



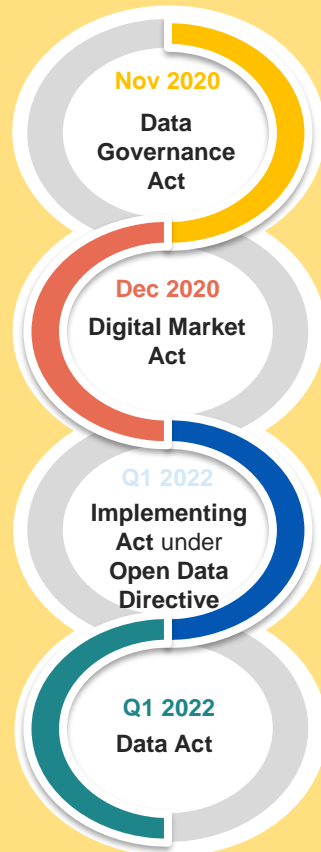
The EU data policy in 2022: high-value datasets, DGA, Data Act, Data spaces, Digital Europe

2nd INSPIRE ESPUS conference
30 June 2022

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DG for Communications Networks, Content and Technology, unit G1

The European Strategy for Data combines:

A **cross-sectoral legislative framework** that enables increased sharing, access and use of data



+

The roll-out and funding of **common European data spaces** in strategic sectors and domains of public interest

23 February 2022: Staff Working Document (SWD) adopted

Data spaces bring together data infrastructures and governance frameworks to facilitate data pooling and sharing.

- The SWD presents relevant **horizontal aspects** (concept, data governance aspects, necessary IT infrastructure) from which **sectoral initiatives** (funding or legislation) can flow to respond to different specificities.
- It also describes the **state of play** of the common European data spaces.



EU funds and programmes that will support this field:

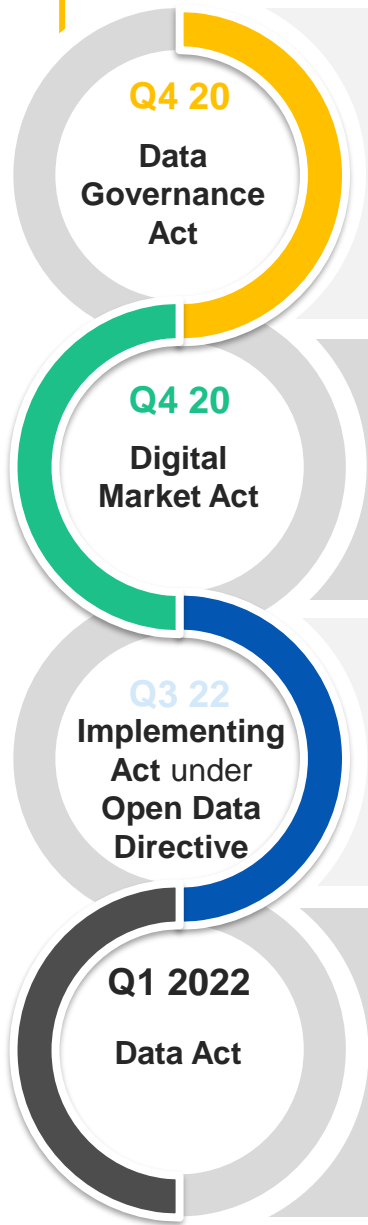
- Digital Europe Programme
- Horizon Europe
- Connecting Europe Facility
- Multi-Country Project in European Common Data Infrastructure and Services (incl. IPCEI and EDIC)
- Recovery and Resilience Facility
- European Regional Development Fund
- Other data infrastructure initiatives

Overview of data actions

[D] What data are we talking about?

[H] Who holds such data?

[A] What policy intervention?



Good governance of data cannot wait

[D] Data voluntarily made available by data holders

[H] Public sector, business, individuals, researchers

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

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

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

[H] Online platforms

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

High quality government data for SMEs & innovation

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

[H] Public sector

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

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

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

[H] Business

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

The Data Governance Act

- *Published in the Official Journal on June 3 June 2022 and it will apply as 24 September 2022*
- Re-use of public sector information that cannot be made accessible as Open Data (personal data, commercially confidential information)
→ public data «intermediaries» anonymise data on-demand or have secure processing environments for controlled data processing (cf. ONS microdata access)
- Voluntary label for data altruism organisations («data donation»)
- Private data intermediaries
- European Data Innovation Board to coordinate better standardisation across sectors

Data Governance Act

Leveraging the potential of data for the economy and society



Pillar 1:
Re-use of **sensitive data** held by **public sector bodies**



Pillar 2:
Framework for new **data intermediaries** in the Single Market: Data broker



Pillar 3:
Corporate and Individual **data altruism** for purposes of general interest

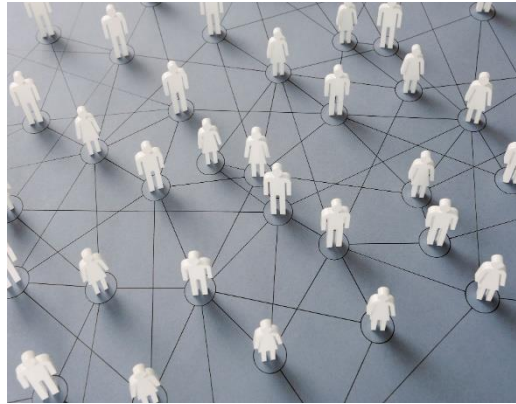


Pillar 4:
Co-ordination and interoperability: **European Data Innovation Board**

Horizontal framework for the creation of a single market for data

Data Act - *who* can use *what* data, and under *which* conditions

Ensure **fairness** in
the allocation of
data value



Make more data
available while
safeguarding
incentives for **data**
generation



Unlock the value
of Europe's
industrial data



Help the EU to
become a **global**
leader in the data
economy



Data Act: Scope of rights and obligations

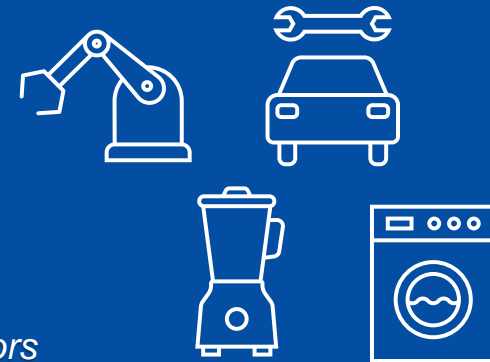
Better access to IoT data

Manufacturers of IoT objects need to allow access & can use the data

Users of IoT objects get right to access and port data

3rd parties can use the data to offer services (SMEs get special conditions)

Rules for IoT data also frame data sharing in other sectors



Tackle contractual unfairness



Companies are prohibited from unilaterally imposing unfair contractual clauses related to data sharing on SMEs

Make business data available for the common good



Companies must make data available to public sector bodies in case of emergencies and other exceptional needs

Easier switching between cloud services



Cloud service providers must ensure easy switching conditions for customers



Facilitate data flows through technical standards and interoperability

The European Commission may adopt technical specifications if necessary to ensure interoperability

Open Data Directive 2019/1024 of 20/6/2019 – basic facts

Competition
instrument

Open Data
Directive

Open Data
instrument

- Introduces a minimal set of rules to make more data from the public sector easier and cheaper to use for innovation
- The Directive only applies to *data publicly accessible** under national access to information regimes
- Application of the Directive must fully respect the Union and the national data protection rules
- **Latest revision in 2019:** now entitled '[Directive on Open Data and the re-use of public sector information](#)'

**Access rules are set by the MS. The PSI Directive regulates the re-use of already accessible information*

Open Data directive => Implementing Act : list of high value datasets

Geospatial

*Earth observation
and environment*

Meteorological

Statistics

*Companies and
company ownership*

Mobility

- Datasets listed in the implementing act to be made available:
 - for free
 - in machine-readable formats
 - via APIs and (where relevant) as bulk downloads
- [Impact Assessment](#): positive opinion
- Inter-service consultation in April
- Public consultation closed on 21 June
- Written comments from MS's until 30 June
- Open Data Committee opinion
- Expected adoption: Q3/2022

Geospatial – draft Implementing Regulation

Datasets	Administrative units	Geographical names	Addresses	Buildings	Cadastral parcels	Reference parcels	Agricultural parcels
Granularity	All generalisation levels available up to the level of scale 1:5000. From municipalities to countries; sea-frontiers.	N/A	N/A	All generalisation levels available up to the level of scale 1:5000.	All generalisation levels available up to the level of scale 1:5000.	Equivalent at least to 1:10 000 and, as from 2016, to 1:5000 as referred to in Article 70(1) of Regulation (EU) 1306/2013	Equivalent at least to 1:10 000 and, as from 2016, to 1:5000 as referred to in Article 70(1) of the Regulation (EU) 1306/2013
Geographical coverage	Single or multiple datasets that shall cover the entire country when combined.						
Key attributes	Unique identifier; Unit type (administrative or maritime unit); Geometry; Boundary status; National identification code; Identification code of the upper administrative level; Official name; Country code; Name in multiple languages (only for countries with more than one official language) including a language with Latin characters, when feasible.	Unique identifier; Geometry; Name in multiple languages (only for countries with more than one official language) including a language with Latin characters, when feasible; Category.	Unique identifier; Geometry; Address locator (e.g. house number); Thoroughfare (street); name; Administrative units (e.g. municipality, province, country); Postal descriptor (e.g. post code); Date of last update.	Unique identifier; Geometry (footprint of the building); Number of floors; Type of use.	Unique identifier; Geometry (boundary of cadastral parcels); Type of parcel; Parcel code; References to the administrative area to which the parcel belongs.	Unique identifier; Geometry (boundary and area); Land cover; organic; Stable landscape elements (“EFA-layer”); areas with natural/specific constraints; animal (total number); Animal (species type); Animal (production type)	Unique identifier; Geometry (boundary and area of each agricultural parcel); Land uses (crops or crop groups); Organic; Individual landscape element; Permanent grassland.

Arrangements for the publication and re-use

The datasets shall be made available for re-use:

- under the conditions of the Creative Commons BY 4.0 licence or any equivalent or less restrictive open licence;
- in a publicly documented, Union or internationally recognised open, machine-readable format;
- through application processing interfaces ('APIs') and bulk download;
- in their most up-to-date version.

The metadata describing the datasets within the scope of the INSPIRE data themes shall contain at least the metadata elements set out in Commission Regulation (EC) No 1205/2008.

For the implementation of the Reference parcels and Agricultural parcels datasets, Member States shall take into consideration the ongoing implementation of Directive 2007/2/EC as well as the obligation foreseen by Article 67(3) of Regulation (EU) 2021/2116.

Earth observation and environment – draft Implementing Regulation

INSPIRE DATA THEMES (INSPIRE ANNEX)	SCOPE OF DATASETS
Hydrography (I)	Hydrographic elements, including marine areas and all other water bodies and items related to them, including river basins and sub-basins. Where appropriate, according to the definitions set out in Directive 2000/60/EC of the European Parliament and of the Council.
Protected sites (I)	Area designated or managed within a framework of international, Community and Member States' legislation to achieve specific conservation objectives.
Elevation (II)	Digital elevation models for land, ice and ocean surface. Includes <u>terrestrial elevation, bathymetry and shoreline</u> .
Geology (II)	Geology characterised according to composition and structure. Includes bedrock, aquifers and geomorphology.
Land cover (II)	Physical and biological cover of the earth's surface including artificial surfaces, agricultural areas, forests, (semi-)natural areas, wetlands, water bodies.
Orthoimagery (II)	Geo-referenced image data of the Earth's surface, from either satellite or airborne sensors.
Area management / restriction / regulation zones & reporting units (III)	Areas managed, regulated or used for reporting at international, European, national, regional and local levels. Includes dumping sites, restricted areas around drinking water sources, nitrate-vulnerable zones, regulated fairways at sea or large inland waters, areas for the dumping of waste, noise restriction zones, prospecting and mining permit areas, river basin districts, relevant reporting units and coastal zone management areas. Areas identified as in need of restoration according to a nature restoration plan applicable in a Member State.
Bio-geographical regions (III)	Areas of relatively homogeneous ecological conditions with common characteristics.
Energy Resources (III)	Energy resources including hydrocarbons, hydropower, bio-energy, solar, wind, etc., where relevant including depth/height information on the extent of the resource.
Environmental monitoring Facilities (III)	Location and operation of environmental monitoring facilities. Includes most current and historical observation and measurement data of emissions, of the state of environmental media and of other ecosystem parameters (biodiversity, ecological conditions of vegetation, etc.) by or on behalf of public authorities.
Habitats and biotopes (III)	Geographical areas characterised by specific ecological conditions, processes, structure, and (life support) functions that physically support the organisms that live there. Includes terrestrial and aquatic areas distinguished by geographical, abiotic and biotic features, whether entirely natural or semi-natural.
Land Use (III)	Territory characterised according to its current and future planned functional dimension or socio-economic purpose (e.g. residential, industrial, commercial, agricultural, forestry, recreational).
Mineral Resources (III)	Mineral resources including metal ores, industrial minerals, etc., where relevant including depth/height information on the extent of the resource.
Natural risk zones (III)	Vulnerable areas characterised according to natural hazards (all atmospheric, hydrologic, seismic, volcanic and wildfire phenomena that, because of their location, severity, and frequency, have the potential to seriously affect society), e.g. floods, landslides and subsidence, avalanches, forest fires, earthquakes, volcanic eruptions. Areas identified in the Member States' national adaptation strategy with high natural and man-made risks, subject to climate-related disaster risk reduction actions.
Oceanographic geographical features (III)	Physical conditions of oceans (currents, salinity, wave heights, etc.).
Production and industrial facilities (III)	Industrial production sites, including installations covered by Directive 2010/75/EU of the European Parliament and of the Council.
Sea regions (III)	Physical conditions of seas and saline water bodies divided into regions and sub-regions with common characteristics.
Soil (III)	Soils and subsoil characterised according to depth, texture, structure and content of particles and organic material, stoniness, erosion, where appropriate mean slope and anticipated water storage capacity.
Species distribution (III)	Geographical distribution of occurrence of animal and plant species aggregated by grid, region, administrative unit or other analytical unit.

ENVIRONMENTAL DOMAIN	Legal acts laying down the key variables
Air	Articles 6-14 of Directive 2008/50/EC of the European Parliament and of the Council, Articles 7 of Directive 2004/107/EC of the European Parliament and of the Council
Climate	Articles 18(1), 19, 26(2), 39(3) of Regulation (EU) 2018/1999 of the European Parliament and of the Council, Article 26 of Regulation (EC) 1005/2009 of the European Parliament and of the Council
Emissions	Article 24, 32, 55, 72 of Directive 2010/75/EU, Article 21 of Directive 2012/18/EU of the European Parliament and of the Council, Article 10 of Council Directive 91/676/EEC, Article 7 of Regulation (EC) No 166/2006 of the European Parliament and Council, Article 18 of Regulation (EU) 2017/852 of the European Parliament and of the Council, Article 10 of Directive (EU) 2016/2284 of the European Parliament and of the Council
Nature preservation and biodiversity	Articles 4, 9, 12 of Directive 2009/147/EC of the European Parliament and of the Council, Articles 4, 6, 16, 17 of Council Directive 92/43/EEC, Article 24 of Regulation (EU) 1143/2014 of the European Parliament and of the Council, Data for the nationally designated protected areas inventory – (CDDA), National biogeographical regions
Noise	Articles 4, 5, 7, 10 of Directive 2002/49/EC of the European Parliament and of the Council
Waste	Article 15 of Council Directive 1999/31/EC, Article 18 of Directive 2006/21/EC of the European Parliament and of the Council, Article 10 of Council Directive 86/278/EEC, Articles 15-17 of Council Directive 91/271/EEC, Article 13 of Regulation (EU) 2019/1021/EU of the European Parliament and of the Council, Article 15 of Commission Recommendation 2014/70/EU
Water	Articles 15-17 of Directive 91/271/EEC, Article 13 of Directive 2006/7/EC of the European Parliament and of the Council, Articles 5, 8, 11, 13, 15 of Directive 2000/60/EC, Articles 3-6 of Directive 2006/118/EC of the European Parliament and of the Council, Article 5 of Directive 2008/105/EC of the European Parliament and of the Council, Articles 17, 18 of Directive 2020/2184/EU of the European Parliament and of the Council, Articles 3-8, 10 of Directive 2007/60/EC of the European Parliament and of the Council, Articles 6-11, 13, 14, 17-19, 26, 27 of Directive 2008/56/EC of the European Parliament and of the Council
Horizontal legislation	Articles 15, 18 of Directive 2004/35/EC of the European Parliament and of the Council, Article 8 of Regulation (EU) 2020/852 of the European Parliament and of the Council



Meteorological – draft Implementing Regulation

Datasets	Observations data measured by weather stations	Climate validated data: observations	Weather alerts	Radar data	NWP model data
Granularity	Per weather station, full temporal resolution	Per weather station, full temporal resolution	Alerts, 48 hrs or more ahead	Per radar station in the MS and national composite	Minimum 48 hrs ahead in 1hr steps, national, at 2.5km/best available grid
Key attributes	All observation variables measured	All validated measured observation variables; daily average per variable		Reflectivity, Backscatter, polarization. Precipitation, wind, and echotops	Deterministic and/or ensembles if available, for meteorologically relevant parameters and levels
Format	BUFR, NetCDF, ascii (for real time data), JSON (for hourly data)	NetCDF, JSON	XML (Cap or RSS / Atom)	HDF5, JSON	GRIB (or NetCDF), JSON
Update frequency and timeliness	Every 5-10 minutes in real time for automated stations, hourly unvalidated for all stations, for the last 24 hrs	Daily validated hourly (and better temporal resolution) and daily average observations data; all digitised historical data	As issued or hourly	Near real time in 5 minute intervals (or available shortest interval)	Every 6 hrs, or better temporal resolution, from the last 24 hrs.

Statistics – draft Implementing Regulation

A number of socio-economic indicators described in legislation or directly in the Implementing Regulation.

Arrangements for the publication and re-use

- a) The datasets shall be made available for re-use:
 - as frequently as required by the corresponding legislation referred to under 4.1. (e.g. monthly, quarterly, yearly);
 - under the conditions of the Creative Commons BY 4.0 licence or any equivalent or less restrictive open licence;
 - in CSV, XML (SDMX), JSON or another publicly documented, Union or internationally recognised open, machine-readable format;
 - through APIs and bulk download;
- b) The metadata describing the data set shall be available as a well-developed structured file containing at least a description of the statistical data, the statistical concepts, methodologies and information on data quality.
- c) The datasets shall be described in a complete and publicly available online documentation describing at least the data structure and semantics.
- a) Datasets shall use Union or internationally recognised and publicly documented controlled vocabularies and taxonomies, where available.

Companies and company ownership – draft Implementing Regulation

Datasets	Basic company information: key attributes	Company documents and accounts
	<ul style="list-style-type: none"> - Name of the company (full version; alternative names when applicable); - Company status (such as when it is closed, struck off the register, wound up, dissolved (as well as the date of these events), economically active or inactive as defined in national law); - Registration date; - Registered office address; - Legal form; - Registration number; - Member State where the company is registered; - Activity/activities that are the object of the company, such as the NACE code. 	<p>The descriptions of the datasets and their key attributes shall be understood in accordance with Articles 4, 5, 9-19a, 24, 28-29a, 31, 35, 39, 40, 43 and 48c of Directive 2013/34/EU of the European Parliament and of the Council and Articles 4-6 of Directive 2004/109/EC of the European Parliament and of the Council.</p> <ul style="list-style-type: none"> - Accounting documents, which include: <ul style="list-style-type: none"> o Financial statements (incl. the list of participating interests, subsidiary undertakings and associated undertakings, their registered office address and proportion of capital held), audit reports. o Non-financial statements, management reports and other statements or reports. o Annual financial reports.

Mobility – draft Implementing Regulation

The mobility thematic category includes datasets within the scope of the INSPIRE data theme ‘Transport networks’ as set out in Annex I to Directive 2007/2/EC, at all generalisation levels available up to a scale of 1:5000, covering the entire country when combined, including as key attributes national identification code, geographical position as well as links with cross-border networks, where available.

For those Member States to which Directive 2005/44/EC of the European Parliament and of the Council applies, this category also includes Inland waterways datasets; the datasets are understood as described in Directive 2005/44/EC.

Common European data spaces



High Value
Datasets
from
public
sector

- Driven by stakeholders
- Rich pool of data of varying degree of openness
- Sectoral data governance (contracts, licenses, access rights, usage rights)
- Technical tools for data pooling and sharing

Data Spaces Support Centre

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

Technical infrastructure for data spaces



Edge & cloud
Services

Smart
Middleware
solutions

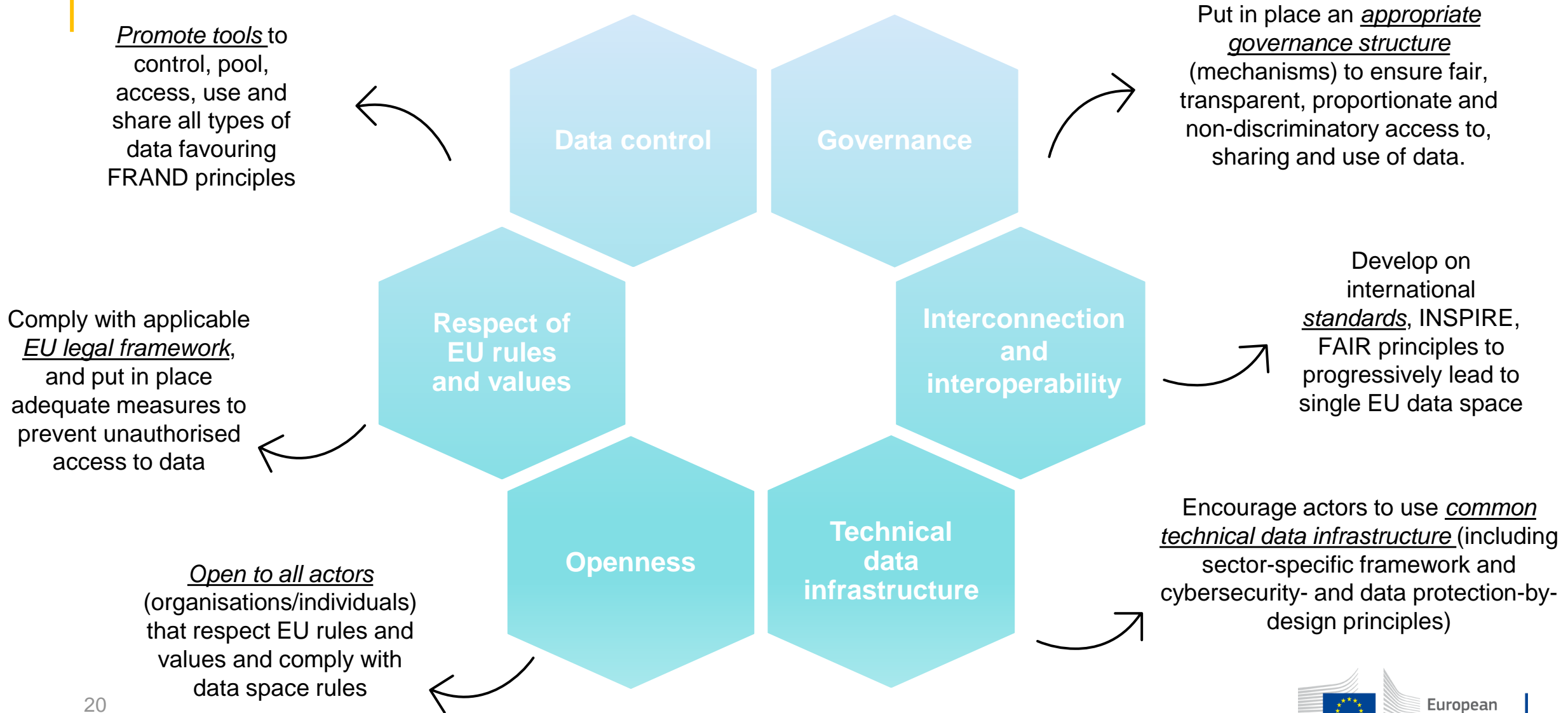
Marketplace

High-Performance
Computing

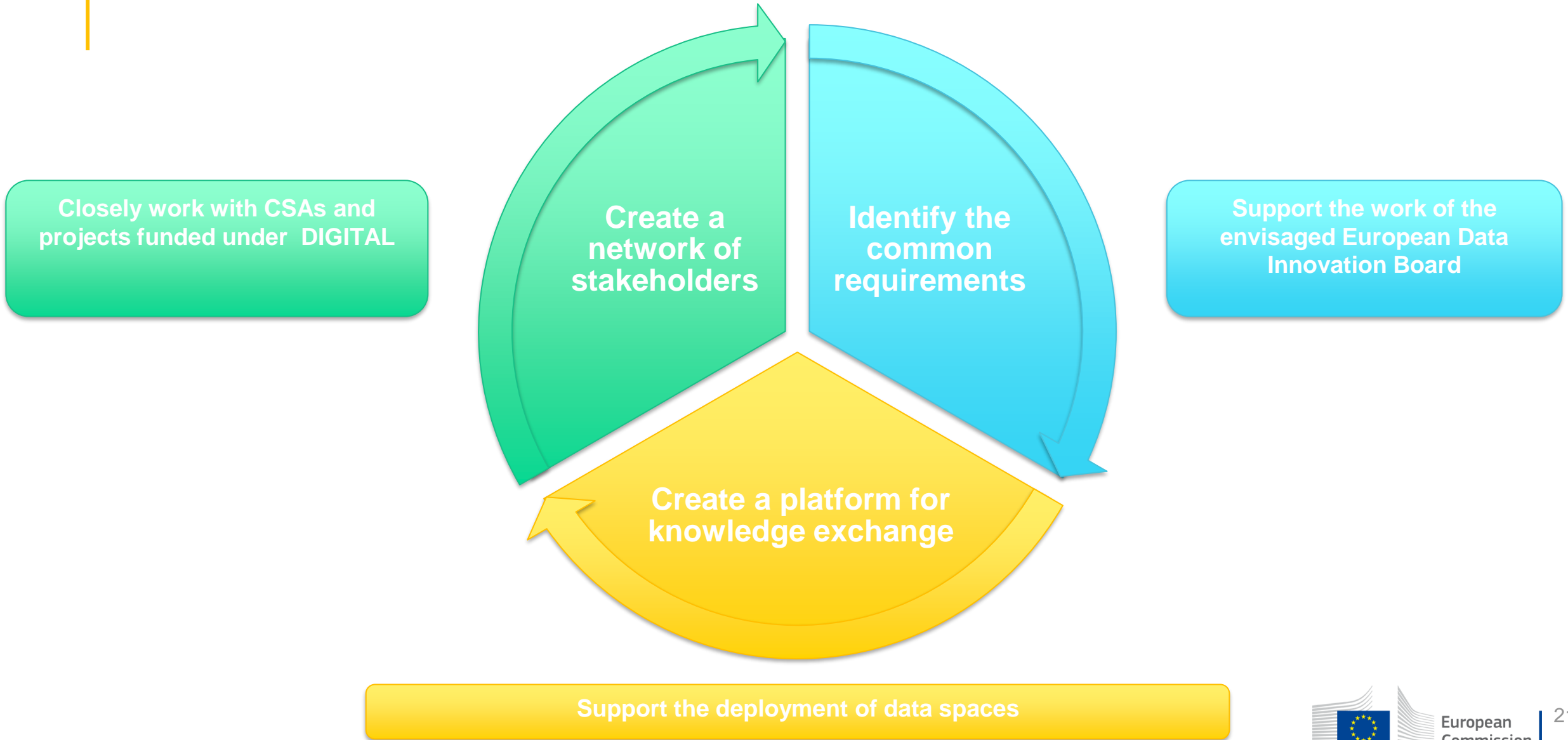
AI on demand
platform

AI Testing and
Experimentation
Facilities

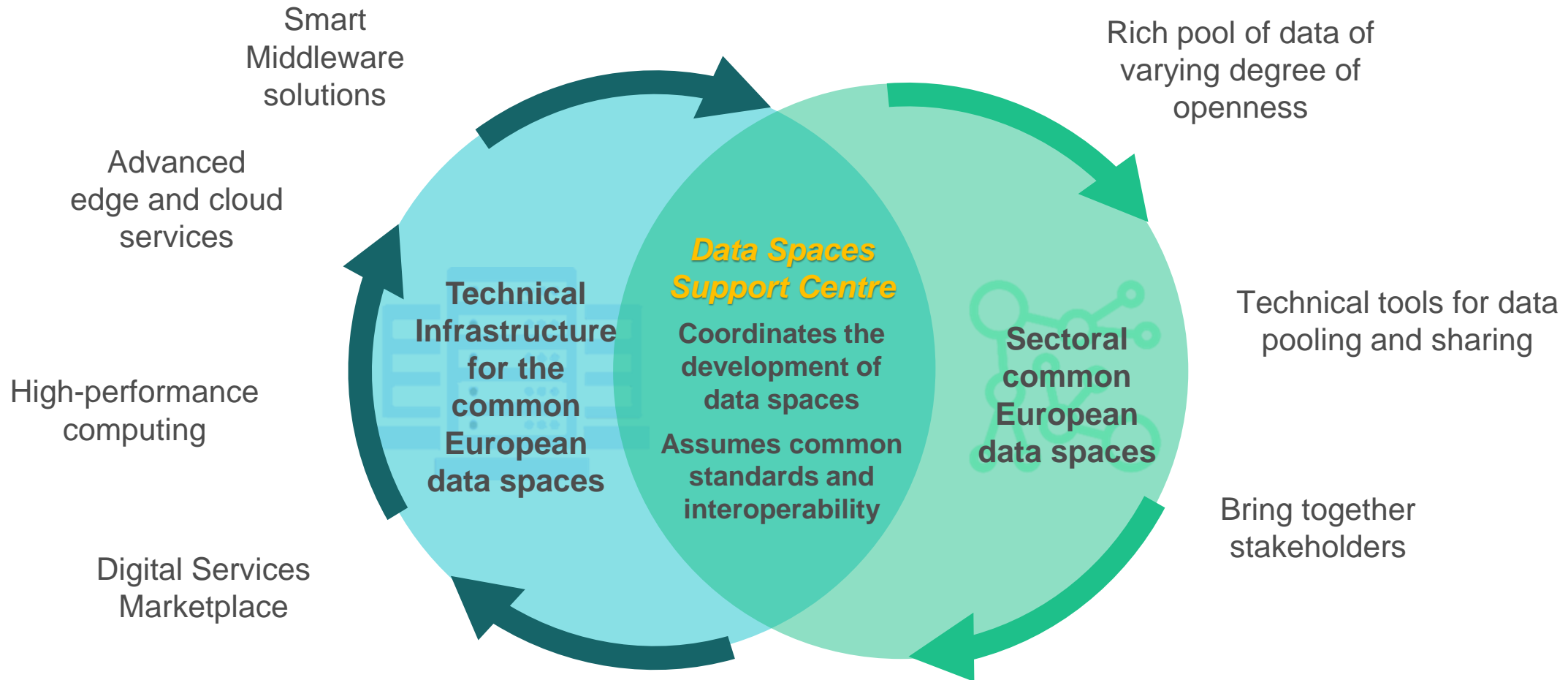
Design principles for common European data spaces



Data Spaces Support Centre

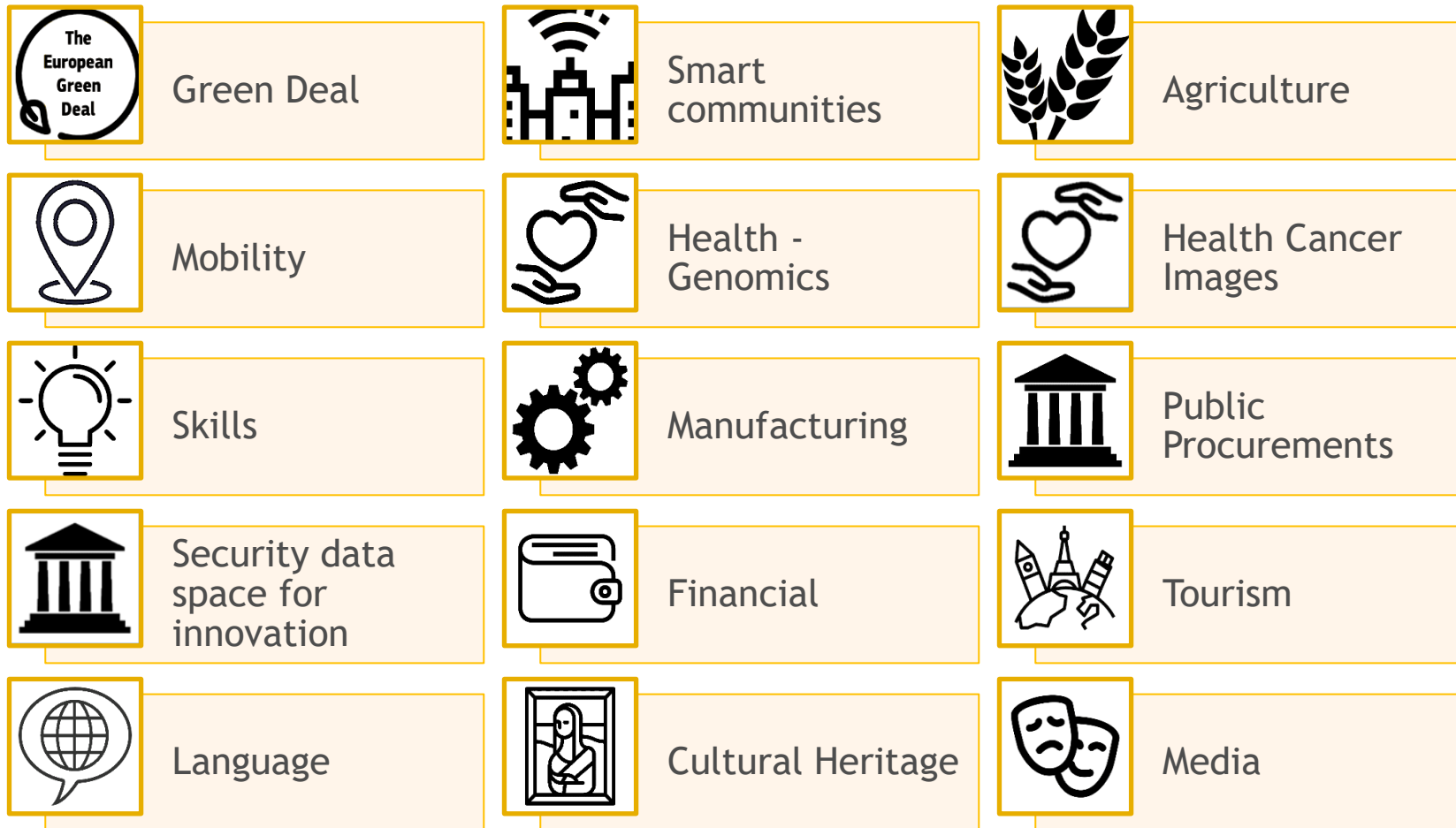


Deployment and governance of common European data spaces



The Support Center will act as the operational arm of the European Data Innovation Board (EDIB) by providing technical information and promoting the adoption of the guidelines














Common European data spaces supported through DIGITAL



Digital Europe Programme call 2 just closed in May: Public Sector Open Data for AI

- Grants will support increasing semantic, technical and legal interoperability and data portability of the free high-value datasets;
- Targeted stakeholders: Public Administrations addressed by the Open Data Directive as data providers;
- Simple grants: 50% funding rate;
- Indicative budget: EUR 20 million in total, for 24-36 months. Between EUR 4 million and EUR 6 million per project.

EC funding calendar* - common European data spaces

Data Spaces	2021	2022	2023
 Health	DIGITAL Grant genomic data		DIGITAL Grant cancer images
 Finance		DIGITAL procurement for the definition of ESAP architecture	
 Energy	Horizon Europe Pilot projects		
 Agriculture	DIGITAL CSA to bring stakeholders together, define ref. architecture for the agriculture data space		
	Agri data space projects Horizon Europe		
 Public Administration	DIGITAL tender - Initial phase for public procurement data space		
		DIGITAL Grant to create a common data platform, including national components for the Law enforcement data space	
 Skills	DIGITAL CSA to bring stakeholders together, define ref. architecture of the Skills Data Space		
 Manufacturing	DIGITAL CSA to bring stakeholders together, define ref. architecture and building blocks	DIGITAL Grant to deploy and test, using procured building blocks and middleware solutions	
 Green Deal	DIGITAL CSA to bring stakeholders together, define ref. architecture and building blocks		
	DIGITAL CSA for the creation of a Smart Communities data space		
	DIGITAL Destination Earth		
 Mobility	DIGITAL CSA to bring stakeholders together, define ref. architecture of the mobility data space	DIGITAL Grant to deploy and test, using procured building blocks and middleware solutions	
 EOSC	Horizon Europe Deploy EOSC foundations with the support		
 Media	Horizon Europe prototyping advanced solutions for the creation, distribution and consumption of new immersive and innovative products for media		
		DIGITAL grant for the deployment of the first version of the Media Data Space	
 Cultural Heritage		DIGITAL Procurement to extend Europeana to a data space for cultural heritage	
		DIGITAL Grants to contribute to the deployment of the cultural heritage data space	
 Tourism	DIGITAL CSA to bring stakeholders together, define ref. architecture of the Tourism Data Space		

*Visual approximation.
For updated info, see
respective calls.



**Thank you very much for
your attention**

For further questions:

email: CNECT-G1@ec.europa.eu

Unit G1 of DG CONNECT

**Websites with more
information:**

<https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=celex:32019L1024>

https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en

<https://ec.europa.eu/digital-single-market/en/open-data>