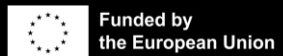




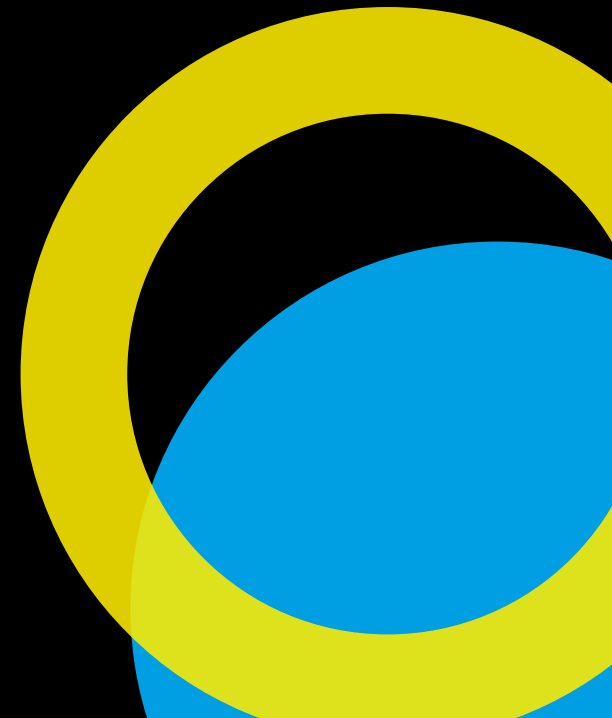
International perspectives on trusted data sharing

Brazil: The Federated Industrial Data Space Demonstrator – from industrial data to cross-border trust and competitiveness

Flavio Maeda | ABINC



This event is organised as part of the project PLIADES, which integrates data life cycles across sustainability and manufacturing operations in the process industry. PLIADES receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135988.





A Federated Industrial Data Space Demonstrator

Hannover Messe





Open Industry

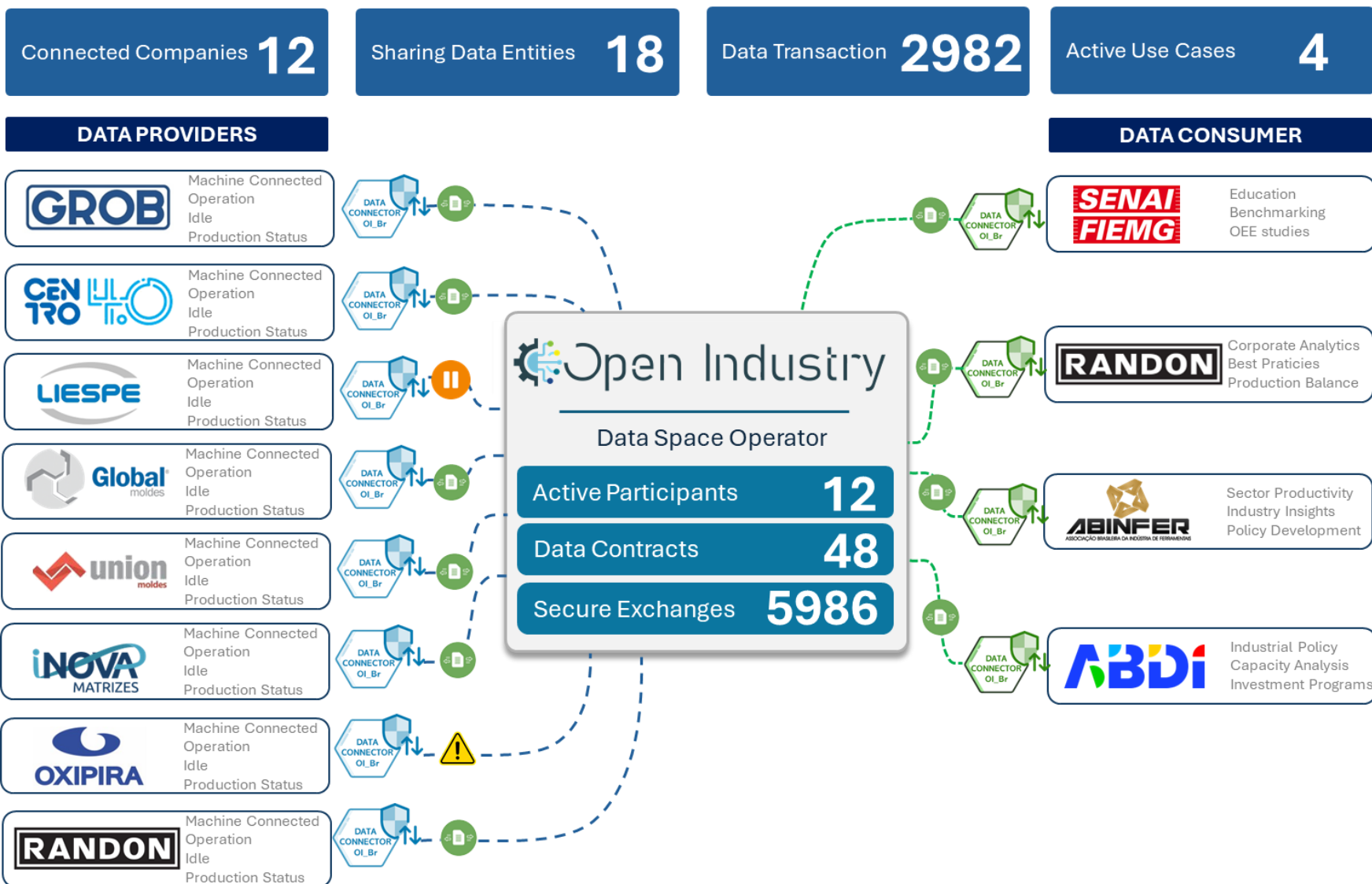


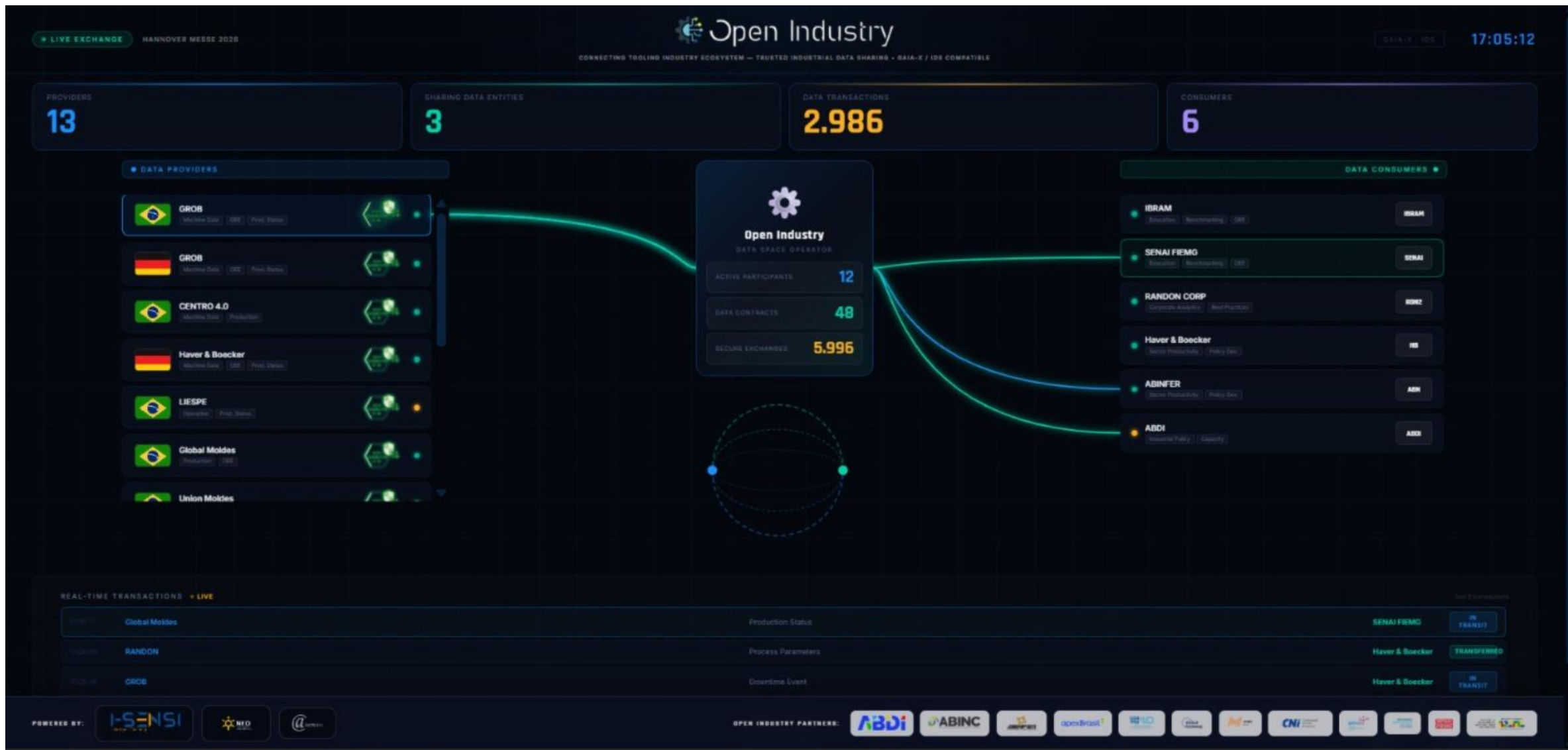
www.openindustry.org.br

Contact Info: ct.manufatura@abinc.org.br

OPEN INDUSTRY – LIVE DATA EXCHANGE

Connecting Tooling Industry Ecosystem - enabling trusted industrial data sharing







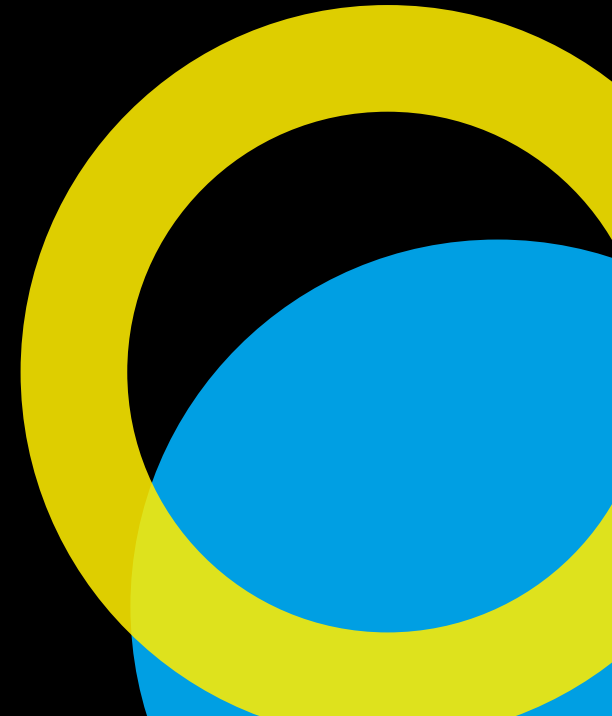
International perspectives on trusted data sharing

Brazil: AutoBras Dataspace Demonstrator – Controlled and trusted data sharing along the supply chain

Mateus Silva Pierre | ELDORADO



This event is organised as part of the project PLIADES, which integrates data life cycles across sustainability and manufacturing operations in the process industry. PLIADES receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135988.



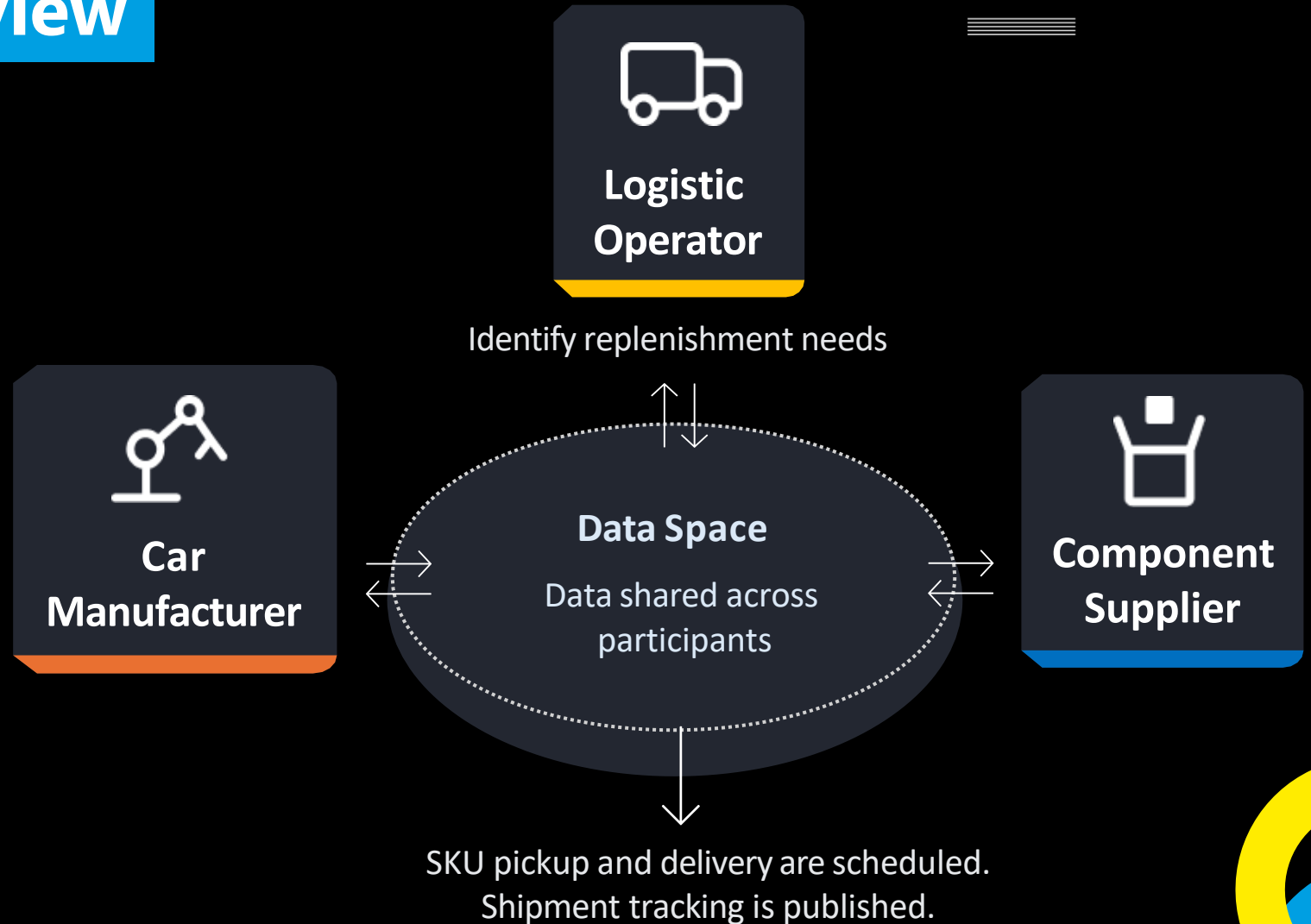


AutoBras Dataspace
Mateus Pierre | ELDORADO
mateus.pierre@eldorado.org.br

Automotive Overview

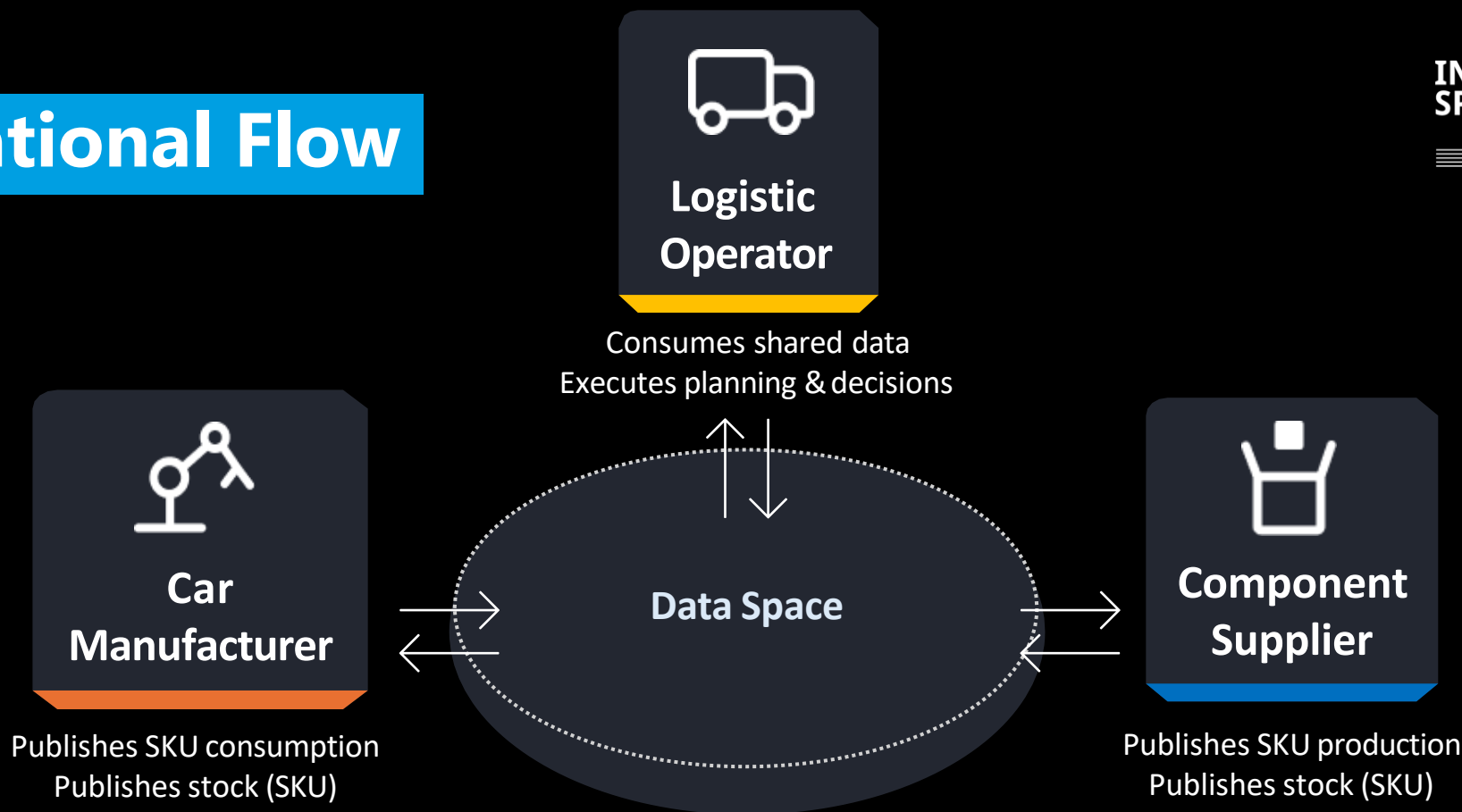
An shared data ecosystem connecting OEM, supplier and logistics operator, sharing SKU inventory, SKU production, SKU consumption and logistics data.

Improves coordination, visibility and decision-making across the supply chain.



Operational Flow

INTERNATIONAL DATA
SPACES ASSOCIATION



1

The auto manufacturer publishes daily consumption and inventory by SKU

2

The supplier publishes daily inventory and production by SKU

3

Logistics uses all data to perform replenishment analyses

4

Logistics publishes replenishment orders for supplier and manufacturer

5

Auto manufacturer and supplier consume the orders from logistics

Business Impact

INTERNATIONAL DATA
SPACES ASSOCIATION



Operational Efficiency

Synchronized planning across partners



Stock Optimization

Reduced shortages and overstock



End-to-End Visibility

Real-time tracking across supply chain



Data Sovereignty

Full control over shared data



Governance & Compliance

Support for SLA, KPIs and audits

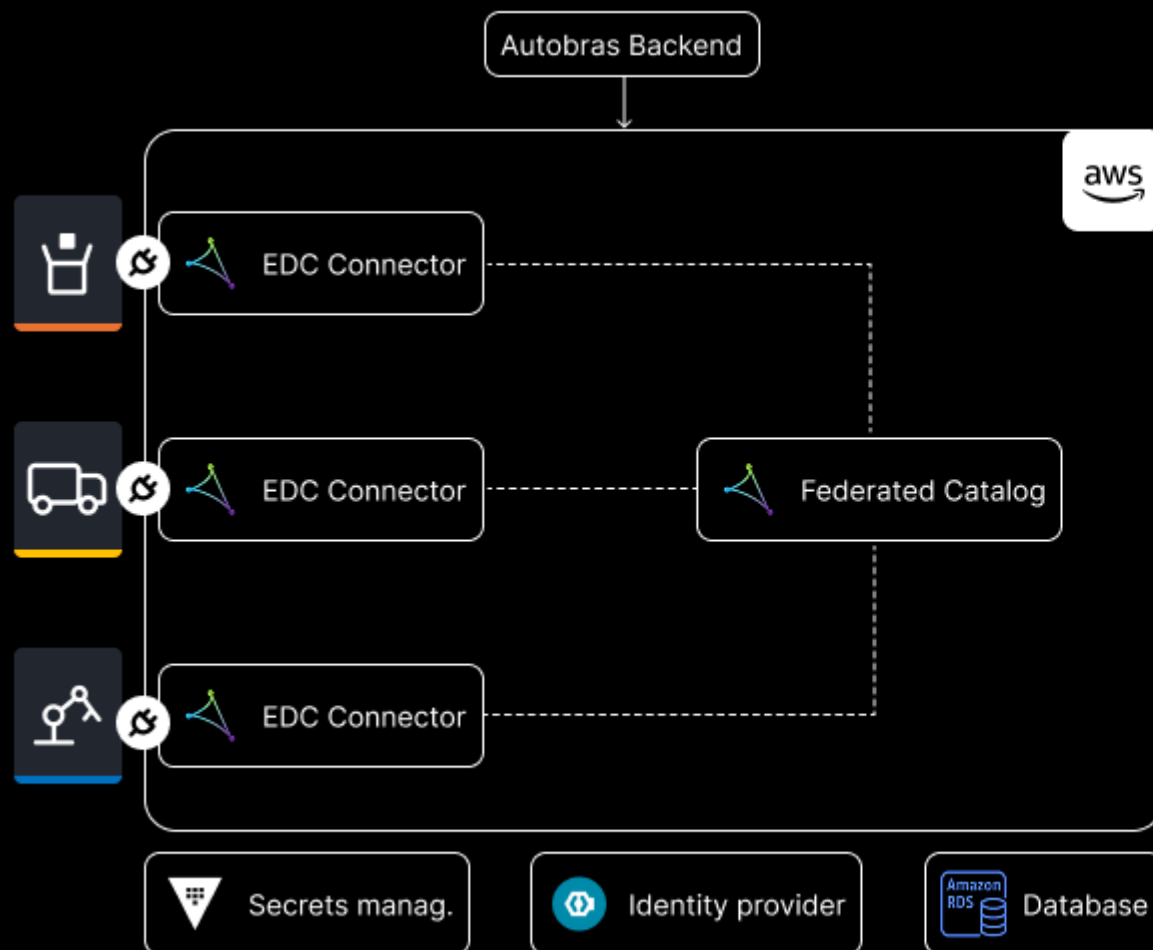


Smarter Decision-Making

Data-driven replenishment and planning



Architecture Overview



Code languages



Java



Python



React

Techonologies



Amazon Web Services



Eclipse EDC (0.15.1)



Hashicorp Vault (1.15)



Keycloak (26.2)





Thank You!



ELDORADO
INSPIRAÇÃO PELO NOVO





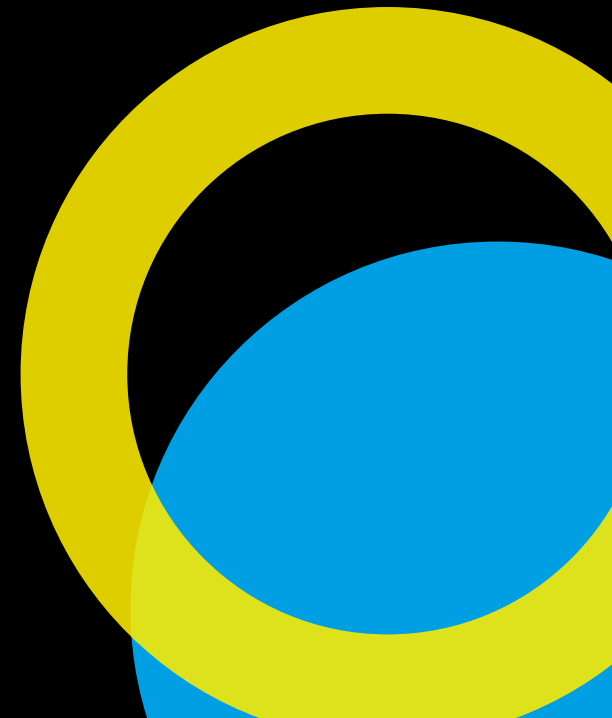
International perspectives on trusted data sharing

US: i3X – Digitalization & data exchange, AI-driven production & ecosystems

John Dyck | CESMII & Erich Barnstedt | Microsoft



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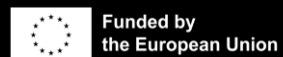




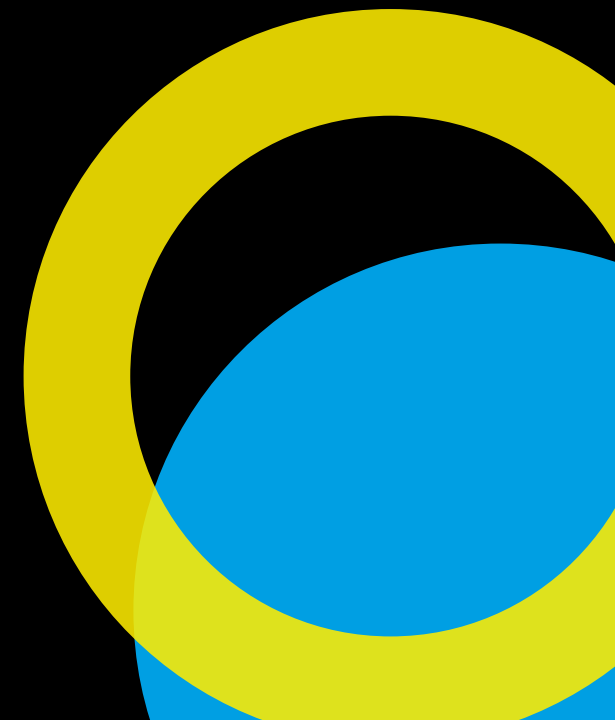
International perspectives on trusted data sharing

US: The Genesis Mission

Douglas Ramsey | Axial GA



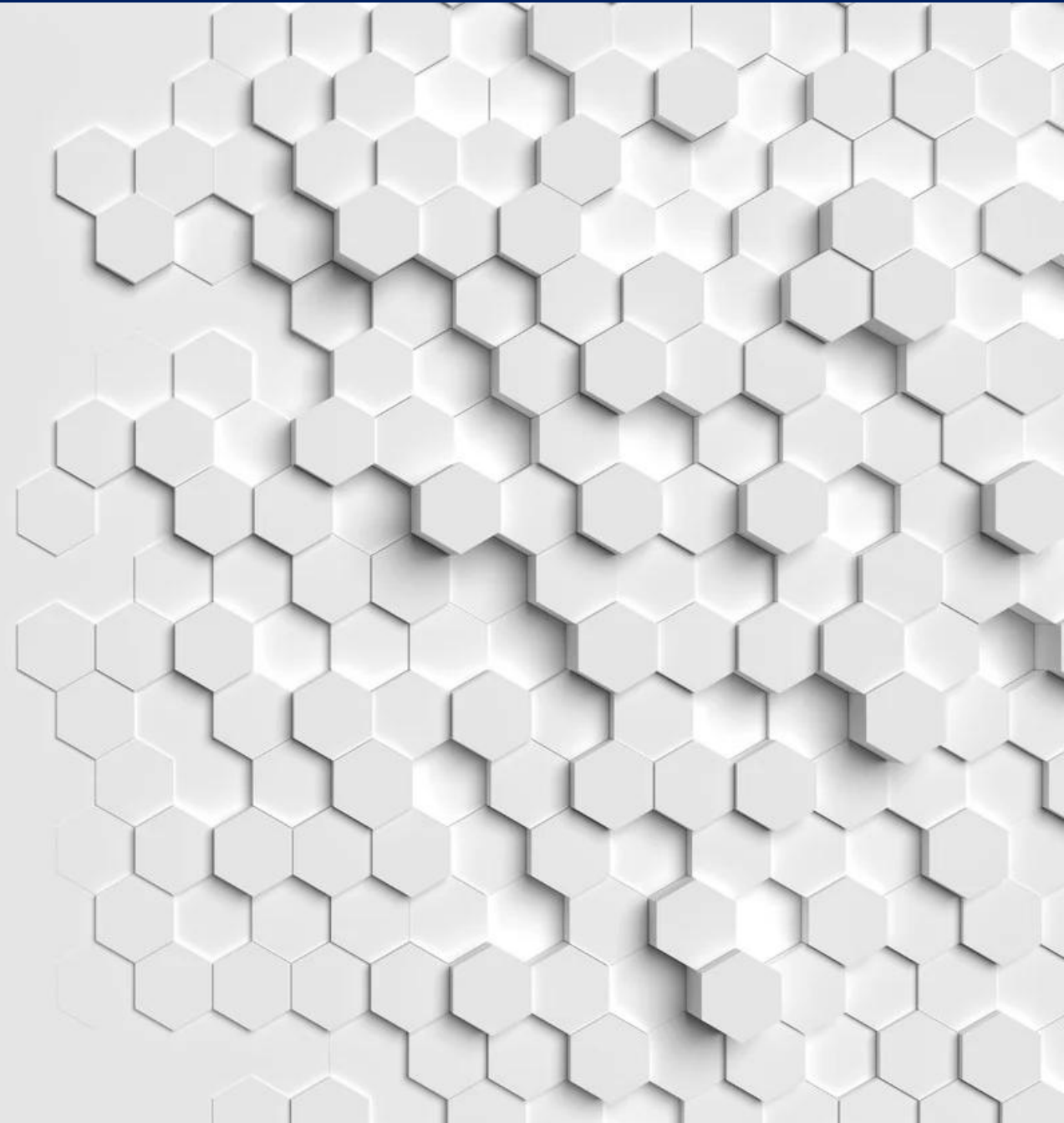
This event is organised as part of the project PLIADES, which integrates data life cycles across sustainability and manufacturing operations in the process industry. PLIADES receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135988.





US Genesis Mission, AI-Driven Discovery, and the IP Challenge

Douglas Ramsey
Managing Partner, Axial Global Advisors
April 2026



Data is the Fuel for AI-Driven Innovation – IP Management is Challenge

Data Sharing for AI-Driven Discovery

- The Genesis Mission aims to create a single data sharing systems that will allow the US' 17 national labs to share proprietary data to train AI to accelerate innovation in 26 different sectors (Nuclear fusion, quantum computing, manufacturing, energy grid, rare earth materials, etc).

Urgent Need for Federated Data Sharing at Scale

The formal program was launched in early 2026 and is currently set to fund 40-50 new projects with \$293m in initial funding. The program does not specify the intent to build a “Data Space”; however, they will functionally create a new federated sharing data model to address the goal of sharing data to drive AI.

Data Sharing & IP AI Innovation Ownership Challenge

- A major pillar of this initiative is a White House Directive to develop a new IP management model that supports data sharing and incentivizes contribution through some form of IP rights for contributors. It's still very early in the program, so it is unclear how this will be resolved.

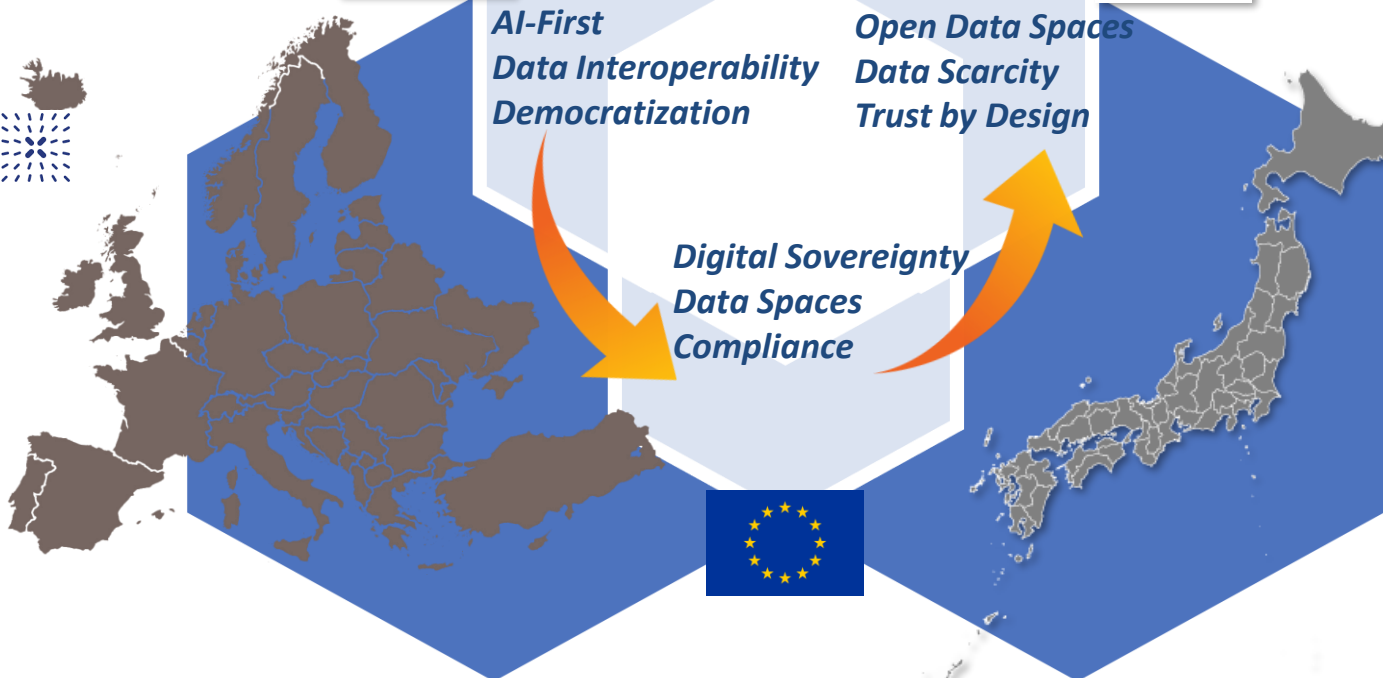
US Industry Is Committed

As part of the Genesis Mission, USG identified over 90 current federal contractors that are obligated to participate. This includes all the major AI and cloud companies as well as companies such as NVIDIA, Lockheed Martin, Northrop Grumman, and others.



The result of this program will be a federated data sharing platform or protocol that focuses leveraging proprietary data to train AI while also ensuring that ownership and IP can be traced, and discoveries can be commercially shared.

Digital Transformation (DX) & Federated Data Exchange International Priorities



Open Discussion Items

- AI and Federated Data Exchange
- Need to Access 'Dark Date'
- AI Output IP Challenge
- Data Monetization Strategies
- Data Security Risks
- Connectors & AI-Agents
- Reduced Complexity



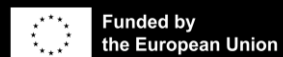
一般社団法人xIPFコンソーシアム



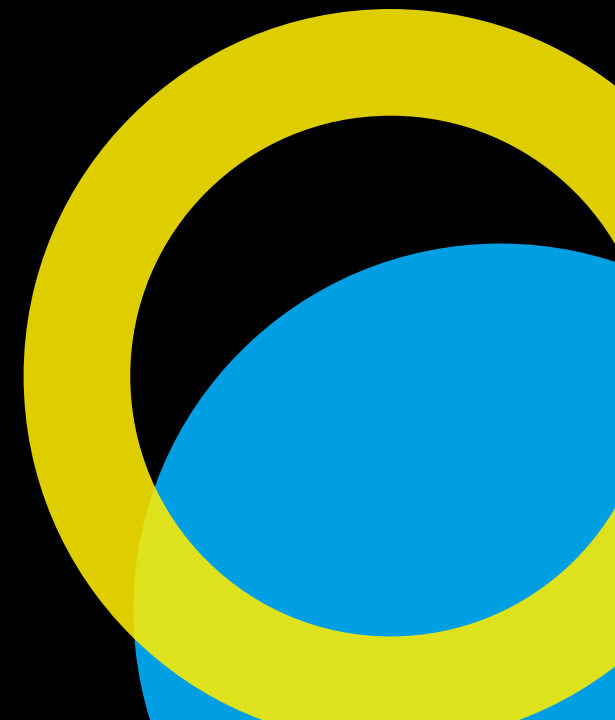
International perspectives on trusted data sharing

Japan: Unlocking practical value of data through data spaces

Miki Kanno & Masaru Dobashi | NTT DATA



This event is organised as part of the project PLIADES, which integrates data life cycles across sustainability and manufacturing operations in the process industry. PLIADES receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135988.



Unlocking Practical Value of Data Through Data Spaces

Technology and Innovation General Headquarters, NTT DATA

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Moving forward
in harmony.

土橋 昌 (Masaru DOBASHI)

■ Initiatives

- Development and implementation of **enterprise data utilization platforms** leveraging **parallel distributed processing** and **open source software**.
- Development and implementation of **inter-company and cross-industry data collaboration** and **Data Spaces technologies**.
- Awareness-raising, model development, and deployment to strengthen **enterprise data utilization capabilities**.

■ Roles

Executive IT Specialist / Senior Specialist (NTT DATA), Visiting Researcher (University of Tokyo), Senior Expert (IPA), DSA, IOFDS Vice Chair, IDSA Ambassador



United Nations WG



Data Spaces Symposium



Miki KANNO : NTT DATA

My role

- Manager
- Working for NTT DATA
- In charge of **leading Innovation related to data exchange and collaboration for data spaces.**
- Experience in developing mission-critical projects for large-scale public systems
- Experience in technical support for data processing infrastructure projects on distributed processing, OSS



My Recent Activities

- Presentation : Data Space Week, IOFDS, Gaia-X Tech-X Conference & Hackathon7 etc.
- Data Space Strategy Lead
- Leading Developing Solution :NTT DATA's Solution for Secure Inter-Company Data Collaboration
- Member of IOFDS, DSA
- Creating Global Team
- Interview form Forbes, Gaia-X Her Voice in Tech: 3 Questions



Presentation :
Gaia-X Tech-X Conference &
Hackathon7



Developing Solution :
NTT DATA's Solution for Secure Inter-Company Data Collaboration
<https://www.youtube.com/watch?v=vnt5bjZENPY>
<https://www.nttdata.com/global/ja/news/topics/2025/032601/>



Leading Global Team
<https://www.nttdata.com/global/ja/news/topics/2025/031001/>



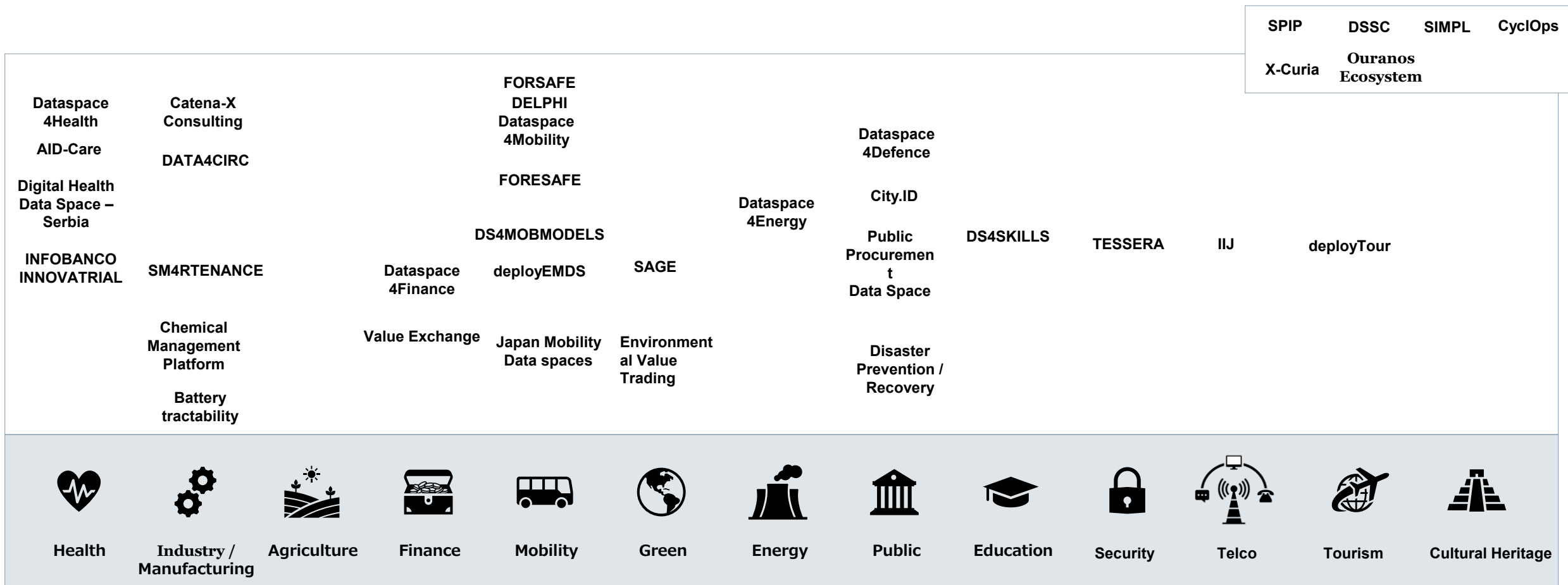
Forbes
LinkedIn: <https://www.linkedin.com/feed/update/urn:li:activity:7298730943169654785>
Twitter: https://x.com/gaiax_aisbl/status/1892965880432128327
Website: <https://gaia-x.eu/her-voice-in-tech-3-questions-with-miki-kanno/>



Gaia-X Her Voice in Tech

NTT DATA's Global Activity Examples on Data Spaces

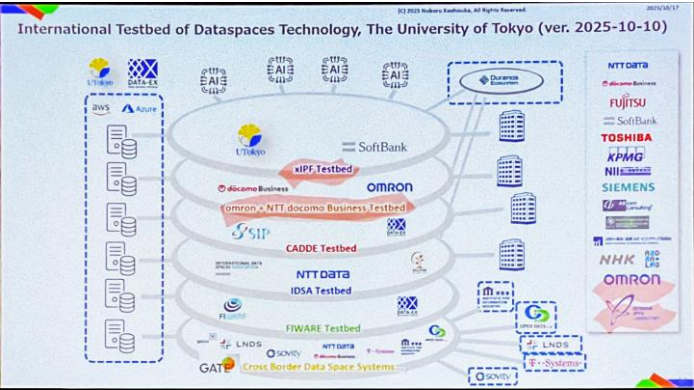
NTT DATA actively contributes to data space initiatives across 13 industry domains, from healthcare and mobility to energy and public services. The map below illustrates examples of our broad portfolio of over 30 projects and partnerships driving trusted, sovereign data exchange globally.



International Testbed of Dataspaces Technology & IDSA Japan Hub, U. Tokyo



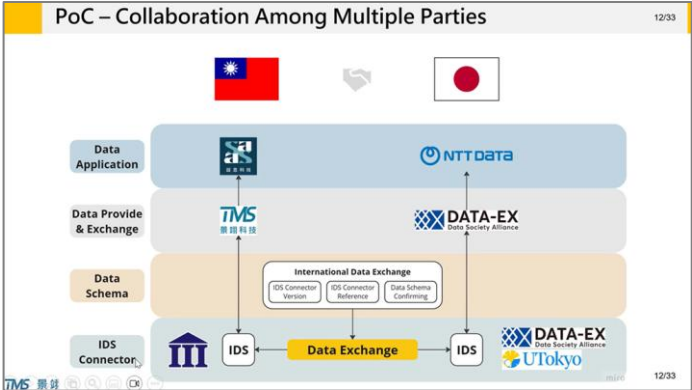
Launched in July 2024 under Prof. Noboru Koshizuka, the International Testbed of Dataspaces Technology (ITDT) at the University of Tokyo operates multiple dataspace OSS including CADDE, EDC, and FIWARE. Participants include Toshiba, SoftBank, NTT Docomo Business, OMRON, and Fujitsu. ITDT is advancing interoperability testing with IDSA/Gaia-X in Europe, international collaboration with Malaysia, and—following a 2025 workshop with Sovity—the practical deployment of DSaaS technology.



ITDT Overview



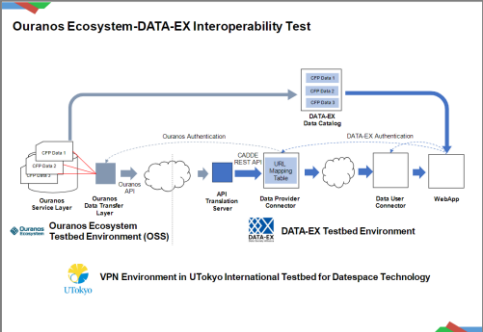
Project leaders



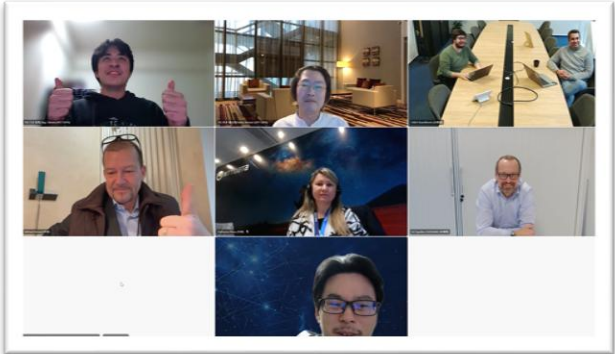
w/ Taiwan



Hands-on and pre-seminor



Battery Traceability and CADDE



w/ Luxembourg

Why Data Spaces?: AI's Next Bottleneck Isn't Compute—It's Cross-Organization Data

Model progress is plateauing—what drives AI advantage next is access to data your organization doesn't own.

01

AI plateaus on model alone

Scaling compute and parameters is hitting diminishing returns. The next frontier is data—diversity, freshness, and coverage beyond any single organization.



02

80% of industrial data is never used

And the data that matters most often sits outside your organization. AI agents stall the moment they need partners', suppliers', or customers' data.



03

But sharing stalls on trust

Contracts take months. Usage is unenforceable. Provenance is unclear. Data sharing remains a liability—which is why it hasn't scaled, despite the demand.

Data spaces turn data sharing from a liability into infrastructure—the missing piece for AI at scale.

Source: European Commission, EU Data Act impact assessment (2022).

Data Space 2.0?

Shift the Subject: From Ecosystem-First to Firm-First

Ecosystem-level framing dilutes incentives. Firm-level framing creates them — and network effects follow as a byproduct.

BEFORE — ECOSYSTEM AS SUBJECT

"What should the industry share?"

Data spaces framed as a collective asset, governed by the ecosystem as a whole.

- Incentives diffuse — no single party feels the payoff
- Participation reads as contribution, not investment
- Network effects required **before** any value appears

AFTER — FIRM AS SUBJECT

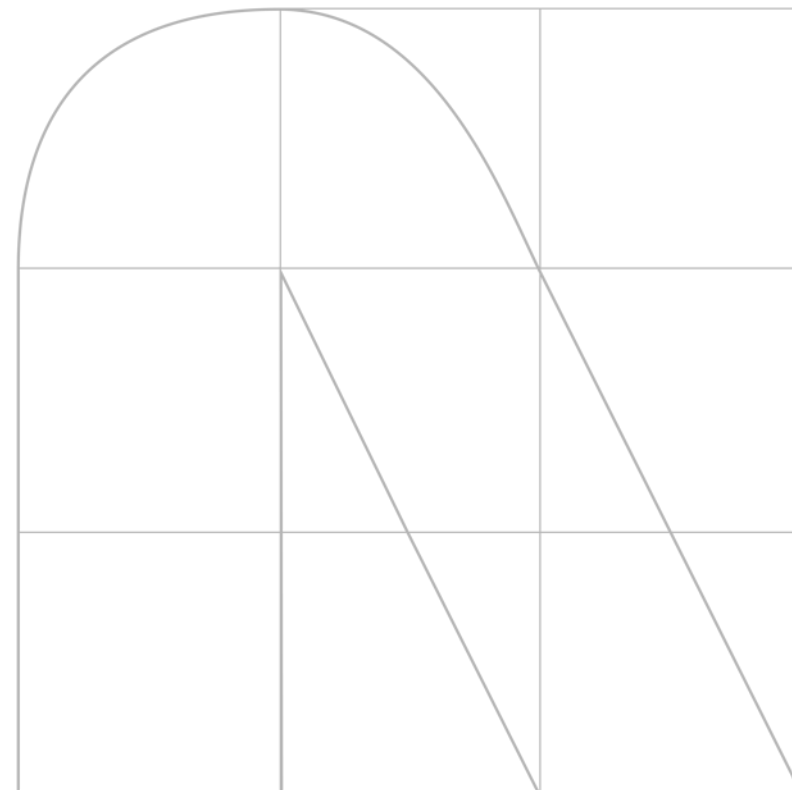
"What problem does sharing solve *for me*?"

Start from the firm's own pain point, then widen the data scope as the solution matures.

- ▶ Solve a concrete firm pain (traceability, forecasting, Scope 3)
- ▶ Expand data scope as ROI compounds
- ▶ Network effects emerge **as a byproduct**, not a prerequisite

Design for one firm's problem in a way that's easier to extend than to rebuild — and the network builds itself.

Key contributions



Four examples of our contribution: firm-first, flexible, scalable

Each example solves a concrete enterprise problem while amplifying what only a data space can offer: interoperability across organizations, privacy-preserving use of sensitive data, decentralized AI-ready access, and trust anchored in public identity — letting firms keep control of their own data while unlocking value they cannot achieve alone.

- 01 Open Data Spaces (ODS)**
Contribution to Japan's full open dataspace stack — published April 2026.

- 02 Secret Processing**
Five functions that make sensitive data shareable without compromising privacy.

- 03 Trusted Data Sharing × Federated RAG**
Unlocking enterprise data for AI — without centralization.

- 04 Digital Agency × GBizID**
Experimental connection tests on Japan's public corporate authentication.

Example 1: Contribution to Open Data Spaces (ODS): Japan's Full Dataspace Stack, Published April 2026



IPA/DADC released the complete ODS suite on 2026-04-01 — positioning 2026 as the "Data Depletion Year" when high-quality LLM training data begins to run out (Epoch AI).

01

Why Open Dataspaces

DESIGN PHILOSOPHY

Why now?

Frames 2026 as the 'Data Depletion Year' — high-quality LLM data runs out 2026–2032 (Epoch AI). Dark data inside firms must be unlocked.

02

ODS-RAM

REFERENCE
ARCHITECTURE

How to think about it?

4 loosely-coupled layers × 4 perspectives. Logical compatibility with IDS-RAM keeps Japan interoperable with Europe.

03

ODP

PROTOCOL
SPECIFICATION

How do systems talk?

Technical specs realizing the four RAM layers: Discovery, Trust, Transfer, Data Sovereignty.

04

Middleware + SDKs

REFERENCE OSS

How do I build it?

Open-source core components plus Onboarding SDK and Semantics SDK — cut integration cost for commercial services.

05

Guidebooks

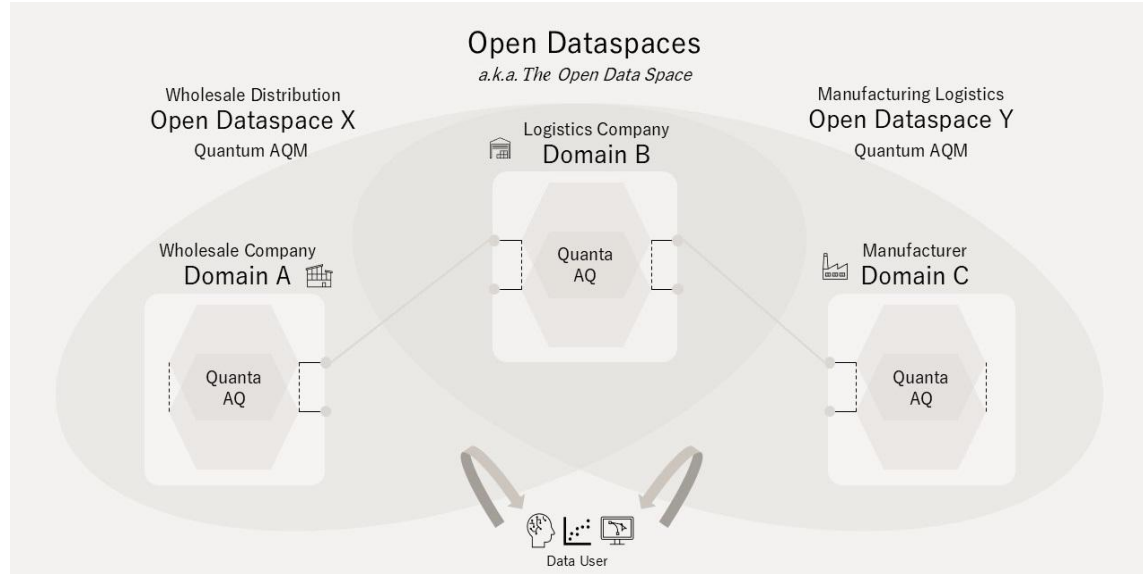
USERS &
DEVELOPERS

Where do I start?

Business-planner guide (entry / role / investment) and engineer guide (design / implement / operate).

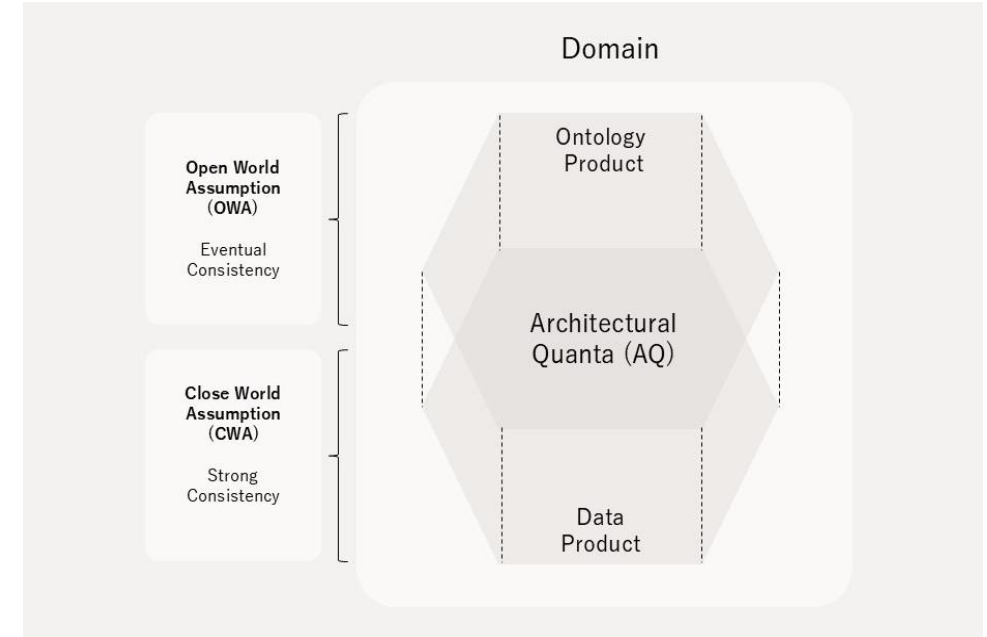
An open, technology-neutral dataspace suite — design philosophy, reference architecture, protocol, OSS middleware, and guidebooks, all published together.

ODS basic concepts: Open Dataspaces Architecture: Double-Product Quanta Model (DPQM)



Federated Dataspaces

Domains (Quanta AQ) from multiple organizations interconnect to form industry-specific dataspace such as Wholesale Distribution (X) and Manufacturing Logistics (Y). Data users can obtain and utilize data across organizational and national borders.



Architectural Quanta (AQ) inside a Domain

Ontology Product follows the Open World Assumption (OWA) with eventual consistency; Data Product follows the Closed World Assumption (CWA) with strong consistency. AQ bridges the two layers and reconciles the trade-off between data providers and consumers.

Example 2: Secret Processing Technology

Secret Processing technology satisfies two requirements by the following five functions.

Requirement 1. Data of multiple data providers are protected

Requirement 2. Algorithm is protected

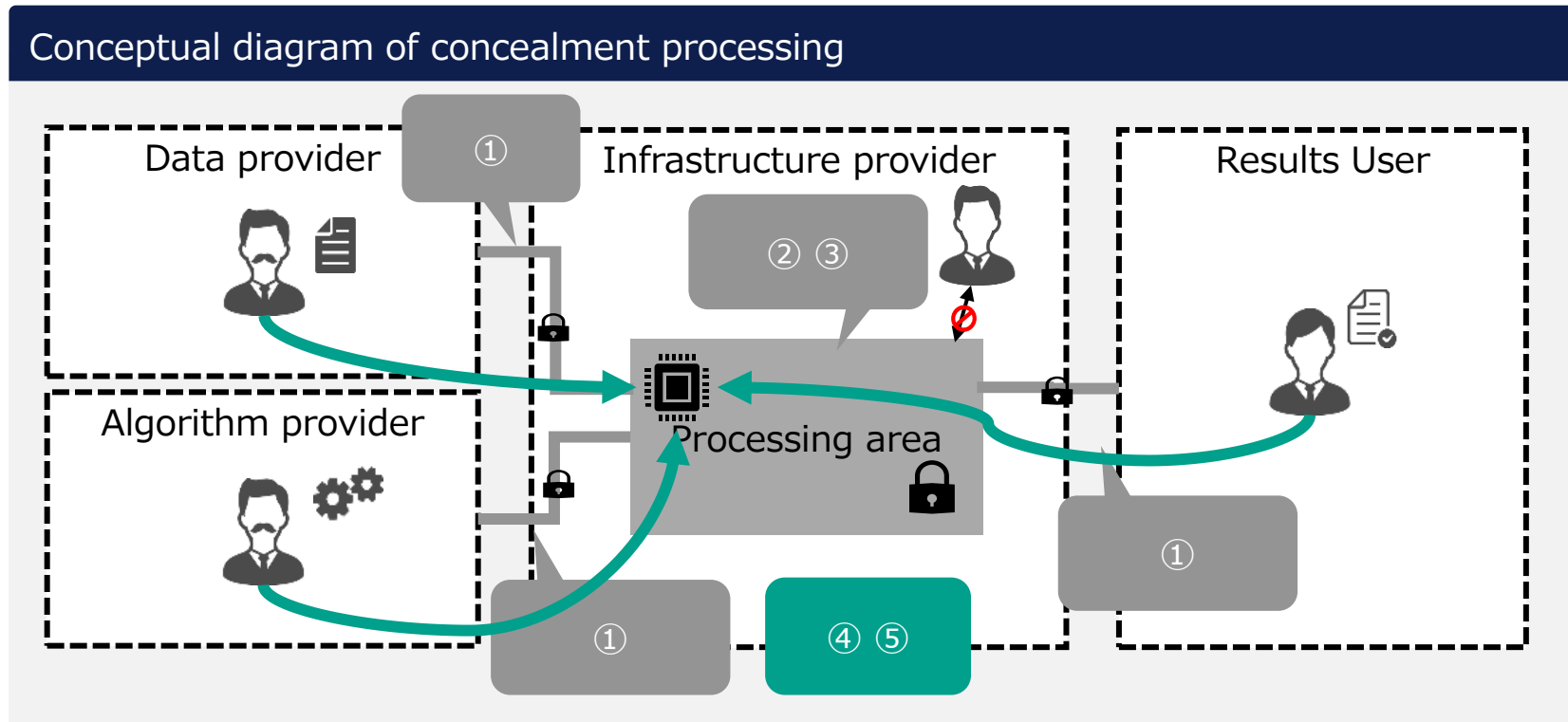
① Function to encrypt communication path

② Function to encrypt memory

③ Disk encryption

④ Functions to ensure that the expected stakeholders are involved

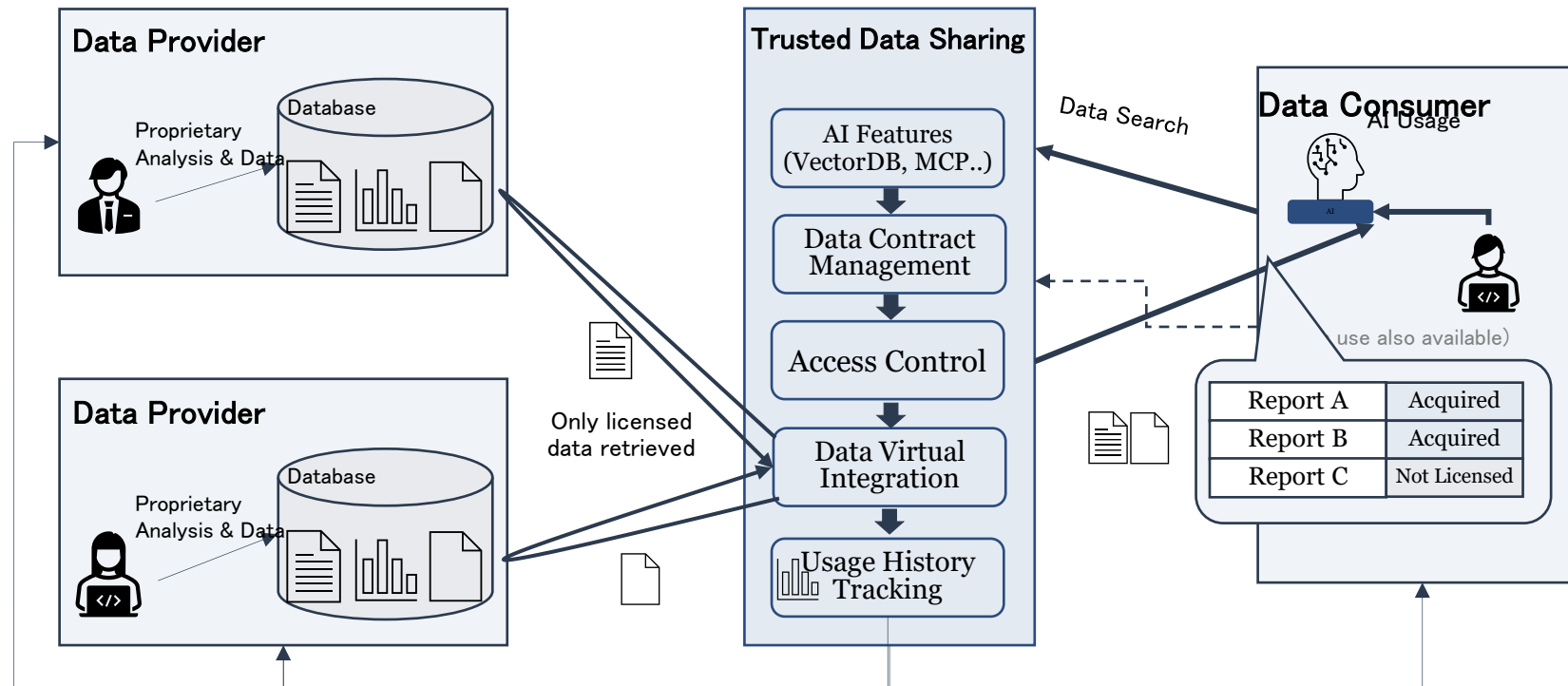
⑤ Functions to ensure that the assumed data and algorithms are used



Example 3: Trusted Data Sharing including Federated RAG

Safely combine internal and external data with a **Federated RAG with built-in usage control**.

Each data holder keeps full control over its own data; only data permitted by policy (access rights, purpose of use, protection requirements) is delivered to AI in an auditable way — preventing leakage and unauthorized use, while enabling cross-organizational collaboration.



Example 4: GBizID Use-Case Initiative — Digital Agency

A study on the reliability and efficiency of cross-industry data collaboration, using GBizID — Japan's public corporate authentication infrastructure.

01

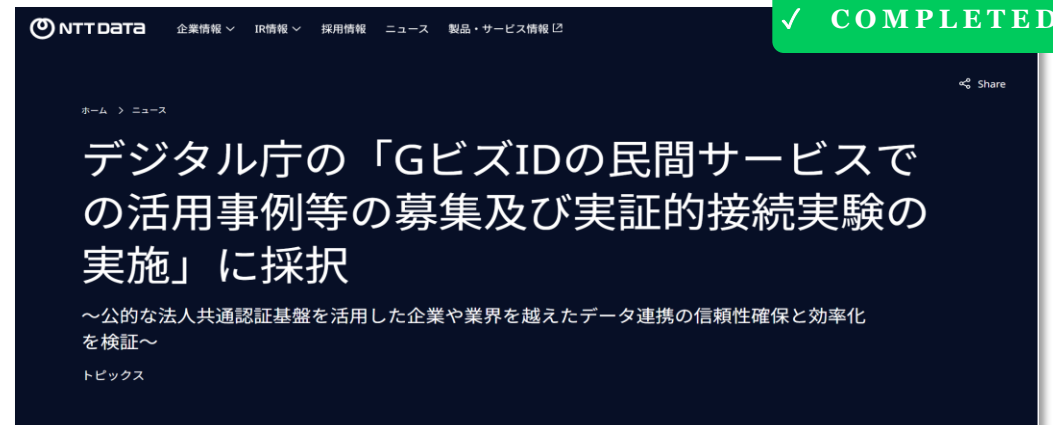
Goal **TRUSTED AUTHENTICATION**

Verify the reliability and efficiency of data collaboration across companies and industries by leveraging GBizID.

02

Approach **TWO FOCUS AREAS**

- Use GBizID to simplify cross-industry data collaboration.
- Explore frameworks that foster new services and business innovation.



INITIAL VIEW · project since completed

Source: nttdata.com/global/ja/news/topics/2025/100100/

03

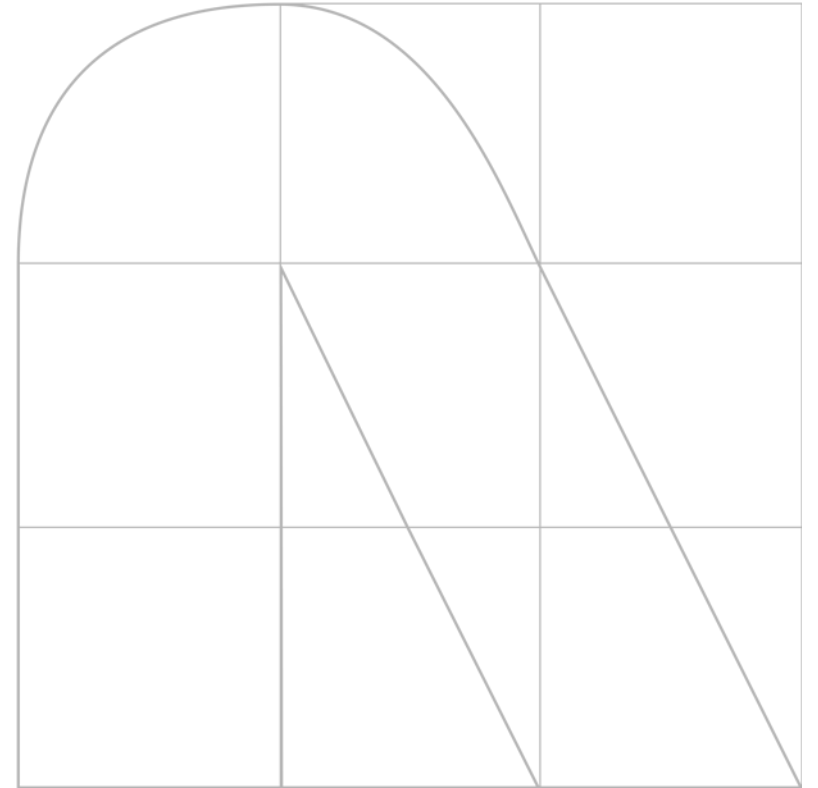
Consortium **JOINT PROPOSAL**

Lead NTT DATA Group · ABtC · DENSO · NTT DATA Corp.

Advisors NTT DOCOMO Business, Inc.; Prof. Noboru Koshizuka (University of Tokyo, Graduate School of Interdisciplinary Information Studies).

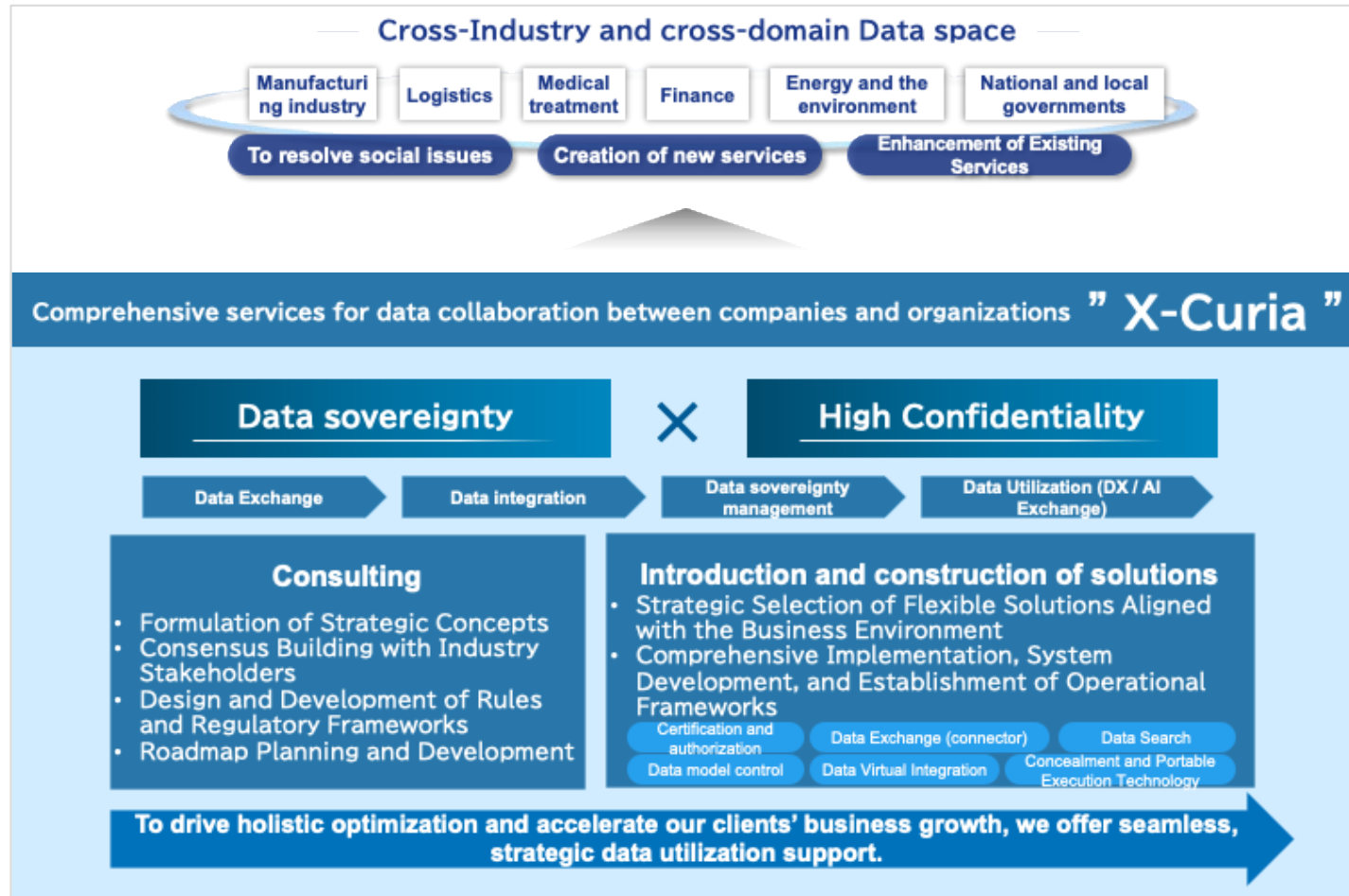
Adopted by the Digital Agency — first step toward federated, trust-ready data collaboration.

Applications



DATA's Vision for Inter-Enterprise Data Integration Service “X-Curia”

A comprehensive package to address challenges in inter-enterprise data integration by leveraging business knowledge and cutting-edge technology to enable “secure and flexible” data distribution.



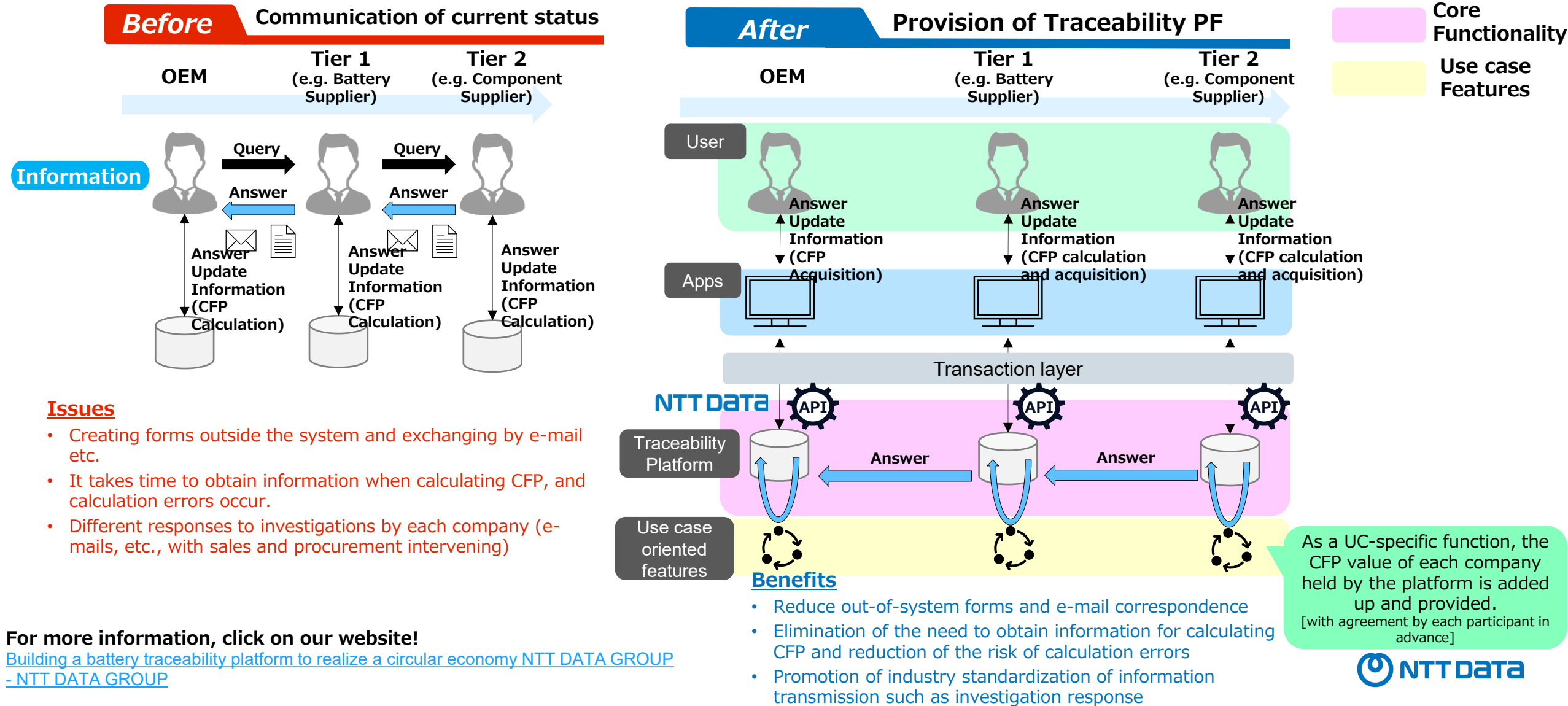
For more details

NTT DATA's Contributions: Ongoing Use Cases

- Battery traceability management (now under commercial service)
- CMP -Chemical Management Platform- (now under development)
- Telco Cyber Resilience
- Energy data space
- Japan Mobility Data Space (JMDS)
- AID-Care: Secure Data Collaboration for Neurodegenerative Disease Research and Care
- SAF (Sustainable Aviation Fuel) through Environmental Value Distribution
- DPP(Digital Product Passeport)

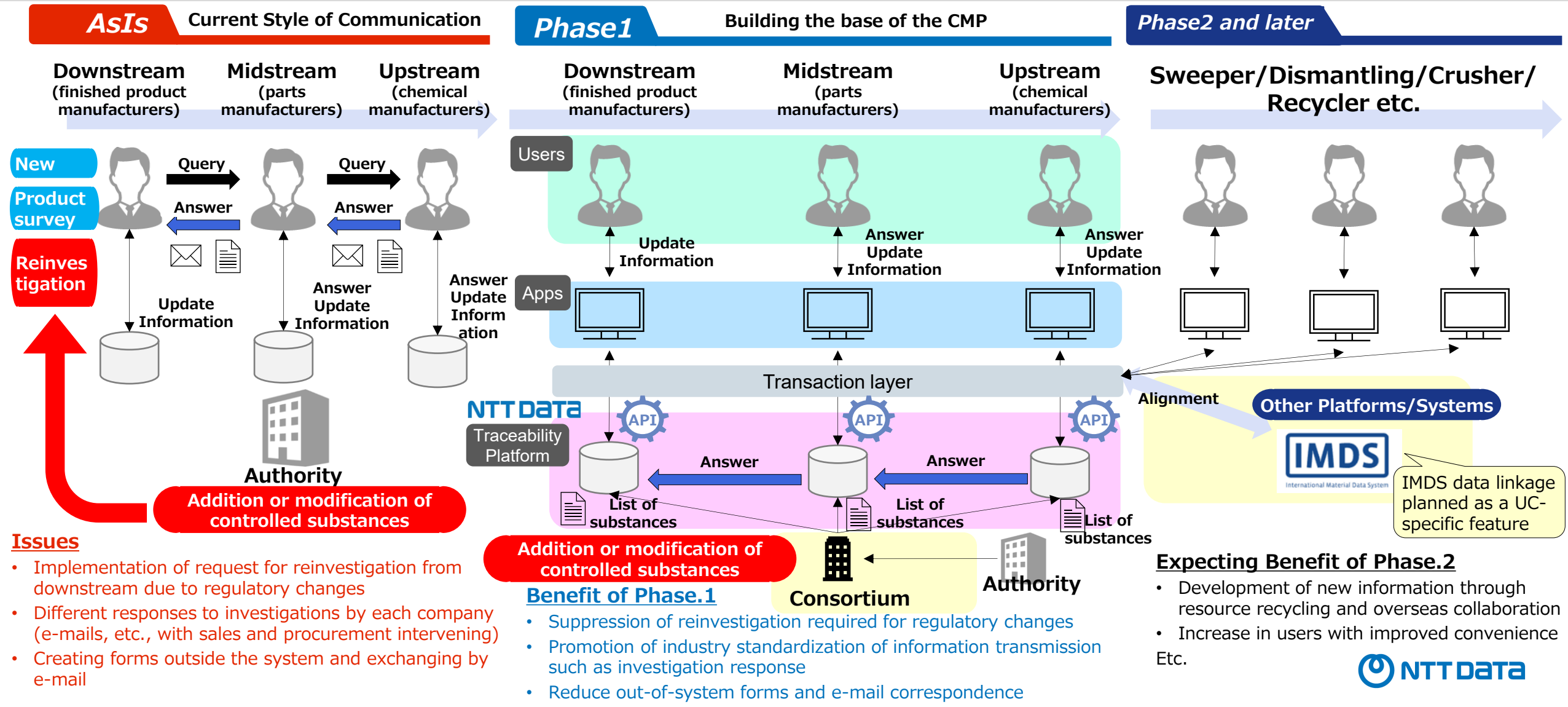
Battery traceability management (now under commercial service)

- Calculating CFP requires significant effort due to repeated survey requests for product and part data. Traceability PF streamlines these requests and simplifies CFP calculation, enabling CO₂ reduction across the entire supply chain beyond individual companies.



CMP -Chemical Management Platform- (now under development)

- When chemical substances change, repeated reinvestigation requests require significant effort. CMP on Traceability PF removes this need, enabling faster regulatory response and improved accuracy.
- We will aim for resource recycling and overseas collaboration in the future.



Strengthening Telco Cyber Resilience with Data Spaces

IIJ (Internet Initiative Japan Inc.) is designing a wide-area network facility data space that connects telco operators, IT equipment manufacturers, distributors, and system integrators to strengthen cyber resilience across communications infrastructure.

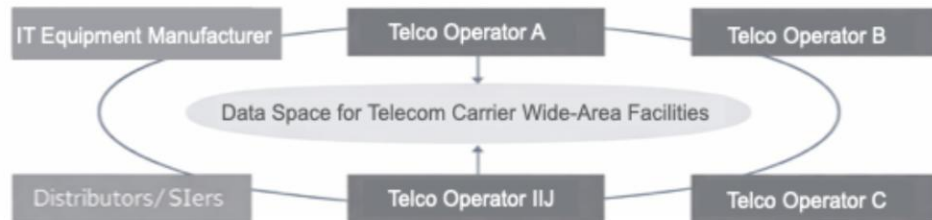
Challenge

Manufacturers, distributors, and system integrators do not always have timely visibility into the latest deployment status, operating conditions, and software versions of IT equipment installed in telco operators' infrastructure. As a result, determining the scope of impact can take significant time when warning signs of a cyberattack emerge or an incident occurs.

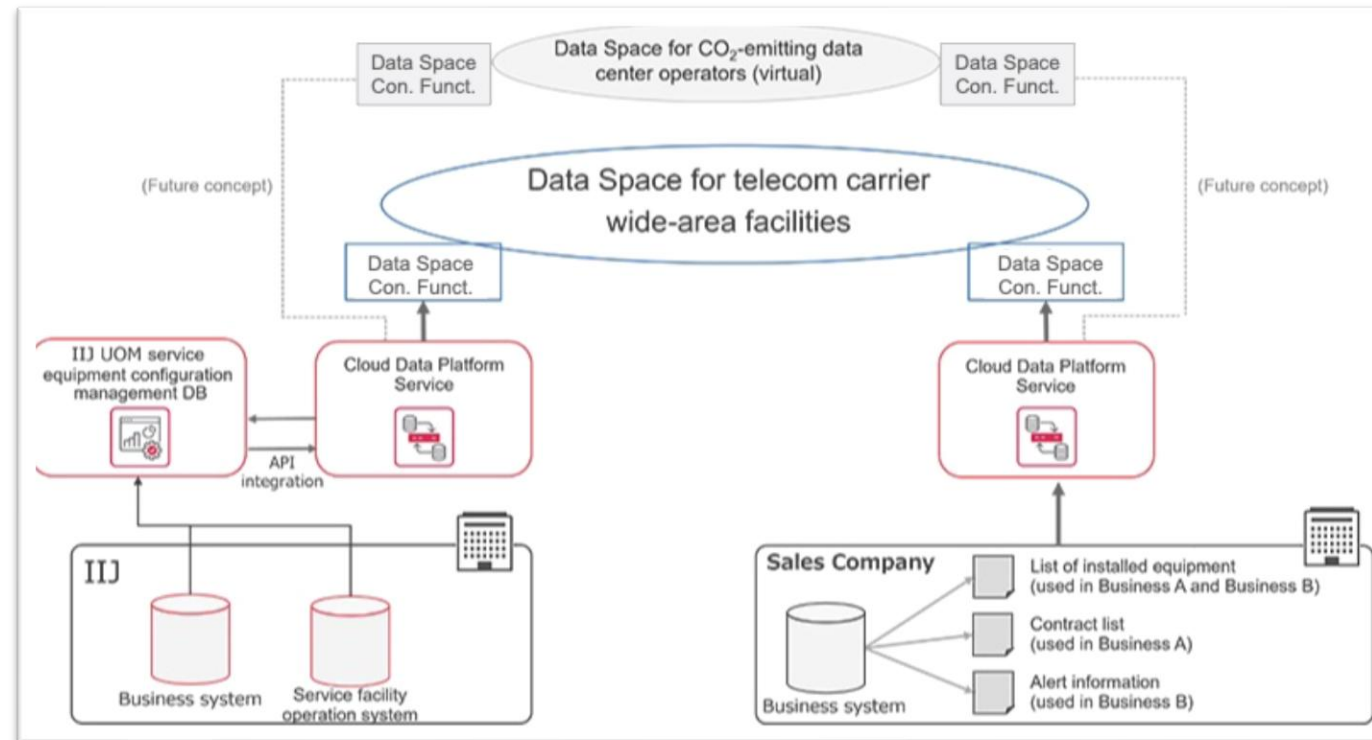
Use Cases

- Addressing risks across the entire supply chain in response to sophisticated cyberattacks targeting telco infrastructure
- Strengthening cyber resilience by shortening the lead time from early detection of widespread threats to implementation of countermeasures and eliminating information asymmetry

Inter-operator Equipment Information Sharing to Enhance Cyber Resilience

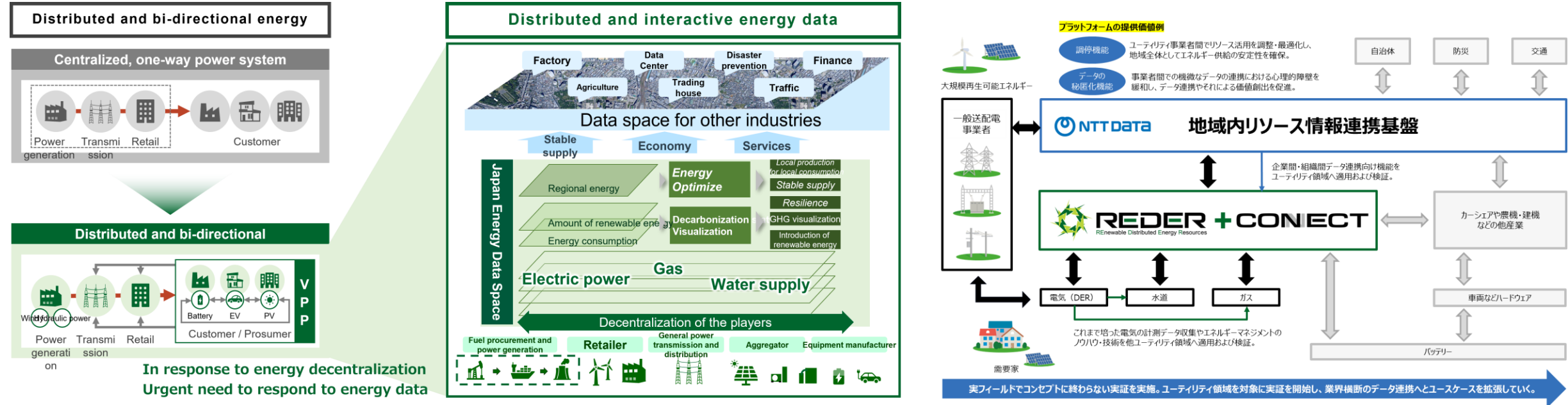


For more details!



Energy data space

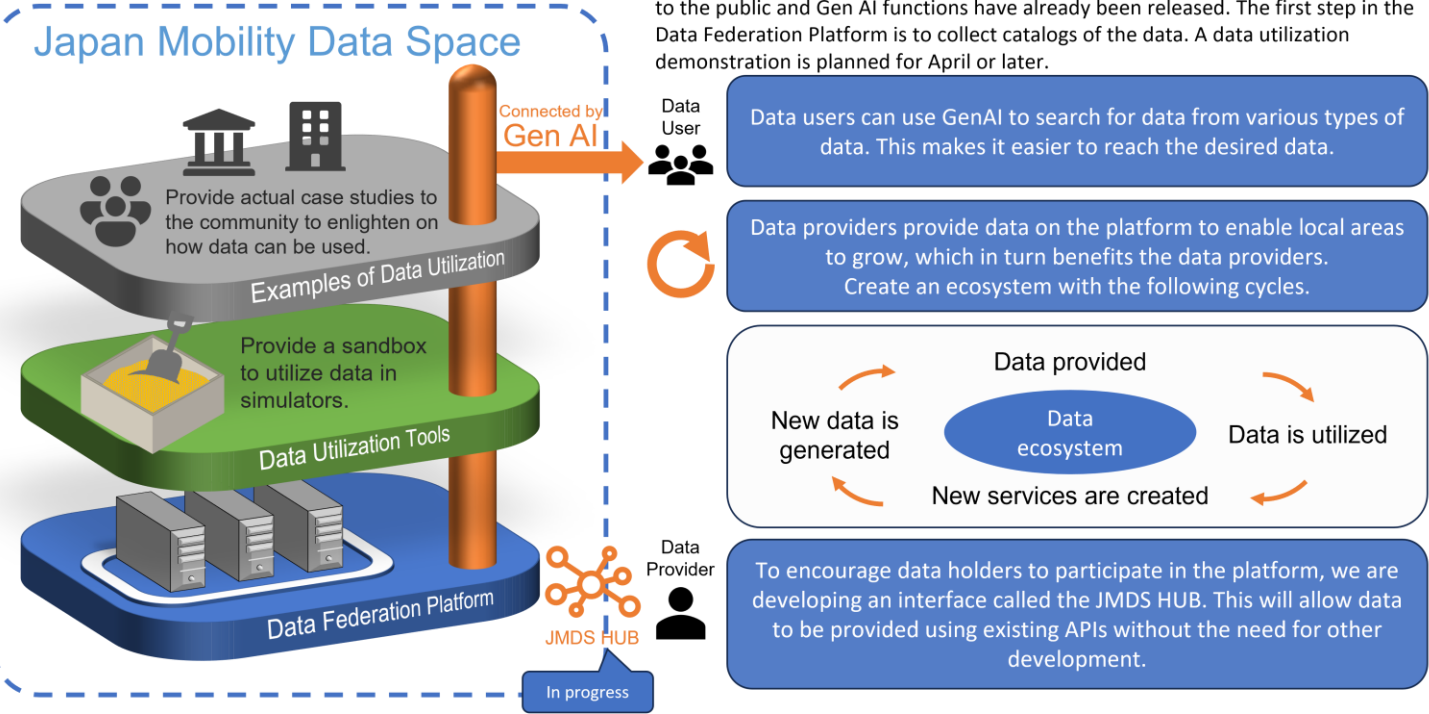
As energy decentralization progresses, data management remains based on traditional centralized models, creating a gap that poses challenges. By enabling cross-sector data collaboration, we can promote stable supply, reduce costs, and contribute to strengthening industrial competitiveness.



NTT DATA announced on October 15, 2025, the launch of a joint demonstration project for data collaboration with NEXTEMS, which has a proven track record in the power sector, as well as Waseda University and REDER.

The project will build a platform that enables data collaboration among different operators, targeting various factors that affect the balance of power supply and demand, such as water pumping operations and gas usage conditions.

Japan Mobility Data Space (JMDS)



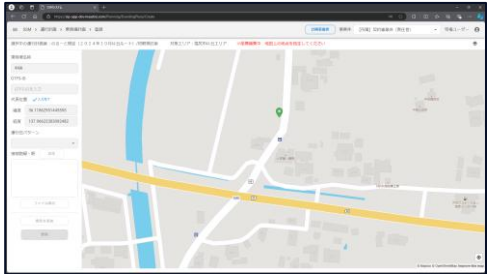
Introduction of Shuttle Bus (Leveraging the Ministry of Land, Infrastructure, Transport and Tourism Project)



Implementation of Reservation App (SSM Features)



Planning of Bus Stops (SSM Capabilities)

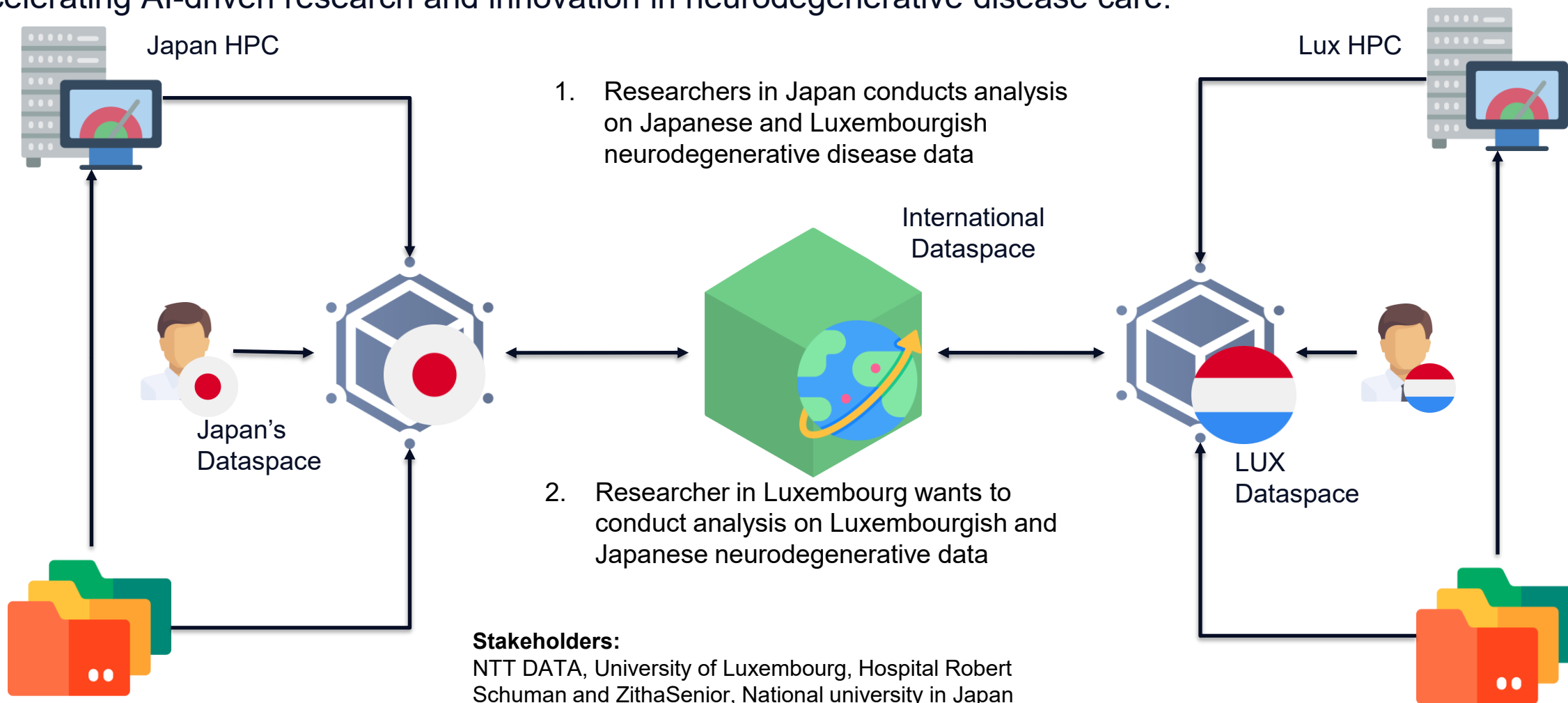


NTT DATA and MaaS Tech Japan Launch Demonstration Project in Sumoto City to Enhance Regional Mobility Services

NTT DATA, in collaboration with MaaS Tech Japan, announced the launch of a demonstration project in Sumoto City, Hyogo Prefecture, starting October 3, 2025. The initiative utilizes the SSM (Smart Shared Mobility) service developed by MaaS Tech Japan to operate a nighttime shuttle bus and taxi service, supported by a reservation and dispatch application. By working closely with local taxi operators, the project aims to streamline dispatch requests and improve coordination with road administrators and other relevant authorities for the establishment of boarding and alighting points. Through collaboration with multiple stakeholders, NTT DATA is promoting the development of sustainable and user-friendly regional transportation services that enhance community accessibility and convenience.

AID-Care: Secure Data Collaboration for Neurodegenerative Disease Research and Care

AID-Care enables secure, automated cross-border data collaboration between Japan and Luxembourg, accelerating AI-driven research and innovation in neurodegenerative disease care.



AID-Care: Work Packages and Tasks

NTT DATA is responsible for business development and dataspace infrastructure of AID-Care.

Strategy and Business Development

Develop exploitation and business strategies for AI models, data infrastructure, and services. Define sustainability plan for the federated dataspace and AI systems. Align results with regulatory and policy frameworks to support adoption.

Dataspace Infrastructure and Agentic AI

Design, build, and deploy the hybrid dataspace architecture. Implement agentic AI to dynamically orchestrate queries between central harmonized storage and federated data agents.

Clinical Use Cases: Definition and Validation

Translate clinical requirements into prototypes and validate them with end-users. Deliver dashboards and chatbot interfaces that make multimodal dementia data accessible and interpretable for clinicians.

Harmonization, Embeddings, RAG, and Model Validation

Developed and implemented the technical backend infrastructure for advanced multilingual natural language processing (NLP), scalable data harmonization, and Retrieval-Augmented Generation (RAG)-driven orchestration workflows.

Data Governance, and Compliance

Support R&D of tools and governance ensuring GDPR, EHDS, APPI, EU AI Act, and EU MDR compliance, aligning with cybersecurity best practices, ethics oversight, data governance, and FAIR/OA strategies.

Clinical Data Gap

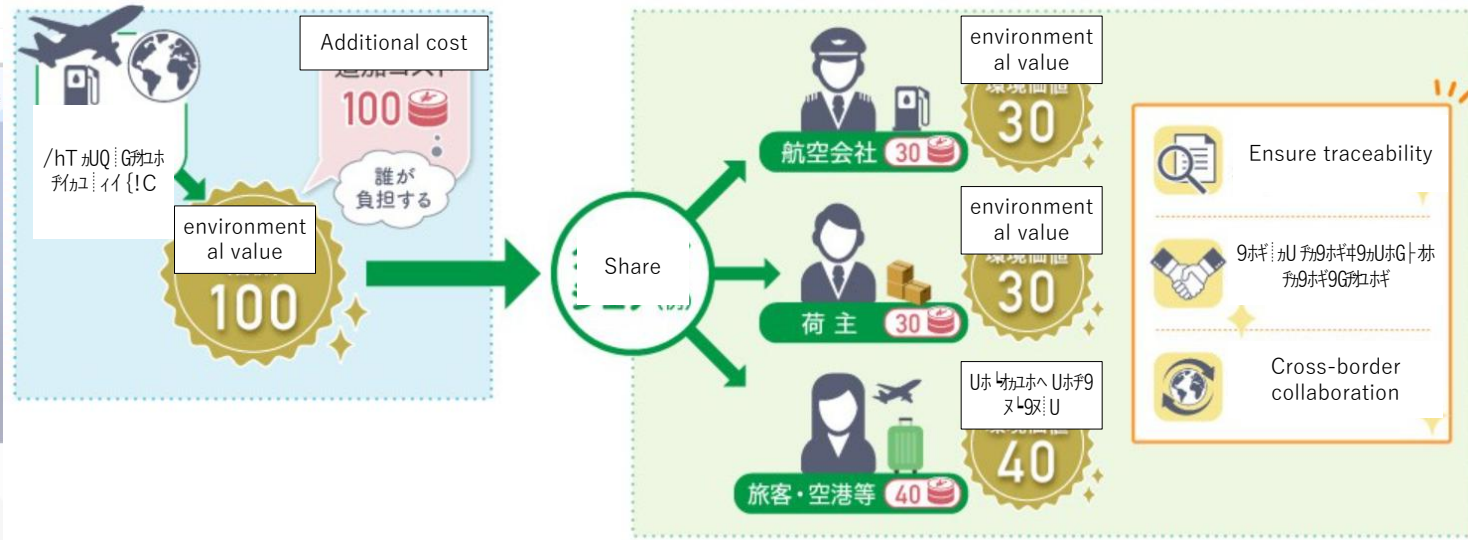
Unstructured dementia EHR data can be transformed via NLP and harmonization into structured, interoperable formats. This enables timely, interpretable insights to support both care and research objectives.

Accelerating SAF (Sustainable Aviation Fuel) Deployment through Environmental Value Distribution

Mizuho Bank and NTT DATA, jointly announced that, in order to enable the reliable circulation of environmental value and accelerate the deployment of **Sustainable Aviation Fuel (SAF)**, we will create a "new industrial structure in which **environmental value is traded**" and develop an environmental value distribution platform centered on Data Space technology.

Japan aims to replace 10% of its domestic jet fuel with SAF by 2030; however, for SAF to be widely adopted, environmental value must be distributed transparently and fairly across the entire supply chain.

Beyond proof-of-concept initiatives, we will also actively **contribute to collaboration with a wide range of companies and to the realization of business concepts necessary to strengthen industrial competitiveness.**



NTT DATA is Supporting European Commission with EU DPP Implementation

Key facts and strategic context of DPP at a glance

WHAT

A standardized digital product record covering lifecycle, sustainability and compliance data.

WHERE

Relevant for certain products sold in the EU. Data from across the entire value chain and all connected enterprise systems.

WHY

To enable regulatory compliance, transparency and circular economy goals.

WHEN

Gradual EU rollout starting from 2026 under the ESPR* framework.

WHO

Manufacturers, suppliers, importers, regulators and customers across the product ecosystem.

HOW

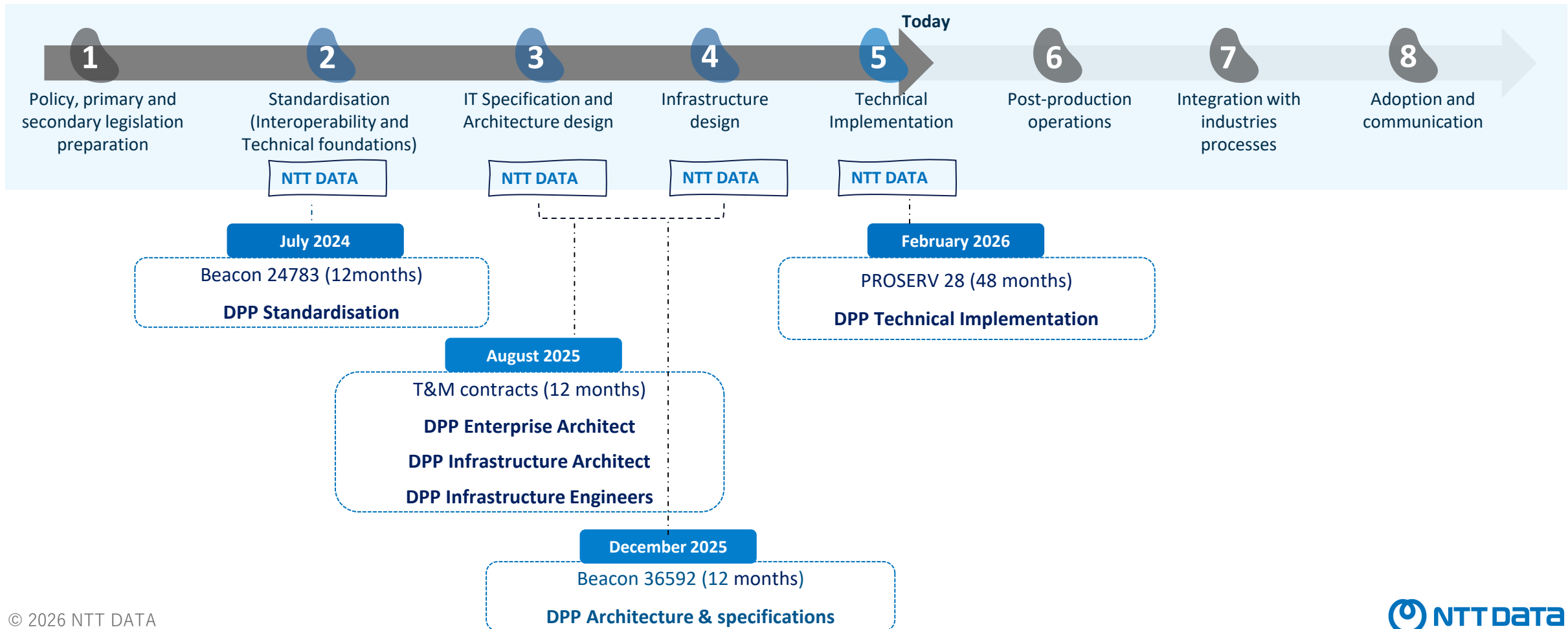
Through integrated data governance, system connectivity and standardized data models.



NTT DATA is Supporting European Commission with EU DPP Implementation

NTT DATA supports the European Commission across the DPP lifecycle, from standardization to technical implementation and beyond.

Digital Product Passport Roadmap – EC Systems





**Join us in Bilbao as we
celebrate the milestones on
our journey – and our anniversary**

INTERNATIONAL DATA
SPACES ASSOCIATION



10 years

IDSA's 10th anniversary on June 10: A Decade of Data Space Pioneering

Pre-event & reception to celebrate a decade of pioneering and progress – the foundation for data spaces that are now a reality, driving impact across business, value networks, and AI.

The V BAIDATA Forum on June 11: Making Data Spaces Work

Today, the focus shifts from concept to execution: how to implement and scale data spaces. The Forum will cover policies and global impact, and showcase real-life implementations and ready-to-deploy solutions.

BAI DATA



2026: Great milestones ahead!

INTERNATIONAL DATA
SPACES ASSOCIATION

10 years

Highly anticipated:
The new modular IDS-RAM

Low-cost, low-effort onboarding:
Connector as a Service

Concepts, principles, architecture: data
space standard **finally an ISO norm**

Future-ready: **Updated IDSA Rulebook**
defines governance, operations, legal aspects

All year long: IDSA celebrates **10 years of data space pioneering**
and a **future where data spaces drive impact and innovation**