#DigitalEuropeProgramme

DG CNECT
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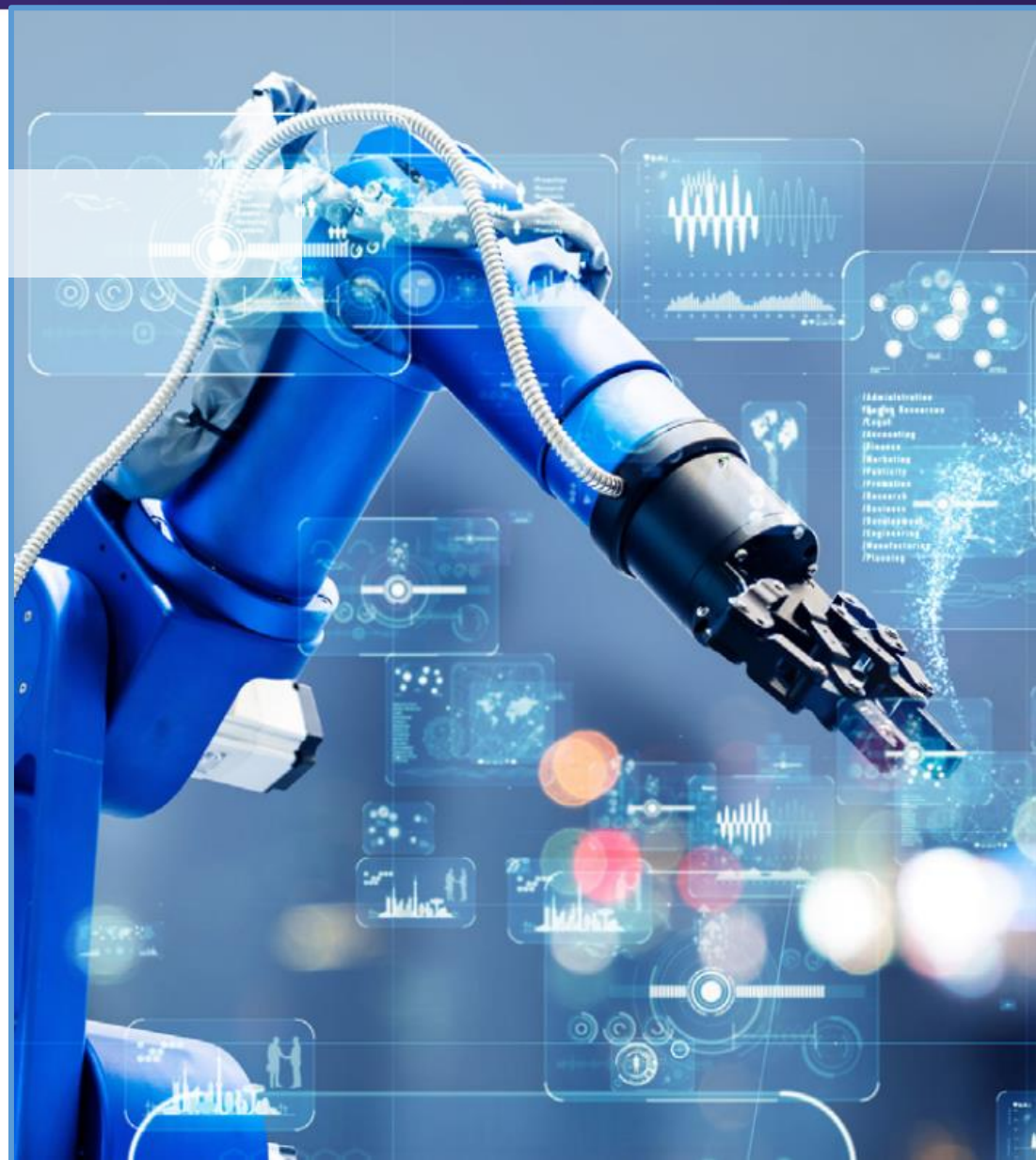
Data Spaces one definition (of many)

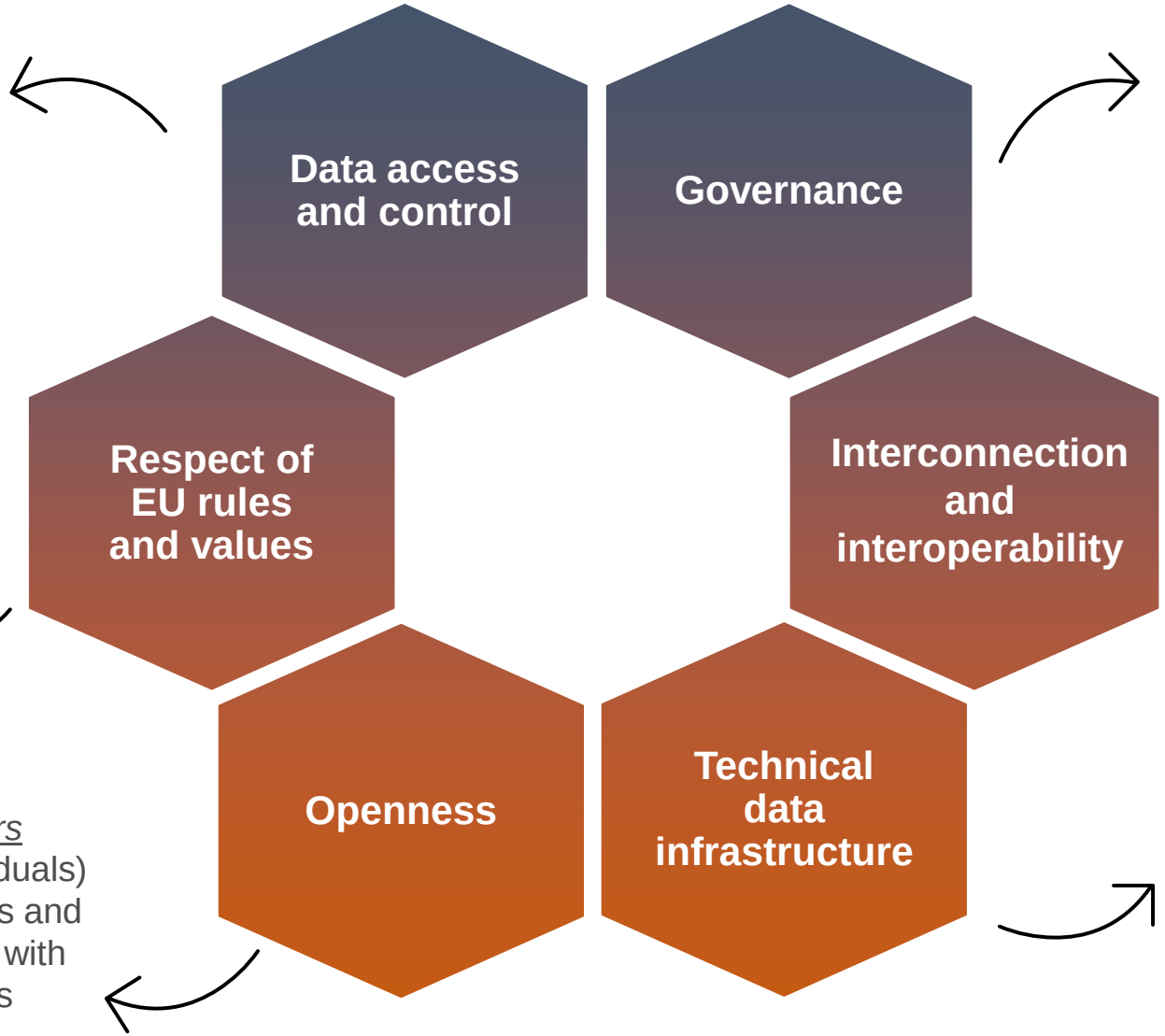
A data space can be defined as a federated data ecosystem based on shared policies and rules. The users of such data spaces are enabled to access data in a secure, transparent, trusted, easy and unified fashion.

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.



Design principles for common European data spaces



Tools to control, pool, access, use and share all types of data in a fair, reasonable and non-discriminatory manner

Governance structure (mechanisms) to ensure fair, transparent, proportionate and non-discriminatory access to, sharing and use of data.

Comply with applicable *EU legal framework*, and put in place adequate measures to prevent unauthorised access to data

Based on common *standards*, FAIR principles to progressively lead to single EU data space

Open to all actors (organisations/individuals) that respect EU rules and values and comply with data space rules

Common technical data infrastructure (including sector-specific framework and cybersecurity- and data protection-by-design principles)

Data spaces common elements

User

Individual, company, public bodies, or complete ecosystems of organisations (e.g. data hub, data marketplaces

DATA SPACE

SPECIFIC SERVICES, MARKET SPECIFIC SOLUTIONS

DATA SHARING COMMON ELEMENTS

EDGE AND CLOUD INFRASTRUCTURE

GOVERNANCE	INTEROPERABILITY	TRUST	DATA VALUE
Cooperation agreement	Data models and formats	Identity management	Metadata and discovery
Operational (e.g. SLA)	Data exchange API	Access and usage control	Publication & marketplace services
Continuity model	Provenance and traceability	Trusted exchange	Data usage accounting

- Separation of duties
- Business agreements
  - Accounting schemes
  - Charging schemes
  - Smart contracts
  - Sustainability
- Operational/Organisational
  - Rulebooks
  - SLAs
  - Governance bodies
  - Maintenance

The EC's role in supporting the creation of data spaces

Work with stakeholders

Bring stakeholders together with a common EU data policy, promote use of data space guidelines

Data Governance Act

Increase trust in data sharing (neutral data intermediaries, i.e. the orchestrators of the data spaces

European Data Innovation Board (EDIB)

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*

Data Act

Unlock the potential of the EU's *industrial data* (IoT data), ensure fairness in the allocation of data value among the actors of the data economy

Funding

research on new technologies for the development common European data spaces (notably HORIZON EUROPE in collaboration with ADRA partnership)

deploy common European data spaces in strategic sectors/domains (DIGITAL)

Offer a technical solution

smart middleware
Simpl

Facilitate *interoperability* of data, data sharing mechanisms and services (incl. data spaces) between sectors

Help *developing data spaces* and *pooling existing data infrastructures* (cloud federation)

Common European data spaces

- Health
- Industrial & Manufacturing
- Agriculture
- Finance
- Mobility
- Green Deal
- Energy
- Public Administration
- Skills

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

Staff working document on data spaces

https://digital-strategy.ec.europa.eu/en/library/staff-working-document-data-spaces