



# Data Spaces for Manufacturing in the Digital Europe Programme

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#DigitalEU



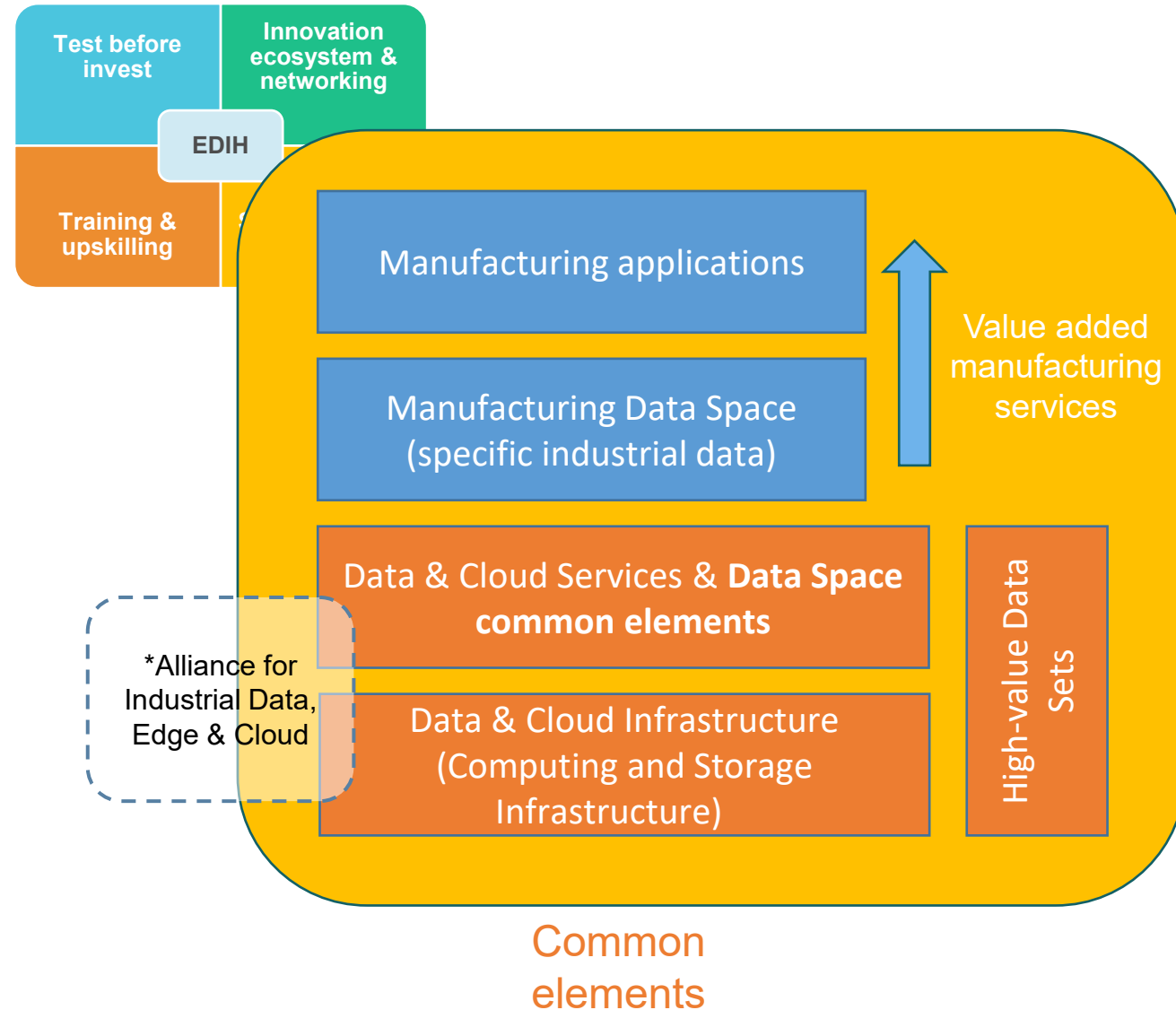
*“My ambition is that European data will be used for European companies in priority, for us to create value in Europe”*

*The aim is to make Europe “the most data-empowered continent in the world”*

*Thierry Breton,  
Commissioner for the Internal Market*

# Manufacturing Data Spaces

building blocks to build an industrial data capacity



Preparatory action

DATA SPACE 4.0

Condition-monitoring  
asset management

SM4RTENANCE

UNDERPIN

Building blocks,  
Data Space Support Centre,

....

National initiatives



[...]



# Manufacturing Data Spaces: Past Actions

## Co-ordination and Support Action (CSA): [EU DATA SP4CE](#)

**Preparatory action** to develop multi-stakeholder data governance scheme, sustainable business models, inventory of existing data platforms, a blueprint for manufacturing-specific building blocks agreed set of priority datasets and data themes.

**Budget:** EUR 1 million

**Funding rate:** 100% eligible costs

**Duration of action:** October 2022 – May 2024 (20 months)

## Deployment: [SM4RTENANCE](#) (cross-industry sectors) and [UNDERPIN](#) (focused on energy sector)

**Two projects** to deploy two data spaces for the manufacturing industry at scale for Maintenance operations and Asset management

**Budget:** EUR 13 million

**Funding rate:** 50% co-funding rate

**Duration of action:** 1/10/2023-1/10/2026 (SM4RTENANCE), 1/12/2023-1/12/2025 (UNDERPIN)



# EU DATA SP4CE deliverables

## Practical Manufacturing Data Spaces Governance Scheme

Jointly agreed

- Accession & Roles
- Rules & Procedures
- Soft infrastructure (functional and non-functional requirements regarding interoperability, portability, findability, security, privacy, and trustworthiness)
- Templates and tools that enables federation & scaling up

## Sustainable business models that incentivise data sharing and reuse from use cases to business models

- Methods to estimate the value of data shared
- non-financial incentive mechanisms
- Business models for intermediation services
- Quality assessment methods
- Agreement mechanisms (e.g. Smart contracts for value sharing)

that enable to share the benefits

## Bring an agreed set of datasets and data themes, including real-time data, into line with the new standards and principles of the blueprint

- Analysis of available datasets, Prioritization
- Adapt to standards and principles identified in the blueprint

## Inventory of existing data platforms & blueprint of manufacturing-specific building blocks

<https://manufacturingdataspace-csa.eu>



# Deployment call 2024

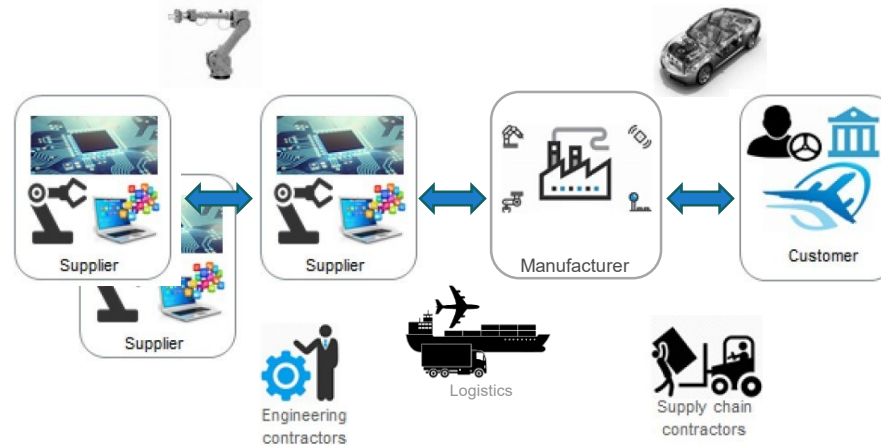


# Objective of the deployment call

- Significantly scale up the deployment and use of the data space(s) for manufacturing by reaching a critical mass of manufacturing industries:
  - sharing industrial data and
  - improving company operations and value chains among providers.
- In addition, the action aims to support data-driven transition to a greener and circular economy, also by enabling new business models

# Manufacturing Data Spaces

Agile supply chain management and execution by continuously **monitoring and exchanging status data across the value chain**







# Expected outcome

- Action specifically focused on data spaces addressing management of supply chains
- Target one of the following two use cases:
  - **Supply chain management and data sharing in risk mitigation response**, such as early-warning predictive material shortage
    - Agile supply chain management and execution by continuously monitoring and exchanging status data on e.g. purchase orders, sales orders, inventory levels, order progress, demand and other forecasts, raw materials, chemicals and energy use and supply, etc. **across segments of the value chain**
  - **Drive the transition to a greener and circular economy**
- Enable the compliance with standards and norms, including environmental requirements, product passports, and tax regimes
- Make data available throughout the value chain of the product lifecycle on the basis of voluntary agreements, in view of completing, deepening and expanding data sharing with other organisations



# Expected deliverables

**Set up and deploy data space(s) for manufacturing at scale, which will stay available after the runtime of the project, delivering industrial data sharing among manufacturing companies and service providers**

The solutions must be characterized by a high degree of user-orientation in terms of trustworthiness, data sovereignty of the companies and manageability



# Specific deliverables

1. Technical infrastructure for the deployment of the Common European Manufacturing Data Space(s).
2. Data governance documentation, comprising a set of rules of legislative, administrative, and contractual nature covering access rights, processing, using and sharing data in a trustful and transparent manner.
3. Code of conduct and contract template.
4. Guidance/training documents for the stakeholders willing to join the data space(s).
5. Once the data space(s) is/are deployed: quarterly and on an ad hoc basis reporting on usage, problems detected, and solutions provided



# KPIs to measure 'Outcomes and deliverable'

## Identify specific KPIs in the following areas

- Business: increase of organisations participating in the Data Space, their geographical distribution and return on investment
- Technical: volume, quality and value of data exchanged; analysis of data actually used by several stakeholders in the value chain
- Deployment: share of supplier/customer interaction having undergone automation, share of SMEs among data providers and data users.

The consortium should also propose relevant indicators (including industry and service relevant KPIs) for measuring the expansion of usage of the data space.

Indicators should be accompanied by target values



# Mandatory Activities

- **Bring together relevant stakeholders to conclude data agreement(s)** with reference to design, reuse, recycling, and environmental impact and indicators for continuous monitoring and exchange of data on product performance and reuse, material content and origin, feedback to design, product recycling, product remanufacturing, etc.
- Carrying out further **activities to effectively track and report resource use from a manufacturer's perspective**. Actions should preferably target data sharing for circularity in line with the Circular Economy Action plan (COM(2020) 98 final).



# Ressources

- Budget: 13 Mio. EUR EU funding, 50% funding rate
- Build on top of the Data Spaces common elements.
  - Refer to the Data Spaces Support Center (e.g. smart middleware platform and tools – see also the [radar](#))
- Coordinate and collaborate with other projects participating in the deployment of the data space, the Data Spaces Support Centre and the governance body identified by [EU DATA SP4CE](#) in order to allow integration of existing standards and to ensure interoperability and portability across infrastructure, applications and data.
- Cooperate with the European Digital Innovation Hubs for a broad uptake & Testing and Experimentation Facility for further support



# Key information for the MDS-2024 Call

**Work programme** documents: [Work Programme 2023-2024](#)

**Call** [DIGITAL-2024-CLOUD-DATA-06-MANUFSPACE](#) open until: 29 May 2024  
17:00:00 Brussels time

**Applicants** must be legal entities established in EU Member States or [countries associated](#) to the Digital Europe Programme

**Consortium** of minimum 3 independent entities from 3 different eligible countries

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/digital-2024-cloud-data-06-manufspace>



# Timeline

- Deployment call
  - Open: 29/2 – 29/5
  - Evaluation Q2 2024
  - Information on evaluation results: Q3 2024
  - Signature of the grant agreements: Q4 2024/Q1 2025
- Ownership Control assessment
  - In line with art. 12.6 of DIGITAL

Nov
Dec
Jan 2024
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# *Thank you*

## Contact

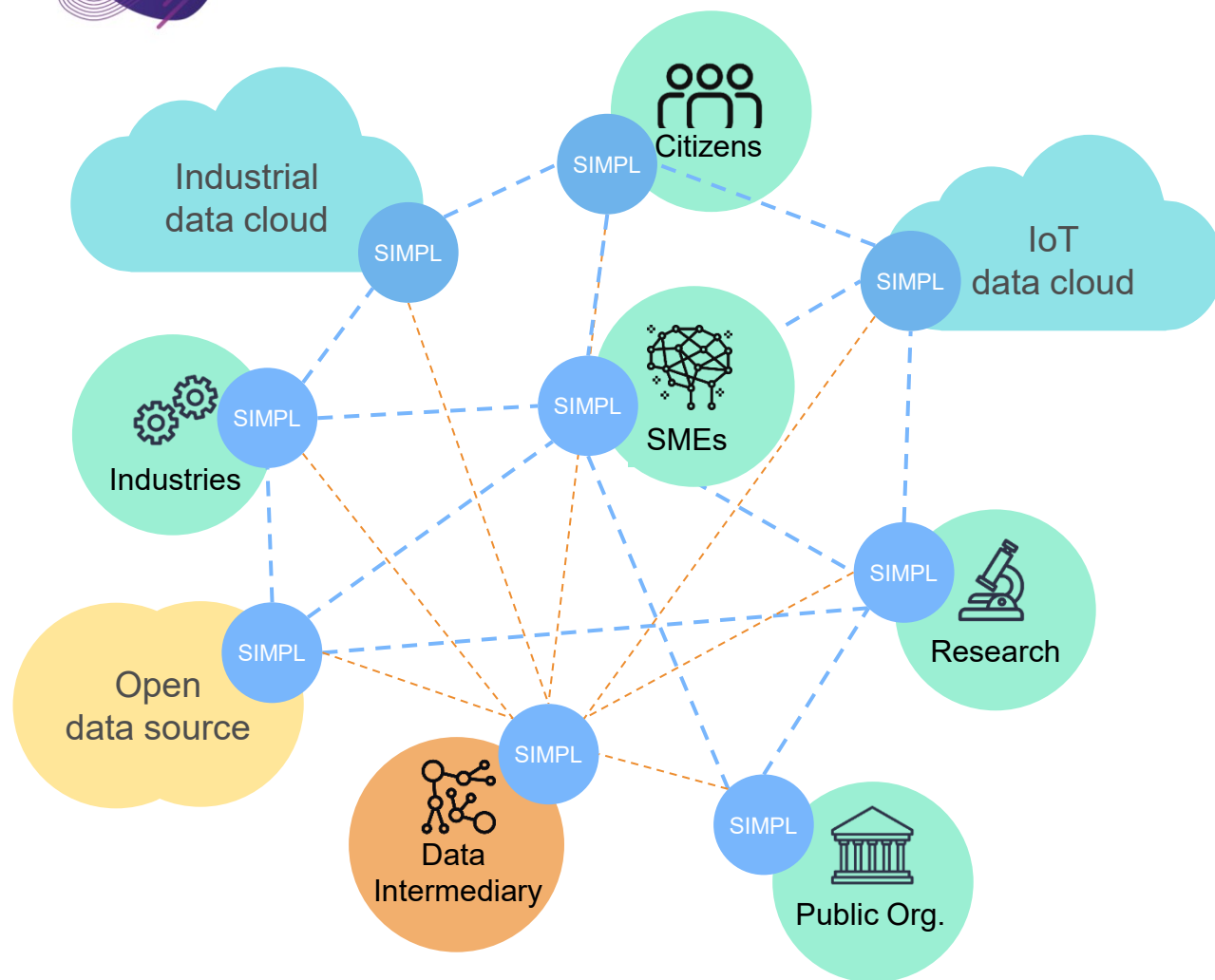


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# Background: Common European Data Spaces



--- Data exchange  
--- Metadata exchange

They can be defined as a federated data ecosystem based on shared policies and rules. The participants of 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 it is rather based on distributed data stores and integration on an “as needed” basis.



# Background: Data spaces common elements

## Users

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 INFRASTRUCTURE

Cooperation agreement

Operational (e.g. SLA )

Continuity model

### SIMPL TECHNICAL INFRASTRUCTURE

#### Administration services

Federation management

Contracts

Security

Access control & Trust

Audit

Reporting

Monitoring

Network

#### Data services

Application sharing

Data sharing

Application discovery

Data discovery

Distributed execution

Data governance

Data orchestration

Data processing

#### Infrastructure connector services

Cloud & Edge computing

HPC

PaaS services

Distributed execution

Infrastructure discovery

Infrastructure orchestration