

**IDSA Ecosystem Building Call · Component Development Session**

---

# Eclipse Dataspace Connector

Julia Pampus · Fraunhofer ISST

# Pillars of a Data Space

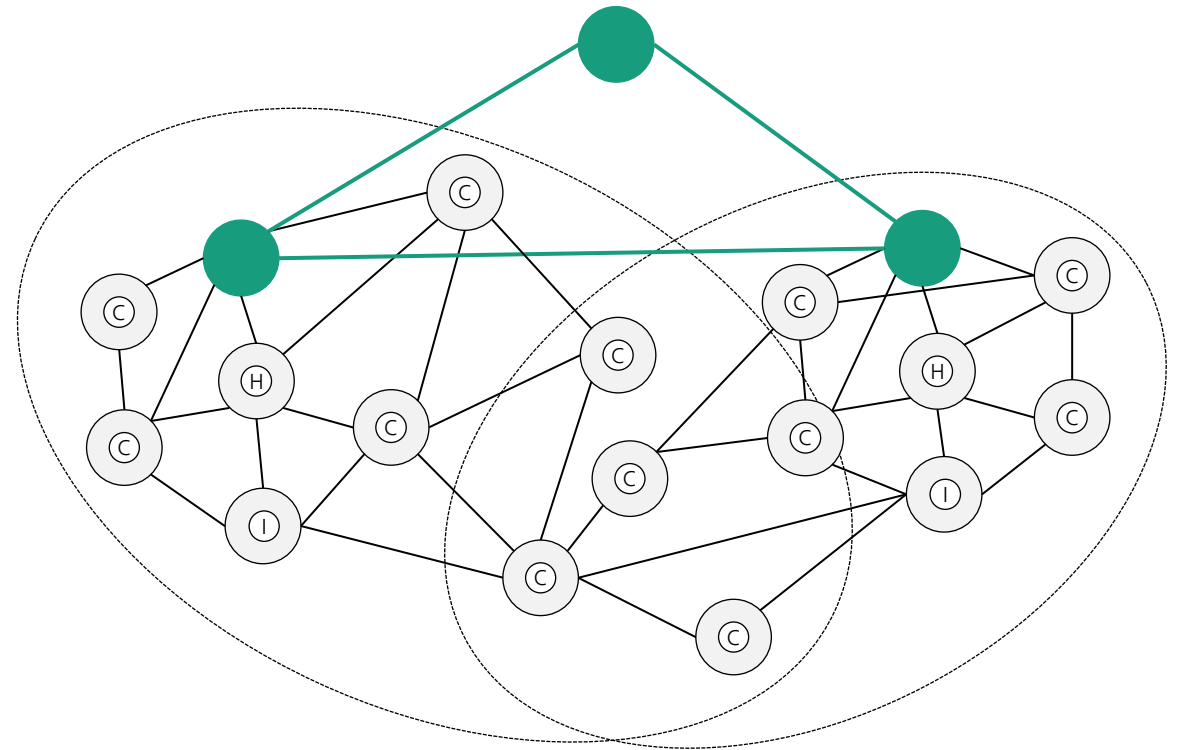
---

- Data spaces allow organizations to securely share data with other participants
- Data spaces enable data cooperation in a multi-cloud federation
- Data spaces are built on
  - **Identity**: Each participant remains in control of their identity
  - **Trust**: Each participant decides who to trust
  - **Sovereignty**: Each participant decides under what policies their data is shared
  - **Interoperability**: Each participant remains in control of their deployment



# New Data Sharing Challenges

- Connection and interoperability with multiple data spaces
- Identity across multiple jurisdictions
- Handle diverse data (transfer) types (e.g., streaming, big data)
- Cataloging across many data providers
- Policy management on multiple infrastructure layers
- Accommodate diverse requirements and use cases





# Eclipse Dataspace Connector

## Eclipse Dataspace Connector

1

### Open Source

started in June 2021 • official Eclipse Foundation project • Apache 2.0 License

2

### Community

12 committers • 20+ contributors • >600 pull requests

3

### Technology

based on Java • extensible architecture

4

### Enterprise-ready

scalable • highly available • customizable

5

### Current State

runnable code • basic end to end samples



# Contributors, Committers & Partners

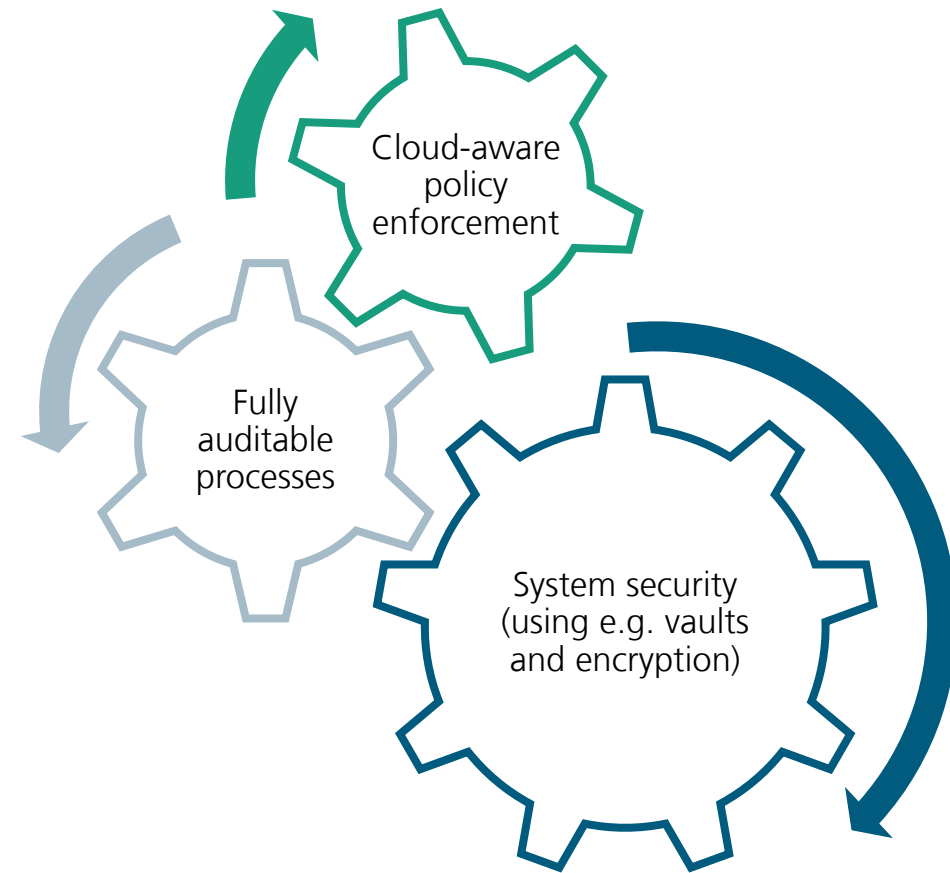
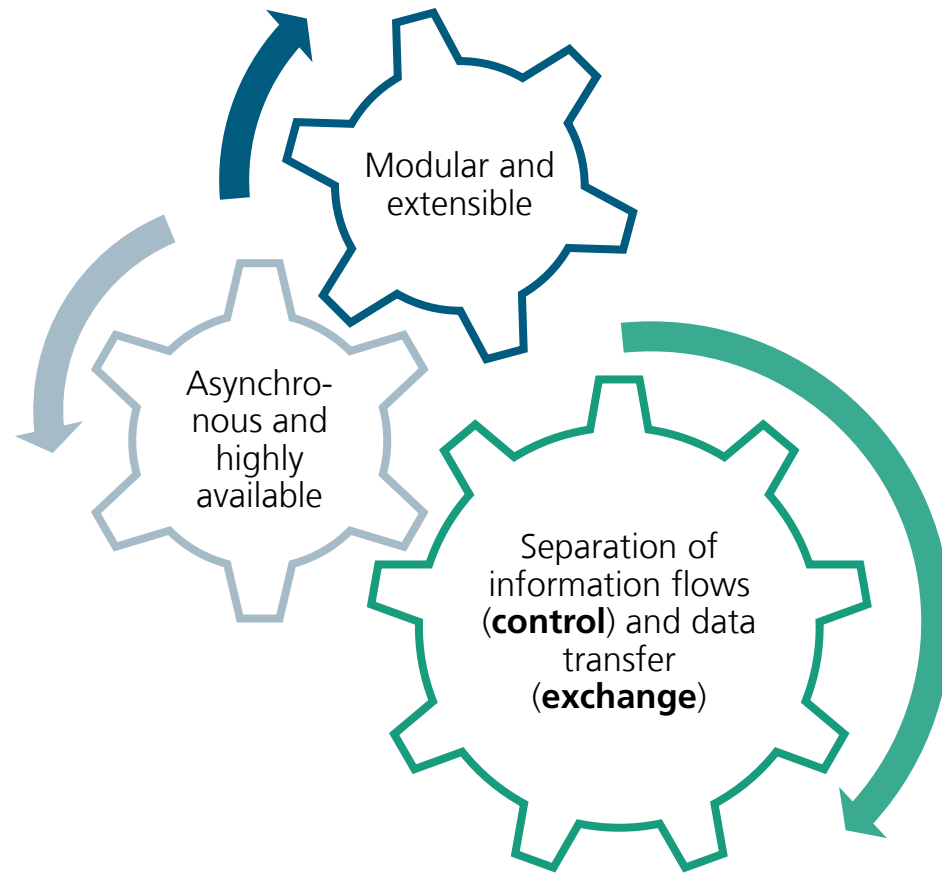
---



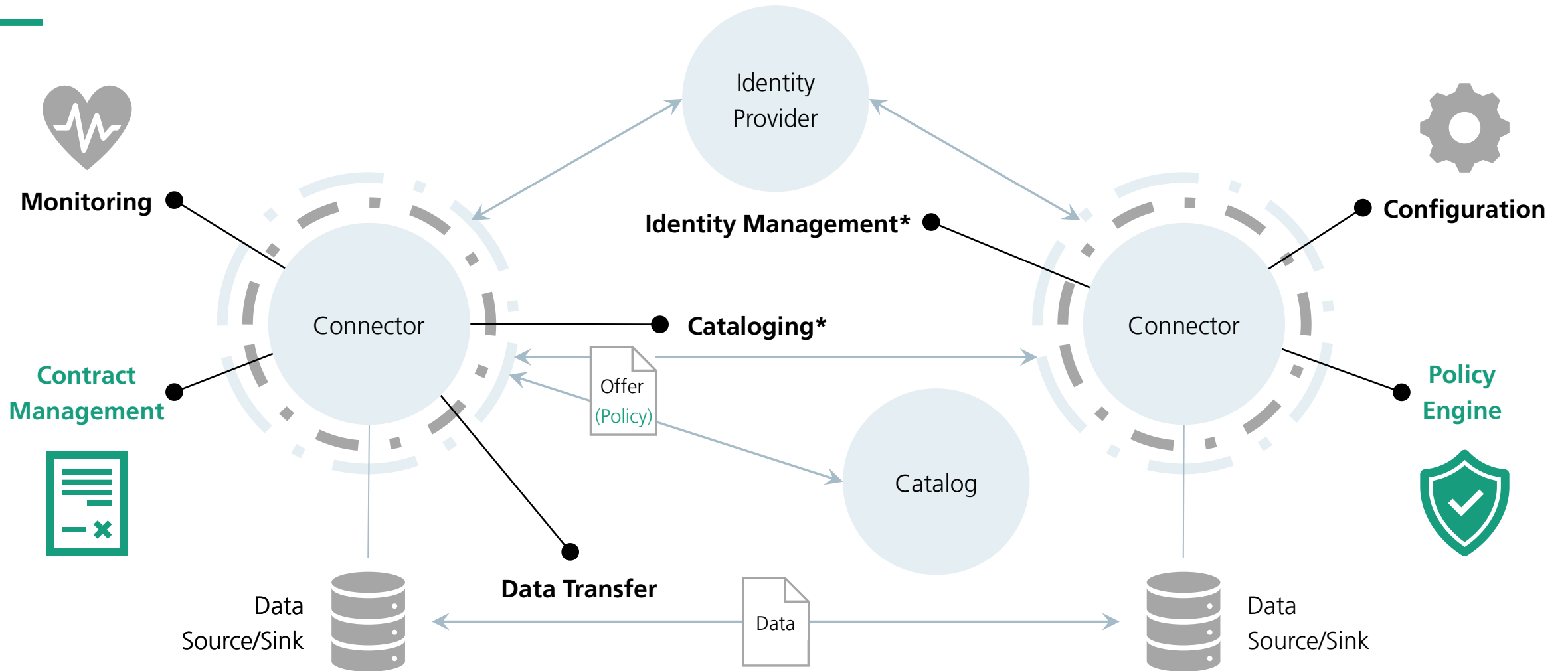
Mercedes-Benz



# Design Principles



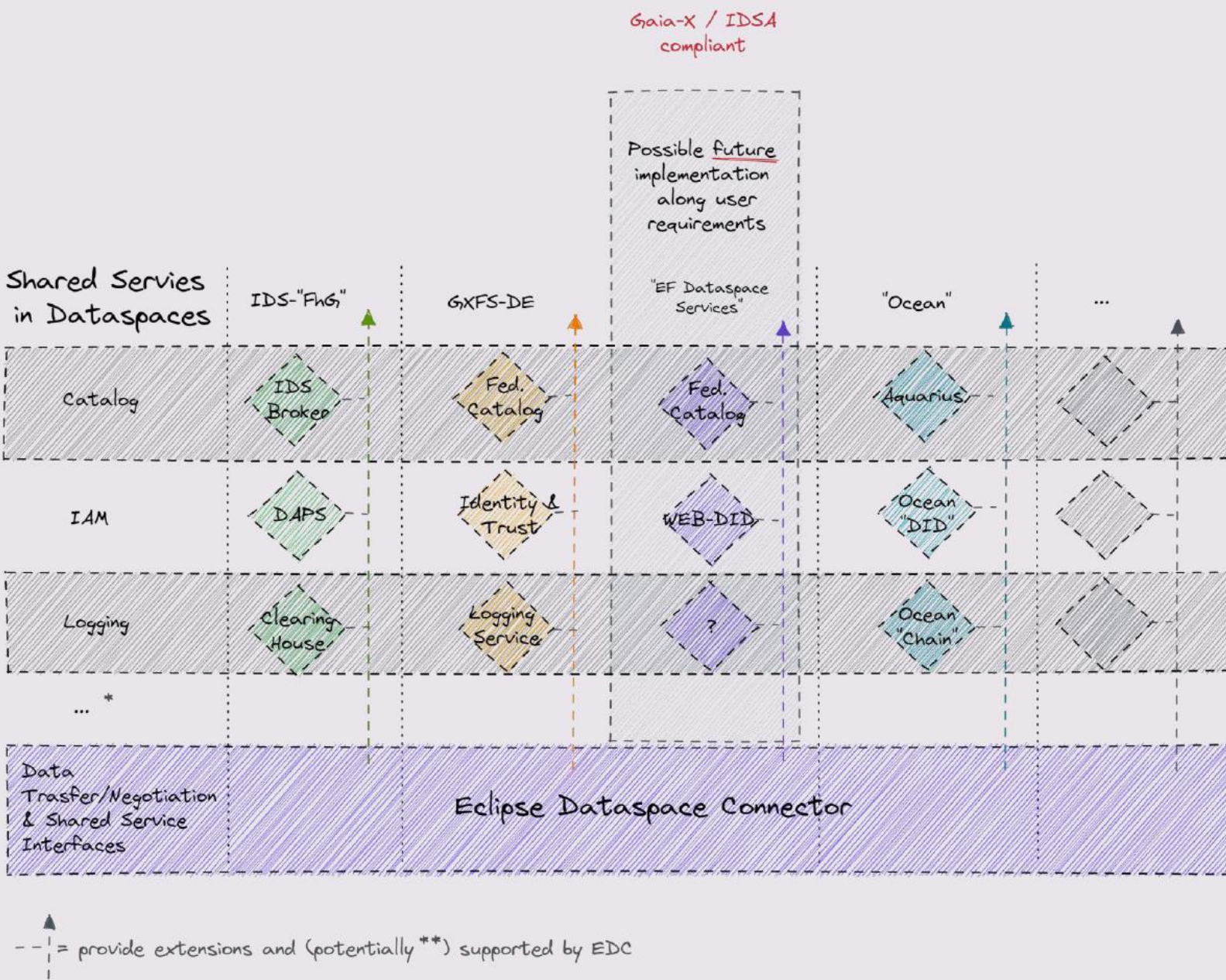
# Technical Capabilities



\*either centralized or decentralized



# Eco-system Integration



\* Examples for other shared services could be the contracting service of GXFS or the AppStore of IDSA

\*\* EDC is committed to support IDSA and Gaia-X based Dataspaces. The support of other specifications depends on contributions to the OSS by other organizations

# Alignment with Gaia-X



- Fulfilment of mandatory and further criteria
  - Support for Gaia-X Trust Framework
  - Support Gaia-X compliant Self-Description
  - Gaia-X Registry Extension and support for Verifiable Credentials (VC)
- Possible alignment with Gaia-X Federation Services v2
- Possible integration with GXFS-DE implementation projects
- Alignment with lighthouse projects (e.g., [Catena-X](#))







- 1 Support of IDS communication protocols, ontology & central services
- 2 Support development of IDS Reference Architecture Model (RAM) 4.0
- 3 Part of IDSA Open Source Landscape (IDSA Graduation Scheme)
- 4 Participating in IDSA committees and working groups
- 5 Maintenance of IDS Infomodel Serializer and CodeGen tools

# Important Links

---

- Eclipse Foundation
  - Eclipse project page: <https://projects.eclipse.org/projects/technology.dataspaceconnector>
  - EDC project proposal: <https://projects.eclipse.org/proposals/eclipse-dataspace-connector>
  - Community mailing list: <https://accounts.eclipse.org/mailling-list/dataspaceconnector-community>
  - Developer mailing list: <https://accounts.eclipse.org/mailling-list/dataspaceconnector-dev>
- GitHub
  - Main Repository: <https://github.com/eclipse-dataspaceconnector/DataSpaceConnector>
  - Documents & presentations: <https://github.com/eclipse-dataspaceconnector/Collateral>
  - Publications: <https://github.com/eclipse-dataspaceconnector/Publications>
- Documentation: <https://eclipse-dataspaceconnector.github.io/DataSpaceConnector/>
- Bi-weekly Q&A session: <https://github.com/eclipse-dataspaceconnector/DataSpaceConnector/discussions/1303>
- YouTube Channel: <https://www.youtube.com/channel/UCYmjEHtMSzycheBB4AeITHg>

# Contact

---

**Julia Pampus, M.Sc.**  
**Research Associate, Data Business**  
**Tel. +49 231 97677 - 429**  
**[julia.pampus@isst.fraunhofer.de](mailto:julia.pampus@isst.fraunhofer.de)**

<https://www.isst.fraunhofer.de/en.html>



Thank You.