



DATA SPACES
SUPPORT CENTRE

DSSC Insight Series

The Data Spaces Blueprint Version 1.0

25 April 2024 | 16:00 to 17:30 CEST | online



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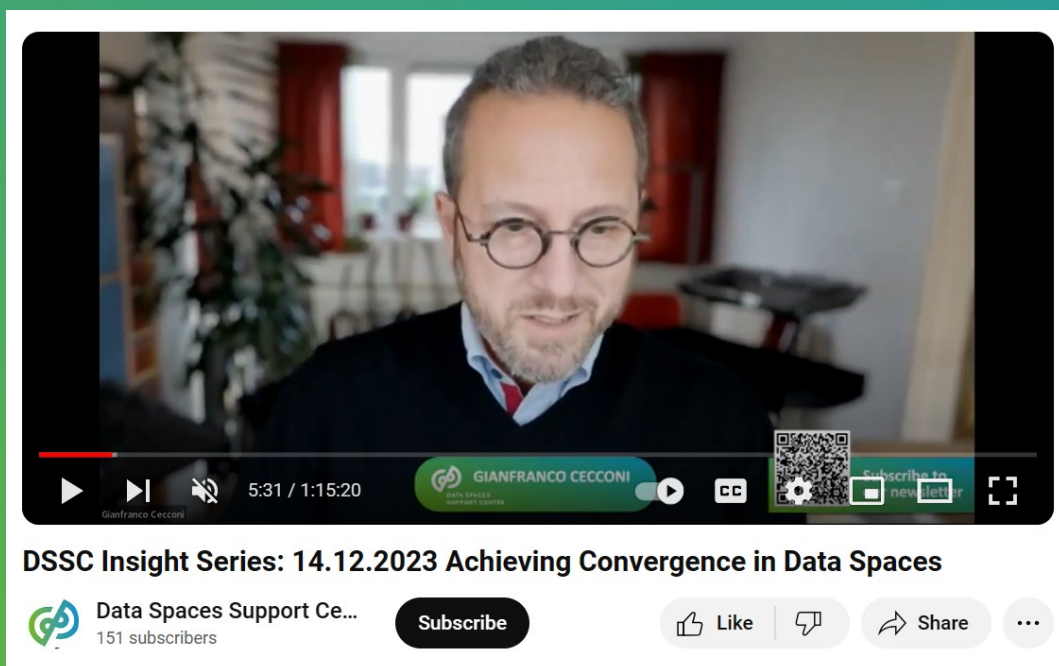
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Today's agenda

- Welcome
Professor Boris Otto, DSSC Project Coordinator, Fraunhofer ISST
- Assets, glossary and conceptual models
Bert Verdonck, Chief Executive Officer at the Luxembourg National Data Service
- A deep dive into the blueprint version 1.0
Matthijs Punter and Claire Stolwijk, TNO
- Q&A

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Support Centre and the European
Union's programme for common
European data spaces.**

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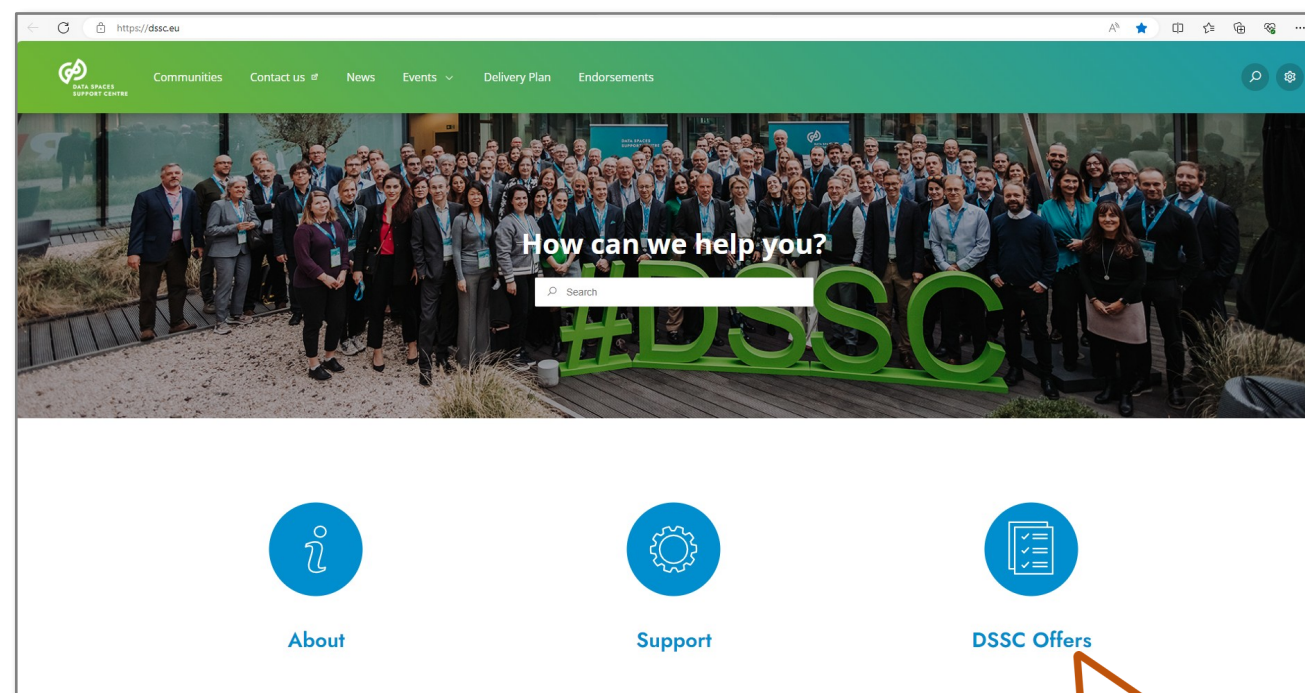
Intro

Professor Boris Otto, Fraunhofer ISST

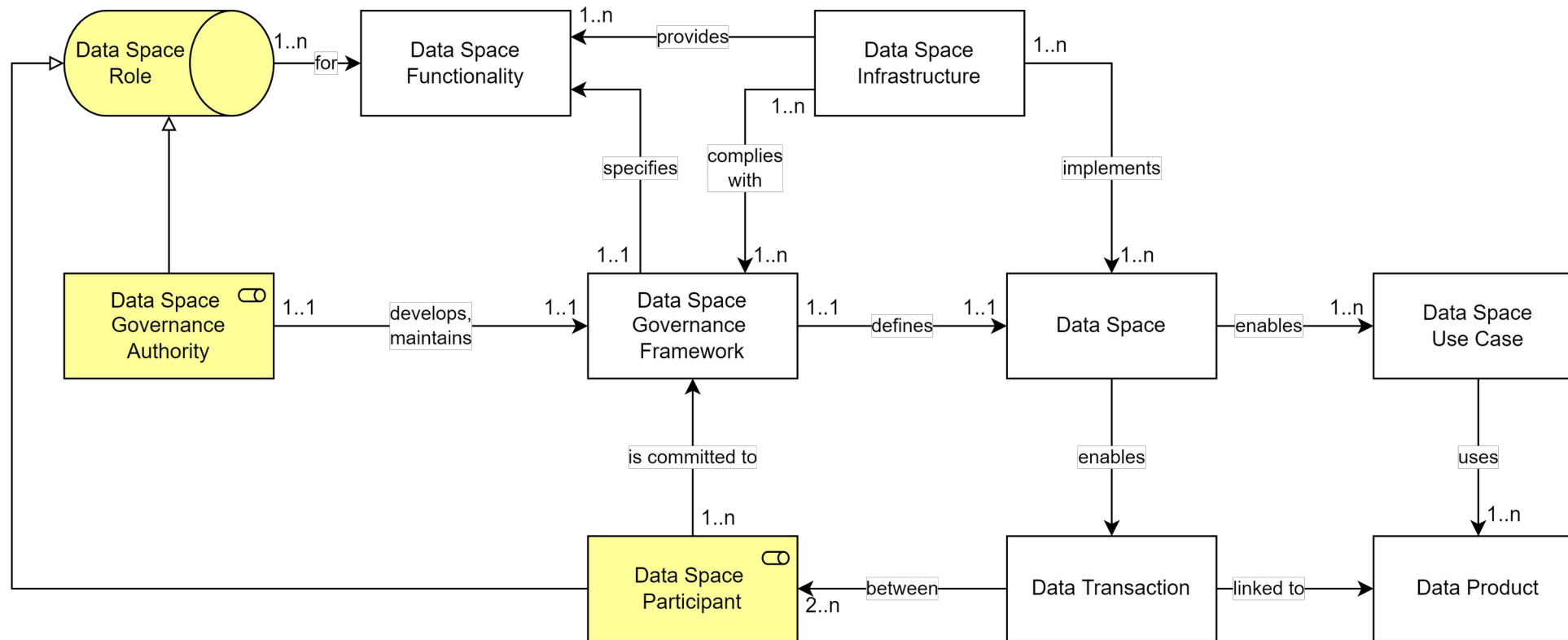
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DSSC Blueprint-related Assets

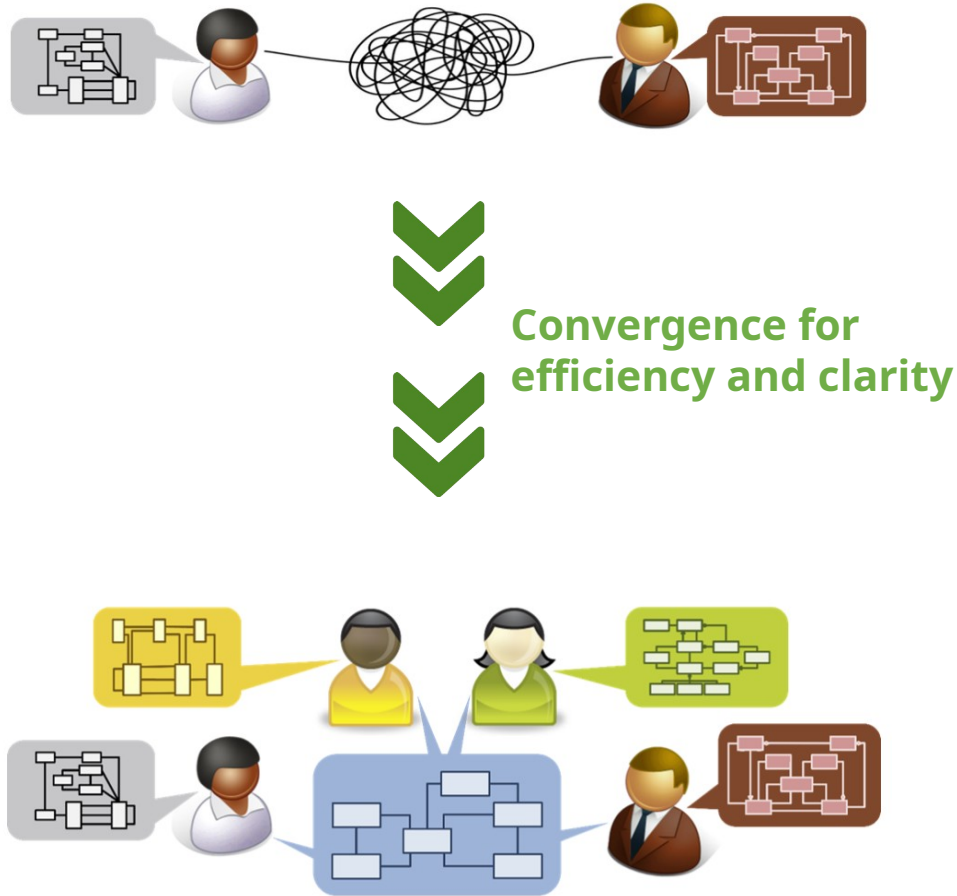
- › Conceptual model
- › Glossary
- › Starter Kit
- › Collection of Standards
- › Blueprint



Conceptual model



Glossary



DSSC Glossary features **~100 terms** in the following categories:

- Foundation of the European data economy concepts
- Core Concepts
- Data space use cases and business model
- Evolution of data space initiatives
- Data space services
- Data products and transactions
- Data policies and contracts
- Interoperability
- Identity and trust
- Building blocks and implementations
- DSSC-specific terms

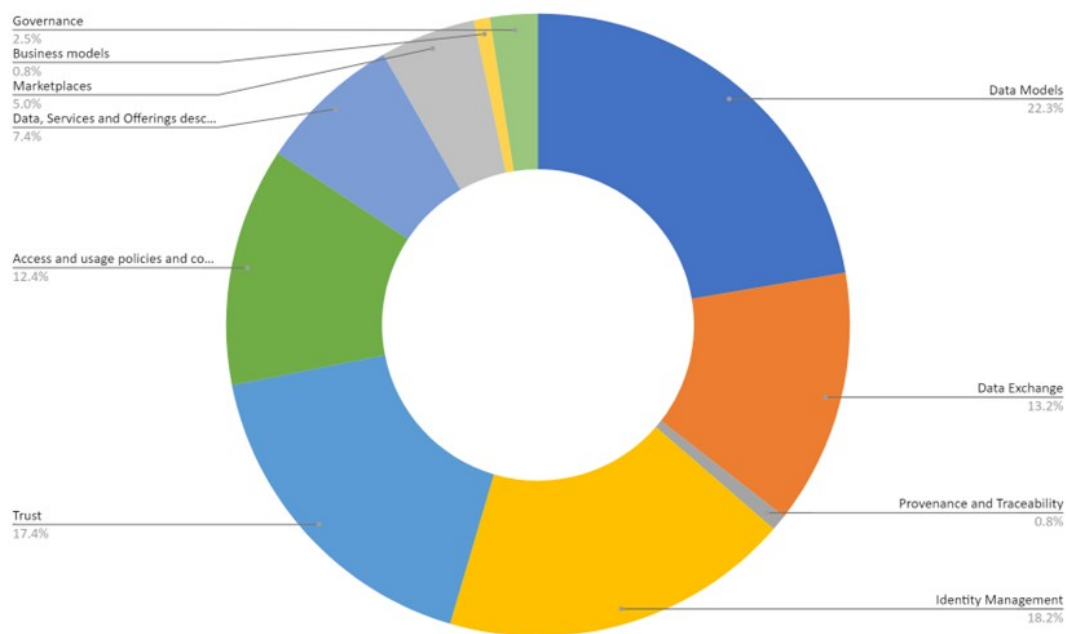
Starter Kit

- › Easy to read introduction to data spaces and to the DSSC
- › Target:
 - data space designers
 - data producers
 - data consumers
 - providers of intermediary services
 - services and business applications

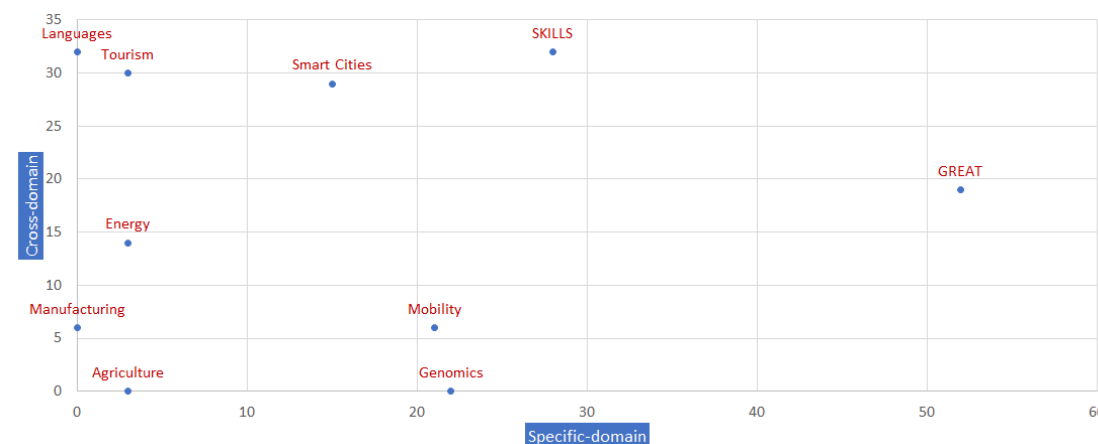


Collection of Standards

- › Map of 130 existing standards and specifications jointly built with the NoS collected until September 2023 and input material for Expert Groups at the Blueprint.



Collected standards per building block



Domain-specific vs cross-domain

Endorsed by more than 3 data spaces:

- Verifiable Credentials, DCAT, JSON-LD, NGSI-LD, XACML, ODRL, EUDI, eIDAS, DID, SOLID, SAML, Dublin Core, OGC

DSSC Blueprint



Get to a higher flight-level, quicker



Future-proof your investments



Federate and scale: bigger market, more value

Building Blocks:

- › Required capabilities
- › Core design decisions
- › Specifications & common standards
- › Further reading



Business & Organisational Building Blocks

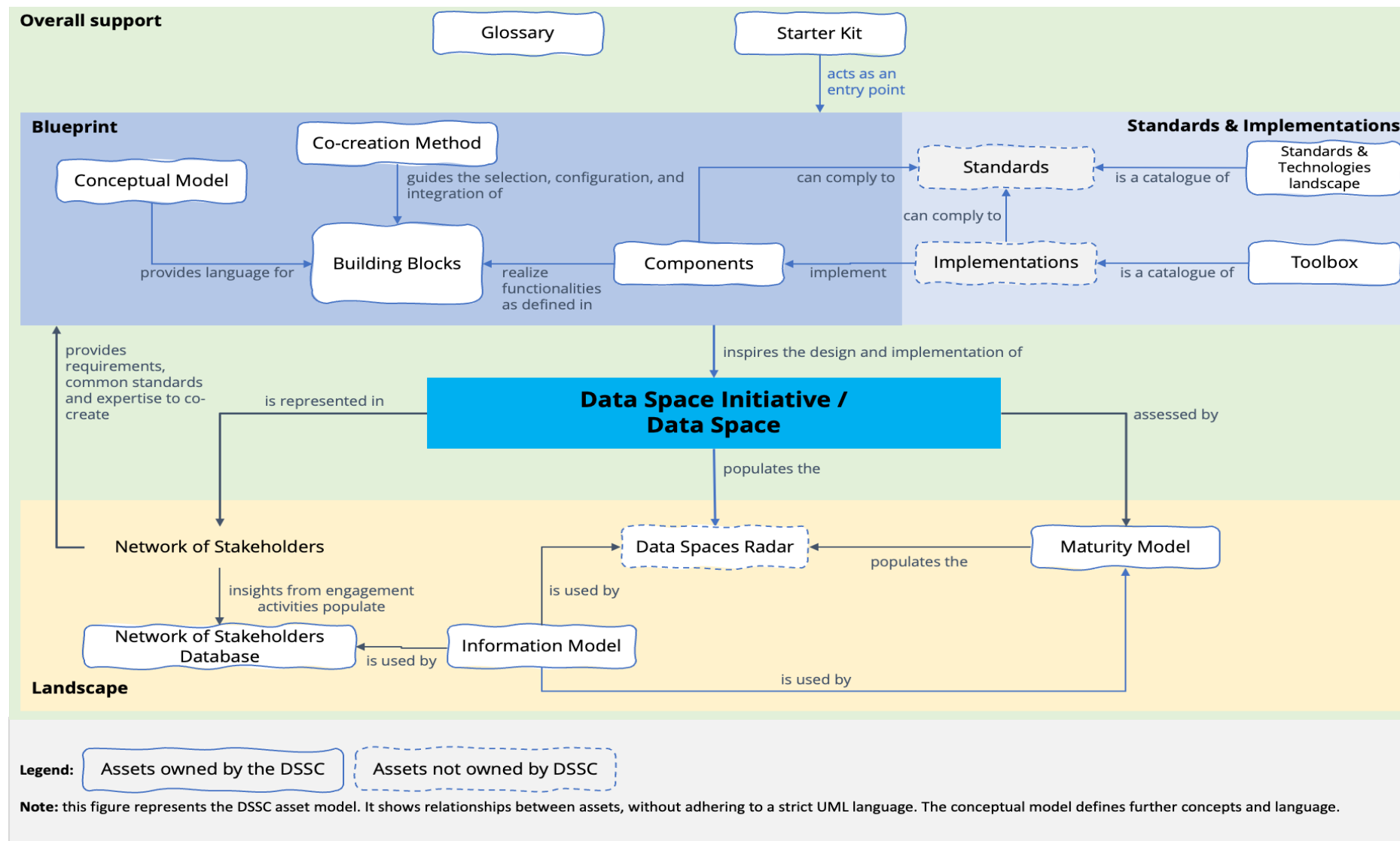


Technical Building Blocks

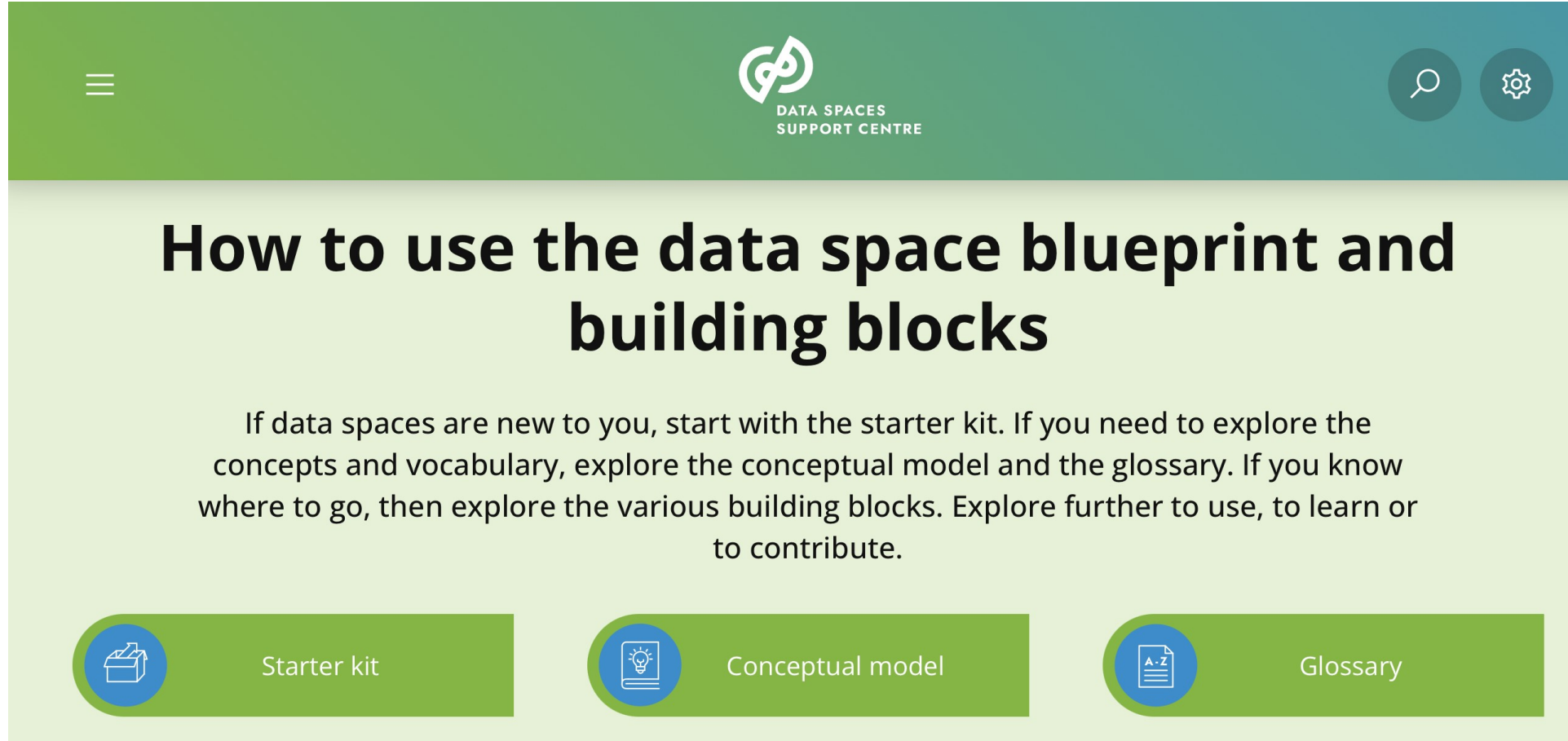
Assets, glossary and conceptual model

Bert Verdonck, LNDS

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Glossary and conceptual model





The screenshot shows a website interface with a green header. On the left is a hamburger menu icon. In the center is the Data Spaces Support Centre logo. On the right are search and settings icons. The main content area has a light green background with the title 'How to use the data space blueprint and building blocks'. Below the title is a paragraph of text. At the bottom are three green buttons with icons and labels: 'Starter kit' (box icon), 'Conceptual model' (lightbulb icon), and 'Glossary' (A-Z icon).


DATA SPACES
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How to use the data space blueprint and building blocks

If data spaces are new to you, start with the starter kit. If you need to explore the concepts and vocabulary, explore the conceptual model and the glossary. If you know where to go, then explore the various building blocks. Explore further to use, to learn or to contribute.

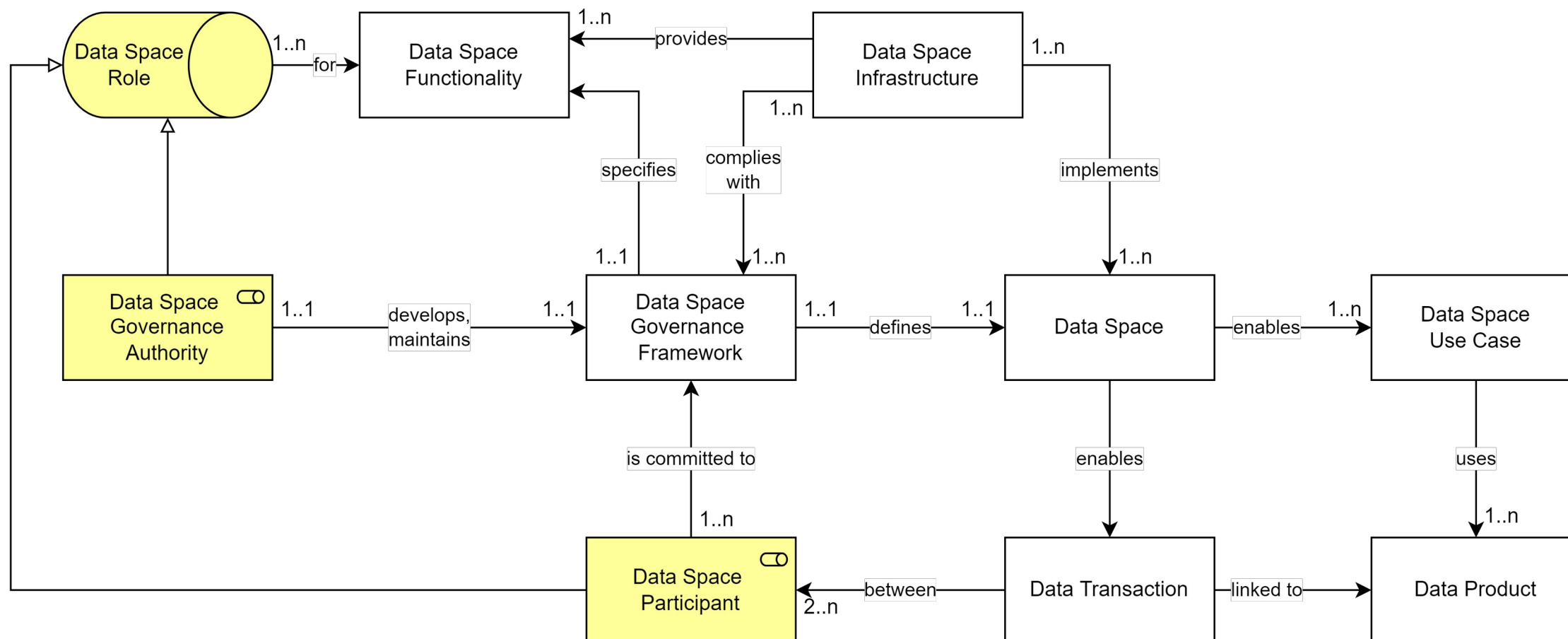
 Starter kit

 Conceptual model

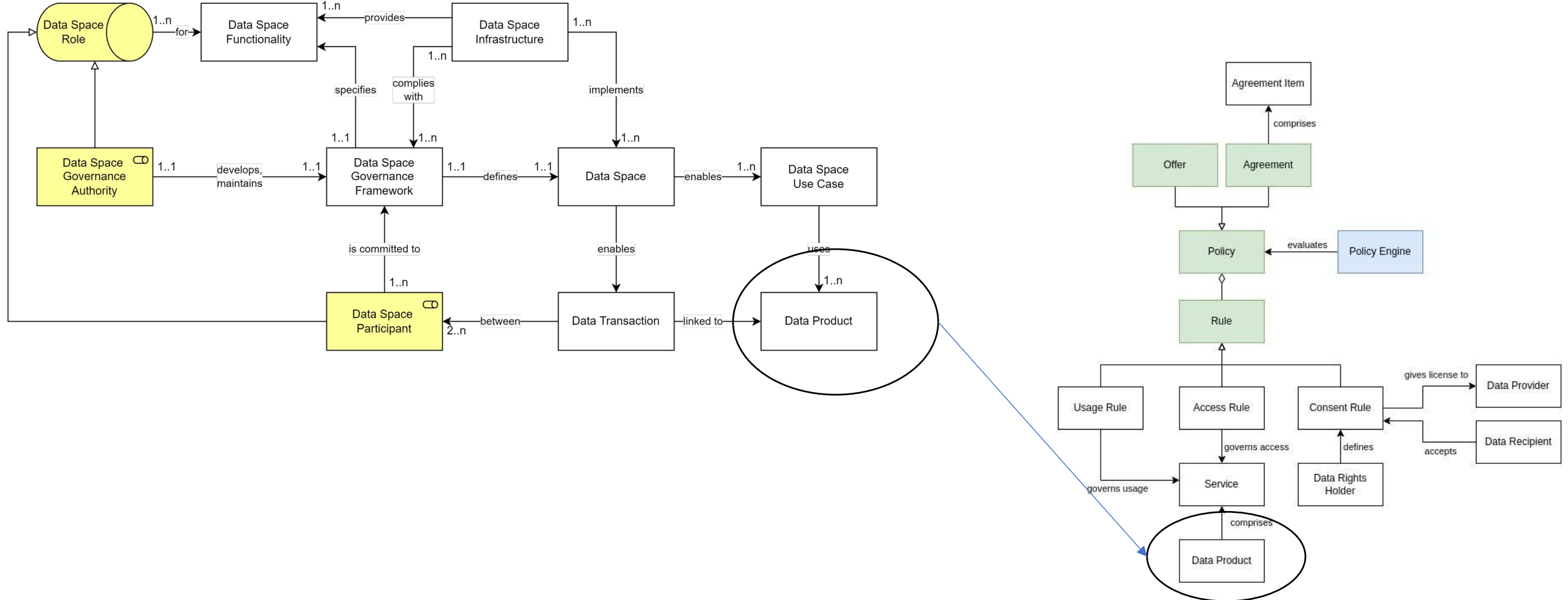
 Glossary

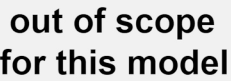
Glossary: a huge step towards conceptual clarity



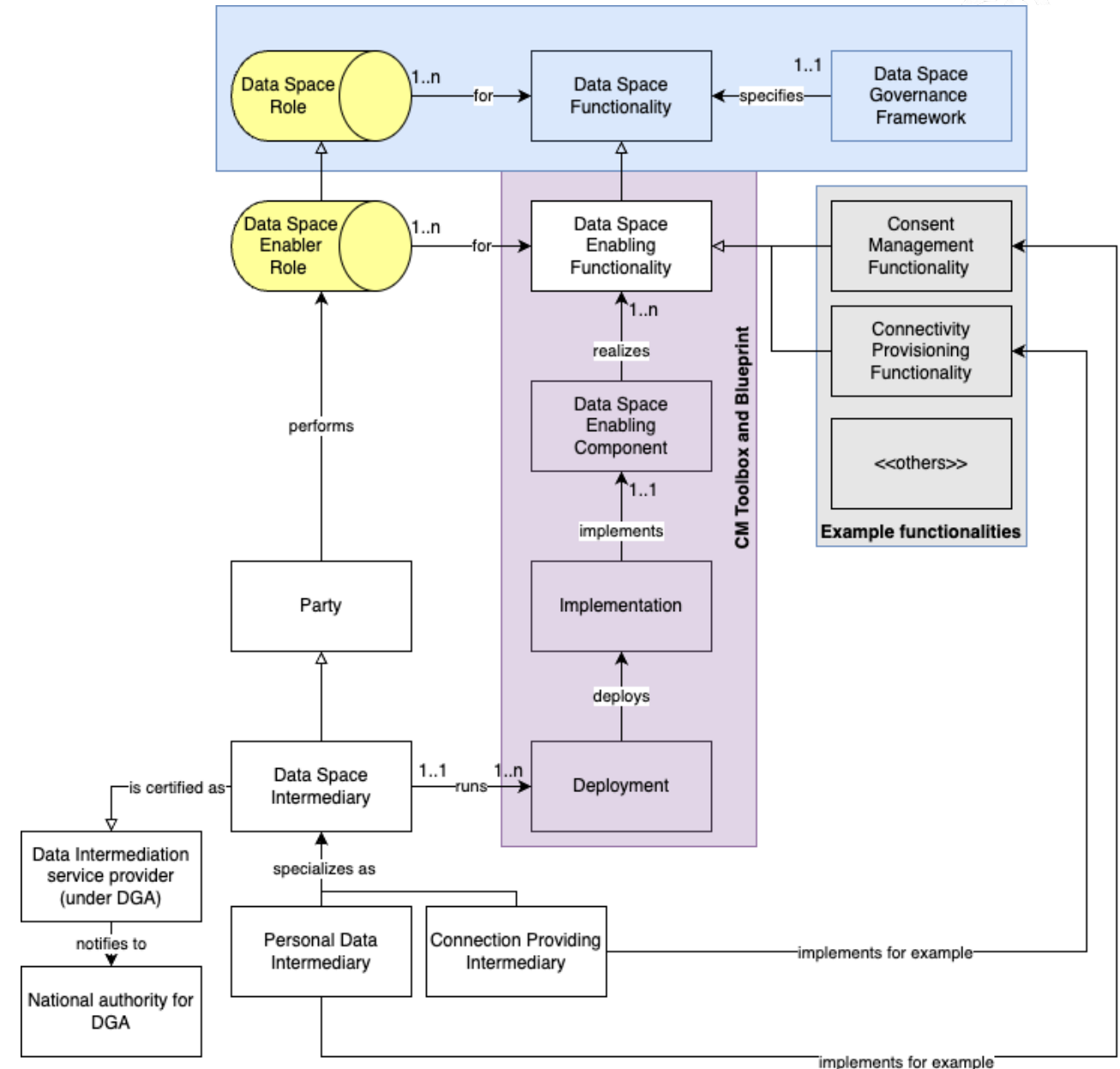


Drill down in conceptual levels





- Roles
- Enabling functions
- Intermediaries



Blueprint Version 1.0 - The building blocks you need

Matthijs Punter and Claire Stolwijk, TNO

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Why a Blueprint for Data Spaces?



DATA SPACES
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Take-off &
get to a higher flight level



Faster

Protect your investment



Future proof

Achieve synergies between
data spaces



Federations



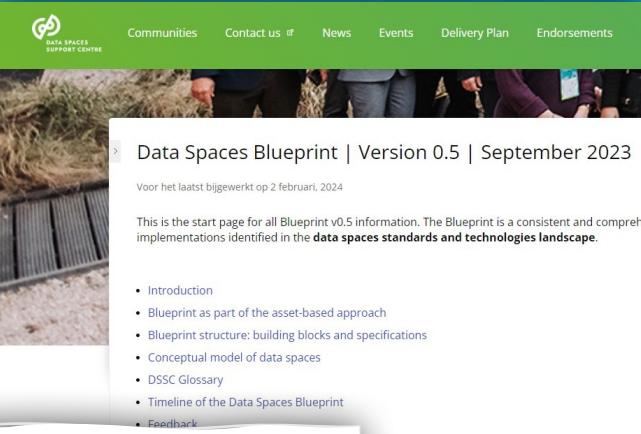
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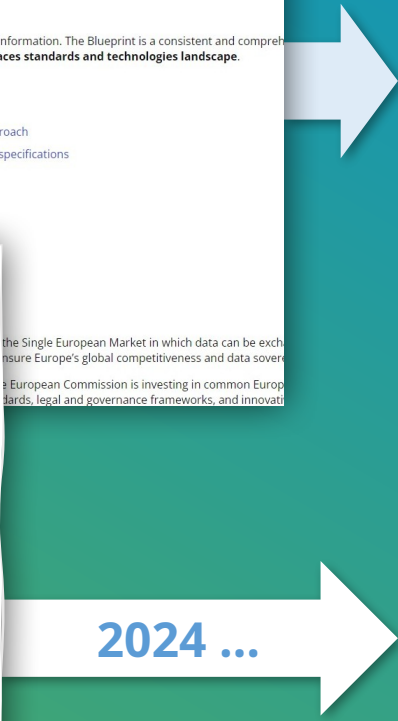
Evolution



INTEROPERABILITY	TRUST	DATA VALUE	GOVERNANCE
Data Models & Formats	Identity management	Metadata & Discovery Protocol	Overarching cooperation agreement
Data Exchange APIs	Access & usage control / policies	Data Usage Accounting	Operational (e.g. SLA)
Provenance and traceability	Trusted Exchange	Publication & Marketplace Services	Continuity model



Organisational and Business Building Blocks		
Business Business Model Development Use Case Development Data Product Development Data Space Intermediary	Governance Organisational Governance Data Sharing Governance	Legal Regulatory Compliance Contractual Framework
Technical Building Blocks		
Data Interoperability Data Models Data Exchange Provenance & traceability	Data Sovereignty & Trust Access & usage policies and control Identity Management Trust	Data Value Creation Data, Services and Offerings descriptions Publication and Discovery Marketplaces



Blueprint → Building Blocks



Building blocks

Business &
Organisational

Technical



- ✓ Required capabilities
- ✓ Core design decisions
- ✓ Specifications & common standards
- ✓ Further reading

Business and Organisational



Business and organisational building blocks



Business

Business model development

Use case development

Data product development

Data space intermediary



Governance

Organisational form and governance authority

Participation management



Legal

Regulatory compliance

Contractual framework

Business building blocks



**DATA SPACES
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What is it?

What is the aim?

Business model development

Approach for value creation

Develop a business model based on:

- Guidelines to the customer journey
- Revenue and costs models

Use case development

Setting to create value from data sharing

Explore, develop and onboard use cases based on:

- Templates, scenario's, ensuring synergies

Data product development

Consumable bundle of resources for value creation in use cases

Create data product offerings based on:

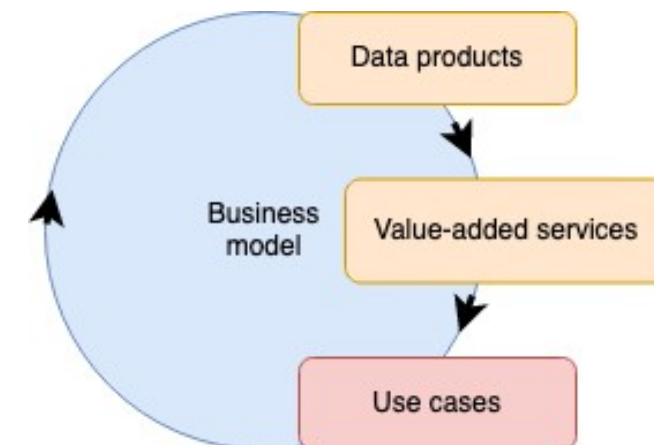
- Templates to create data products
- Governance rules and principles (e.g. data quality and security)

Data spaces intermediary

Optional participant providing enabling services

Initiating a data space intermediary offering enabling services (e.g. identity management) based on:

- 4 generic models & guidelines



Business decisions



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Governance building blocks



**DATA SPACES
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What is it?

Organisational form
and governance
authority

Organisation form
and responsible(s)
for the governance
framework

What is the aim?

Develop the organisation form & governance authority (GA) based on:

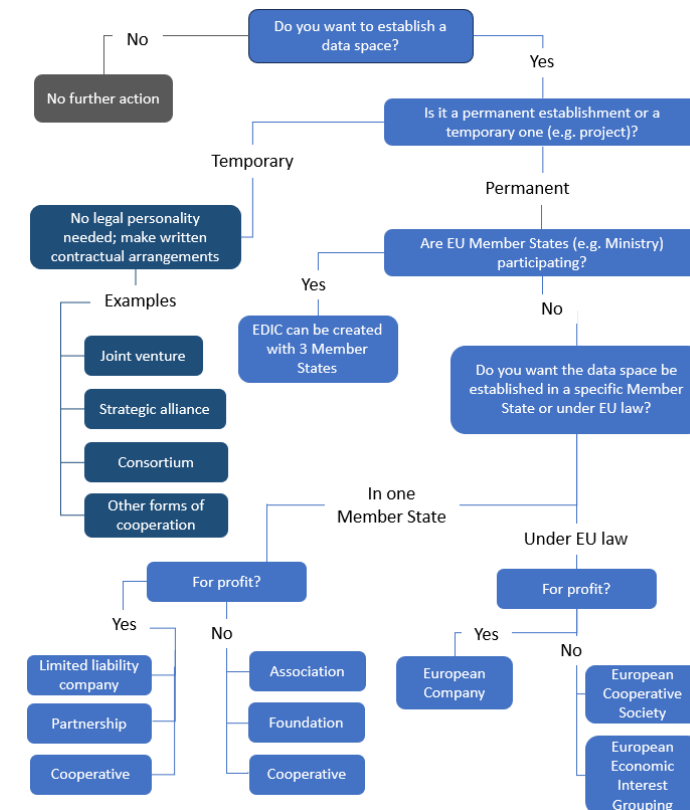
- Guidelines on the impact on the GA

Participation
management

Governance
processes for
participation

Defining the participants and enabling their on/offboarding based on:

- Clear criteria for admission and continued participation & specifications of roles



**Decision tree on organising
& establishing a data space**



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Legal building blocks



**DATA SPACES
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What is it?

What is the aim?

Regulatory
compliance

Ensure adhering
to the law

**Becoming legally compliant by
guiding:**

- On relevant EU legislation
- On roles and responsibilities

Contractual
framework

Legally
enforceable
agreements

**Develop legally enforceable
agreements :**

- 1. Data space agreements and 2. transaction agreements

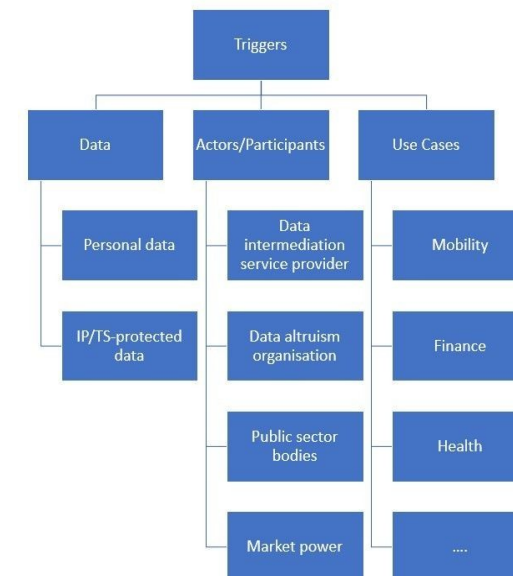
Contractual Framework

Data space agreements

- Constitutive agreement
- General Terms and Conditions
- Accession Agreement
- Agreements related to enabling services

Data transaction agreements

- Data contract(s)



Examples of related legislation;

• **Data:**

- Personal data: GDPR, e-Privacy Directive
- IP/TS protected data : Copy write law, Trade secret protection

• **Actors/Participants:**

- Data intermediation service provider: DGA
- Data Altruism org: DGA, GDPR
- Public sector bodies: Open Data Directive
- Market Power: 101 TFEU, 102 TFEU.

Overview of data space triggers that link to EU legislation

What's new **1.0**



Business and organisational building blocks



Business

- ✓ Visual overview of business ingredients
- ✓ Guidelines & templates to take business decisions



Governance

- ✓ ~~Organisational governance~~ → Organisational form and governance authority
- ✓ ~~Data-sharing governance~~ → Participation management
- ✓ Decision tree to organise and establish a data space
- ✓ Guidelines on/offboarding of participants



Legal

- ✓ Regulatory compliance checklist for data spaces
- ✓ Contractual framework for agreements:
 - Among participants
 - On data transactions

+ More details & practical guidelines!



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Technical Blueprint



Technical building blocks



Data interoperability

Data models

Data exchange

Provenance and traceability



Data sovereignty and trust

Identity and attestation management

Trust framework

Access and usage policies enforcement



Data value creation enablers

Data services and offerings descriptions

Publication and discovery

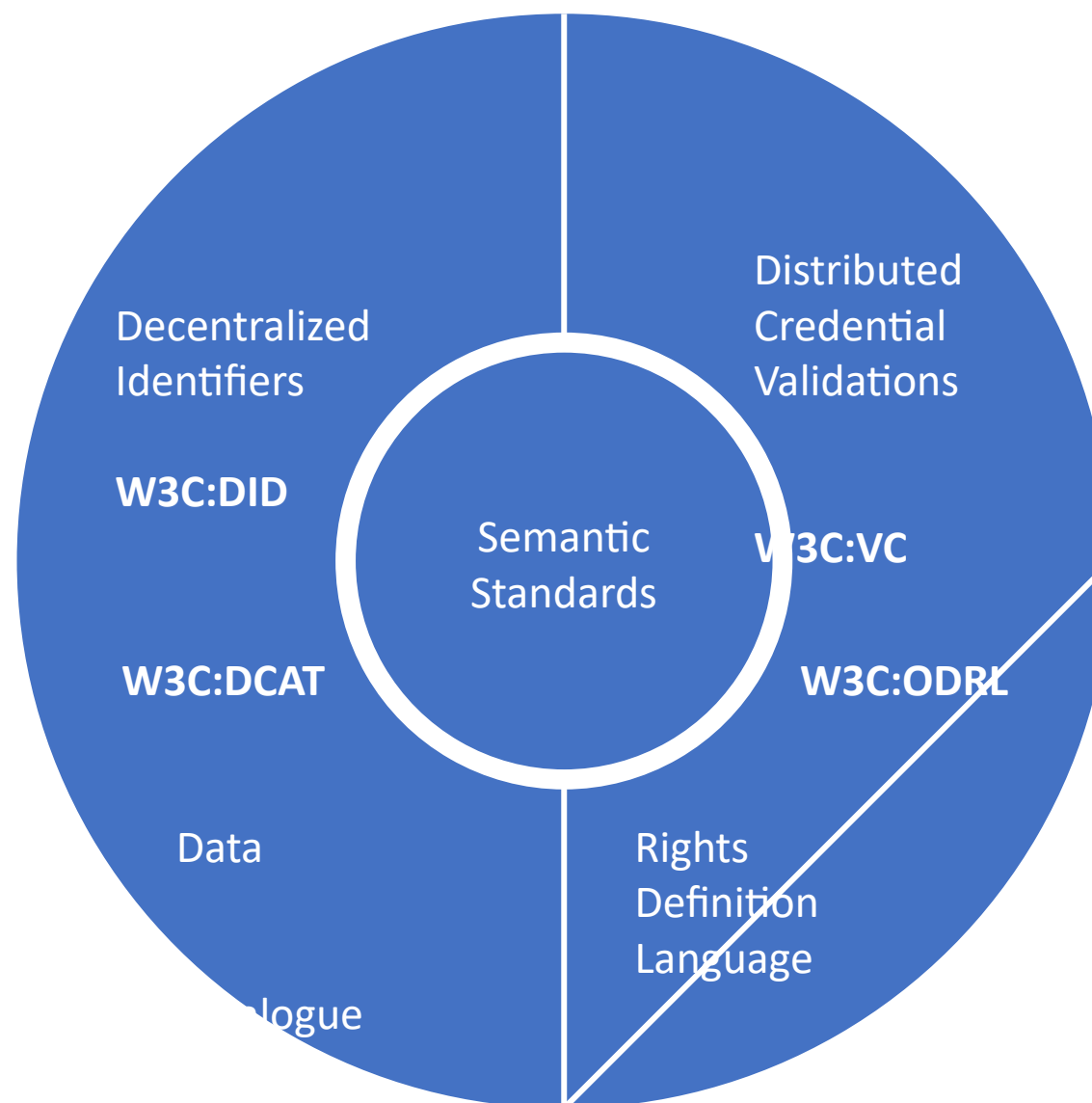
Value added services

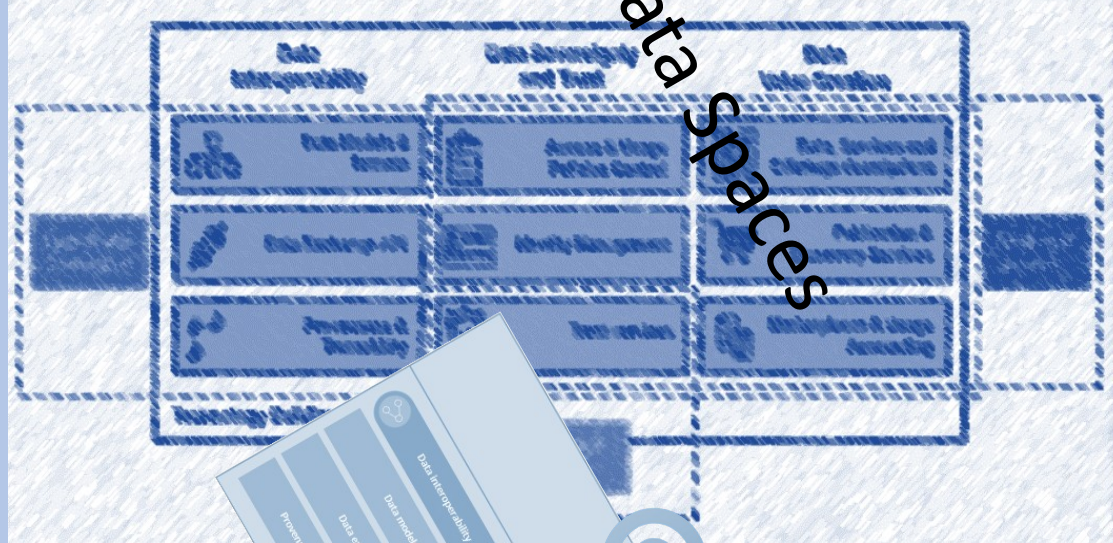


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Foundational standards





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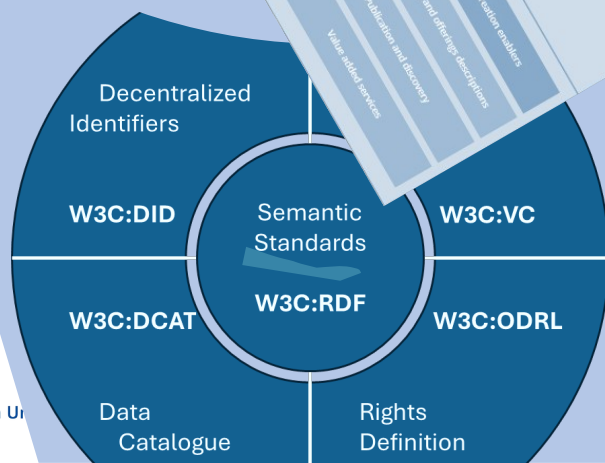
**Data Space specific
rulebooks/blueprints/agreements**

Your blueprint, your specifications

DSSC Blueprint + frameworks of standards

Dataspace Protocol

Trust Framework



Foundational global standards

What's new **1.0**



Technical building blocks



Data interoperability

- ✓ **Vocabulary Hub** for common data models
- ✓ Approaches for **provenance & traceability**



Data sovereignty and trust

- ✓ Attestation & Identity Management based on **W3C Verifiable Credentials** (SSI)
- ✓ Role of Trust Frameworks
- ✓ Access and usage policies based on **W3C ODRL**



Data value creation enablers

- ✓ Usage of **DCAT** for specifying data products & services
- ✓ Role of **Value Added Services** in a data space (not only marketplaces!)

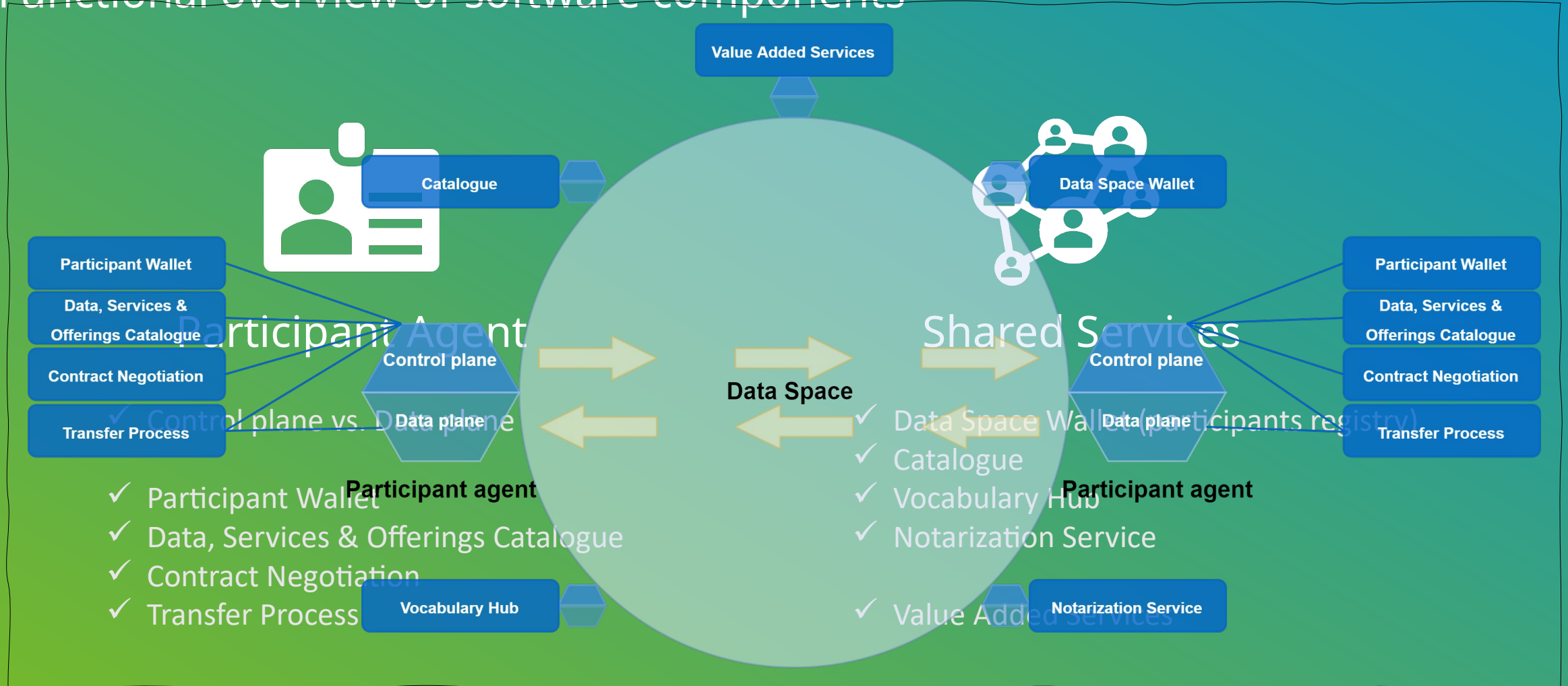


Building Block → Implementation



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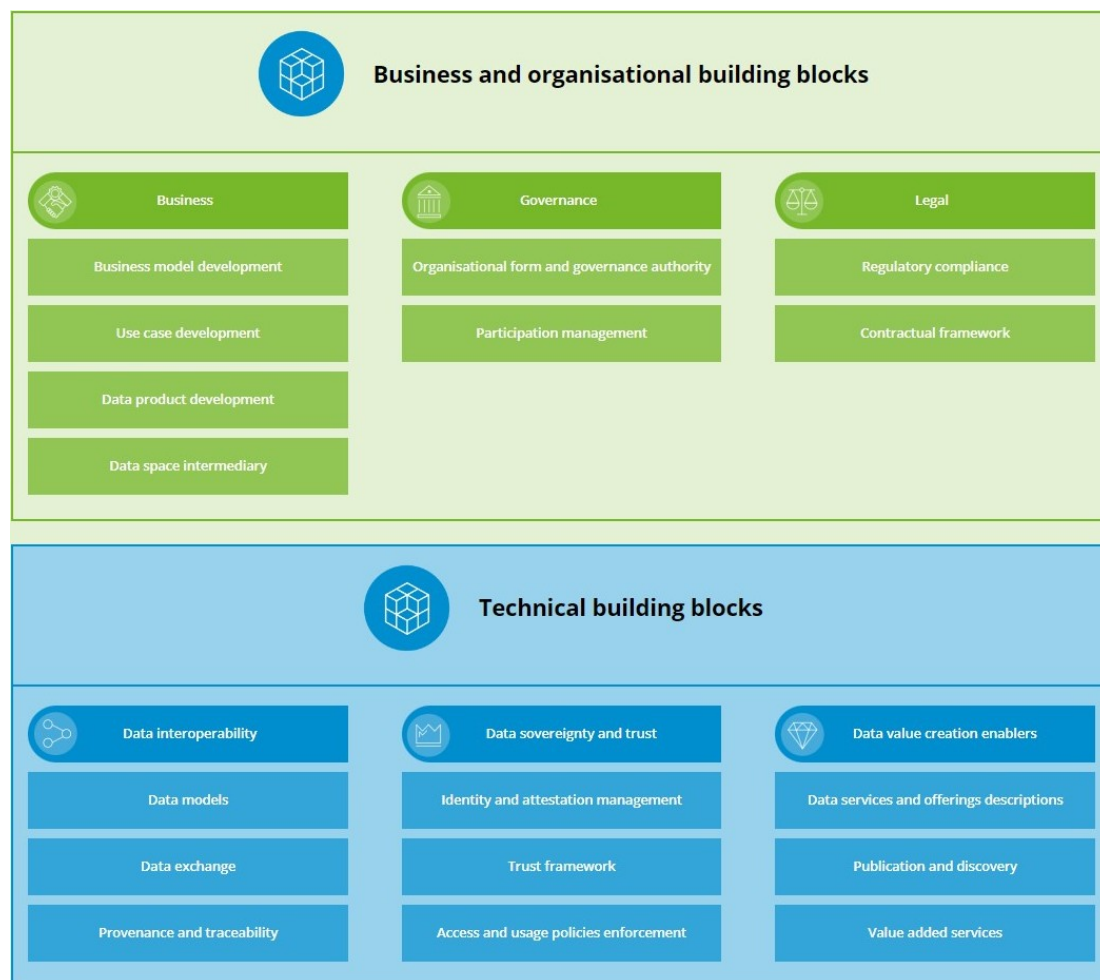
Functional overview of software components



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Navigating the Blueprint



The Co-Creation Method

You want to build a data space: where to begin?

Building a data space is often a collaborative process

Not every building block is needed at the same time: modularity

Build on the DSSC results



Critical mass of
committed partners

Plan and resources to
start a data space pilot

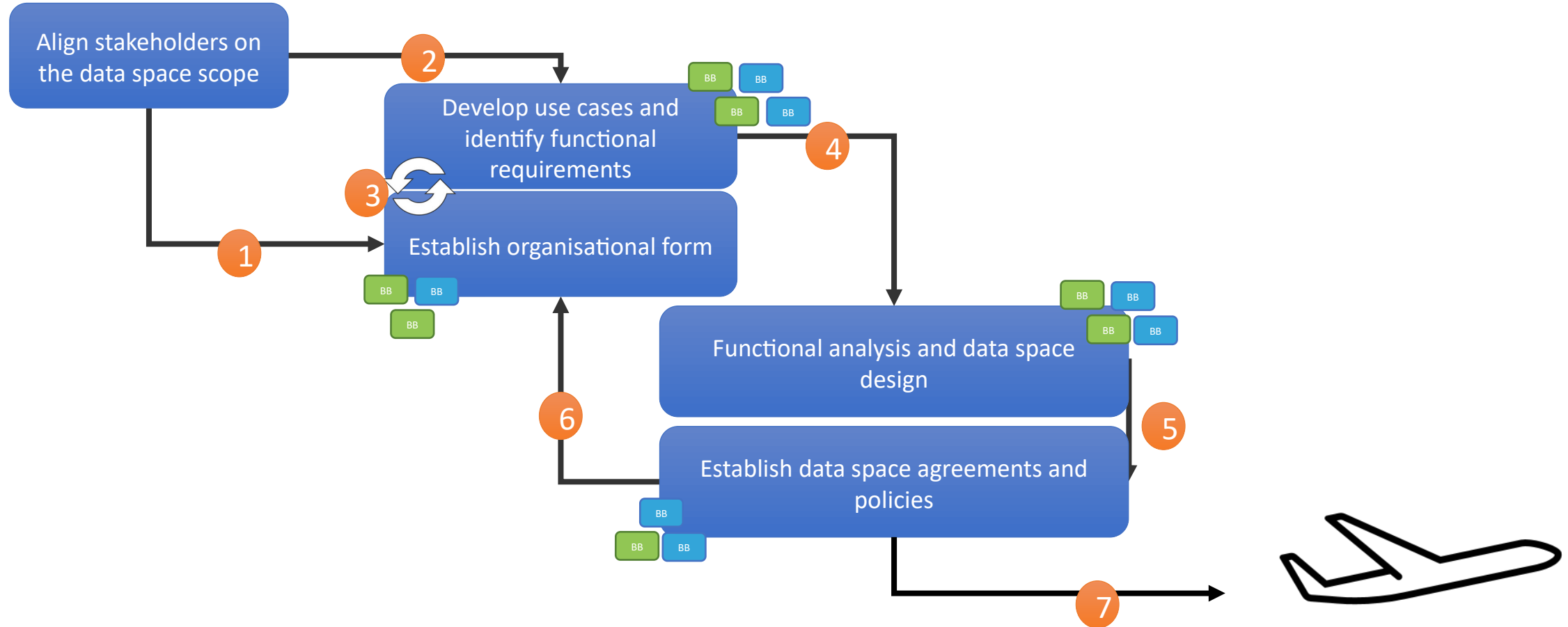
First data space use case
becomes operational

Exploratory Stage

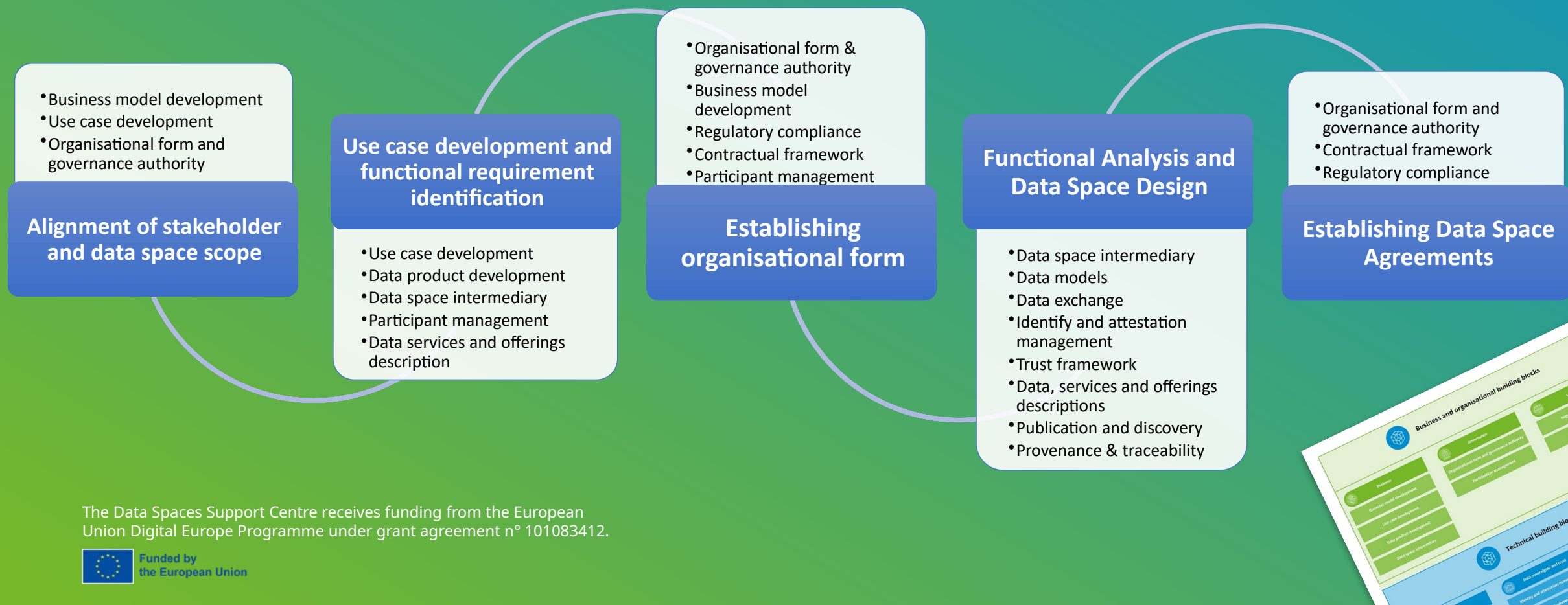
Preparatory Stage

Implementation Stage

Operations



Building Blocks in each step of the Co-Creation Method



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Connect, use and contribute

Use the DSSC Blueprint to develop or enhance the rulebook of your own dataspace

“Comply or explain” + Contribute!



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What can DSSC offer to you? Blueprint 1.0 and other resources

How to use the data space blueprint and building blocks

If data spaces are new to you, start with the starter kit. If you need to explore the concepts and vocabulary, explore the conceptual model and the glossary. If you know where to go, then explore the various building blocks. Explore further to use, to learn or to contribute.



Starter kit



Conceptual model



Glossary



Business and organisational building blocks



Business

Business model development



Governance

Organisational form and governance authority



Legal

Regulatory compliance



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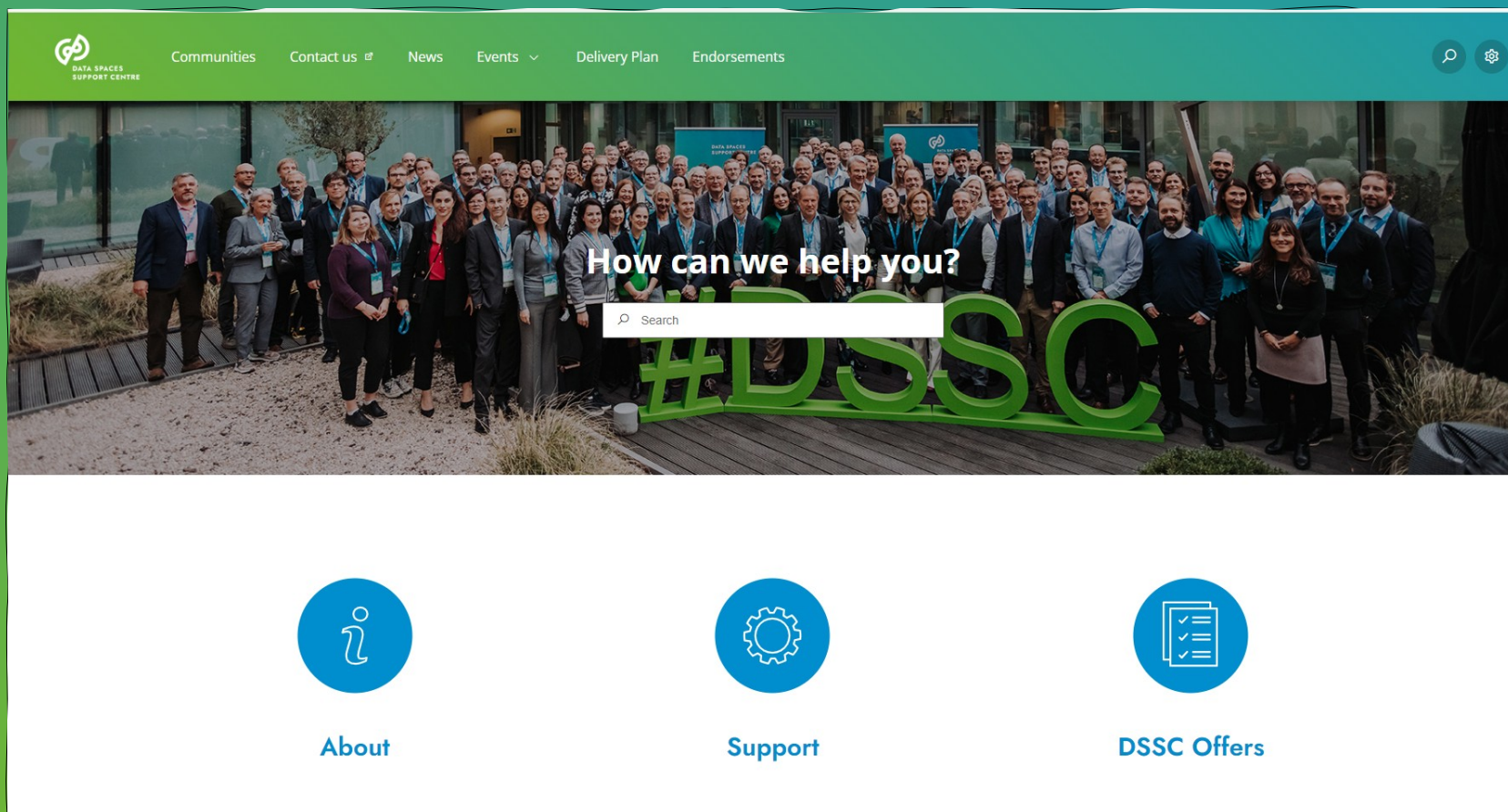
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Q&A Session

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