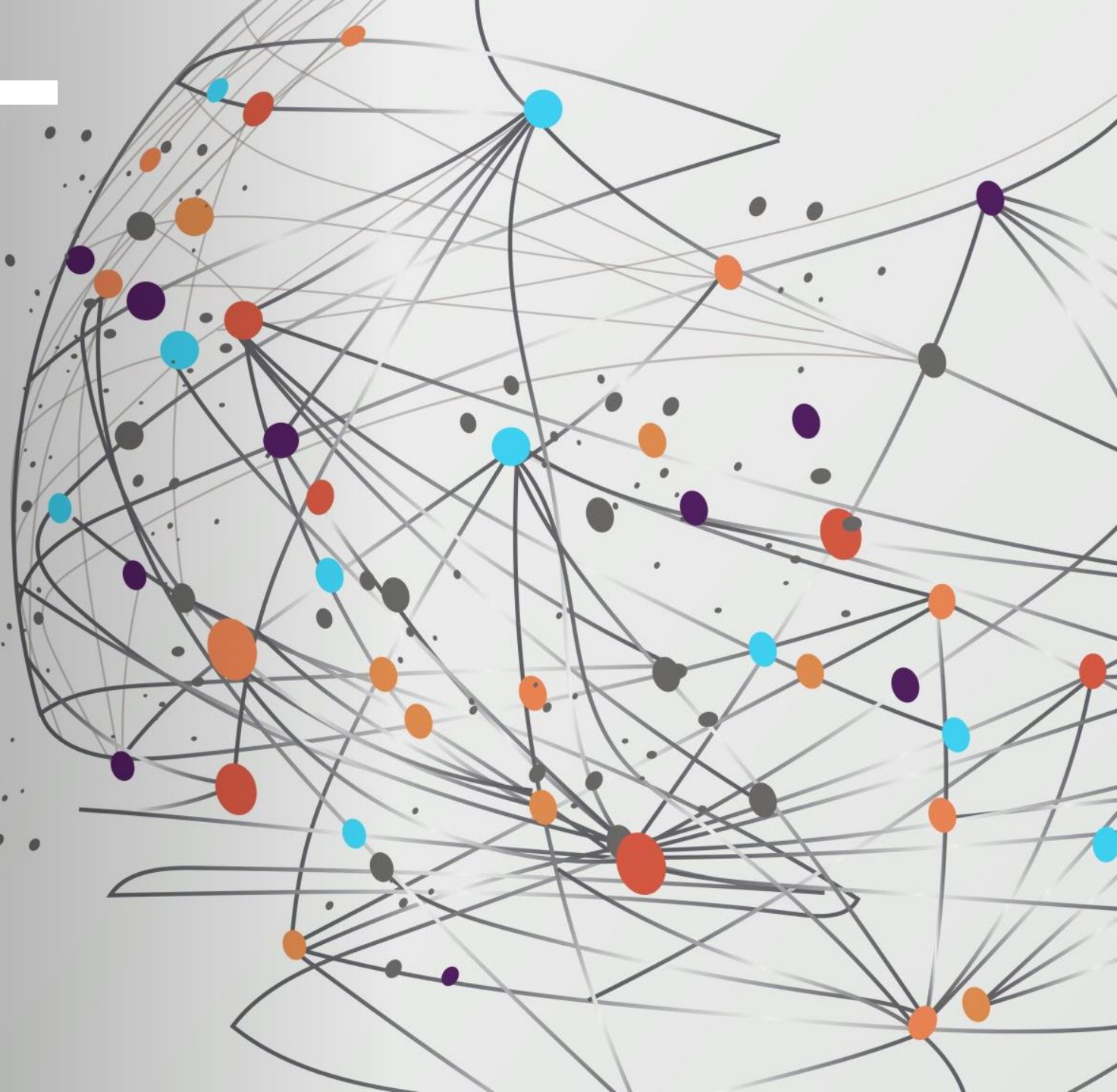# The Dataspaces Opportunity

Trusted, Sovereign & Multi-Cloud Data Sharing

Uli Homann

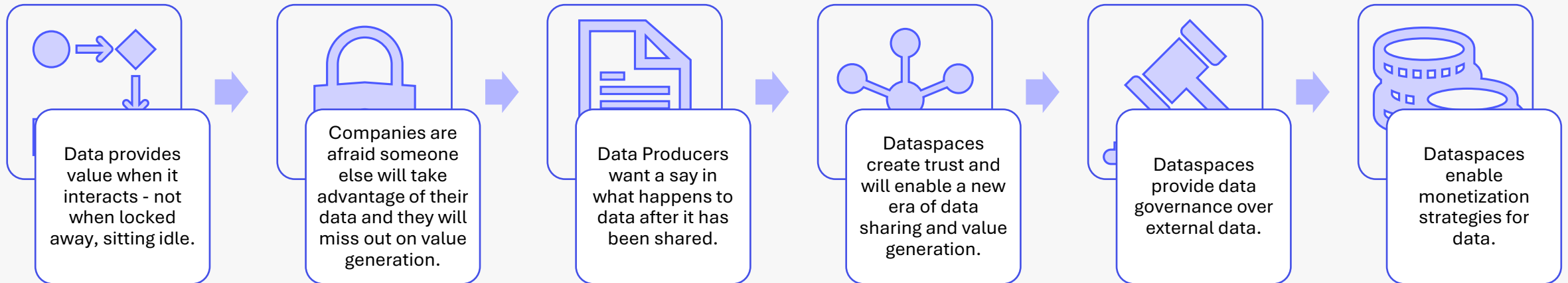*Corporate Vice President & Distinguished Architect*

Microsoft

Everyone needs Trusted Data Sharing

Organizations & Companies in this slide are actively contributing to the Eclipse Dataspace Components Project

Value proposition

Data provides value when it interacts - not when locked away, sitting idle.

Companies are afraid someone else will take advantage of their data and they will miss out on value generation.

Data Producers want a say in what happens to data after it has been shared.

Dataspaces create trust and will enable a new era of data sharing and value generation.

Dataspaces provide data governance over external data.

Dataspaces enable monetization strategies for data.

Dataspace Characteristics

Metadata is shared while **data remains stored at source**

Policies control access

Participants in a dataspace negotiate **Data Contracts** which contain **Access, Contract & Usage Policies**
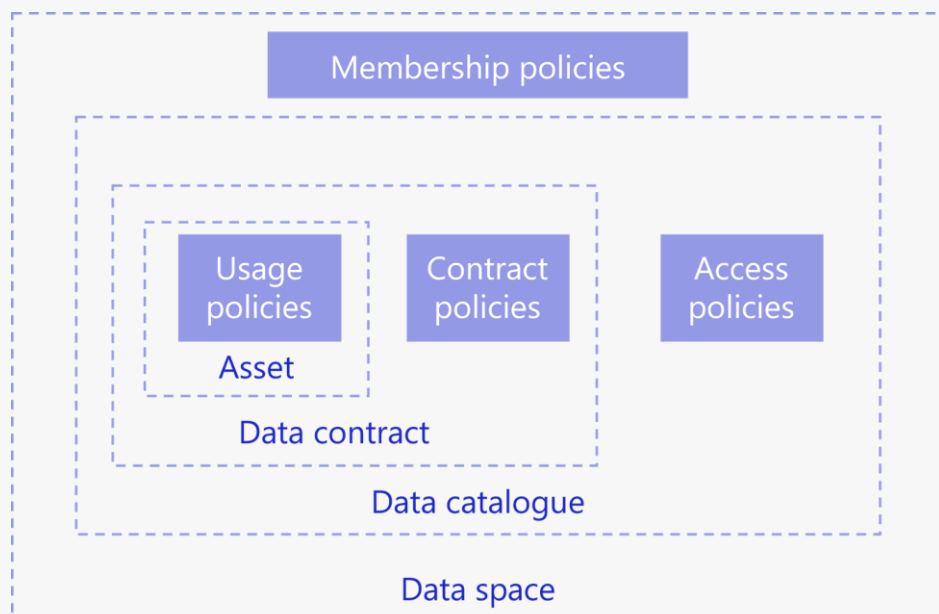
Data Transfer is always **peer-to-peer**

Dataspaces are **infrastructure agnostic** (On Premises, Edge, Cloud)

Value-added services enrich Dataspaces (Marketplace, Auditors, Algorithm Providers,...)

Dataspaces & AI

Membership policies

Usage policies | Contract policies | Access policies

Asset

Data contract

Data catalogue

Data space

Policies in Dataspaces are ideally suited to provide guidance for data usage in AI scenarios

- **Membership policies** simplify trust creation in the dataspace by aggregating base attributes required for participation

- **Access Policies** control who has access to data

- **Contract Policies** control how and to which environments data can be shared

- **Usage Policies** control how data can be used once shared

- Example:
  - Membership policy
    - must be a European Energy company with a valid eIDAS ID
  - Access policy
    - only available for European Energy companies that are verified suppliers
  - Contract policy
    - data needs to be shared to data landing zone on Microsoft Cloud for Sovereignty in France
  - Usage policy
    - data may not be used to train LLMs
    - data can be used for prompt engineering
    - data can be used to anchor factual answers
    - data cannot be used for healthcare related queries
    - data needs to be refreshed/deleted after 30 days

Dataspace Standardization
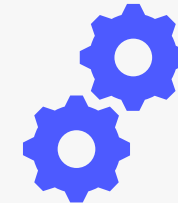
Conceptual Standards

ISO/IEC 20151Dataspaces

CEN/Cenelec CWA Trusted Data Tx

Technical Standards

Eclipse Dataspace Working Group (EDWG)

- Dataspace Protocol (DSP) Specification
- Identity & Trust Protocol (IATP) Specification

Reference Implementations

Ecosystem of OSS projects

- Eclipse Dataspace Components
- FiWare
- Gaia-X

How to participate

As a company – join IDSA
- https://internationaldataspaces.org/make/working-groups-and-task-forces/

As a company – join the Eclipse Dataspaces Working Group
- https://www.eclipse.org/org/workinggroups/dataspace-charter.php

As a developer – join the open-source projects!
- https://github.com/eclipse-edc
- https://github.com/eclipse-dataspacetck

As an architect – join the IDSA Architecture Working Group
- https://github.com/International-Data-Spaces-Association

As a business strategist or legal expert – join the IDSA Rulebook Working Group
- https://github.com/International-Data-Spaces-Association/IDSA-Rulebook

As a Dataspace Enthusiast
- Project Manager, Technical Writer, Marketing Manager, Copy Editors,..
- **Join the working groups and be active – any help you can provide will be appreciated!**