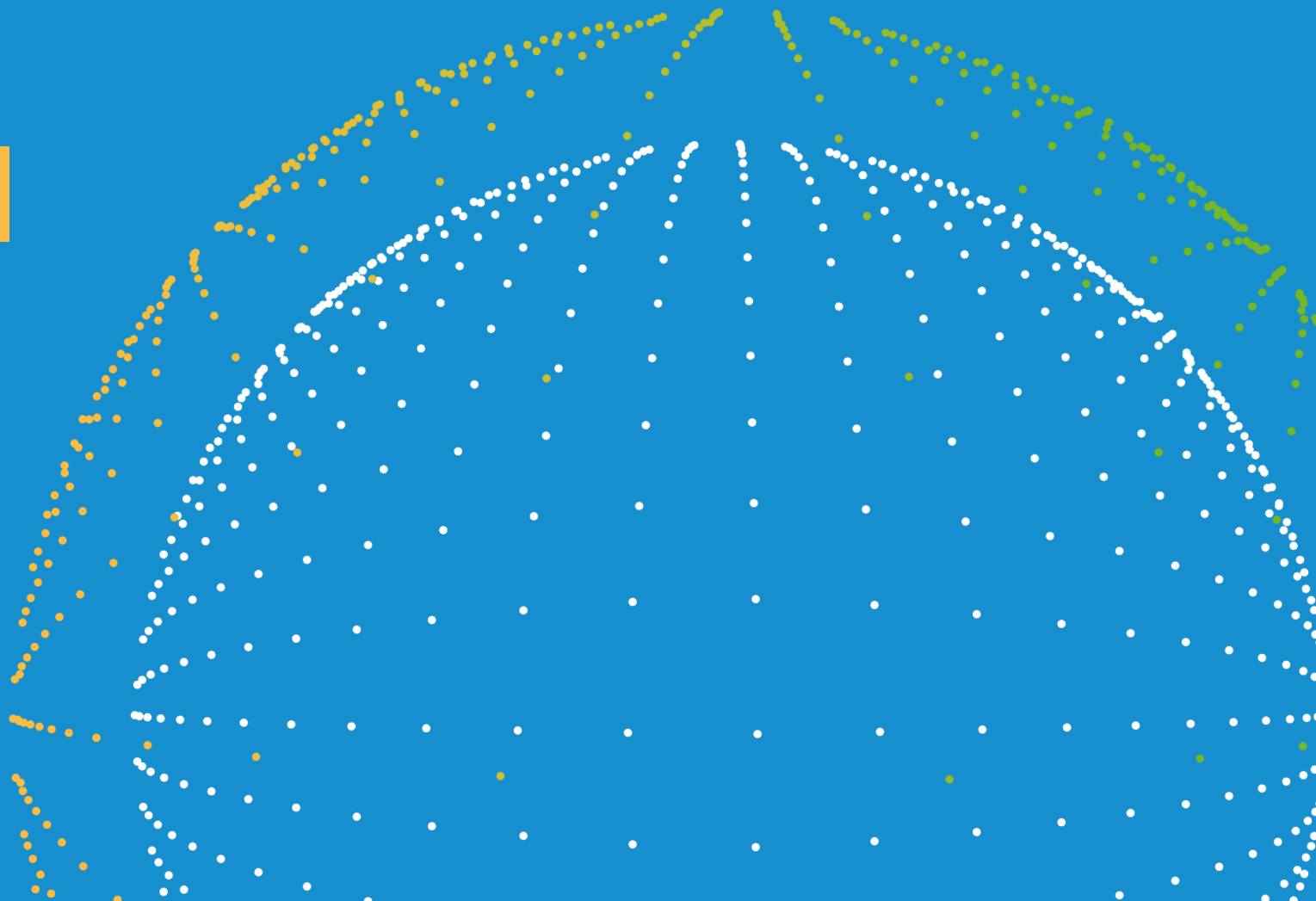
Data Spaces Symposium

Technical realization of data spaces.

12 March 2024

Data Spaces Discovery Day



INTERNATIONAL DATA SPACES ASSOCIATION

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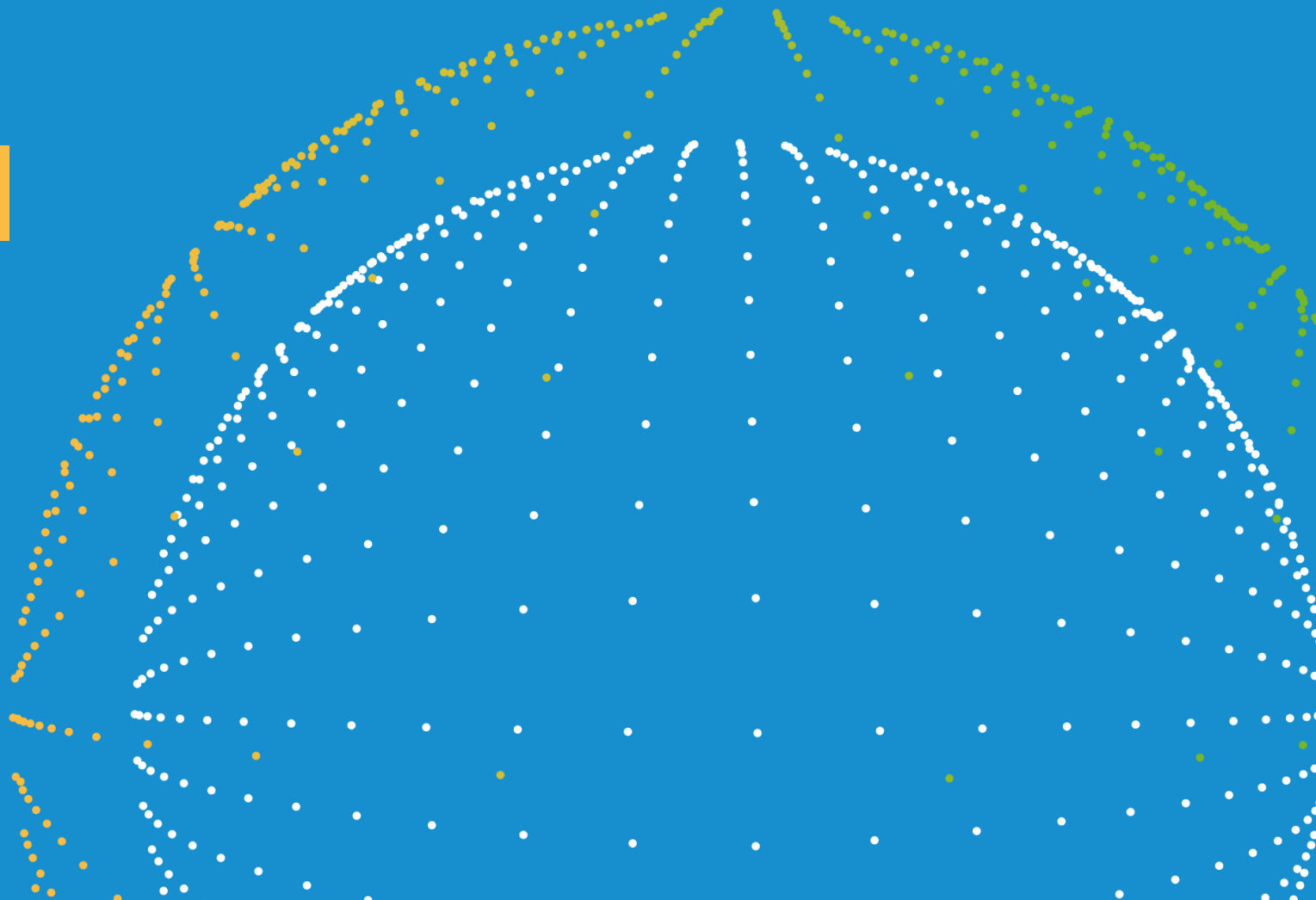


Silvia Castellvi

INTERNATIONAL DATA SPACES ASSOCIATION

Data Spaces Symposium

March 12, 2024 | 14:10 - 16:30 Ferrum

Let's tech talk about connectors
How the new generation of data space connectors supports interoperability

Silvia Castellvi
IDSA

vier Valiño Llamazares
Eclipse Foundation

Gonzalo Gil
Tekniker

Markus Spiekermann
Huawei

Maarten Kollenstart
TNO

Sebastian Opriel
sovity

Lukas Holthof
SAP

Dennis Wendland
FIWARE

Marko Turpeinen
1001 Lakes

Klaus Otravader
EVIDIAN

Let’s tech talk about connectors workshop

How the new generation of data space connectors supports interoperability | March 12, 14:25 to 16:30 | Room: Ferrum

Agenda

14:25 – 14:35 Introduction: Silvia Castellvi, IDSA

14:35 – 14:45 Tekniker IDS connector - Gonzalo Gil, Tekniker

14:45 – 14:55 Eclipse Dataspace Component (EDC) - Markus Spiekermann, HUAWEI

14:55 – 15:05 TNO connector - Maarten Kollenstart, TNO

15:05 – 15:15 Sovity: connector as a service in Omega X project – Sebastian Opriel, sovity

15:15 – 15:25 EDC by SAP - Lukas Holthof, SAP

15:25 – 15:35 FIWARE data space connector - Dennis Wendland, FIWARE

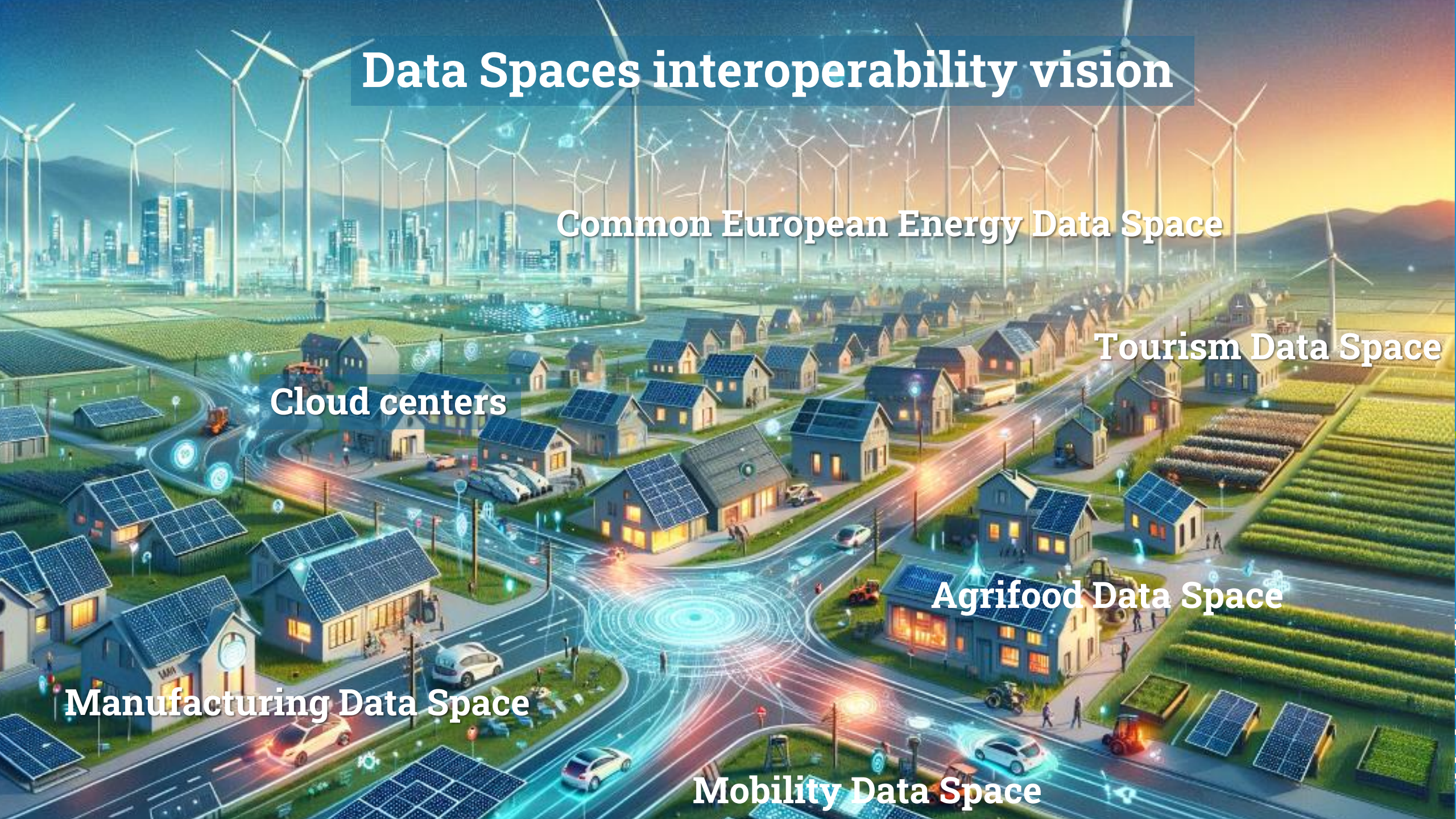
15:35 – 15:45 Business perspective - Markus Turpeinen, 1001 Lakes

15:45 – 16:00 Data Spaces Business Alliance: Achieving data space tech convergence - Klaus Ottradovetz, EVIDIEN

Q&A - Slido

16:00 – 16:30 Round Table Discussion - Moderator: Javier Valiño, ECLIPSE

Q&A – Slido - Results


Data Spaces interoperability vision
Common European Energy Data Space
Tourism Data Space
Cloud centers
Agrifood Data Space
Manufacturing Data Space
Mobility Data Space

Dataspace Protocol

Goals

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1. Support modern data transfer requirements (streaming, big data)
   - Requires asynchronous messaging
2. Achieve interoperability in a dataspace
   - Mix-and-match dataspace components
3. Embody standards best-practices
   - Normative language and clear guidance on conformance
   - Verification test suite for all normative statements

A “minimal interoperability mechanism”

Technical Interoperability

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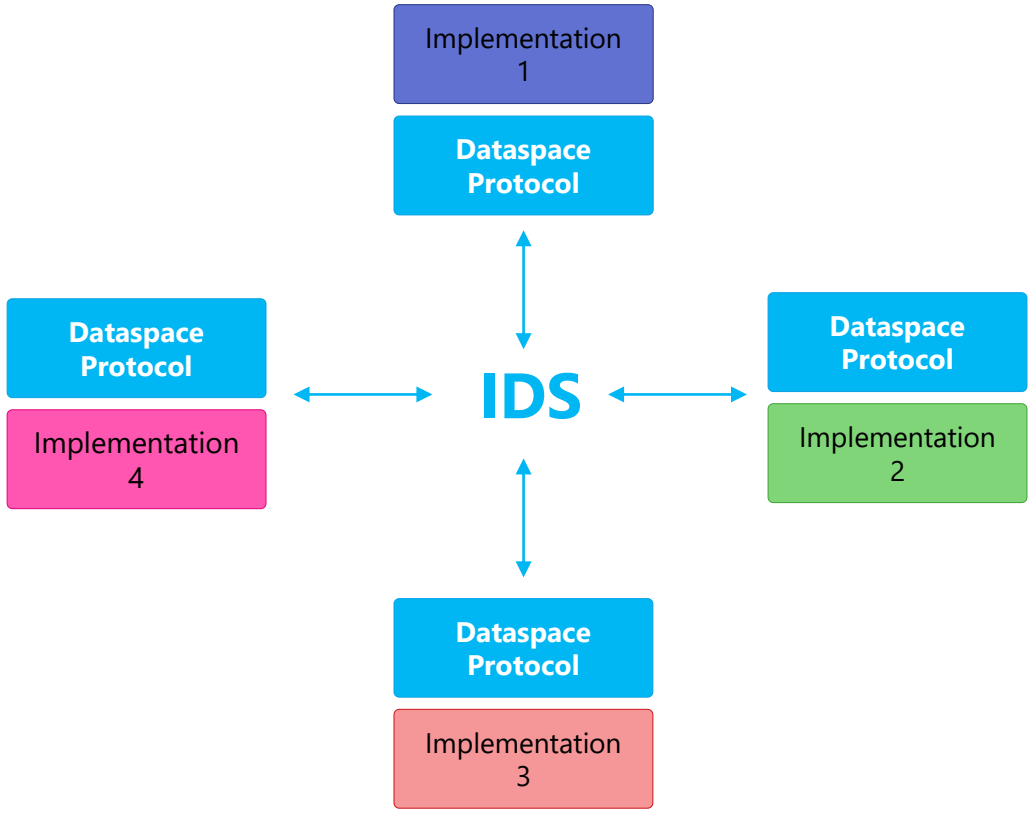

If components are conformant to the Dataspace Protocol Specification, they will be *interoperable (regarding the scope of the Dataspace Protocol)*.

Dataspace Protocol

Foundation for technical Interoperability

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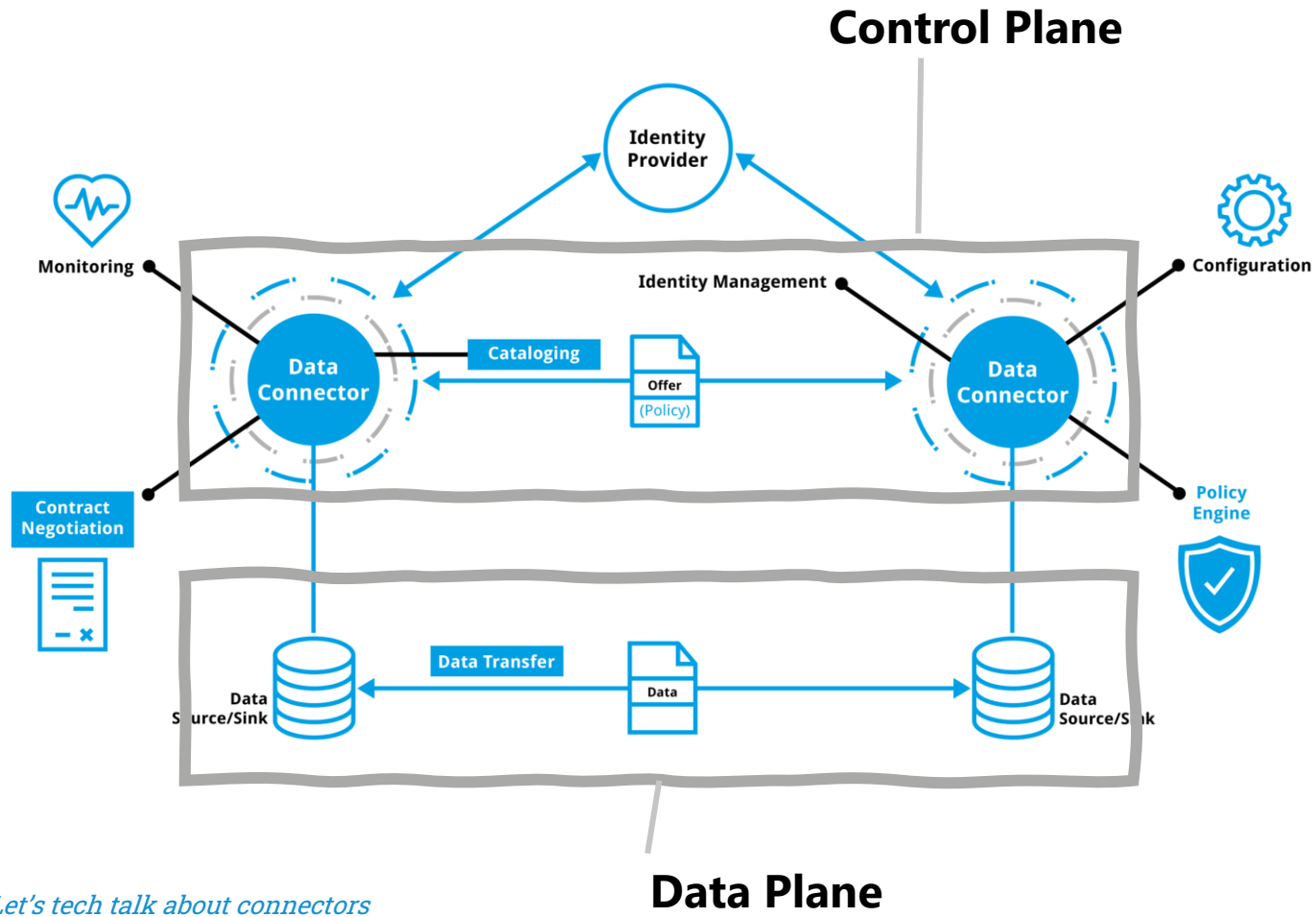


Control Plane provides interoperability Dataspace level

Data Planes will manage interoperability for data exchange

Conceptually divided, can be combined practically

Let's tech talk about connectors

Dataspace Protocol

INTERNATIONAL DATA SPACES ASSOCIATION

IDSA on its way to a global standard – with the dataspace protocol in its core

Global Standardization

W3C · IEEE · CEN CENELEC · ISO

Consensus and harmonization | **Implementations of data connectors** | **Standaridsation** | **DSP Validation certification** | **Scale up**

Eclipse Dataspace Components (EDC) Framework
TNO Security Gateway (TSG)
Tekniker IDS connector
FIWARE data space connector

Data Connectors speaking Dataspace Protocol

DSP project Source code

ECLIPSE FOUNDATION

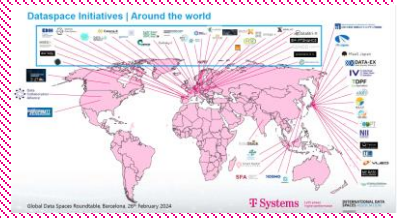
Submit to ISO PAS Contribution to ISO/IEC by June '24 via PAS fast track

Finalize ISO standard by end of '24

ECLIPSE FOUNDATION

IDS Certification 2.0

Criteria for Dataspace protocol & testing (TCK) Offered as a modular certification



The Dataspace Protocol development journey: from definition to scaling up market deployment.

IDS - RAM
IDSA Rulebook
Dataspace Protocol stable version (2024-1)
.....

Connectors implementations on
Data connector report.

Dataspace Protocol specification document
TCK -Technology Compatibility Kit

Dataspace Protocol is at the core of data space standardization.
ISO standardization via PAS fast track.

Dataspace protocol & testing (TCK)
Certification for reliable, industry grade components

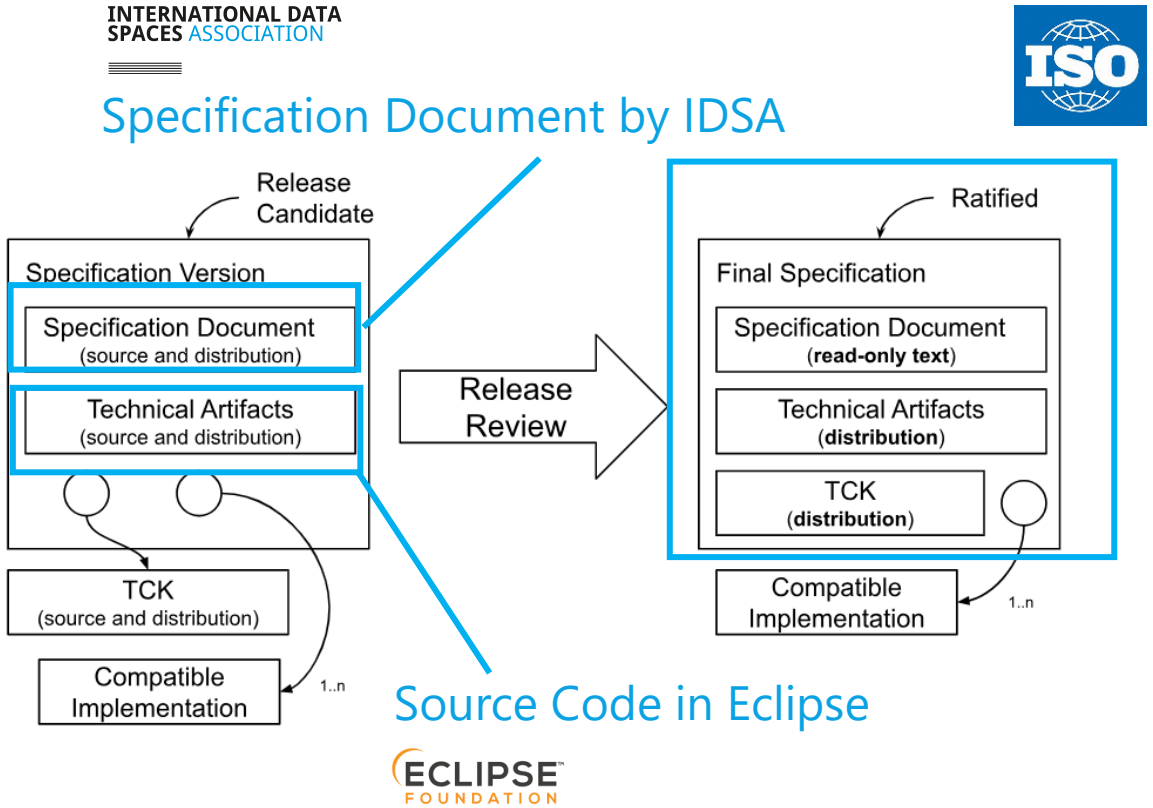
GO TO MARKET
Dataspaces around the world

Way forward Dataspace Protocol

INTERNATIONAL DATA SPACES ASSOCIATION

- Specification Document (created by IDSA) – under the CC-BY License as is
- Create OSS project for TCK -Technology Compatibility Kit – Source Code created under Apache 2 License
- At least one compliant implementation

- Submit to ISO by June ‘24 via PAS fast track
- Finalize ISO standard by end of ‘24



Find the Dataspace Protocol

In the IDSA Knowledge Base
https://docs.internationaldataspaces.org/ids-knowledgebase/v/dataspace-protocol
On GitHub
https://github.com/International-Data-Spaces-Association/ids-specification

Milestones

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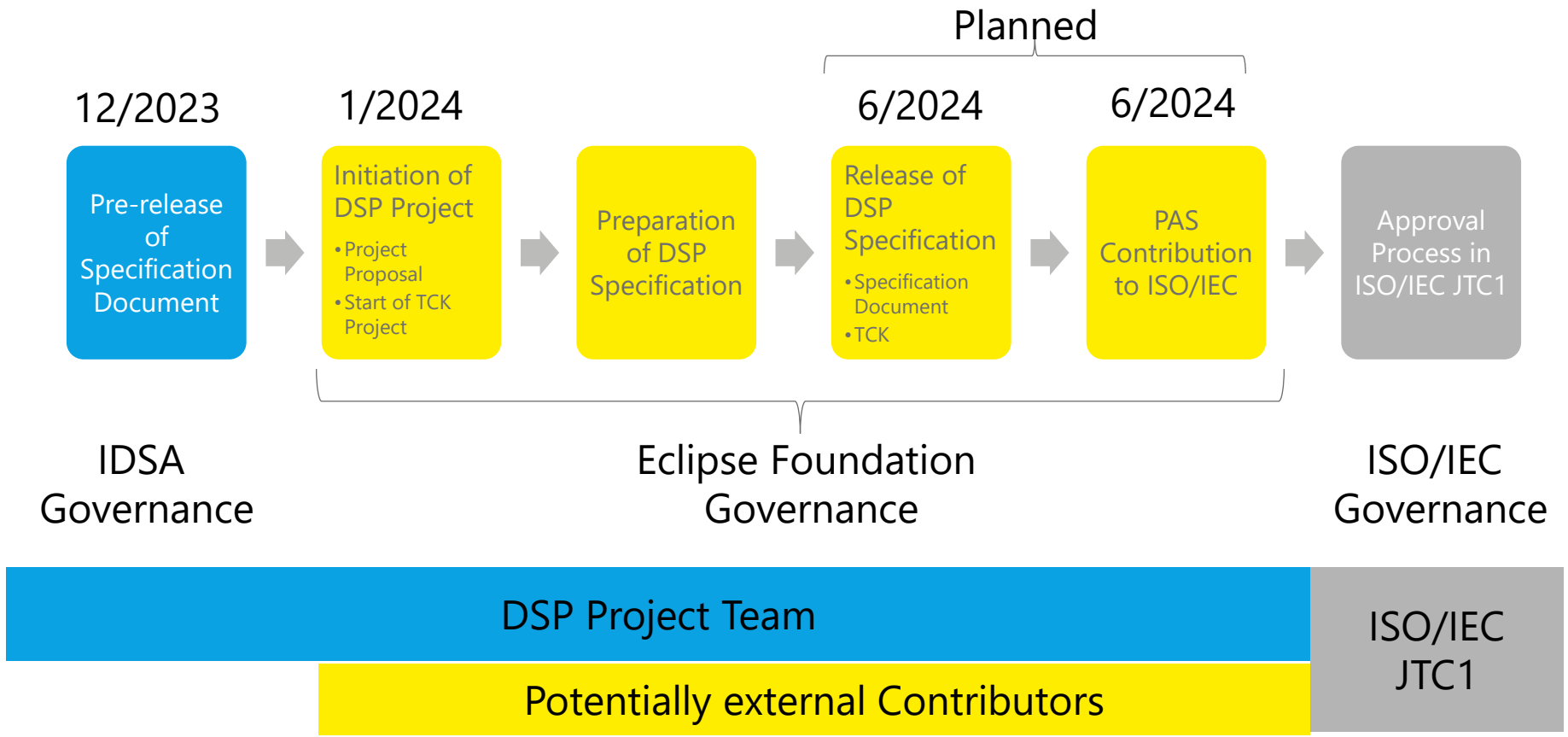


Dataspace Protocol 2024-1

Where to find more information

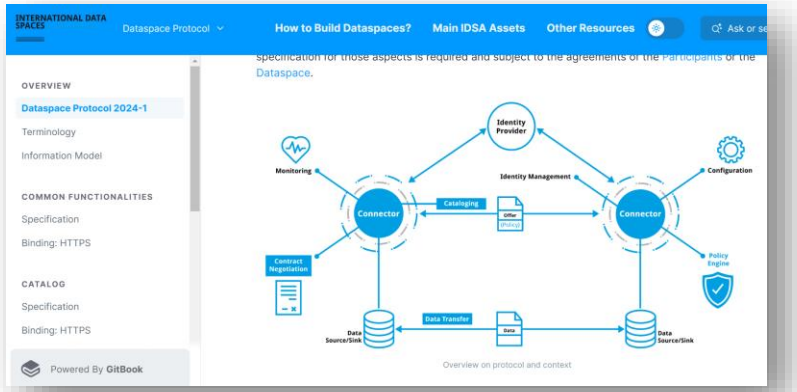
INTERNATIONAL DATA SPACES ASSOCIATION

- *IDSA Knowledge Base/ Dataspace Procol*

https://docs.internationaldataspaces.org/ids-knowledgebase/v/dataspace-protocol/overview/readme

- Github/International Data Spaces Association/IDS-specification

https://github.com/International-Data-Spaces-Association/ids-specification



IDS Tech Talk
Dataspace Protocol
November, 2023

https://internationaldataspaces.org/archive/

Click here to see the talk

Click here to take a look inside

Data Connector Report

A monthly publication from IDSA

INTERNATIONAL DATA SPACES ASSOCIATION

Issue #12 February 2024

[Click here to take a look inside]

[Click here to provide feedback or add a connector]

Why a Data Connector Report?

- To explain what data connectors are and why they are crucial in data spaces
- To provide transparency about the number of connector implementations available, their maturity and features, following their evolution over time
- To explain how data connectors can be technically interoperable
- To provide additional insights on related technologies and initiatives

Let’s tech talk about connectors workshop

Data space protocol. Slido questions

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Let’s tech talk about connectors workshop

Round table. Moderator: Javier Valiño, ECLIPSE

Question 1.

1. Introduction of the Interoperability and importance of data space protocol standardization.
   - Based on the experience from those who have implemented the Data Space Protocol. What were the most significant challenges you encountered while implementing the Data Space Protocol in your project? How did you overcome these challenges? Are there any solutions or workarounds you discovered that might benefit others? What advantages have you observed since implementing the Data Space Protocol? How has it impacted to interoperability?

   - What are the main advantages or motivations for organizations that are in the early stage or considering implementing the Dataspace Protocol?

Let’s tech talk about connectors workshop

Round table. Moderator: Javier Valiño, ECLIPSE

Question 2.

2. Interoperability should be defined also at trust level, when selecting technology or a connector for a project, what criteria does the technical architecture use to ensure trust compatibility with de facto current standards? How do you navigate the decision-making process?
   - The data space protocol doesn't explicitly specify how to manage trust between different connectors. Can you share how your organization has approached this challenge? With the growing interest in SSI as a means to manage identities and credentials, how has your organization incorporated SSI governance models?
   - How does your implementation of the Data Space Protocol handle the validation and authentication of entities participating in a data space? What measures have you put in place to manage credentials effectively, particularly concerning compliance with frameworks like IDSA & Gaia X?

Let’s tech talk about connectors workshop

Round table. Moderator: Javier Valiño, ECLIPSE

Question 3.

3. This final question is pivotal for understanding the broader context within which the Data Space Protocol operates, recognizing that technical interoperability is just one piece of the puzzle.
   - What additional elements are crucial to ensure the comprehensive effectiveness of data spaces? How do you integrate these elements with the Data Space Protocol to create a cohesive ecosystem?