

Aktuelles aus Europa: INSPIRE in Bewegung!

Markus Jobst

Ein Geoinformations-Ökosystem

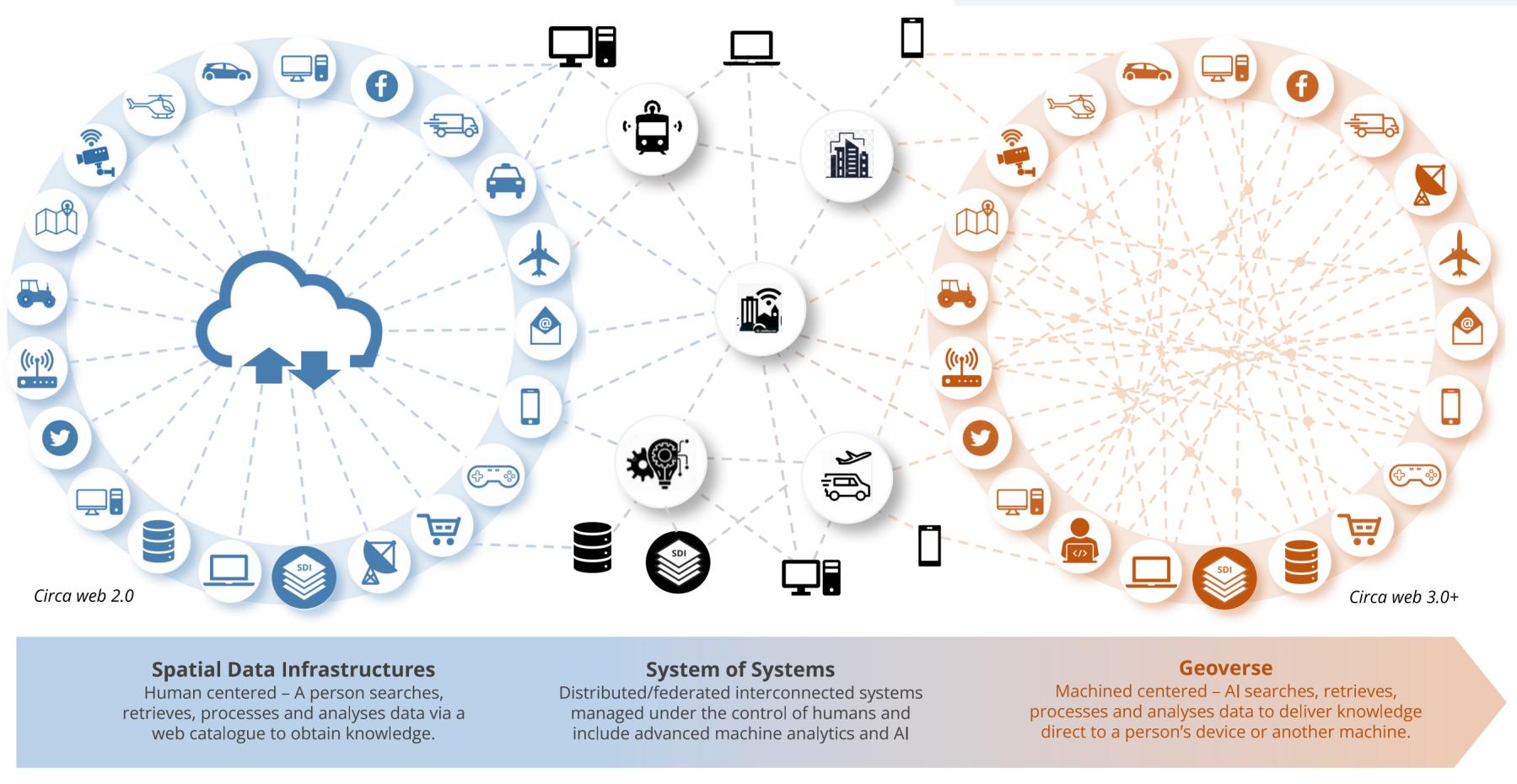


Figure 3. The future geospatial information ecosystem comprising SDIs, SoS and the Geoverse.

https://ggim.un.org/meetings/GGIM-committee/12th-Session/documents/Future_Geospatial_Information_Ecosystem_Discussion_Paper_July2022.pdf

Agenda

- Datenräume und Wissensinfrastrukturen
 - INSPIRE on the move
(public consultation,
governance,
standardisation, ...)
 - Schwerpunkte/Maßnahmen

levels
leavesbeyond
revision covered
control
gov
space
directive prob



Structured data is (widely) available but not (easily) accessible

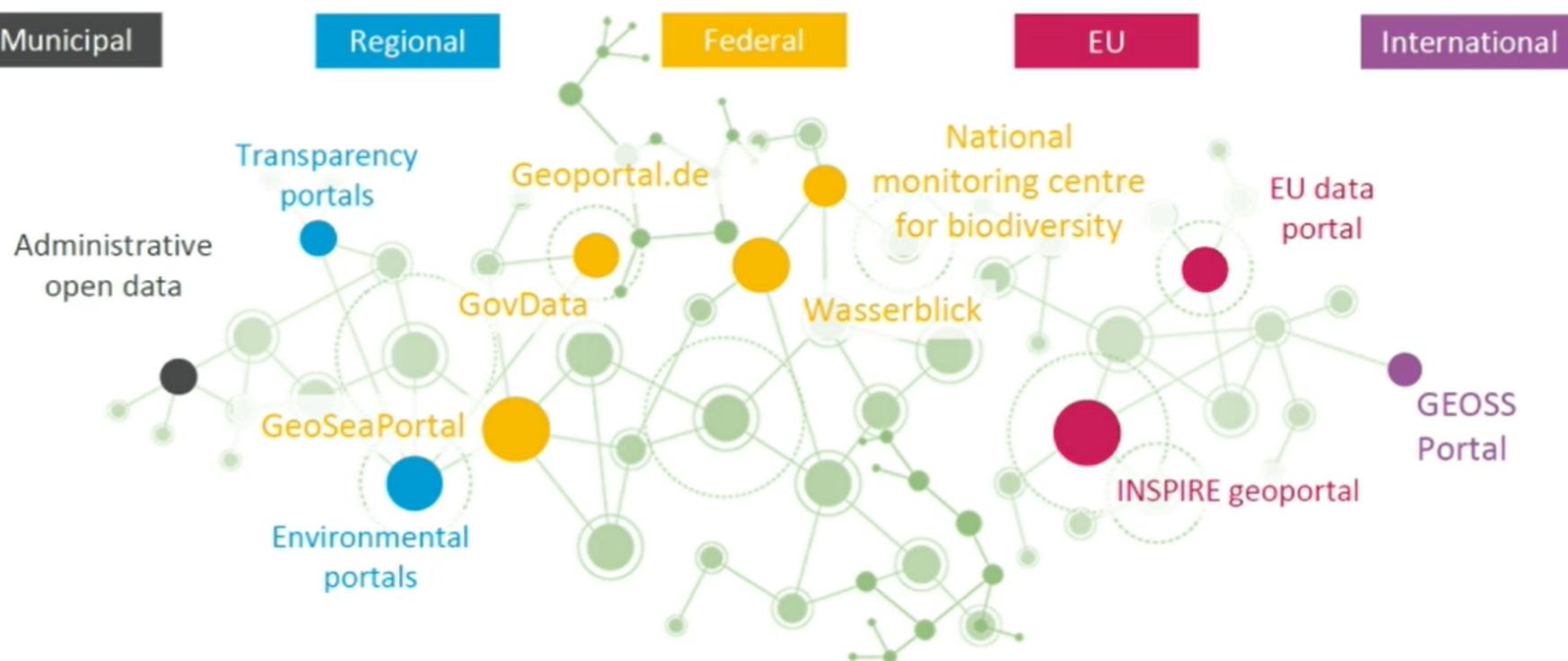
Municipal

Regional

Federal

EU

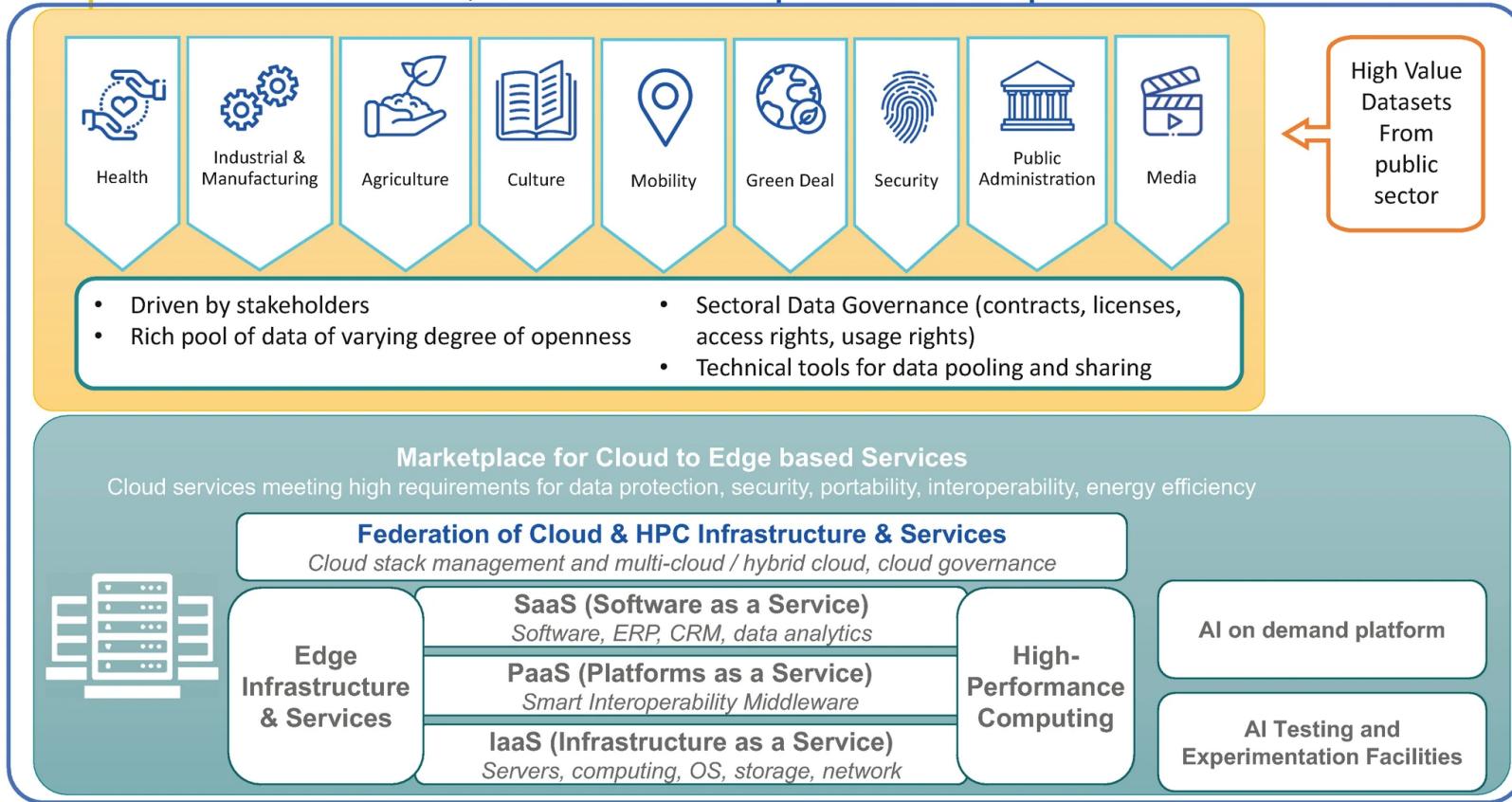
International



Michael Lutz, Datenlabor DE, INSPIRE Conference 2023

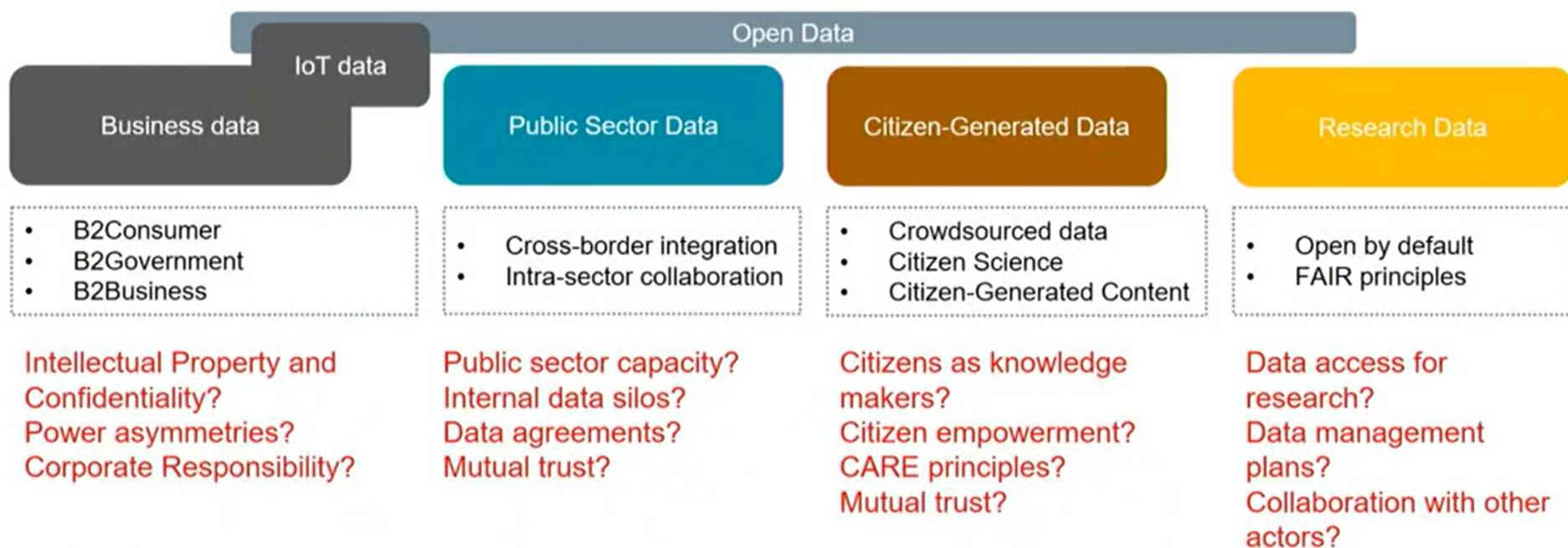
Quelle Grafik: tmit-solutions.com

Cloud Federation, common European Data Spaces and AI



Scerri, S., Tuikka, T., de Vallejo, I.L., Curry, E. (2022).
Common European Data Spaces: Challenges and Opportunities.
In: Curry, E., Scerri, S., Tuikka, T. (eds) Data Spaces . Springer, Cham.
https://doi.org/10.1007/978-3-030-98636-0_16

Green Deal: Data ecosystem or data siloes?

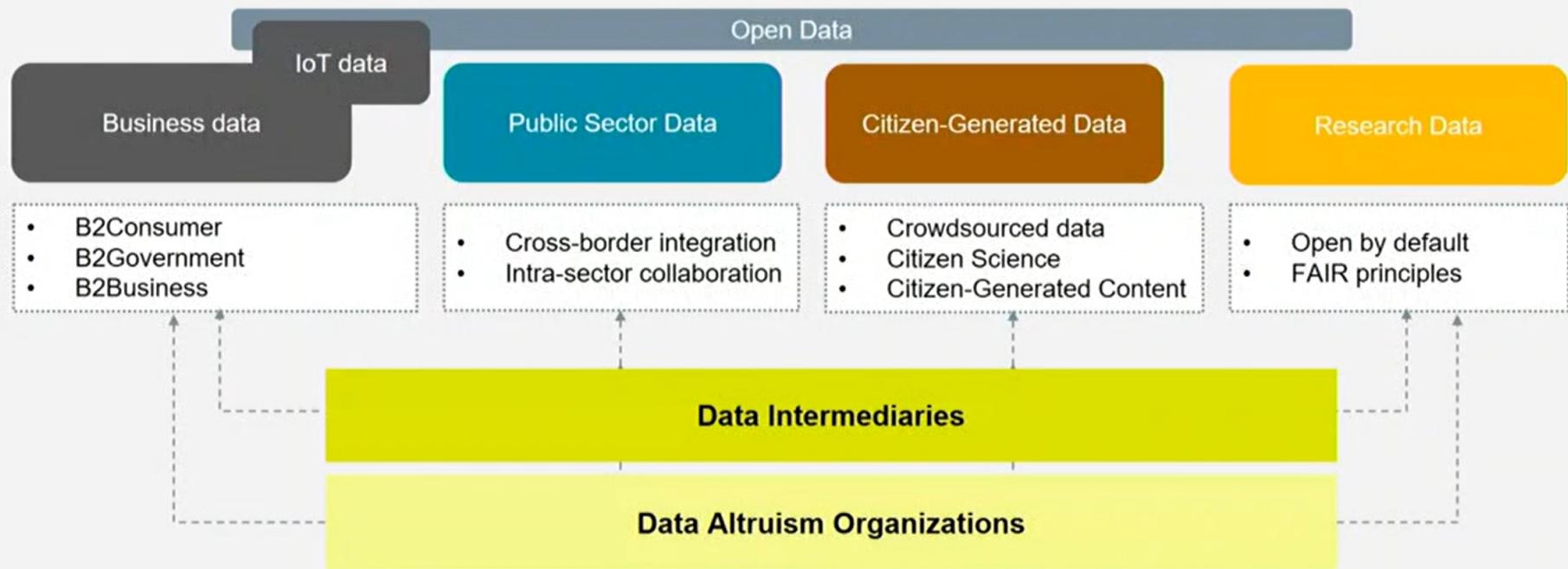


Sara Thabit Gonzalez, EC-JRC, INSPIRE Conference 2023



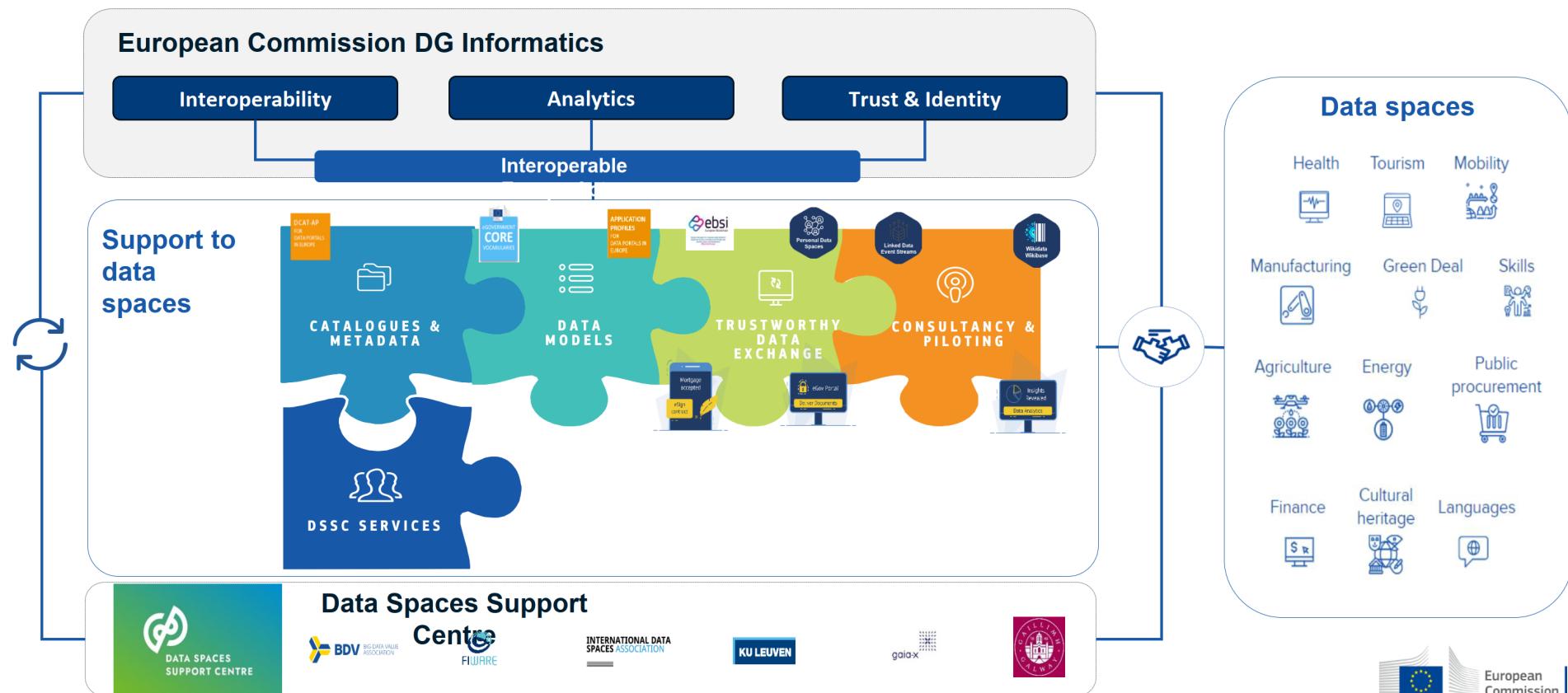
Green Deal: horizontal data initiatives

→ EU Legal & Policy Instruments (DGA, Data Act, etc.)



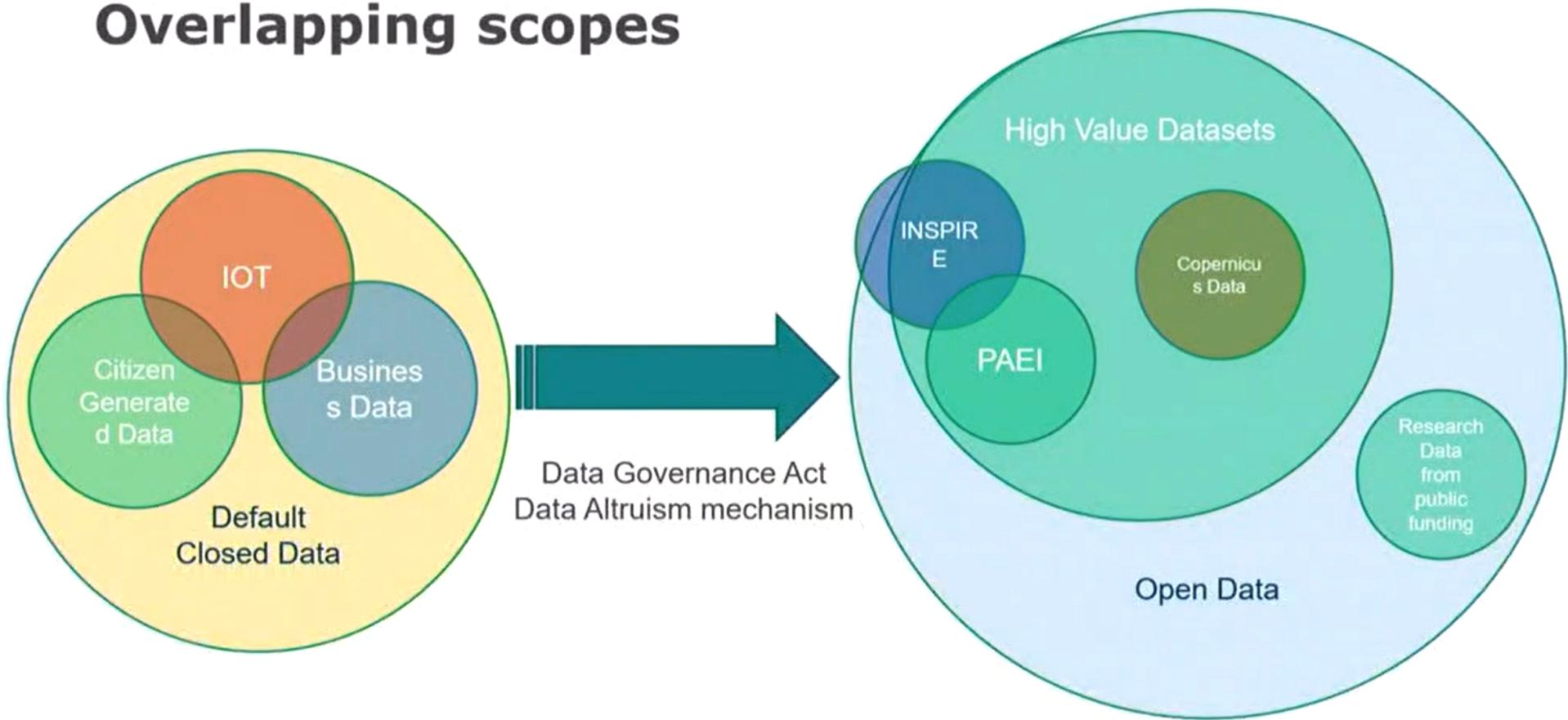
Sara Thabit Gonzalez, EC-JRC, INSPIRE Conference 2023

DG DIGIT Rollen und Dienstleistungen



Sichtweise EK zu Datenquellen der EU Gesetzgebung

Overlapping scopes



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The INSPIRE Directive

Objective: create a European Union spatial data infrastructure to enable the sharing of environmental spatial information among public sector organisations, facilitate public access to spatial information across Europe and assist in policy-making across boundaries.

Rules

- Builds on existing Spatial Data Infrastructures
- Spatial data held by/on behalf of public authorities
- Does not require collection of new data
- Framework Directive with detailed implementing provisions in Implementing Rules

Implementation

- Defines 34 spatial data themes that are in scope
- Requires Member States to
 - transpose the Directive
 - set up a national coordination structure
 - identify relevant spatial data
 - document identified data
 - publish data and metadata for download, view and reuse
 - make data interoperable

Monitoring & Reporting

- Monitoring data is harvested from 35 online catalogs in the Member States and indicators are automatically calculated on a yearly basis.
- Reporting consist of yearly updating an online country fiche.

2016 - INSPIRE midterm review

- INSPIRE Directive is still fit for purpose
- The overall relevance of the Directive remains high and is expected to increase given the drive towards a digital economy.

Recommendations for Member States

- Improve INSPIRE coordination
- Close specific implementation gaps
- Publish data relevant to environmental law conform to INSPIRE
- Further remove inefficiencies in data policies
- Align the national INSPIRE implementation with the drive towards an EU Digital Single Market

Recommendations for the European Commission

- Reflect on possible revisions of the legislation
- Priority setting
- Develop EU-level end-user applications
- Adapt INSPIRE to better regulation principles
- Address the lack of resources by exploring funding programmes opportunities to help capacity building

INSPIRE Evaluierung Ergebnisse 2022

- Zielsetzungen von INSPIRE sind weiterhin relevant
- Es gibt Potential zur Vereinfachung bei gleichzeitig erhöhter Interoperabilität
- Synergien zwischen INSPIRE und Open Data müssen ausgeschöpft werden
- Wertsteigerung des EU Datenraumes und Unterstützung des Green Deal Datenraumes
- Eine Überarbeitung der INSPIRE Richtlinie wird empfohlen

INSPIRE Änderungsbedarf/Beobachtungen

Call for Evidence – Problem the initiative aims to tackle

1. The INSPIRE Directive's rules for spatial environmental data sharing tend to be overly prescriptive, too rigid and do not build on more recent horizontal data legislation and hence are not adapted for use in the future Green Deal Data Space. Risk of diverging rules might increase burden on data providers and users and result in a scattered data offering.
2. The INSPIRE data is of limited use in environmental policy development and implementation (impact assessment, monitoring and reporting, evaluation). INSPIRE focuses on geospatial data. Data describing the state of the environment and pressures on the environment is largely missing.
3. The INSPIRE Directive is strongly focussed on publishing spatial data held by data providers and does not take in consideration evolving user needs. There is no feedback loop on how and for what purpose data are being used and instruments to capture requirements from a rapidly evolving playing field of end users are missing.

INSPIRE Änderungsbedarf / Call for Evidence

Fokus auf Daten

- Vereinfachen und modernisieren des Datenaustausches
- Flexiblere Lösungen für Dateneigenschaften und Datenaustausch
- Anpassung an die horizontale Gesetzgebung

Based on further analysis and stakeholder input on these measures, policy options will be formulated and analysed in the impact assessment. These policy options will then be compared to a baseline scenario, consisting of no modification to the current INSPIRE Directive.

On technical specifications for data and for data sharing:

- Simplify and modernise the technical prescriptions for data harmonisation, network services and metadata.
- Align data characteristics and data sharing and reuse rules with the relevant horizontal legislation.
- Consider flexible solutions for setting data characteristics and data sharing standards through flexible coordination mechanisms to make them future-proof.

INSPIRE Änderungsbedarf / Call for Evidence

Fokus auf Daten

- Berücksichtigen von CrowdSourcing und Forschungsdaten
- Wieder verstärkter Fokus auf Umweltthemen

Based on further analysis and stakeholder input on these measures, policy options will be formulated and analysed in the impact assessment. These policy options will then be compared to a baseline scenario, consisting of no modification to the current INSPIRE Directive.

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INSPIRE Änderungsbedarf / Call for Evidence

Fokus auf Governance

- Anpassen der derzeitigen MIG und MIG-T Governance Strukturen
- Integration mit der **Governance aus den horizontalen Themenbereichen**
- Einbetten/Berücksichtigen der „**Data Intermediaries**“ und Erhöhung der **Transparenz** und **Vertrauenswürdigkeit**
- Organisatorische Strukturen zur Förderung der Datennutzung und Weiterverwendung

Roadmap zu den Anpassungen

Green Data 4 All - Indicative roadmap

- Political validation: 29/07/2021
- The evaluation Staff Working Document (SWD) for the INSPIRE Directive was published on the "[Have your say](#)" website in July 2022
- Revision



Vorgeschlagene INSPIRE Anpassungen

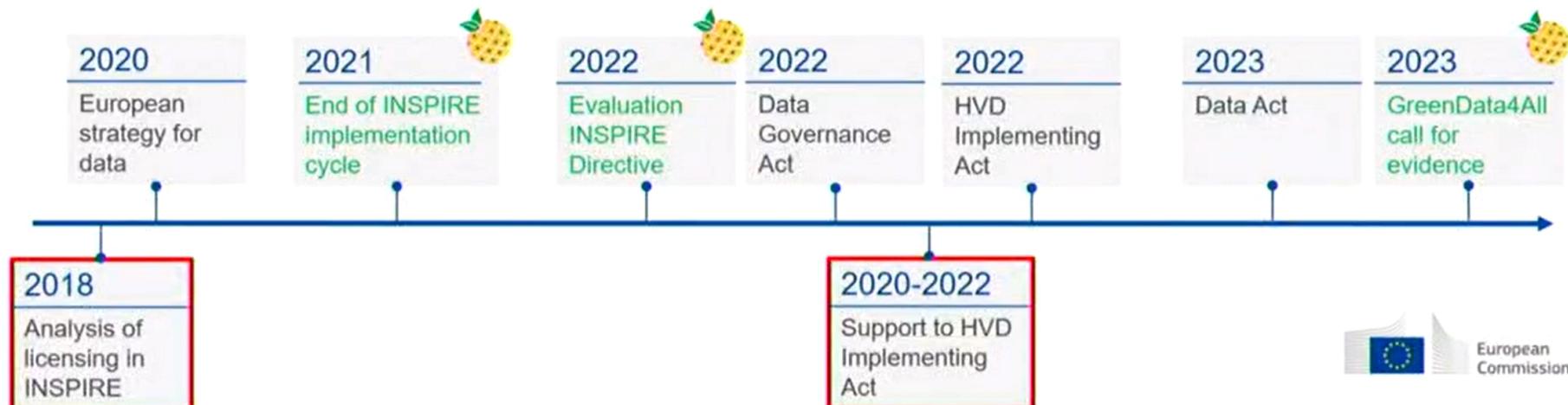
- Legal
 - 1. Avoid overspecification in legislation
 - 2. Use a simple licensing framework
- Organisational
 - 1. Embrace co-design by default
 - 2. Rethink the existing governance structures
 - 3. Adopt an ecosystem approach
- Technological
 - 1. Continue to improve the discoverability and accessibility of data
 - 2. Ensure neutrality and embrace well-adopted standards and technologies
 - 3. Avoid custom extensions
 - 4. Embrace well-documented, standard-based APIs
 - 5. Optimise data for search engines
 - 6. Leverage on the developments of federated European cloud infrastructure

Licensing

- Issues
 - heterogeneous licensing in INSPIRE
 - licensing information not available at all
 - use of custom licenses (often in country-specific language)

Actions

- Legal:
 1. Avoid overspecification in legislation
 2. Use a simple licensing framework
- Organisational:
 1. Embrace co-design by default
 2. Rethink the existing governance structures
 3. Adopt an ecosystem approach



<https://publications.jrc.ec.europa.eu/repository/handle/JRC109943>

Infrastructure governance

Issues

- Technical Provisions 'hardcoded' in law
- Rapid technological developments
- Not flexible and fast in accommodating novelties
- Governance structures are provider-driven
- Need to be user-centric and inclusive

Actions

Legal:

- 1 Avoid overspecification in legislation

- 2 Use a simple licensing framework

Organisational:

- 1 Embrace co-design by default

- 2 Rethink the existing governance structures

- 3 Adopt an ecosystem approach

Technological:

- 1 Continue to improve the discoverability and accessibility of data

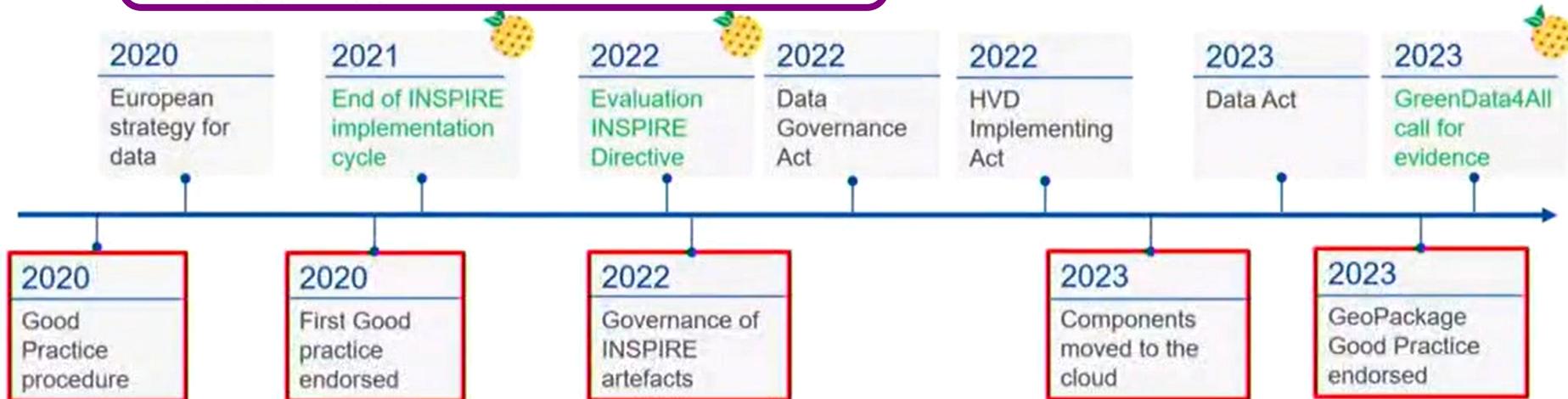
- 2 Ensure neutrality and embrace well-adopted standards and technologies

- 3 Avoid custom extensions

- 4 Embrace well-documented, standard-based APIs

- 5 Optimise data for search engines

- 6 Leverage on the developments of federated European cloud infrastructure



Infrastructure governance – Insights

INSPIRE Maintenance and Implementation

[Overview](#) [Repositories 26](#) [Projects](#) [Packages](#) [People](#)

Q. Find a repository... Type Language Sort

technical-guidelines Public

Community for the discussion of change proposals to the INSPIRE Technical Guidance documents.

inspire · governance · technical-guidance

HTML 14 ⭐ 9 16 6 Updated 2 days ago

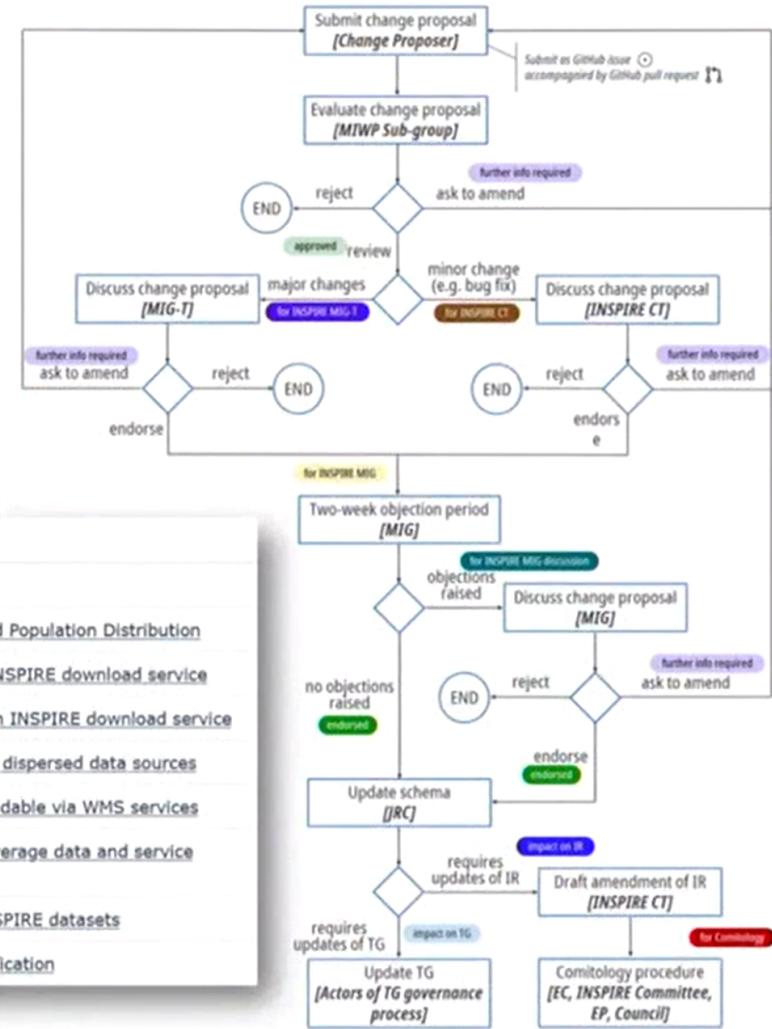
application-schemas Public

Community for the discussion of change proposals to the INSPIRE Application Schemas.

inspire · xml-schema · governance · and

9 ⭐ 7 5 2 Updated 2 days ago

Candidate	Endorsed
GeoJSON encoding of INSPIRE Datasets	GeoDCAT-AP
	SDMX for Human Health and Population Distribution
	OGC API – Features as an INSPIRE download service
	OGC SensorThings API as an INSPIRE download service
	Building one access point to dispersed data sources
	Making spatial data downloadable via WMS services
	OGC compliant INSPIRE Coverage data and service implementation
	GeoPackage encoding of INSPIRE datasets
	Data-Service Linking Simplification



Technological stack

Issues

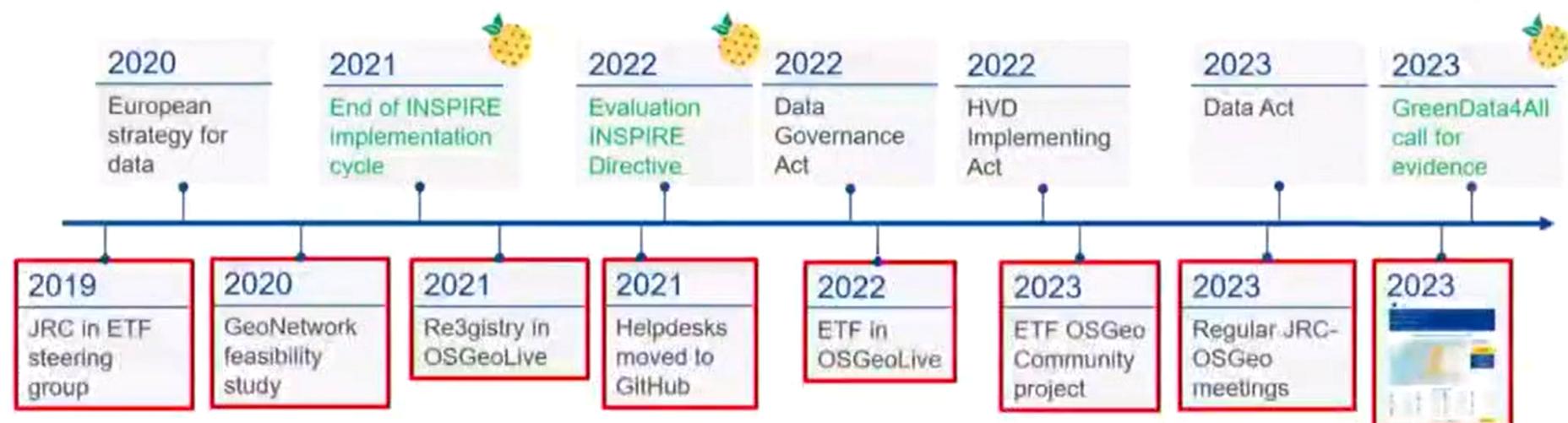
- Custom solutions are expensive and difficult to maintain/operate
- Existing software components and social coding platforms can be utilised

Actions

- Legal:
 - Avoid overspecification in legislation
 - Use a simple licensing framework

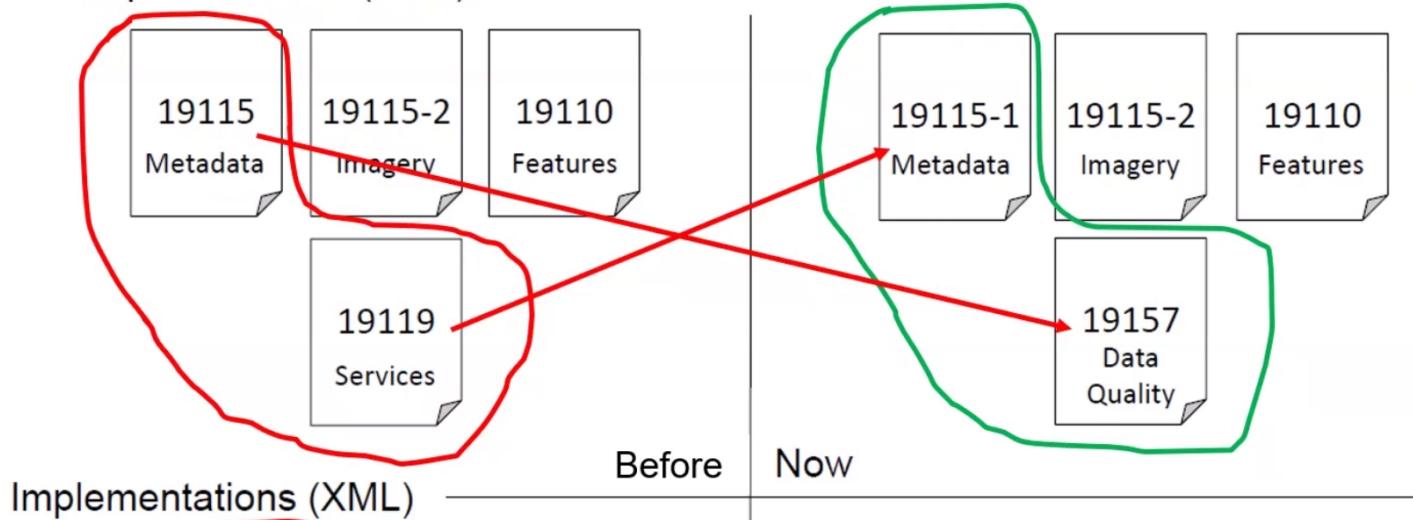
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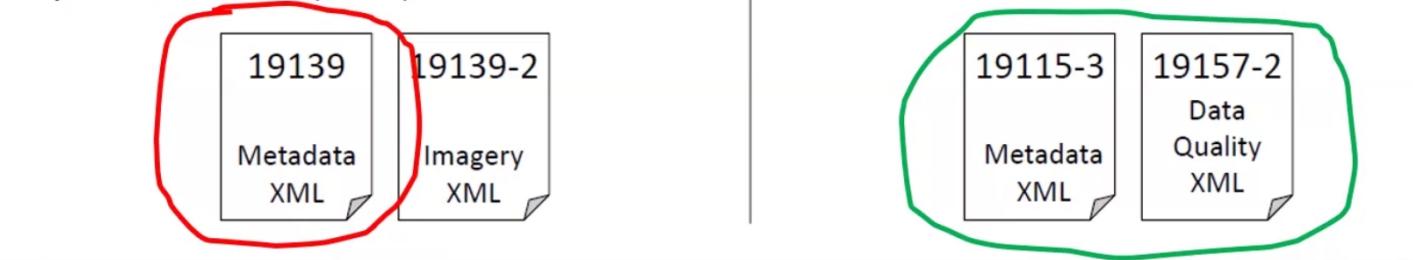


"I am confused by all of these numbers!"

Conceptual Models (UML)



Implementations (XML)



Base standards of the current MD TG

Service metadata has moved from ISO 19119 to ISO 19115-1.

Data Quality metadata has moved from ISO 19115 to ISO 19157.

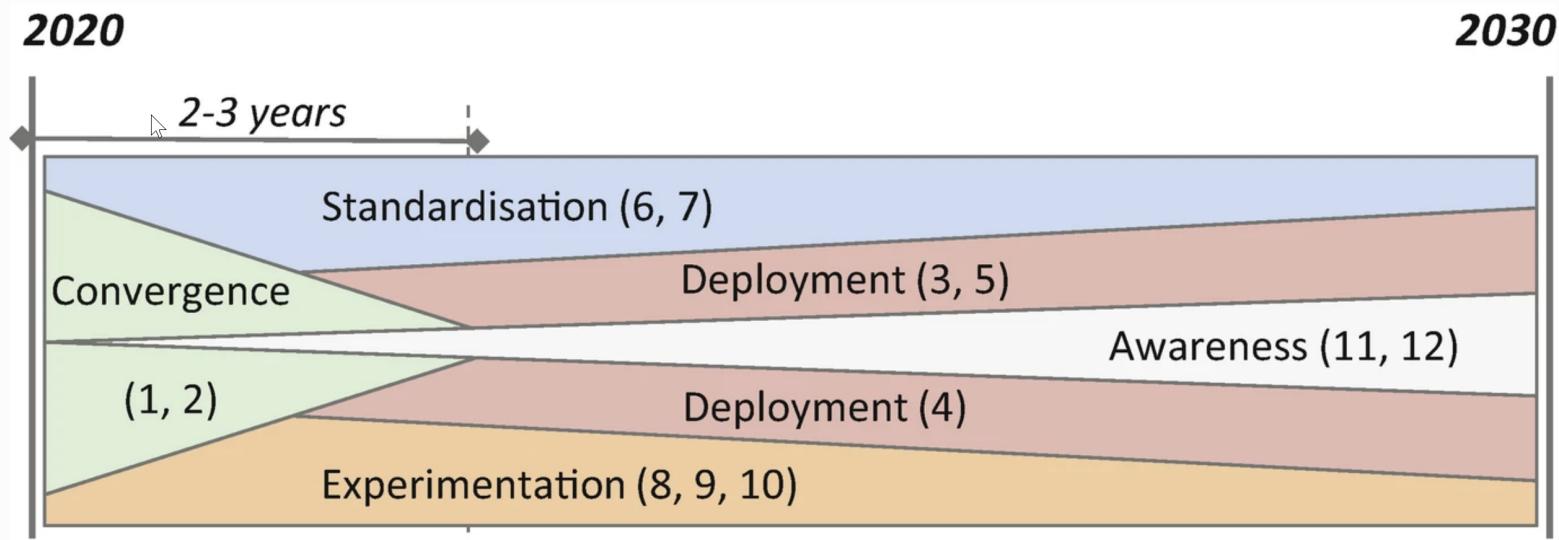
Base standards of future revision of MD TG

Source: https://external.ogc.org/twiki_public/pub/ILApublic/DialInteroperabilidadOGCBarcelona15/08_19115-1_El_nuevo_est%21ndar_de_metadatos_Vinculaci%21n_con_OGC%2C_Ted_Habermann%2C_The_HDF_Group.pdf

Zeitrahmen und Wirkungen von Technologien in Datenräumen

Fig. 4

From: [Common European Data Spaces: Challenges and Opportunities](#)



A suggested timeframe for implementing the recommended actions over the next decade (x-axis). The y-axis illustrates the relative, rather than absolute, effort distribution between the five phases. The absolute effort value is expected to fluctuate, reaching a peak around the 3–5-year mark [1]

Scerri, S., Tuikka, T., de Vallejo, I.L., Curry, E. (2022).
Common European Data Spaces: Challenges and Opportunities.
In: Curry, E., Scerri, S., Tuikka, T. (eds) Data Spaces . Springer, Cham.
https://doi.org/10.1007/978-3-030-98636-0_16

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European Common Data Spaces
(Data Strategy for Europe)



Data Governance Act: Data sharing intermediaries, data altruism, better use of sensitive public data

High Value Datasets: Opening up high quality government data for SMEs & innovation in six thematic domains

Data Act: Better access to and control over co-generated data, B2G data sharing obligations, cloud

Data sources	Business data	IoT data	Public Sector environmental & geospatial	Open Data	Public Sector & Citizen generated data	Research data	Copernicus
Legal instrument		Data Act	INSPIRE Directive PAEI Directive	Open Data Directive	Data Governance Act	Horizon Europe programme	Space programme
Policy measures	B2G data sharing	Non-personal data reuse	Spatial Data Infrastructure	Open Data High Value Datasets	Data Trust	FAIR data	Open Reusable EO Data
Governance bodies			INSPIRE Committee, MIG, MIG-T	Open Data Committee	Registered Data Altruism organisations	Horizon Europe WP	
Governance scope					European Data Innovation Board		
					Interoperable Europe Board (Interoperable Europe Act)		
	Data intermediaries						
Data reuse schemes	Private data			Open Data (full reuse)			
			INSPIRE reuse limitations		Altruism reuse limitations		



Source: Kotsev, A., Escriu Paradell, J. and Minghini, M., Beyond INSPIRE. Perspectives on the legal foundation of the European Green Deal Data Space, European Commission, 2023, JRC133958.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC133958>
<https://joinup.ec.europa.eu/interoperable-europe>

What? European Data Innovation Board (EDIB): Commission expert group to be created by the Data Governance Act

**REGULATION (EU) 2022/868 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 30 May 2022
on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act)**

Article 29

European Data Innovation Board

1. 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

https://www.european-data-governance-act.com/Data_Governance_Act_Article_29.html

https://european-big-data-value-forum.eu/wp-content/uploads/2022/11/EBDVF-2022_EDIB_DSSC-WS.pdf

Register of Commission Expert Groups and Other Similar Entities

Home Expert Groups Meetings Members Calls for application News

Register of Commission Expert Groups > Expert Groups > Details

GROUP | E03903

European Data Innovation Board (E03903)

ACTIVE

[Subscribe to this group](#)

[Print as PDF](#) 

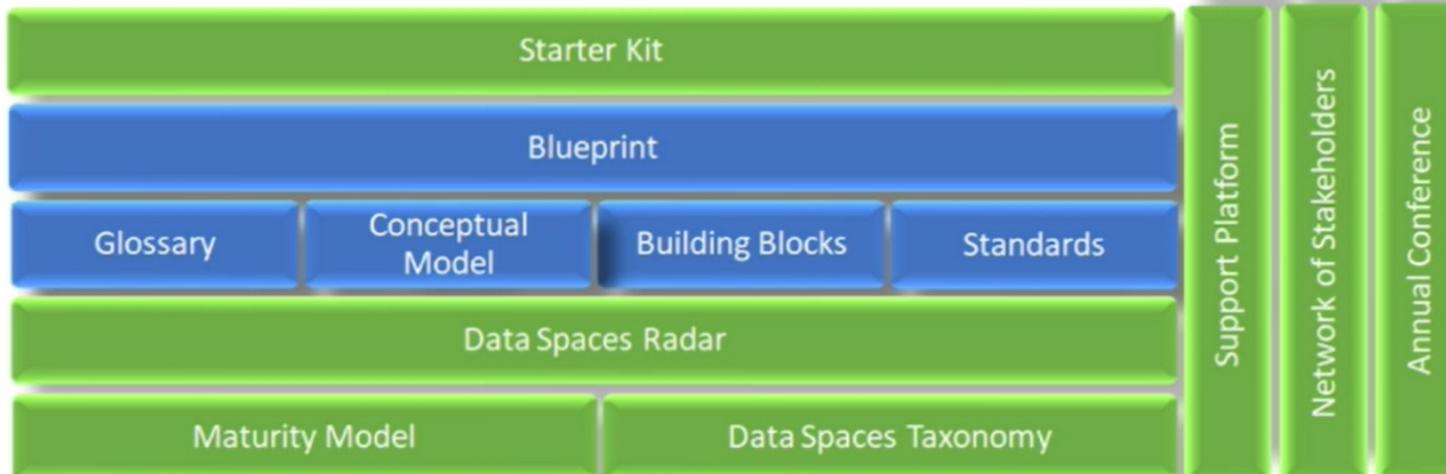
Details	Additional Information	Meetings	Subgroups	Members	Statistics
Abbreviation EDIB	Policy Area ► Information Society				
Lead DG ► CNECT - DG Communications Networks, Content and Technology	Associated DG -				
Type ► Formal ► Permanent	Scope ► Broad				
Mission Advice and support the Commission	Task ► Assist the Commission in relation to the implementation of existing Union legislation, programmes and policies				
Creating Act <small>Commission Decision of 20.02.2023 setting up the European Data ...</small>	Link to Website				

<https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3903&fromCallsApplication=true>

Data Space Support Center DSSC

<https://dssc.eu>

DSSC assets



DELIVERY PLAN

SEMIC Support Center

<https://joinup.ec.europa.eu/collection/semic-support-centre/data-spaces>

- e-Government Core Vocabularies
- DCAT Application Profile for Data Portals in Europe (DCAT-AP)
- Asset Description Metadata Schema (ADMS)

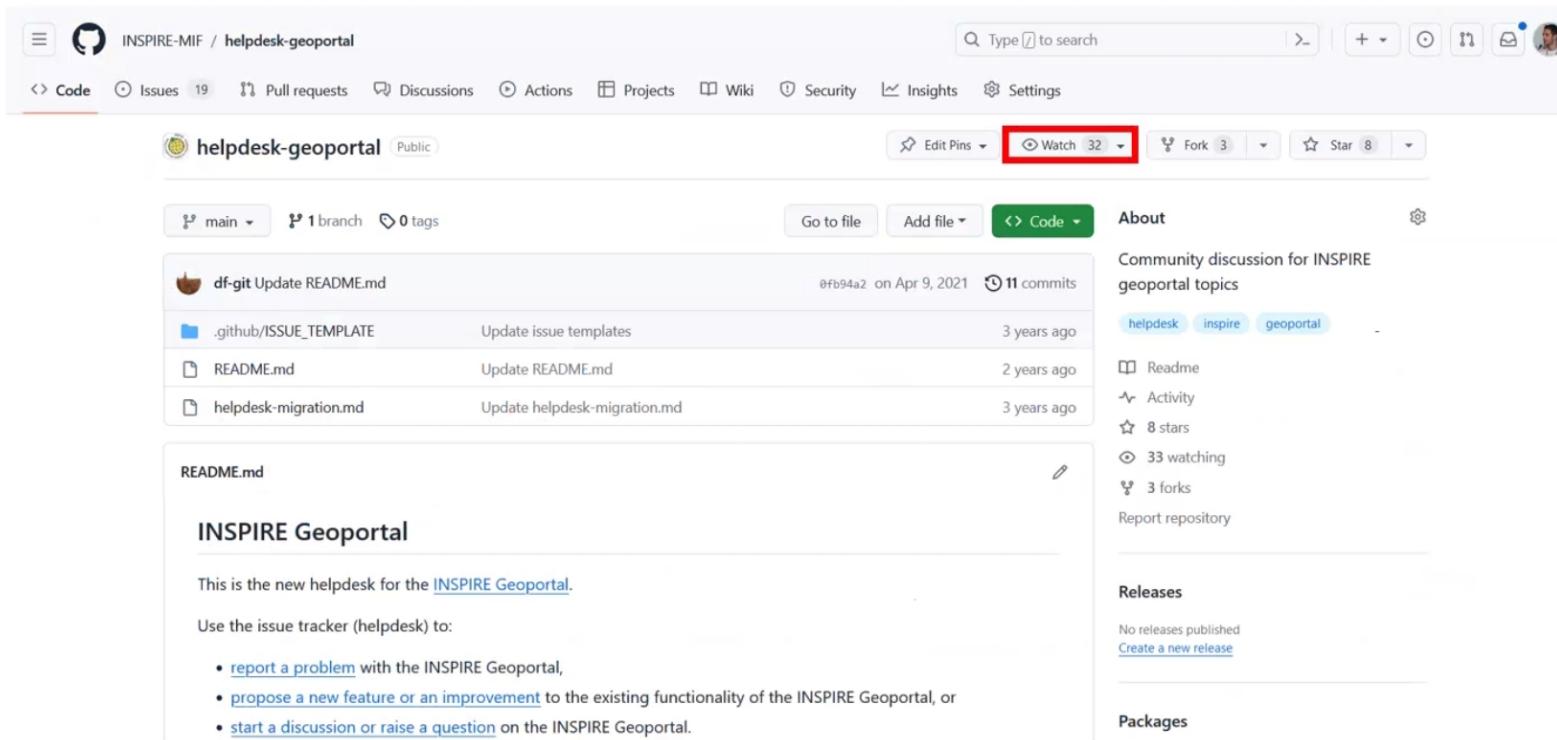
Find below all SEMIC resources on Catalogue of Services (CoS), click on getting started if you want to be guided through.



Revamped INSPIRE Geoportal

Next steps

- Make sure to follow the GitHub repository to receive update notifications!



The screenshot shows the GitHub repository page for `INSPIRE-MIF / helpdesk-geoportal`. The repository is public and has 32 watchers. The main page displays a list of files and their commit history. On the right side, there are sections for 'About', 'Releases', and 'Packages'. The 'About' section includes a link to the 'README.md' file.

About

Community discussion for INSPIRE geoportal topics

[helpdesk](#) [inspire](#) [geoportal](#)

Releases

No releases published [Create a new release](#)

Packages

<https://github.com/INSPIRE-MIF/helpdesk-geoportal>

Resümee

- INSPIRE ist in Bewegung
- Passt der Pace für uns?
- Sind wir bereit für schnellere Adaptierungen?
- Sind wir bereit für neue Governance Strukturen in INSPIRE?
- Sind wir koordiniert genug?

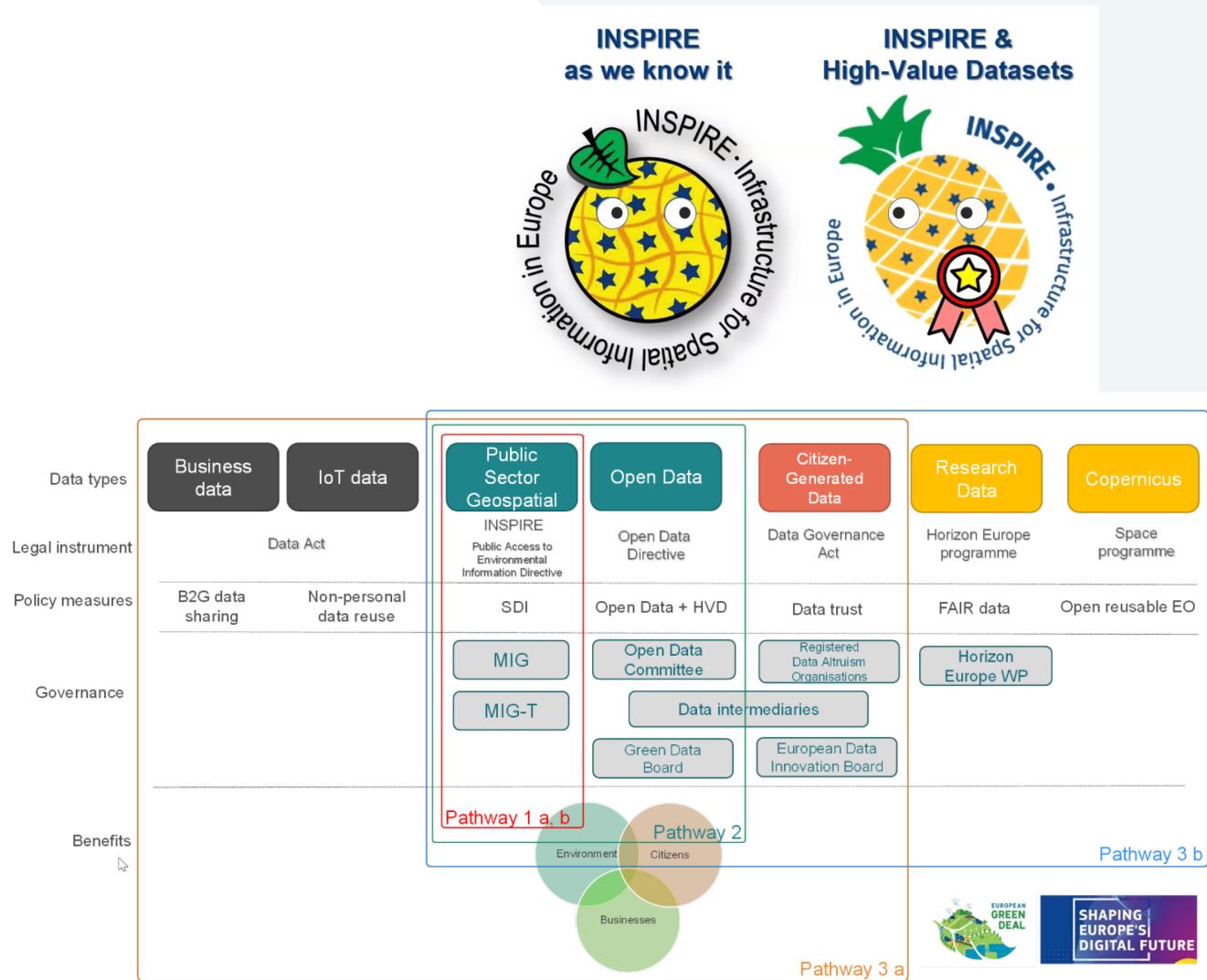


Figure 1. Policy pathways for establishment of the European Green Deal Data Space. Initial reflection. Source: Author's own elaboration.

<https://publications.jrc.ec.europa.eu/repository/handle/JRC133958>