

WEBINAR

# Data spaces: Introducing the concept and relevance in today's world

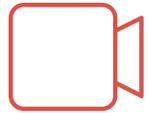
The logo for Data Europa Academy, featuring the text "data.europa academy" in white lowercase letters. The word "data" is on the top line, "europa" is on the second line, and "academy" is on the third line. Small yellow dots are placed above the 'a' in "data" and above the 'o' in "europa". The logo is set against a dark blue circular background.

data.  
europa  
academy

12 May 2023

10.00 — 11.00 CET

# Rules of the game



The webinar will be recorded



Please mute yourselves during the webinar



For questions, please use the ClickMeeting chat.



Please reserve 3 min after the webinar to help us improve by filling in our feedback form

# Introduction



**Giulia Carsaniga**  
Research and Policy Lead  
Consultant, Capgemini



**Daniele Rizzi**  
Principal administrator and  
policy officer, DG CNECT



**Johan Bodenkamp**  
Policy and project officer,  
DG CNECT

# Agenda

10.00 – 10.05      Opening and introduction of the series

10.05 – 10.45      Introducing the concept of data spaces and the relevance in today's world

10.45 – 10.55      Q&A

10.55 – 11.00      Recap and closing



# Data spaces: Introducing the concept and relevance in today's world'

**data.europa academy webinar, 12 May 2023**

**Daniele Rizzi, Johan Bodenkamp**

European Commission, Directorate-General for Communications Networks, Content and Technology (DG CNECT) - Unit G1 – Data policy and innovation

# European Commission priorities 2019-2024

EU digital transition is at the top of the policy agenda:



## A European Green Deal

Europe aims to be the first climate-neutral continent by becoming a modern, resource-efficient economy.



## A stronger Europe in the world

The EU will strengthen its voice in the world by championing multilateralism and a rules-based global order.



## A Europe fit for the digital age

The EU's digital strategy will empower people with a new generation of technologies.



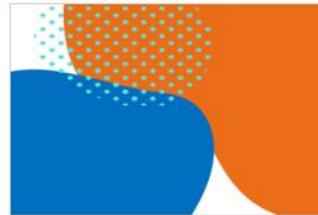
## Promoting our European way of life

Europe must protect the rule of law if it is to stand up for justice and the EU's core values.



## An economy that works for people

The EU must create a more attractive investment environment, and growth that creates quality jobs, especially for young people and small businesses.



## A new push for European democracy

We need to give Europeans a bigger say and protect our democracy from external interference such as disinformation and online hate messages.

# Creating a single European market for data

## European Data Strategy

- [Published Feb 2020](#)
- *Genuine* internal data market
- Built on EU values and rules

## Common European data spaces

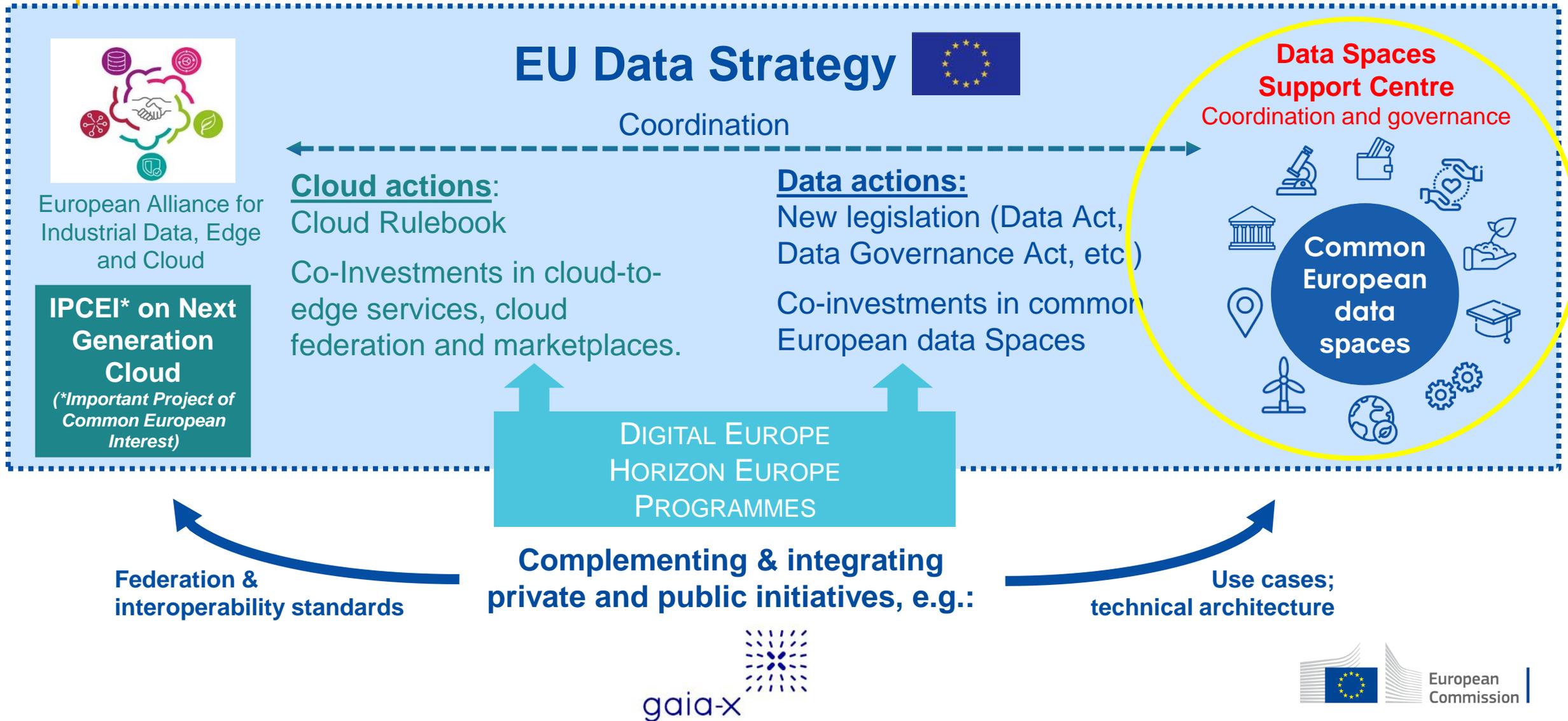
- [Staff Working Document – Feb 2022](#)  
*Overview development data spaces, at request European Council*
  - ✓ Horizontal aspects (concept, legislation, EU programmes/funding)
  - ✓ Sectoral/domain-specific initiatives

## A cross-sectoral legislative framework

- [Data Governance Act](#) – July 2022
- [Data Act](#) – Proposal Feb 2022
- [Implementing Act on High-value datasets](#) (Open Data Directive) – December 2022



# The European Data strategy



# Common European data spaces



## Data Spaces Support Centre (dssc.eu)

- Coordinating the development of data spaces
- Assuring common standards and interoperability

## Technical infrastructure for data spaces



Edge & cloud Services

Smart  
Middleware  
solutions  
(Simpl)

Marketplace

High-Performance  
Computing

AI on demand  
platform

AI Testing and  
Experimentation  
Facilities



## *European Council 25 March 2021*



- c) call for better exploiting the potential of data and digital technologies for the benefit of society, the environment and the economy, while upholding relevant data protection, privacy and other fundamental rights and ensuring the retention of data necessary for law enforcement and judicial authorities to exercise their lawful powers to combat serious crime; we recognise the need to accelerate the creation of common data spaces, including ensuring the access to and interoperability of data; we look forward to the Commission's proposal for a regulatory framework for Artificial Intelligence, and the accompanying review of the coordinated plan, to accelerate the uptake of this technology while ensuring safety and full respect of fundamental rights; we invite the Commission to swiftly present the progress made and the remaining measures necessary to establish the sectoral data spaces announced in the European strategy for data of February 2020;

Brussels, 23.2.2022  
SWD(2022) 45 final

COMMISSION STAFF WORKING DOCUMENT

on Common European Data Spaces

# Common European Data Spaces

## Objective & Concept

” The creation of **EU-wide common, interoperable data spaces** in strategic sectors aims at **overcoming legal and technical barriers to data sharing** by combining the necessary tools and infrastructures and addressing issues of trust by way of common rules.

A common European data space **brings together** relevant **data infrastructures and governance frameworks** in order to facilitate data pooling and sharing. “

[EC Staff Working Document  
\(2022\) 45 – Feb 2022](#)

# Key characteristics of a data space

EC Staff Working Document  
(2022) 45 – Feb 2022

- A **secure and privacy-preserving IT infrastructure** to pool, access, process, use and share data.
- A **data governance mechanism**, comprising a set of rules of administrative and contractual nature that determine the rights to access, process, use and share data in a trustful, transparent manner and in compliance with existing legislations.
- **Data holders are in control** of who can have access to their data, for which purpose and under which conditions it can be used.
- Presence of vast amounts of data that are **made available on a voluntary basis** and can be reused against remuneration or for free, depending on the data holder's decision.
- Participation by an **open** number of organisations/individuals in full respect of competition rules and ensuring non-discriminatory access for all participants.

# Are data spaces the same as data lakes?



A data lake is a repository that allows to store structured and unstructured data at any scale. You can store your data as-is, without having to first structure the data, and run different types of analytics — from dashboards and visualizations to big data processing, real-time analytics, and machine learning to guide better decisions.

If you have access to the data lake, you have access to all the data contained in it.

# Data Spaces are more like fish markets



A data space can be defined as a federated data ecosystem based on shared policies and rules. The users of such data spaces are enabled to access data in a secure, transparent, trusted, easy and unified fashion.

Data holders are in control of who can have access to their data, for which purpose and under which conditions it can be used.

From a technical perspective, a data space can be seen as a data integration concept which does not require common database schemas and physical data integration, but is rather based on distributed data stores and integration on an “as needed” basis.

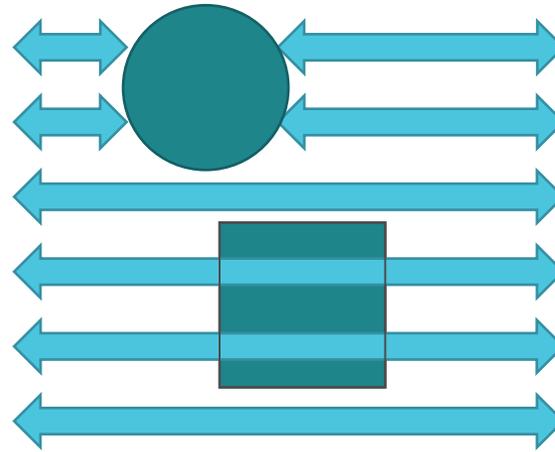
# Data spaces = data infrastructures + governance frameworks

Current situation



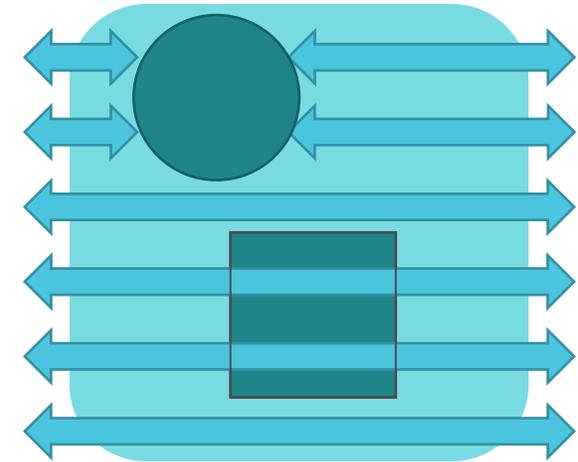
One to one sector-specific data sharing based on contractual agreements.

Taking shape



Data sharing infrastructures with centralized data hosting, and/or data marketplaces to enable discovery and reduce transaction costs where data is not held in a central repository.

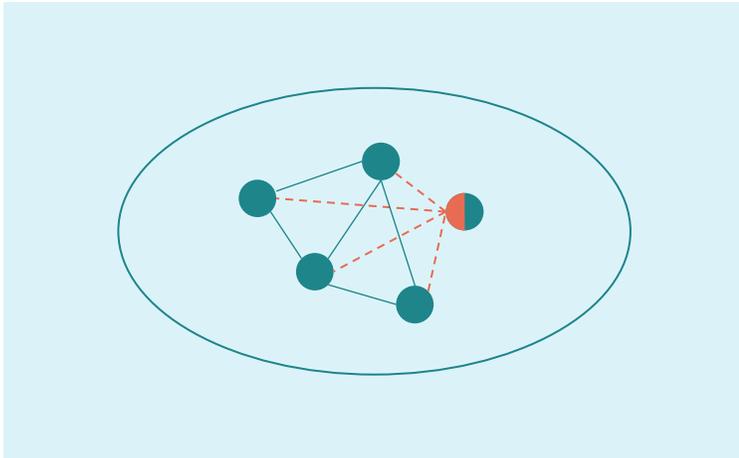
Data space



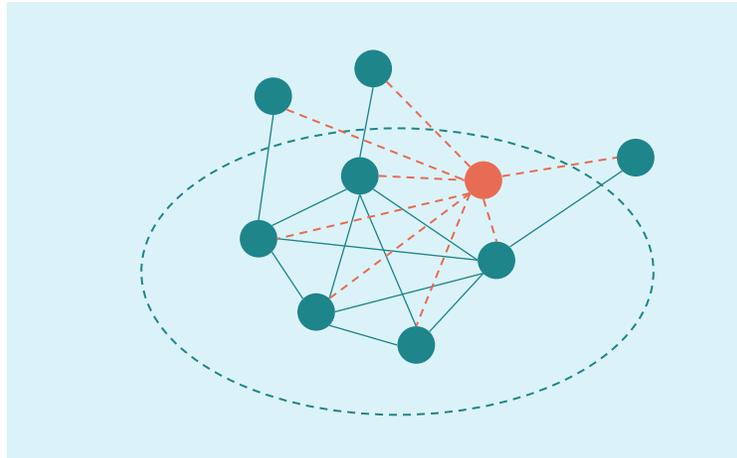
Links are created between data space participants. Federated data is stored in a distributed manner with tools to enable discovery, access, and analysis across industries, companies, and entities.

# Evolution of data spaces

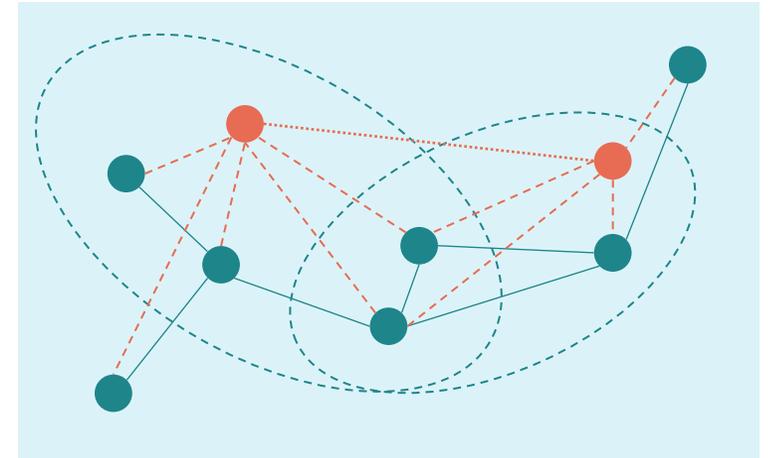
## I Closed ecosystem



## II Open ecosystem



## III Federation of ecosystems



Legend:

Roles: ● Participant (Data Provider | Data User); ● Data intermediary.

Data Exchanges: — Payload data incl. metadata between participants; - - - Metadata between participant and federator; ····· Metadata between federators.

Ecosystems: ○ Closed; ○ Open.

# Role EC in supporting the creation of data spaces

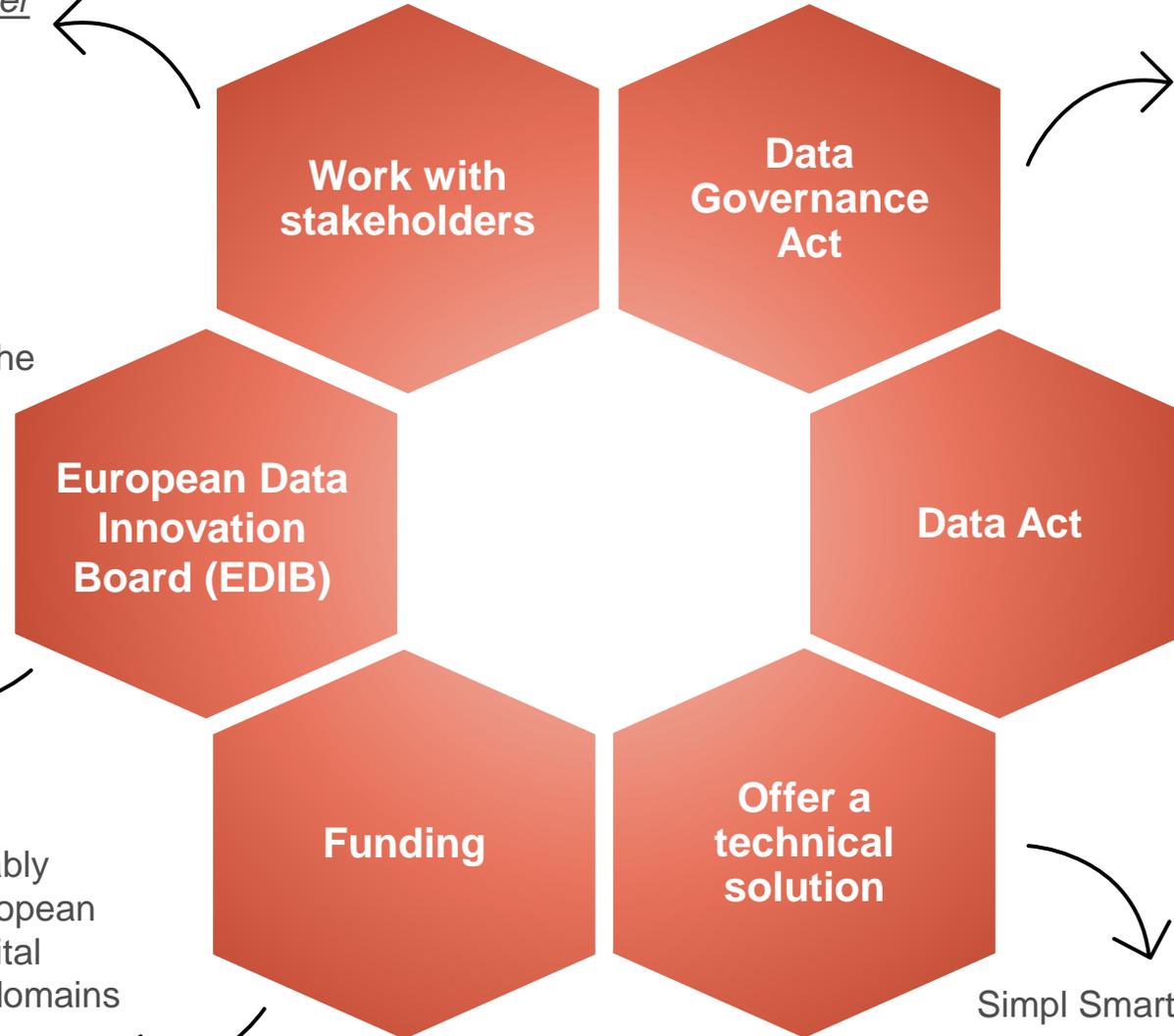
Bring stakeholders together with a common EU data policy

Ensure TRUST in data transactions, e.g. neutral data intermediaries

Support the Commission in:

- Issuing guidelines to facilitate the development of the common European data spaces
- Identifying the relevant standards and interoperability requirements for cross-sector data sharing

EU financial contribution (notably DIGITAL) to deploy common European data spaces as European digital infrastructures in specific sectors/domains



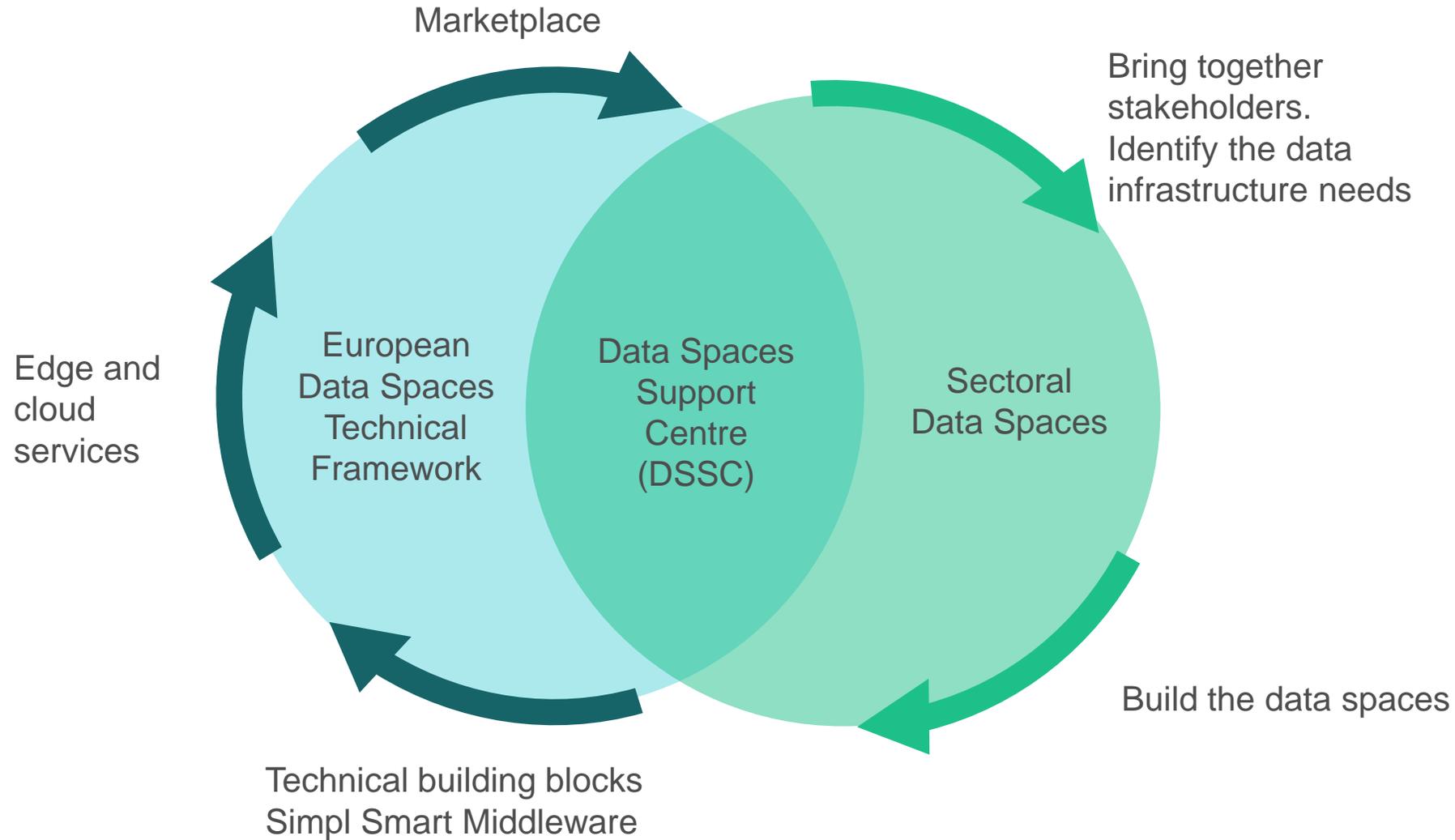
Ensure FAIRNESS in the allocation of data value among the actors of the data economy

Simpl Smart Middleware  
DIGIT building blocks

# Funding – Data Spaces in DIGITAL

 <p>The European Green Deal</p>	Green Deal	 <p>Smart communities</p>	 <p>Agriculture</p>
 <p>Mobility</p>		 <p>Health - Genomics</p>	 <p>Health - Cancer Images</p>
 <p>Skills</p>		 <p>Manufacturing</p>	 <p>Public Procurements</p>
 <p>Security data space for innovation</p>		 <p>Financial</p>	 <p>Tourism</p>
 <p>Language</p>		 <p>Cultural Heritage</p>	 <p>Media</p>

# Funding – Data Spaces and infrastructure in DIGITAL



# Offer a technical solution – building blocks

Apart from EU policy and legislation on data, the Commission offers technical **building blocks** to create data spaces in a harmonised manner

## Choose your Building Block

A Building Block is an open and reusable digital solution. It can take the shape of a **framework**, a **standard**, a **software**, or a **software as a service (SaaS)**, or any combination thereof.

Building Blocks are endorsed by the European Commission and ensure that your digital service will be fully compatible with others on the market. We offer support and guidance on your journey to an interoperable, EU-compliant final product. What's your challenge?



### eDelivery

Exchange electronic data and documents in an interoperable and secure way

[Learn more](#)



### eID

Offer services capable of electronically identifying users across Europe

[Learn more](#)



### Once-Only Technical System (OOTS)

Reduce administrative burden on citizens and businesses

[Learn more](#)



### eSignature

Create and verify electronic, paperless signatures

[Learn more](#)



### eInvoicing

Send and receive electronic invoices with automated processing, in line with the European standard

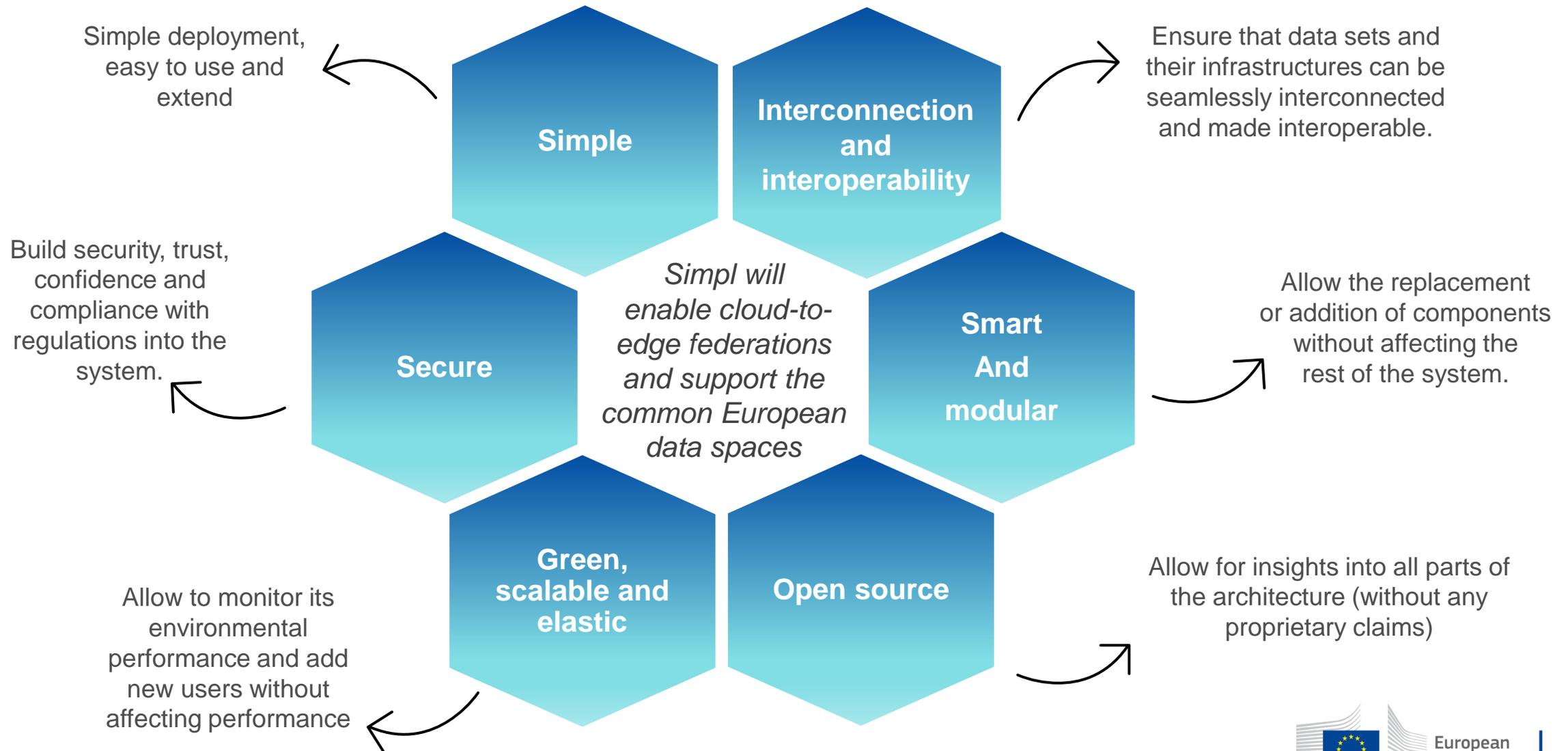
[Learn more](#)

Digital Europe: eIDAS enablers

## Give your digital project a boost

Our eIDAS enablers give you access to free **tools and support** to help you build digital services in line with the eIDAS regulation.

# Offer a technical solution – Simpl Smart Middleware



# Data Spaces Support Centre – key features

- Coordination and Support Action
- Project duration: 42 months
- Start date: 01/10/2022
- End date: 31/03/2026
- Consortium of 12 partners
- Coordination: Fraunhofer (DE)
- 16 associated partners
- Budget: 14 mln euros
- 100% funded by the DIGITAL Europe programme



**DATA SPACES  
SUPPORT CENTRE**



# Data Spaces Support Centre – dssc.eu



## Consortium members



# Data Spaces Support Centre – dssc.eu



## Associated and collaboration partners



## OVERALL MISSION

- Create a **network of stakeholders** and **community of practice**
- Provide tools to address **organisational and technical matters** required for every data space
- This includes a **blueprint, building blocks**, best practices, common standards, reference implementations and identification of **data governance models**
- Provide **support** and enable data spaces to focus on their domain-specific business challenges
- Enable data spaces to reach a higher flight level faster: **quick start** and an **accelerated scale-up**

## SPECIAL FOCUS ON INTEROPERABILITY

- Ensure that participants of one data space can also **participate in other** European data spaces
- Can only be achieved if data spaces conform to certain **standards**, which will be part of the DSSC blueprint

## GENERAL

- Create **economies of scale** and **synergies** on a European level for the development of common European data spaces

# DSSC – Network of Stakeholders

## Community of Practice

- DIGITAL Data Space initiatives and sectoral/domain specific Coordination and Support Actions.
- SIMPL and building blocks implementers

## Strategic Stakeholder Forum

- Think-and-do-tank to continuously deliver on the policy objectives and market needs

## Collaboration with relevant initiatives and Stakeholders

- Public Sector Open Data for AI and Open Data Platform, the Cloud-to-Edge infrastructure and services projects, AI initiatives , EDIHs, Hubs, Advanced Digital Skill initiatives, EuroHPC, Research projects (H2020, HE), space programmes, partnerships, Standardisation Bodies and organisations, National initiatives, Industry and SME associations, international initiatives, etc

## Collaboration with EDIB and Policymakers

- EDIB (European Data Innovation Board)
- Relevant policymakers to enable a steadily and potentially iteratively evolving regulatory and policy environment for the data spaces

# DSSC – Community of Practice



 Cultural Heritage Data Space (EUROPEANA/DS4CH) Cultural Heritage	 European Federation for CAncer IMages (EUCAIM) Health	 The European Genomic Data Infrastructure (GDI) Health (Geonomics)	 Interoperability Network for the Energy Transition (IntNET) Energy	Language Data Space (LDS) Language
 Prep. action Agriculture Data Space (AgriDataSpace) Agriculture	 Prep. action Green Deal (GREAT) Green	 Prep. action Manufacturing Data Space (EU DATA SP4CE) Manufacturing	 Prep. action Mobility Data Space (PrepDSpace4Mobility) Mobility	 Prep. action Skills Data Space (DS4Skills) Skills
 Prep. action Smart Communities Data Space (DS4SSCC) Smart Cities	 Prep. action Tourism Data Space (DATES) Tourism	 Prep. action Tourism DataSpace (DSFT) Tourism		

# Data Spaces Support Centre – Assets

**Definition:** An open resource managed by the Data Spaces Support Centre that can be used to develop, deploy and operationalize data spaces and to enable the knowledge sharing around data spaces.

List of assets (in the pipeline):

- Starter Kit
  - Glossary
  - Building Blocks
  - Blueprint
  - Radar/Data Spaces Inventory
  - Community of Practice
  - Overall network of Stakeholders
- } published on [dssc.eu](https://dssc.eu)



**DATA SPACES  
SUPPORT CENTRE**

Other assets:

- DSSC platform, events, Data Space Design principles, Conceptual Model

# Data Spaces Support Centre – Starter Kit

## What is the Starter Kit?

- Starting point for data spaces that guides to relevant community resources and DSSC material that will be made available

## Content

- A 'quick start' to data spaces
  - Start-up checklist following BLOFT framework (business, legal and governance, operational, functionality and technology)
  - DSSC support references
  - Resource inventories

## What is it not?

- Not a moderated package – for instance, list of available and known resources but no evaluation of maturity of the solutions
- Not a textbook, cookbook, or guidebook
- Does not provide a blue print for developing data spaces

## Information gathering and finalization

- Community Process: workshop, survey and Interview methodologies

Release Interim Version

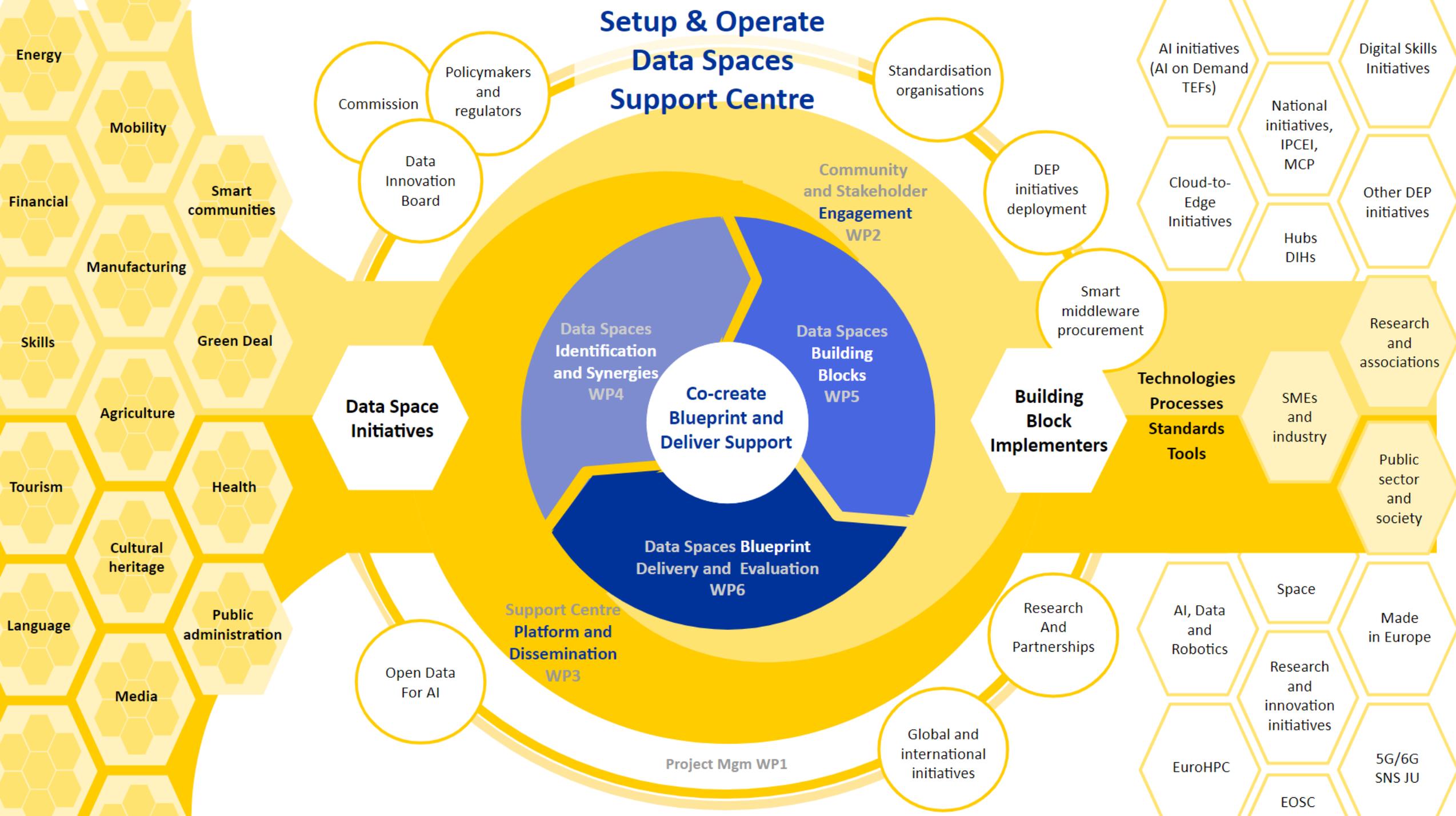
Dec 22

Final Release

Mar 23



Download the Starter Kit on the [DSSC-Website](#)



# Common European data space actors

## Data Spaces Support Centre (DSSC)

- **coordination of all relevant actions** on sectoral data spaces in Europe
- blueprint, best practices, common standards, support activities and knowledge transfer
- funded by the DIGITAL Europe Programme

## Data Space Coordination and Support Actions (CSAs)

- for **sectoral/domain-specific** data spaces
- community of practice, priority datasets, stakeholder engagement, governance/business models, roadmap
- funded by the DIGITAL Europe Programme

## European Data Innovation Board (EDIB)

- Consultative and advisory body established by the Data Governance Act, to be set up in September 2023
- **guidelines** for interoperability of common European data spaces

# EDIB – Composition

See Article 29 from the Data Governance Act

The Commission shall establish a European Data Innovation Board in the form of an expert group, consisting of representatives of the competent authorities for data intermediation services and the competent authorities for the registration of data altruism organisations of all Member States, the European Data Protection Board, the European Data Protection Supervisor, ENISA, the Commission, the EU SME Envoy or a representative appointed by the network of SME envoys, and other representatives of relevant bodies in specific sectors as well as bodies with specific expertise. In its appointments of individual experts, the Commission shall aim to achieve gender and geographical balance among the members of the expert group.

# EDIB – Sub-groups

See Article 29 from the Data Governance Act

The European Data Innovation Board shall consist of at least the following three subgroups:

- (a) a subgroup composed of the competent authorities for data intermediation services and the competent authorities for the registration of data altruism organisations, with a view to carrying out the tasks pursuant to Article 30, points (a), (c), (j) and (k);
- (b) a subgroup for technical discussions on standardisation, portability and interoperability pursuant to Article 30, points (f) and (g);
- (c) a subgroup for stakeholder involvement composed of relevant representatives from industry, research, academia, civil society, standardisation organisations, relevant common European data spaces and other relevant stakeholders and third parties advising the European Data Innovation Board on tasks pursuant to Article 30, points (d), (e), (f), (g) and (h).

# EDIB – Tasks

See Article 30 from the Data Governance Act

## advise and assist the Commission

### ... developing a consistent practice

- subgroup (a) (a) of Chapter II competent bodies
- (b) for data altruism across the Union
- subgroup (a) (c) of competent authorities (for data intermediaries & data altruism orgs)

### ... developing consistent guidelines

- subgroup (c) (d) for data altruism across the Union
- subgroup (c) (e) of competent authorities (for data intermediaries & data altruism orgs)

### ... taking into account the input from standardisation organisations

- subgroup (c) (f) on prioritising cross-sectoral standards
- subgroup (b) (g) in addressing fragmentation of the internal market → aim of encouraging the creation of common European data spaces

- subgroup (a) (k) ... evaluating whether the implementing acts are to be adopted
- (l) ... developing the European data altruism consent
- (m) ... improving the international regulatory environment (including standardisation) for non-personal data

## propose guidelines

- subgroup (c) (h) ... for common European data spaces

## facilitate cooperation between

- subgroup (a) (i) ... Member States with regard to setting harmonised conditions for Chapter II
- (j) ... competent authorities (for data intermediaries & data altruism orgs)

# Thank you for your attention



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[@EuropeanCommission](https://www.facebook.com/EuropeanCommission)



[EU Spotify](https://www.spotify.com/EU)



[European Commission](https://www.linkedin.com/company/EuropeanCommission)

# Questions & Answers



# Stay up-to-date on our 2023 activities!

- **Webinar series** dedicated to **use cases** continued – *26 May, 'Stories of Use Cases: Open Data and a new push for European democracy'*
- **New webinar series** on **data spaces** and **open data** – *to be continued*
- **Webinar series** dedicated to the **Open Data Maturity dimensions** – *To be continued during July*

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# Thank you

