



COOPERANTS

Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages



COLlabORative Processes and sERvices for AeroNauTics and Space

AIRBUS

dfki
ai
Deutsches Forschungszentrum
für Künstliche Intelligenz
German Research Center for
Artificial Intelligence



Fraunhofer
IWU



ii itemis

neusta
aerospace

OHB

RADIUSMEDIA
augment it

SCOPESET
The Tools Experts

VALISPACE

ZARM
Technik



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Bundesministerium
für Wirtschaft
und Klimaschutz

aufgrund eines Beschlusses
des Deutschen Bundestages



What is a dataspace??

Consortial Lead:
Dr. Caroline Lange (DLR)

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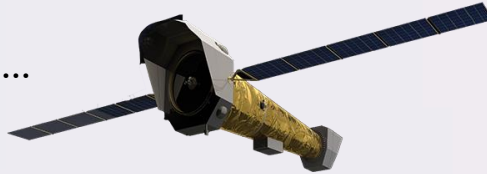
ScopeSET
The Tools Experts

VALISPACE

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Technik

Document-Based Data Exchange Limits

1 medium-sized satellite has ...



... 500K documents with ...



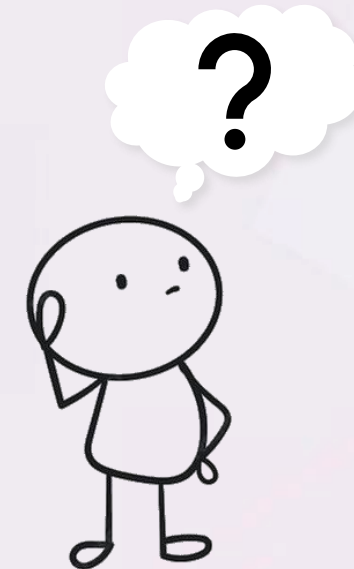
... 25K review items ...



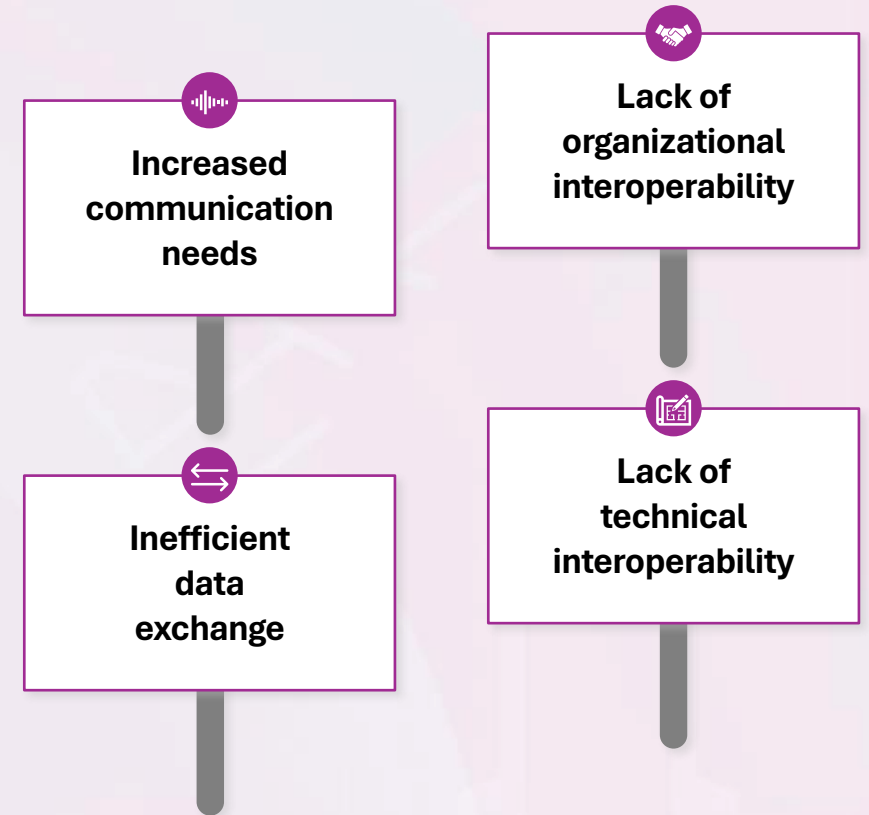
... over 200 reviews ...



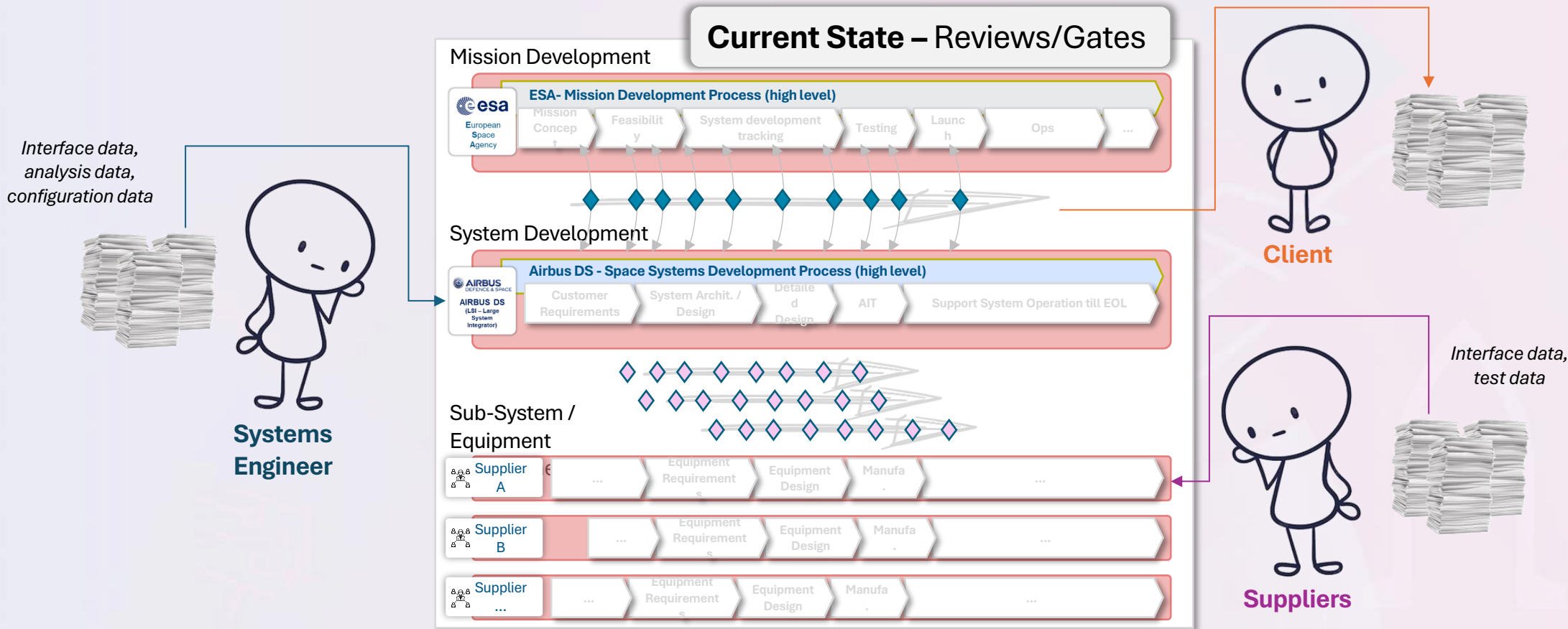
... all by exchanging *.pdf files.



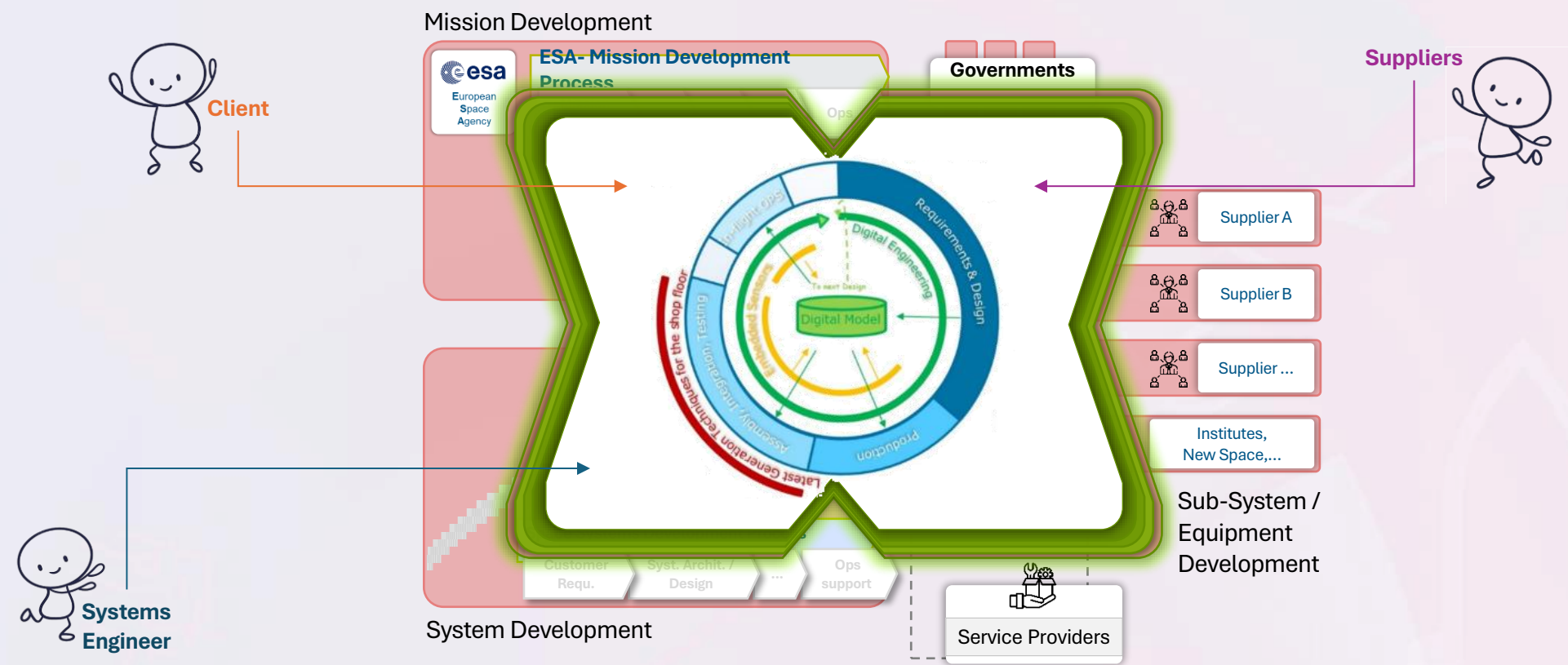
Tom –
Systems Engineer



EU Space Collaboration Challenges

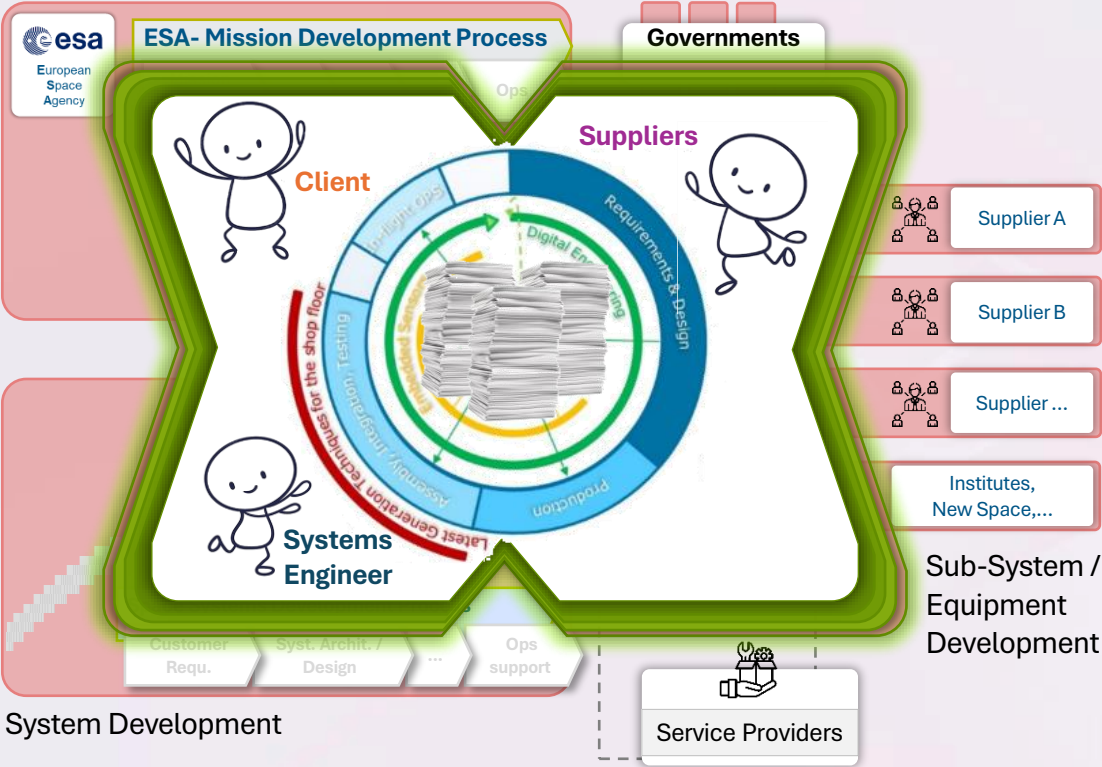


Continuous Data-Driven Collaboration



Shift Collaboration to Data Space

Mission Development

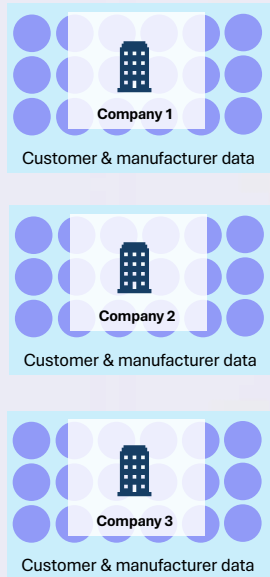


System Development

Transforming Data Sharing

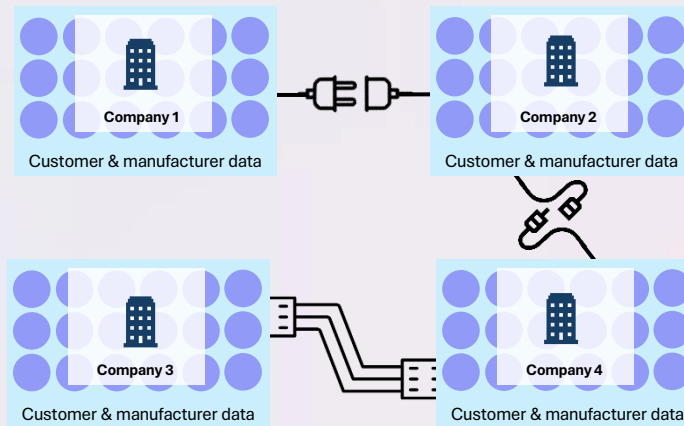
So far: Data silos

- Unused data potential
- No cross-connections



Today: Data Exchange

- individual connections
- proprietary standards



Future: Data Economy

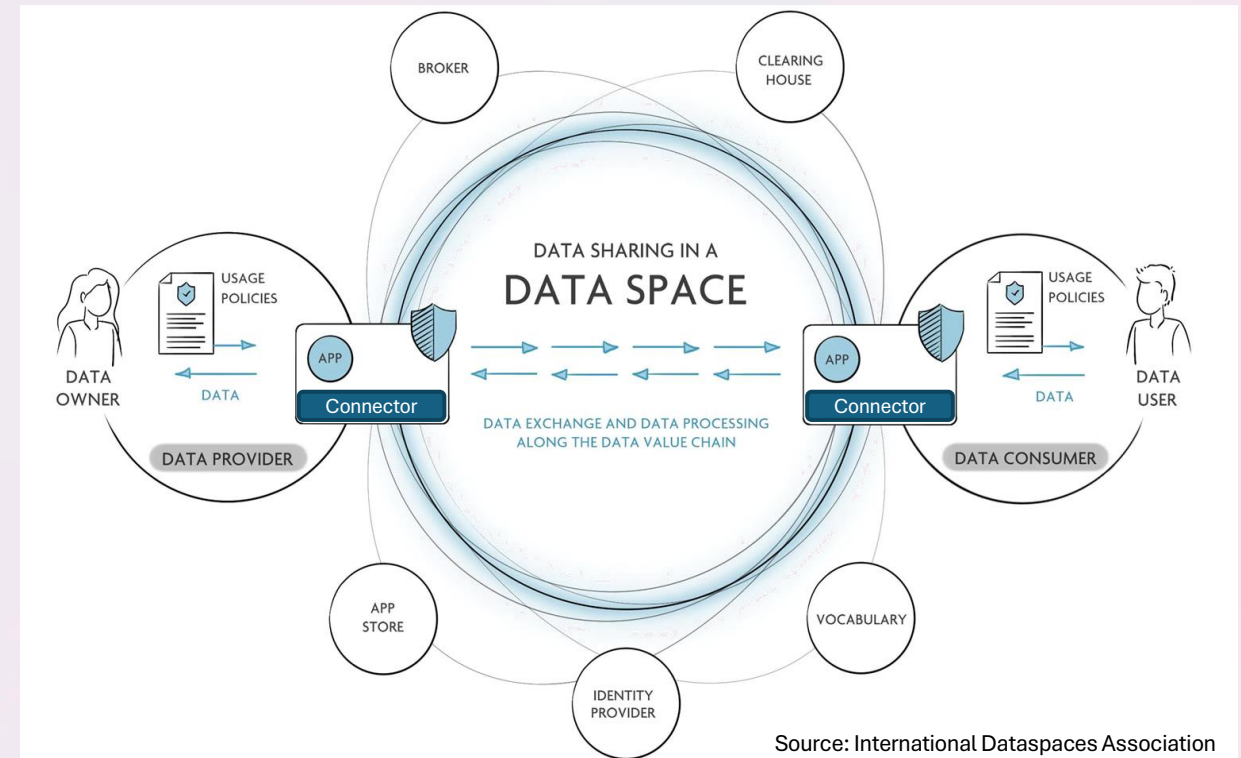
- Common rules and uniform standards
- Data sovereignty for a wide range of participants from different sectors



What is a Dataspace?

*A **data space** is a “federated, open infrastructure for sovereign data exchange based on common agreements, rules and standards.”*

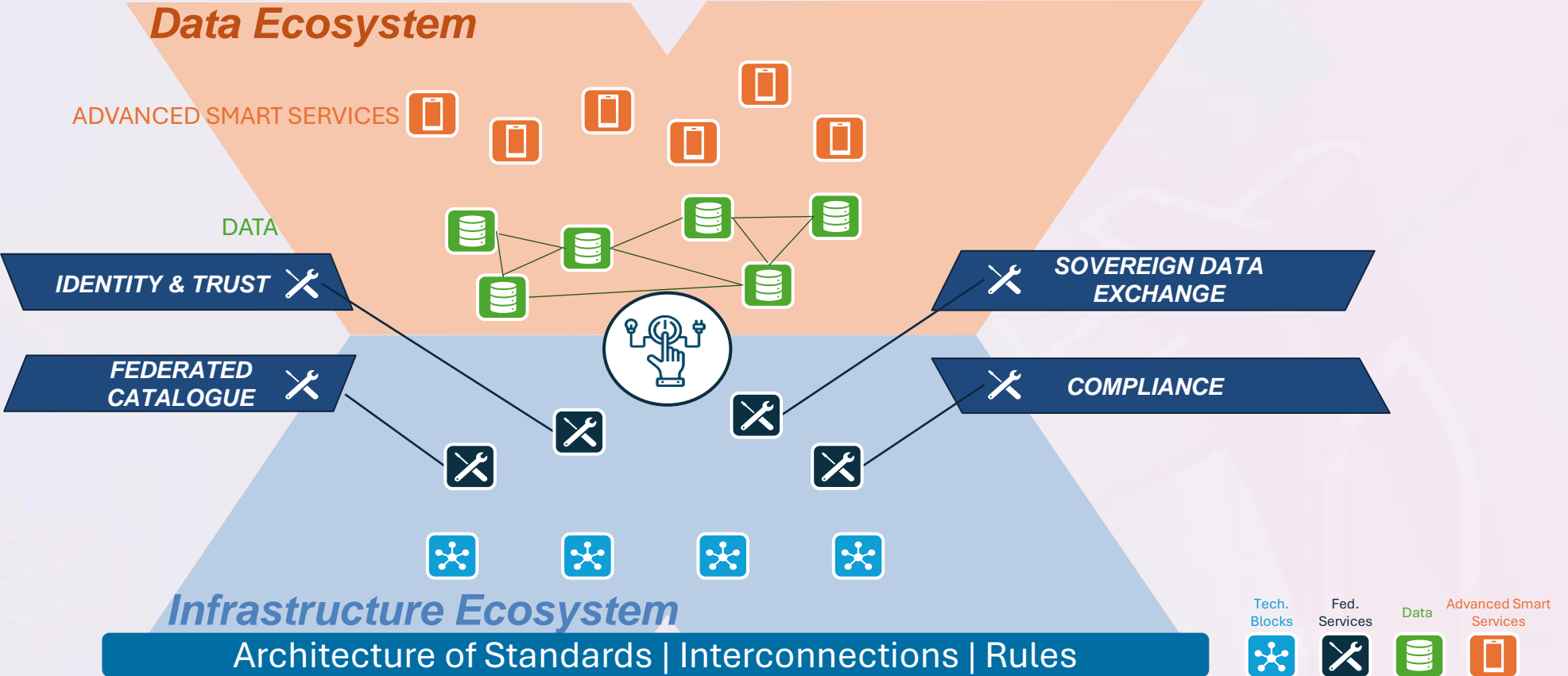
“ Reiberg, Niebel
2022



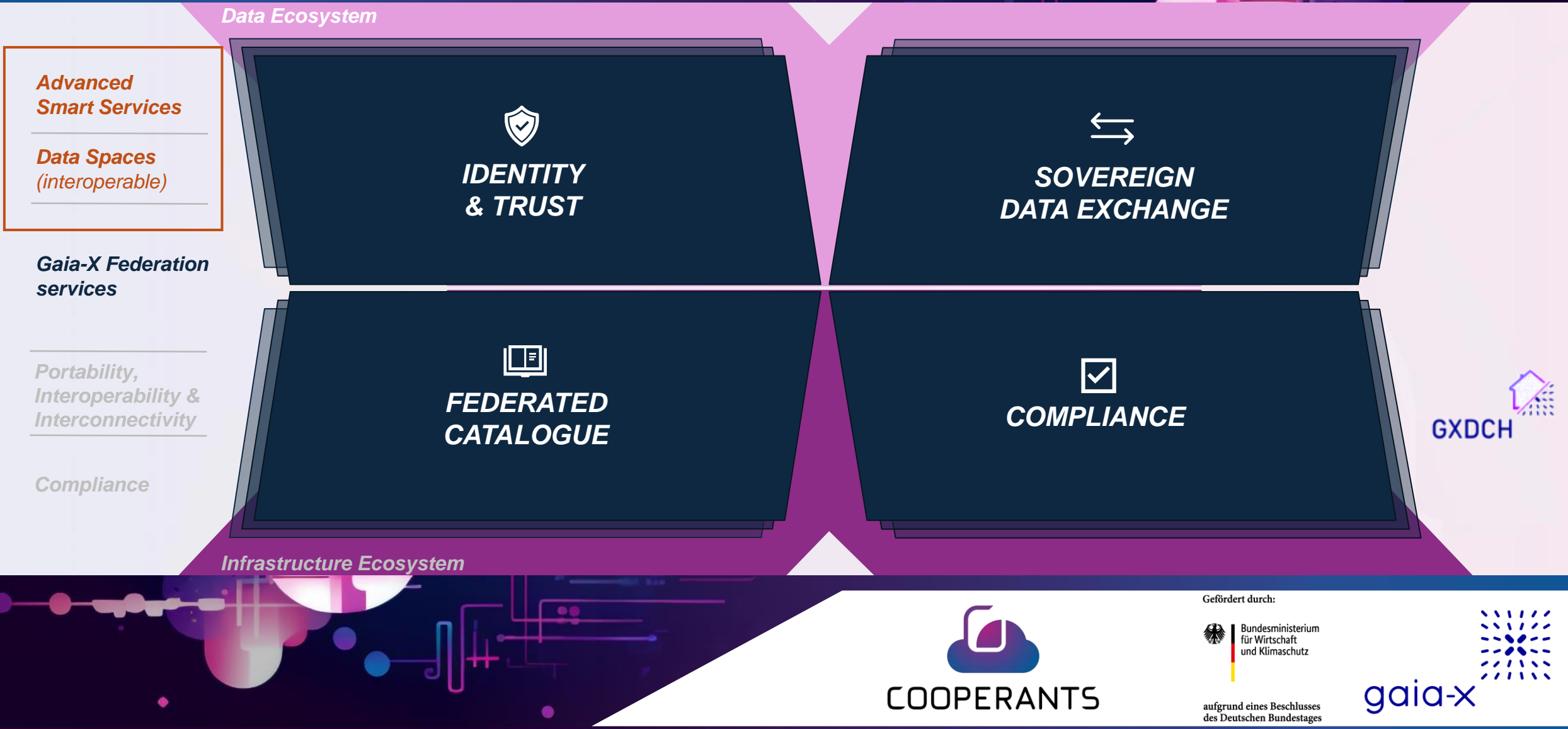
Source: International Dataspaces Association

GAIA-X

Data Spaces



GAIA-X Framework, COOPERANTS Content



Data Ecosystem: Identity & Trust

Data Ecosystem

**Advanced
Smart Services**

**Data Spaces
(interoperable)**

**Gaia-X Federation
services**

**Portability,
Interoperability &
Interconnectivity**

Compliance

Ensuring the authenticity of suppliers.

*Ensuring that data consumers are clearly identified
and authorized to access IP-critical data.*

IDENTITY & TRUST



Infrastructure Ecosystem

GXDCH 



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Data Ecosystem: Sovereign Data Exchange



Infrastructure Ecosystem: Federated Catalogue

Data Ecosystem

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Compliance

FEDERATED CATALOGUE

**Marketplace for services, data and devices:
searchable, promoted**

**Rapid provision of customized toolchains for
collaborative projects (individual members)**

Infrastructure Ecosystem

GXDCH 


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Infrastructure Ecosystem: Compliance

Data Ecosystem

Advanced
Smart Services

Data Spaces
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Portability,
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Compliance

Infrastructure Ecosystem



COMPLIANCE

Exchange of operating data of system-critical
components

IP protection of supplier data and application of
compute-to-data for data sovereignty



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GAIA-X Framework, COOPERANTS Content

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FEDERATED CATALOGUE



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*Exchange of operating data of system-critical
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SOVEREIGN DATA EXCHANGE



COMPLIANCE

*Exchange of operating data of system-critical
components*

*IP protection of supplier data and application of
compute-to-data for data sovereignty*

Infrastructure Ecosystem



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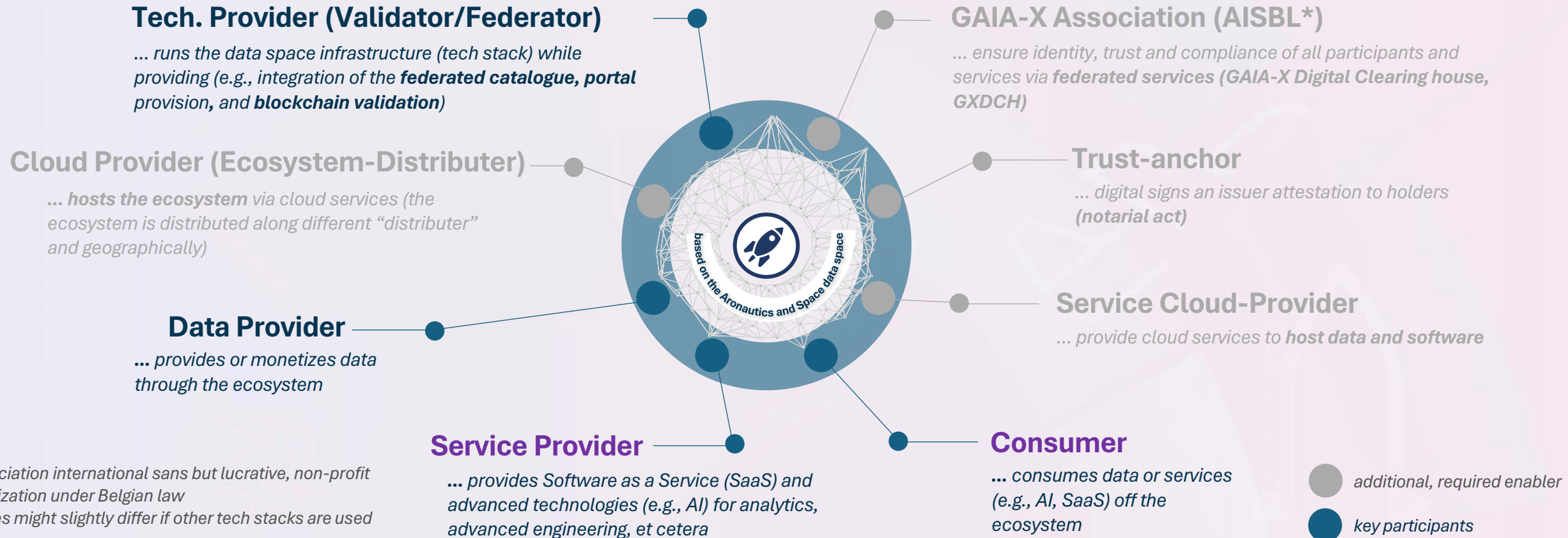


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The Participants



Interaction in Data Space

