



The role of Data Spaces in the European Data Union Strategy

eu-LISA Industry Roundtable
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*Coen Janssen, DG CONNECT
Unit G.1 Data Policy & Innovation*

*Gianfranco Cecconi
Data Ecosystems Lead, Capgemini*

Data Union Strategy

1. Scale up access to high-quality data for AI and innovation

2. Streamlining data rules

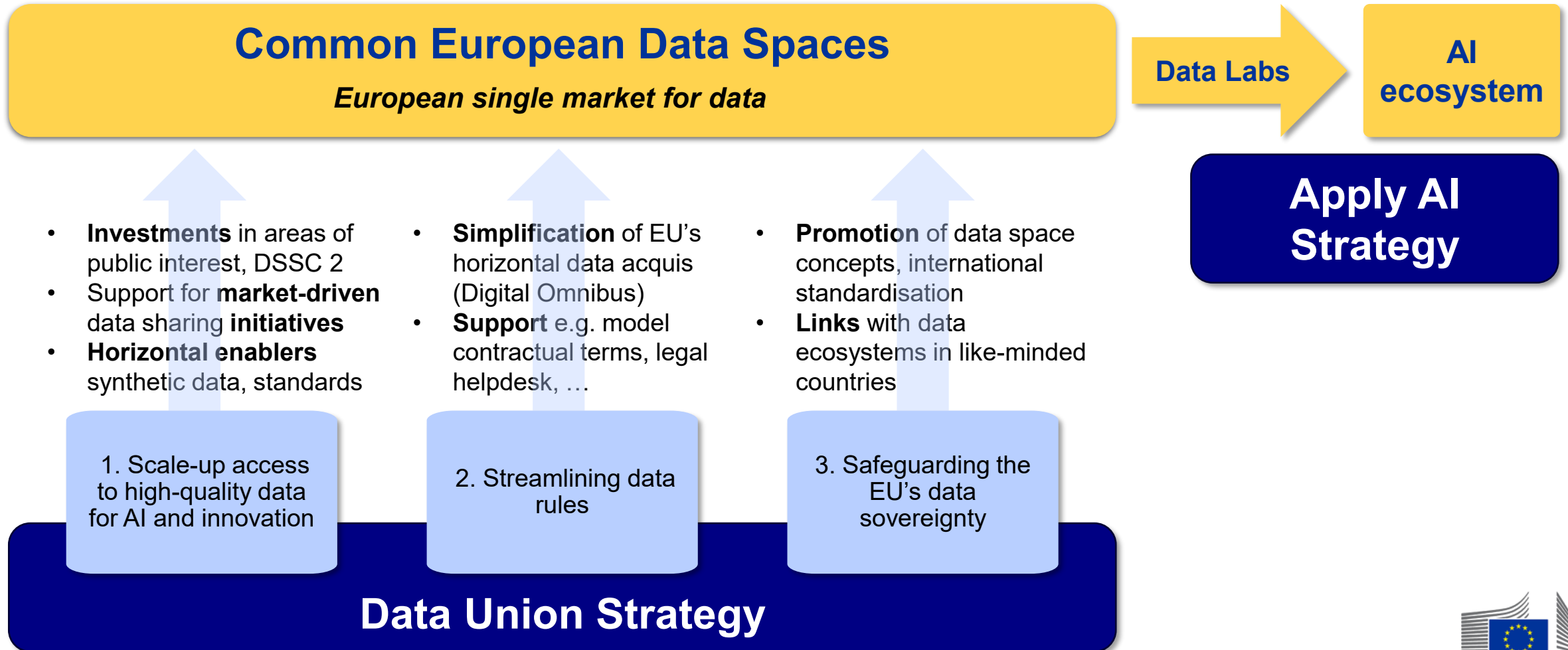
3. Safeguarding the EU's data sovereignty through a strategic international data policy

Data Union Strategy

"To support the development of AI and other frontier technologies, Europe needs to exploit the untapped potential of data. Europe needs a data revolution." (EC Political Guidelines 2024-29)



Data Union Strategy



Data Union Strategy

More than regulatory compliance

1. European data economy

- Single European market for data
- Stimulating innovation and creating economic opportunities

2. Synergies with horizontal and sectoral regulations

- Digital Product Passport, eID (Business wallet)
- One-click compliance → streamline regulatory reporting

3. Stimulating market-driven initiatives

- Importance of private sector data sharing ecosystems, e.g. industry, logistics
- EU support for market-driven models, by promoting standardisation, interoperability, and co-investment frameworks

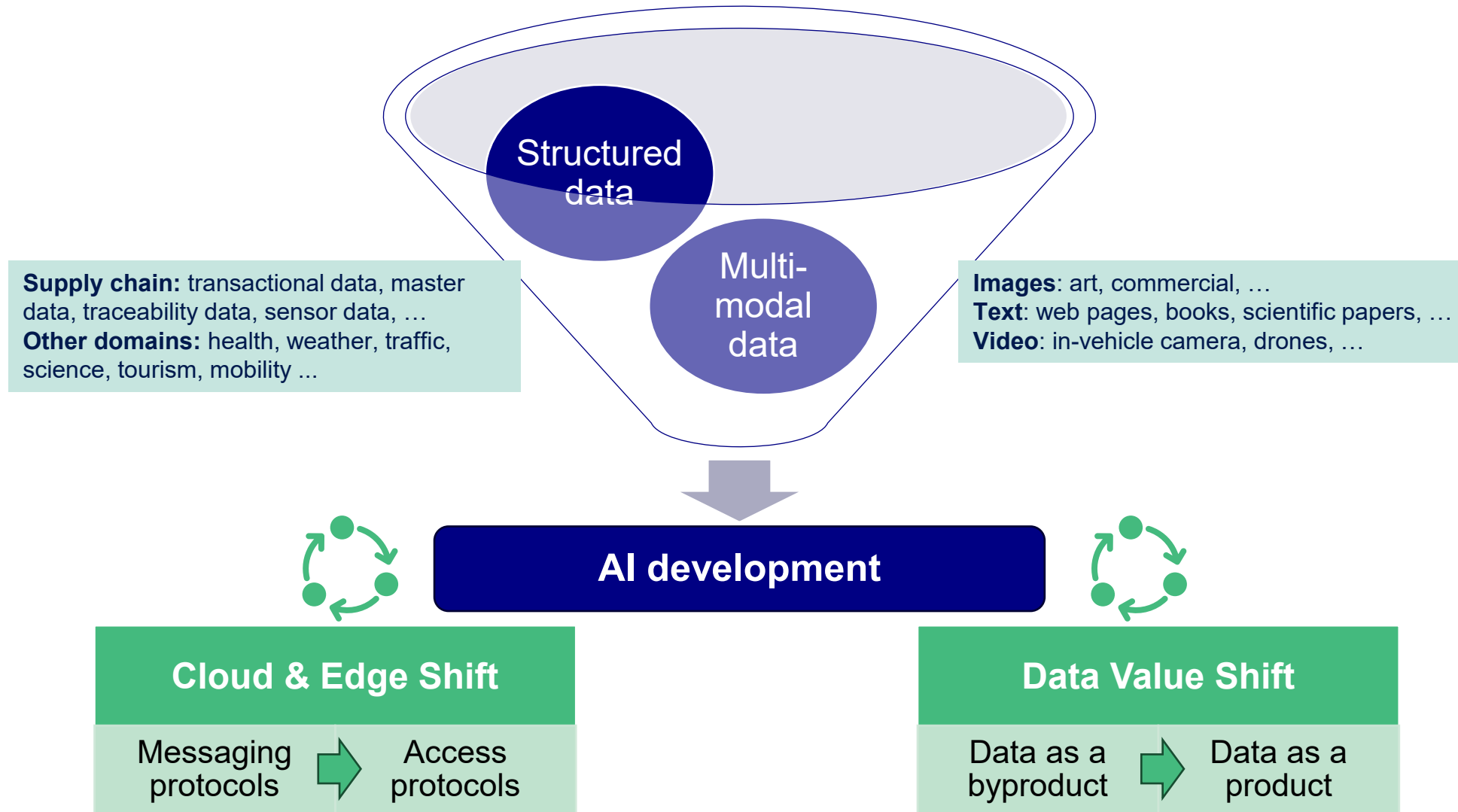


The role of data spaces

Trustworthy data sharing at scale



Data sharing in the age of A.I.



Key needs addressed by data spaces

FAIR principles

- Findability
- Accessibility
- Interoperability
- Reusability



*Data as a
product*

Value creation

- Respect data rights
- Data valuation
- Data quality
- Collaborative use cases



*Data
transactions*

Establishing trust

- Trust frameworks
- Policies and claims
- Federated
- Regulatory compliance



*Automated
trust layer*



How do data spaces work?

Demystifying data spaces



Key concepts

Governance framework

Standards

Facilitating services

data space

environment enabling trusted data sharing between participating parties, based on an agreed governance framework, along with an agreed set of policies, semantic models, standardized protocols, processes, and facilitating services [ISO/IEC FDIS 20151-1]

participant

Participant
agent

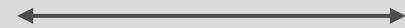
Grant rights & Publication



Discovery & Negotiation



Data sharing / exchange



Access and Use

participant

Participant
agent

data transaction

result of an agreement between a data provider and a data user with the purpose of exchanging, accessing and using data, in return for monetary or non-monetary compensation [EN 18235-1:2026]

data product

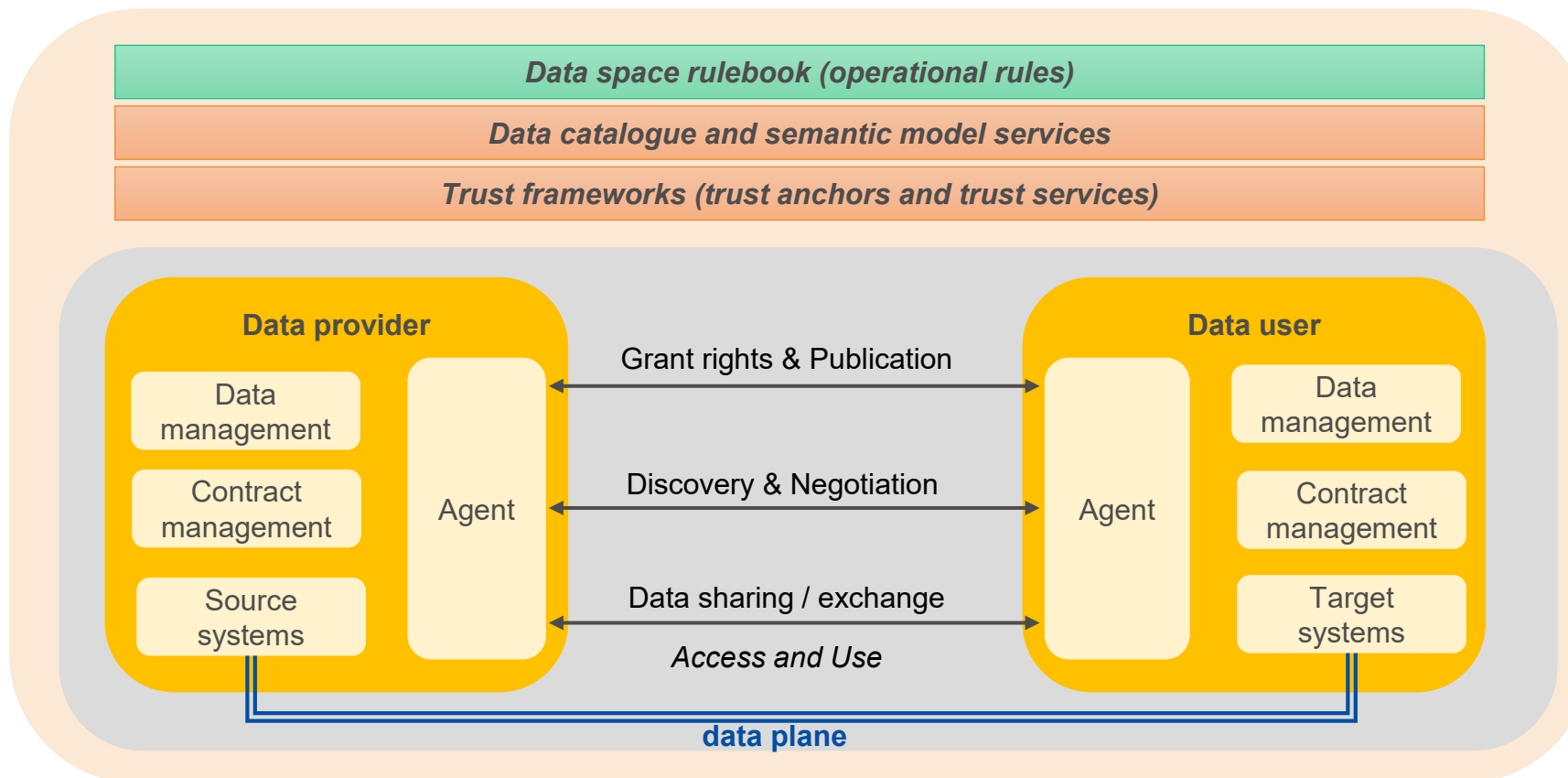
data sharing unit, packaging data and metadata, and any associated licence terms [EN 18235-1:2026]

Data space mechanisms

Governance framework

Standards

Facilitating services



Data products provide metadata that make data findable and usable

data catalogue (**DCAT**), semantic models

Policies and claims enable automated verification of Identity, data space membership, and other credentials.

Open Digital Rights Language (**ODRL**), Decentralised Claims Protocol (**DCP**) ...

Participant agents ensure a seamless link between the control and access layers

Data Space Protocol (**DSP**)

Getting started

Actions supporting interoperability in data space



European Trusted Data Framework Foundations

interoperable
europe

EU Vocabularies

SEMIC

data.europa.eu

- **DCAT-AP:** the DCAT application profile for data portals in Europe
- **Vocabularies**
- **Ontologies**
- Other **semantic data technology and assets**
- The official portal for **European Data**



DATA SPACES
SUPPORT CENTRE



- Data Spaces Blueprint
- Data Spaces Maturity Model
- Open-source middleware



... and many other organisations...



- CEN workshop 'Trusted Data Transaction' (closed)
- CEN/CENELEC **JTC 25** on 'Data management, Dataspaces, Cloud & Edge'
- ETSI: **TC DATA**



International
Electrotechnical
Commission



- ISO/IEC JTC 1 SC 38 Cloud computing and distributed platforms



Standardisation request (adopted 2025)

European Trusted Data Framework

Five deliverables

	Trusted Data Transactions harmonised standards <i>Part 1: Terminology, concepts and mechanisms (PUBLISHED, EN 18235-1:2026)</i> <i>Part 2: Trustworthiness requirements</i> <i>Part 3: Interoperability requirements</i>
	Data catalogue implementation framework
	Semantic assets implementation framework
	Data governance standard for data space participants
	Maturity model for Common European Data Spaces

Standardisation request (2026)

European Data Quality Standard

- Stakeholder consultation started on **22 April**
- Proposing two deliverables:



Data Quality Metrics standard



Collaborative Data Quality Management standard

- Both standards are to become integral parts of the European Trusted Data Framework.



The street view



The Once-Only Technical System

Single Digital Gateway Regulation, Regulation (EU) 2018/1724, with its technical specifications set out in Implementing Regulation (EU) 2022/1463.” EUR-Lex (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32022R1463>)



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The Digital Product Passport

Batteries Regulation, Regulation (EU) 2023/1542, and Digital Product Passport framework under the Ecodesign for Sustainable Products Regulation, Regulation (EU) 2024/1781.” EUR-Lex (<https://eur-lex.europa.eu/eli/reg/2023/1542/2023-07-28>)



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Thank you

