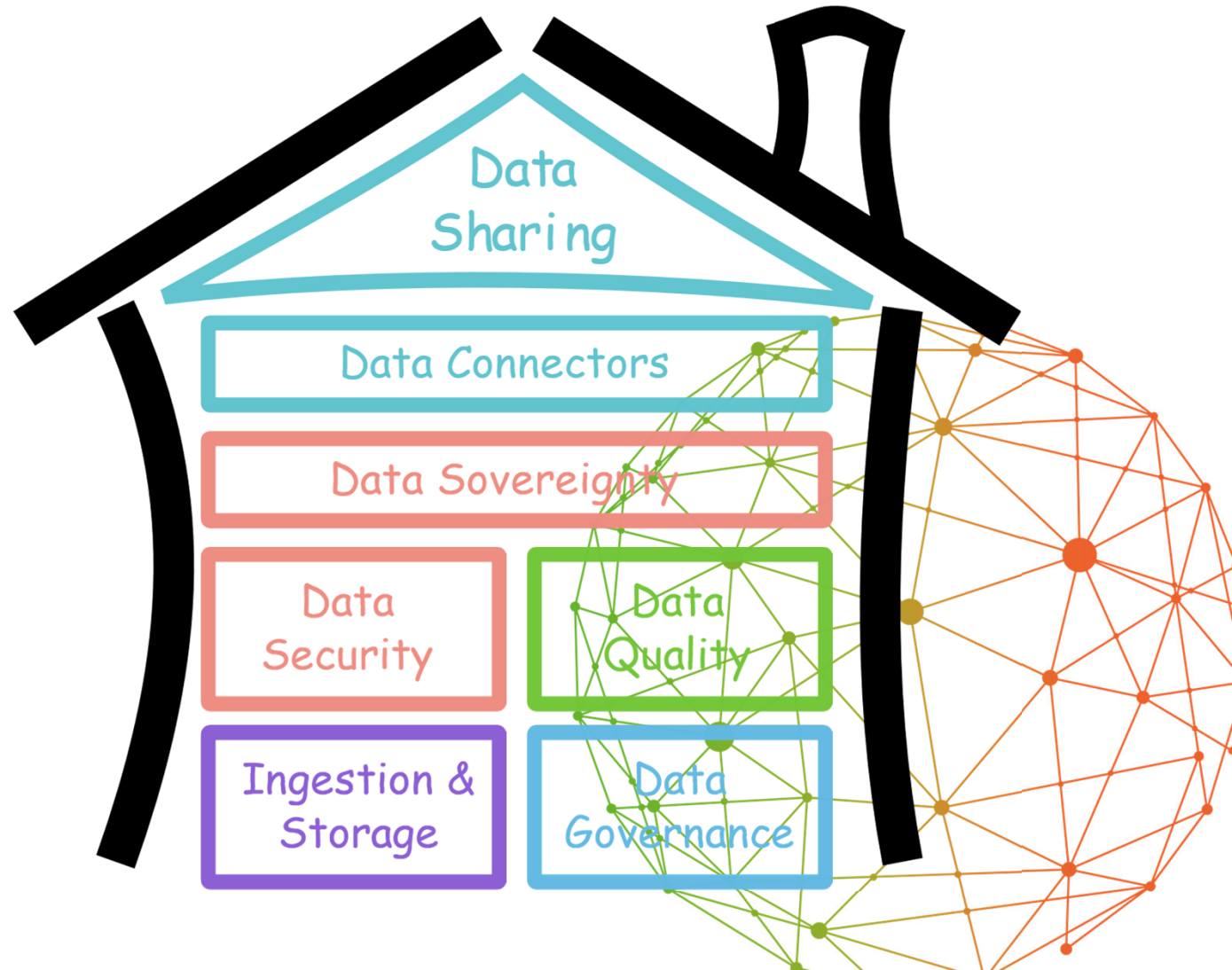
Lack of **Skills**





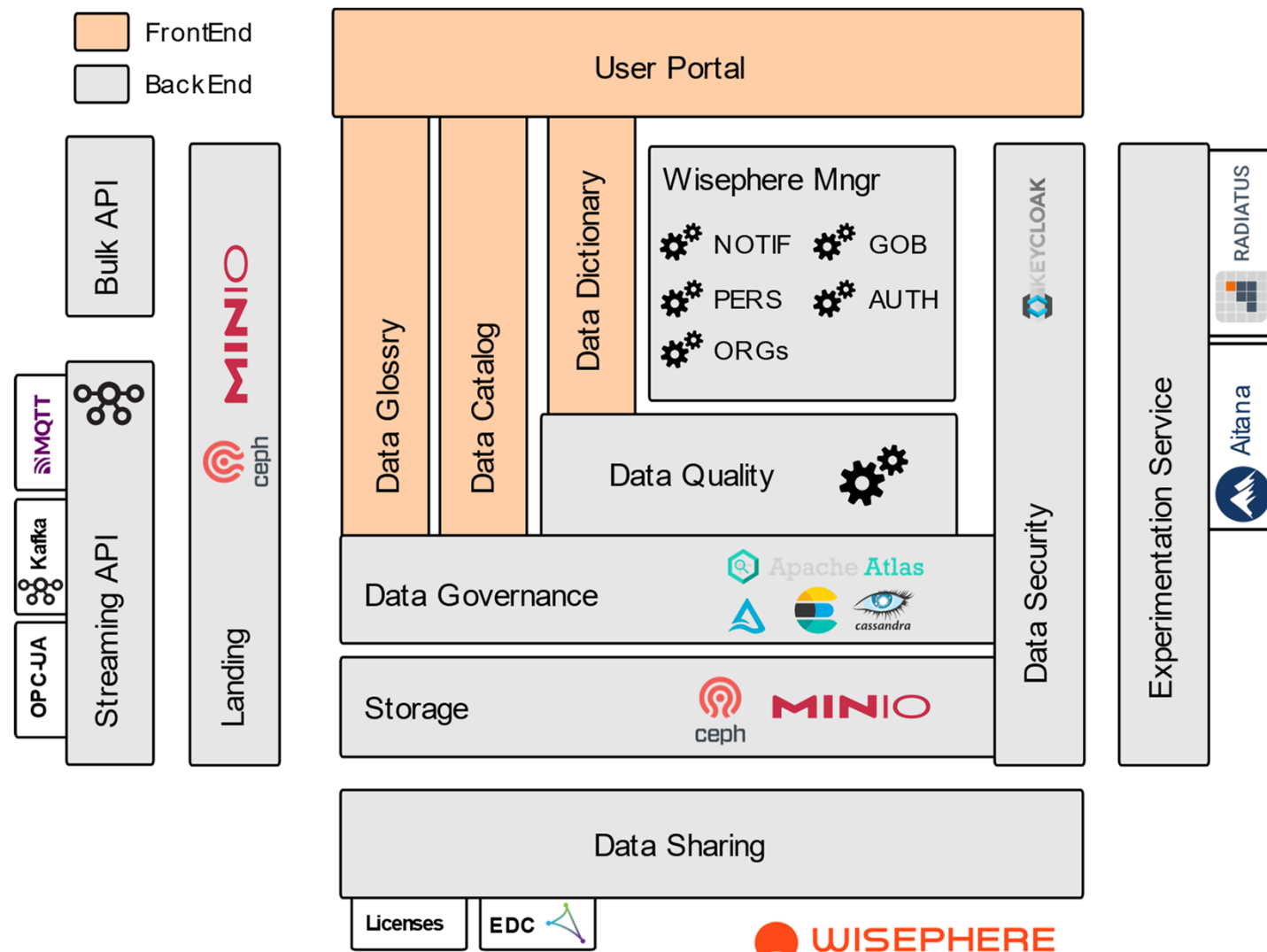
# WISEPHERE

**WISEPHERE** is a technological environment developed by ITI that, once deployed, allows organizations to manage, share and exploit data in a reliable and secure environment, with the aim of transforming this data into knowledge and value. **WISEPHERE** helps companies to adopt data technologies, offering a response to their technological, legal and economic uncertainties, thus facilitating the path towards the data economy and to the Data Spaces.





FrontEnd  
Back End



**Enriched node** providing:

- Data Quality
- Data Governance
- Data Ingestión
- Data Storage
- Data Sharing
- Data Processing
- Access control and security

**A Data Space in itself**

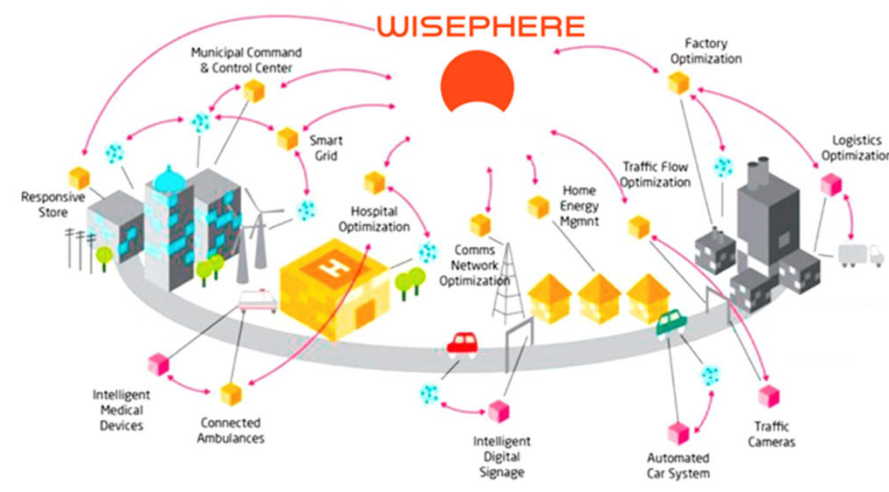
- Able to **connect to other nodes** (Data Space Intermediary)
- Organisation management
- Based on Open SW



# WISEPHERE AS DATA HUB

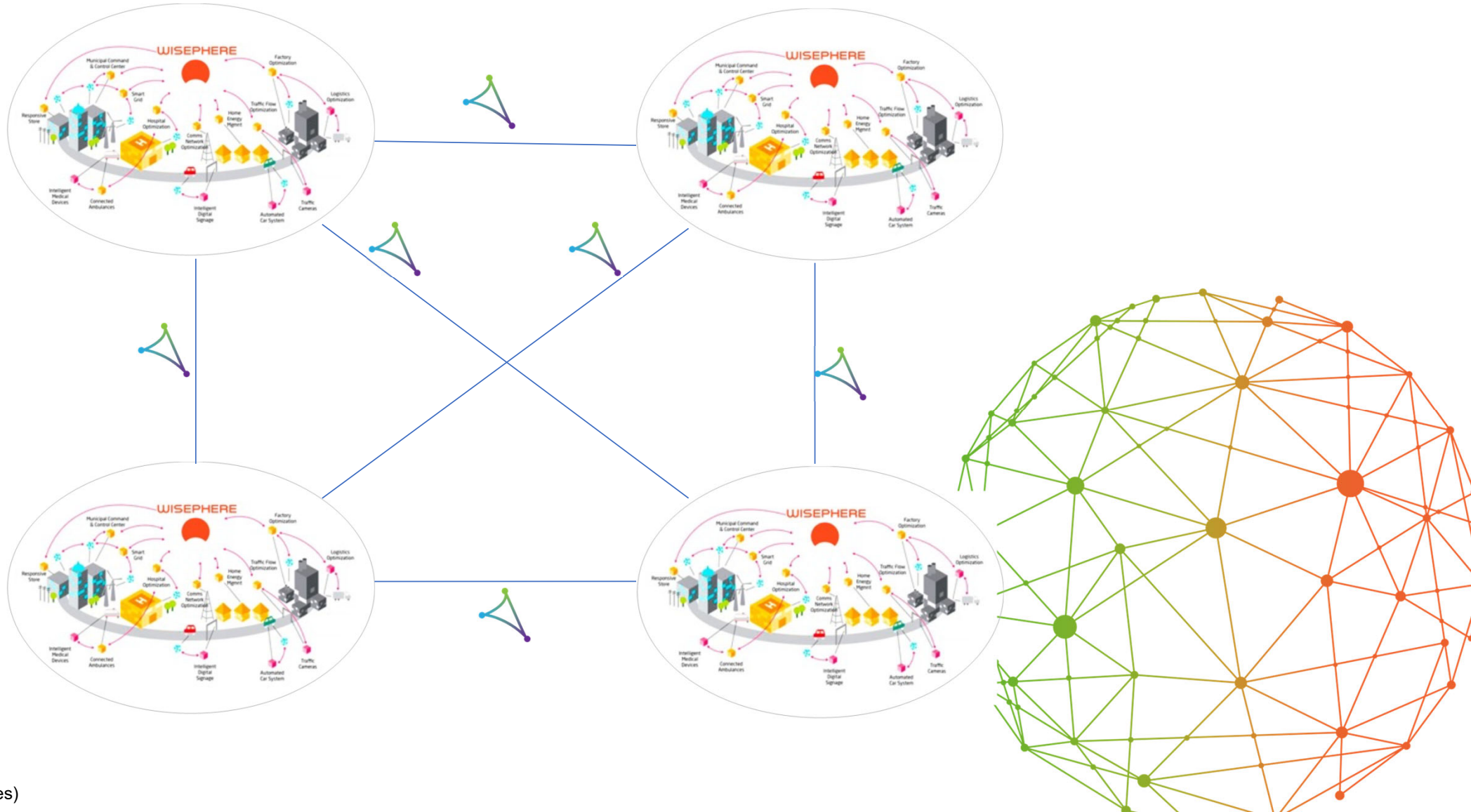


Single Organization



Multiple Organizations

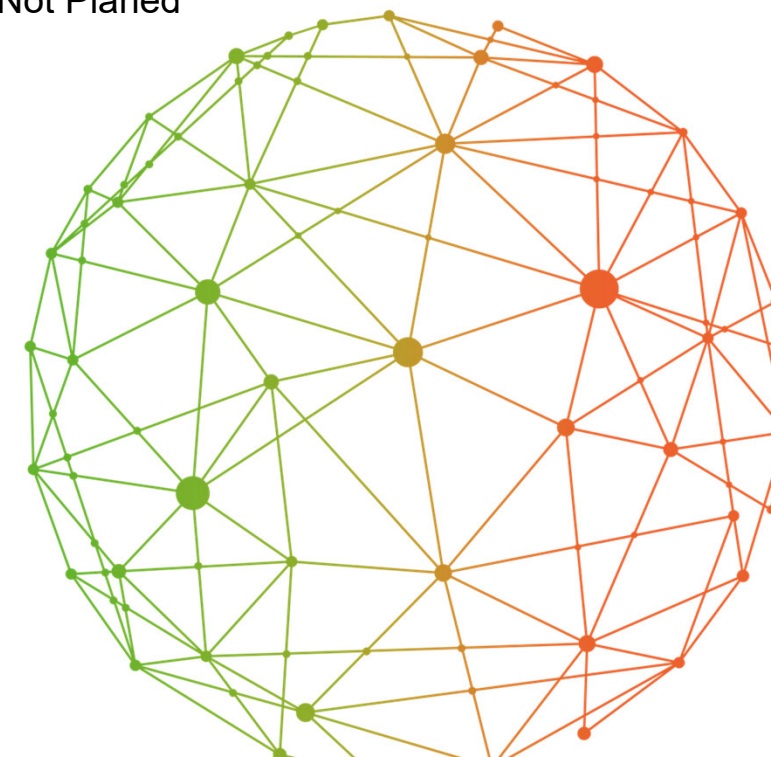
# WISEPHERE AS A DATA SPACE BUILDER





Features	WISEPHERE
Data Discovery (from Databases)	S3, PostgreSQL, MongoDB, MySQL, Cassandra, Azure, other
Data Ingestion Bulk	Yes
Data Ingestion Streaming	Plugin Based (MQTT, Kafka, OPC-UA)
Data Catalog & Glossary	Yes
Data Quality: Inherent metrics	Yes
Data Quality: User defined metrics	Yes
Creation of Data Products	Yes
Data Sovereignty	Basic rules, being extended
Data Spaces Sharing	EDC
Sharing to other initiatives	No
Data Processing	Yes
Extra functionalities (Anonymisation, harmonisation, ...)	No
Data Visualisation	Yes
Organisation Management	Yes

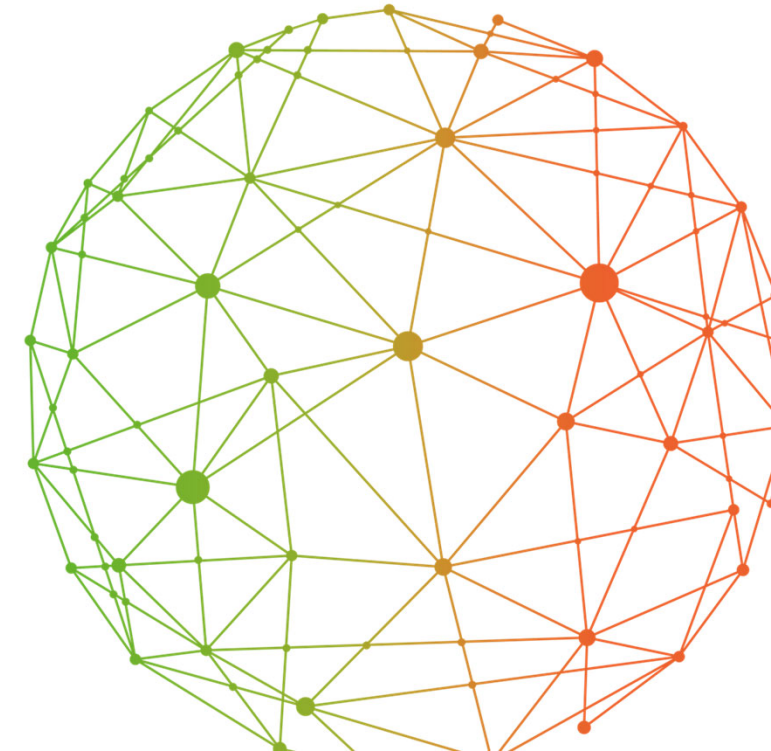
- Ready
- Short Term
- Mid Term
- Not Planed



# Delivering data spaces through Data Space Builder Data space tools in action

Data Spaces Symposium 2025

Carlos Mazo – NTT DATA



DSBA

BDV  
BIG DATA VALUE  
ASSOCIATION

FIWARE  
FOUNDATION

gaia-x

INTERNATIONAL DATA  
SPACES ASSOCIATION

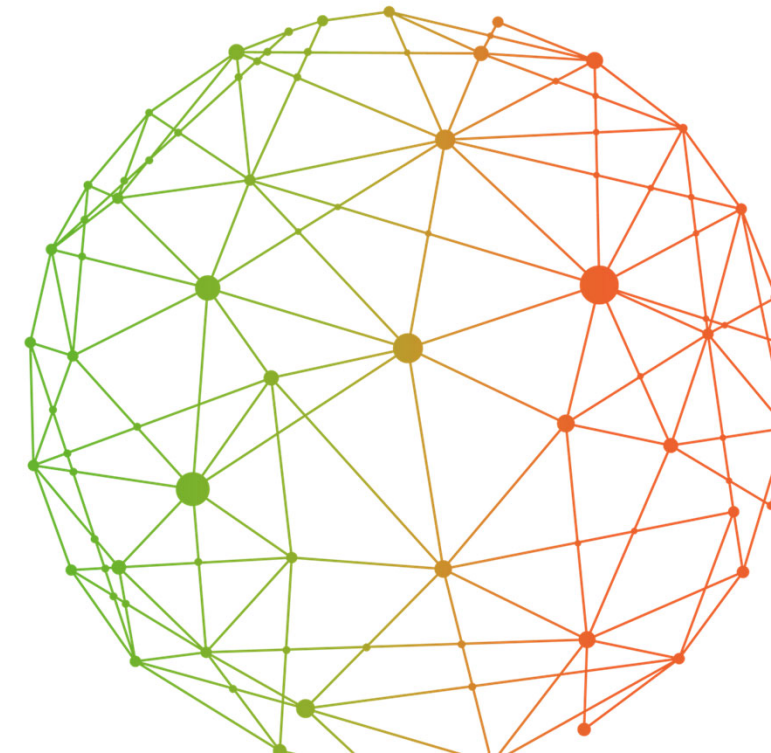


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# Delivering data spaces through Data Space Builder Agenda

NTT DATA – Data Spaces Overview

Data Space Builder - Features  
Components  
Interfaces  
Services



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# NTT DATA – Data Spaces Overview



## DATA SPACE LIFECYCLE

CONSULTANCY &  
ECOSYSTEM DESIGN

ARCHITECTURE &  
TECHNICAL DESIGN

BUILDING BLOCKS  
IMPLEMENTATION

DEPLOYMENT &  
OPERATION

EXPLOITATION &  
APPLICATIONS

+50 EXPERTS IN SPECIFIC DOMAINS

DATA SHARING  
ECOSYSTEMS

INTEROPERABILITY  
& SEMANTICS

TRUST SERVICES &  
DIGITAL IDENTITY



# Data Space Builder – features

---

## Delivering E2E data space business processes



Onboarding of providers and consumers



Asset (e.g. data) transfer process management



Publication of resources to the catalogue



Vocabulary publication



Discovery of catalog resources



Vocabulary consumption and reuse



Contract negotiation management

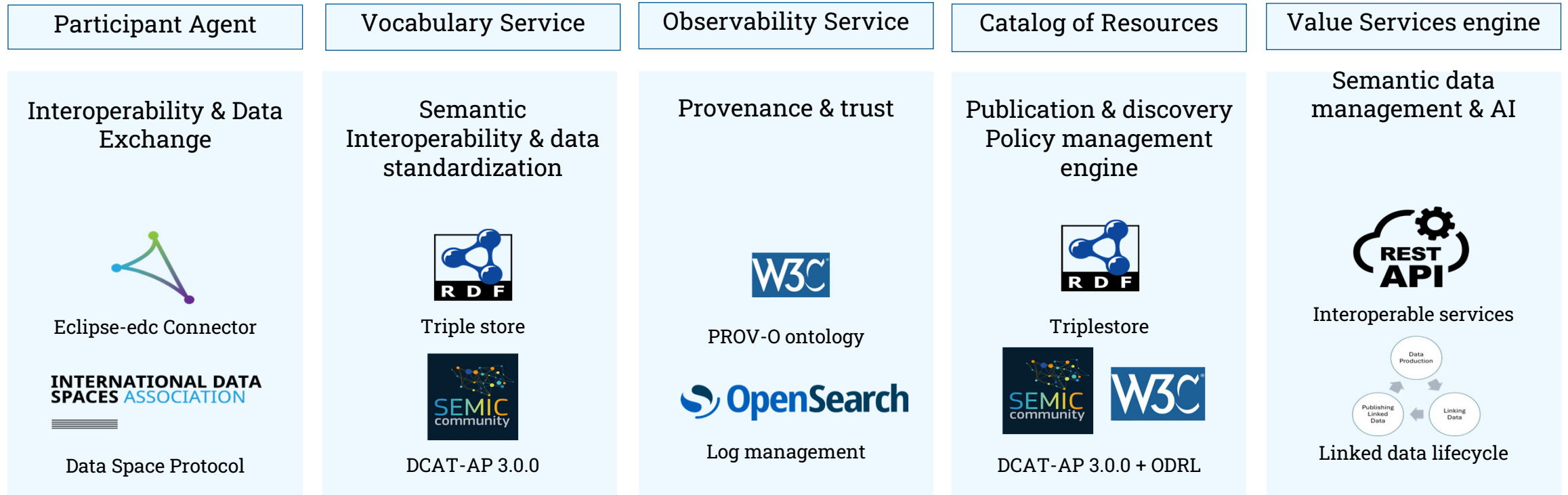


Value added services for semantic data management  
(linked data lifecycle)



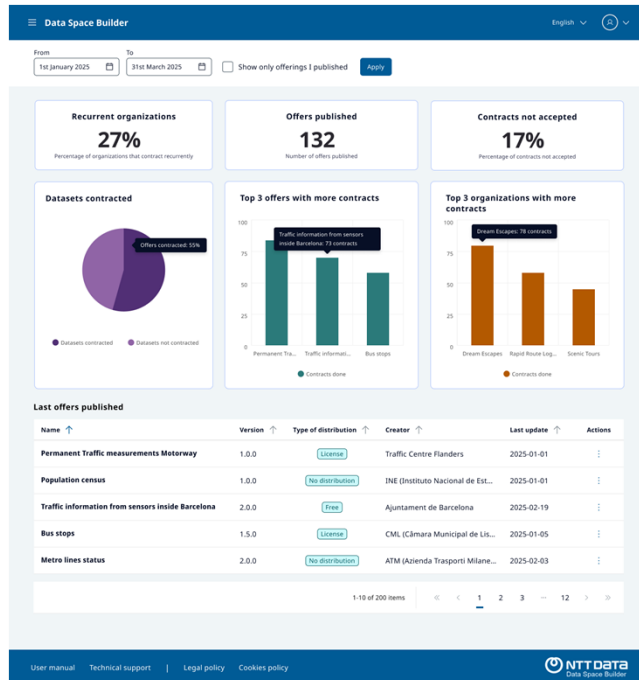
# Data Space Builder - components

## Technical architecture aligned with DSSC Blueprint



# Data Space Builder - interfaces

## GUI layer & REST services for enterprise integration



The 'Dataset Offerings' page displays a list of datasets with search and filter capabilities.

Name	Version	Type of distribution	Creator
Permanent Traffic measurements Motorway	1.0.0	License	Traffic Centre Flanders
Population census	1.0.0	No distribution	INE (Instituto Nacional de Est...
Traffic information from sensors inside Barcelona	2.0.0	Free	Ajuntament de Barcelona
Bus stops	1.5.0	License	CML (Càmara Municipal de Lis...
Metro lines status	2.0.0	No distribution	ATM (Azienda Trasporti Milane...

The details page for the 'Traffic information from sensors inside Barcelona' dataset provides comprehensive information:

- Metadata:** Creator (Ajuntament de Barcelona), Publisher (Antoine Dupont), Version (1.0.0), Last update (1st of February 2025), Status (Completed).
- Description:** The published data is supervised by the operators of the Mobility Management Center before its publication. The traffic measurement elements are mostly sensors installed under the asphalt that measure magnetic field variations caused by the...
- Version notes:** Complete review of the dataset has been conducted to ensure accuracy and relevance. New variables related to user behavior have been added, providing deeper insights into user interactions and preferences. Duplicate records have been meticulously identified.
- Policies:** Type (Permission), Action (Use), Operator (Until 31st December 2025).

Footer: ☐ I accept the policies of the current dataset offering. [Initiate contract process](#)

# Data Space Builder – Service catalog

Organizational business goals	Targets
 Design & Deliver your data sharing ecosystem	 Data sharing ecosystem up & running
 Boost your data space	 Succeed in impact, use cases, business models
 Prepare your organization and data for sharing	 Produce high value datasets, organizational align
 Interoperate with other data spaces (DS2DS)	 LOST Interoperability achieved
 Join a data sharing ecosystem as participant (P2DS)	 Organizational, technical & semantic alignment

# Panel discussion | Insights from Toolbox users

Capabilities needed to make a data space a success



Valentina Staveris  
SIMPL



Gianfranco Cecconi  
DSSC



Viivi Lähteenoja  
My Data



Matthias De Bièvre  
Prometheus-X



Moderated by  
Michiel Stornebrink  
TNO for DSSC

DSBA



INTERNATIONAL DATA  
SPACES ASSOCIATION



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