November 2024

Report on Data Spaces Week 2024 in Tokyo

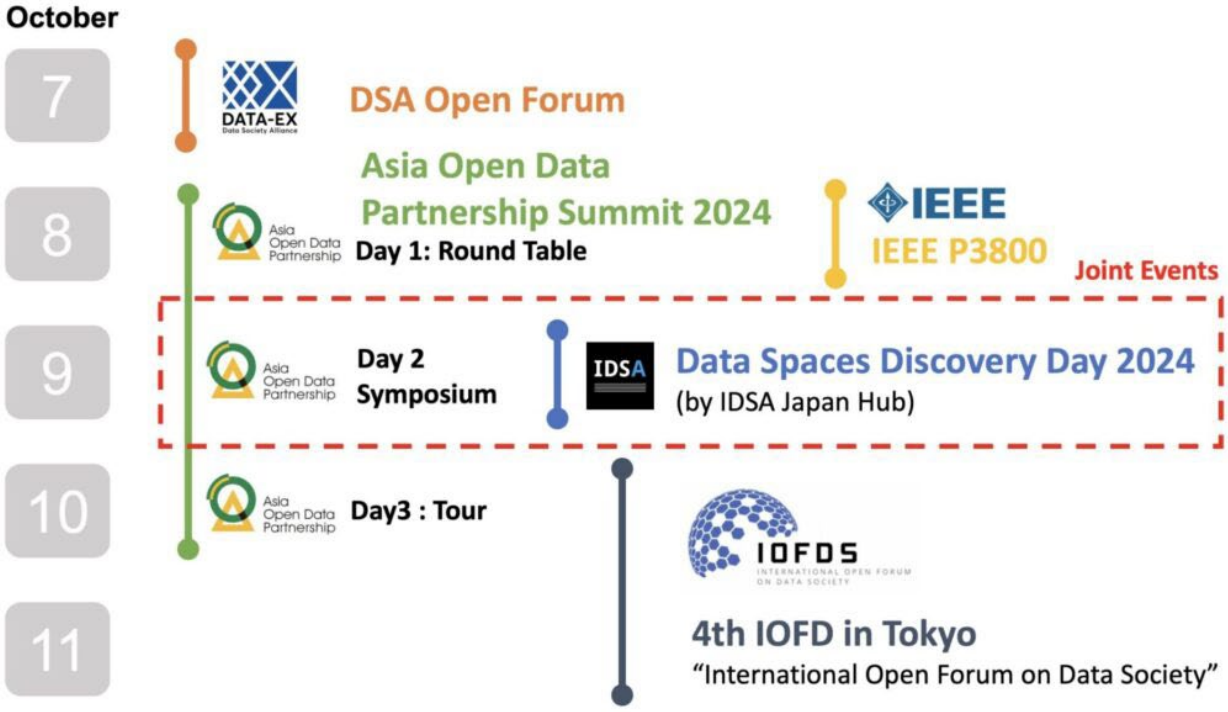
Contents

1 General

1.1 Overview of Data Spaces Week 2024

"Data Spaces Week 2024," held from October 7th (Monday) to October 11th (Friday) at the University of Tokyo's Hongo Campus, brought together over 600 participants, both on-site and online. The event successfully served as a platform to advance international efforts in data spaces. Organized by the Data Society Alliance (DSA) and the Interfaculty Initiative in Information Studies at the University of Tokyo, the event was held in collaboration with the Asia Open Data Partnership (AODP), the International Data Spaces Association (IDSA), IEEE, and the International Open Forum on Data Society (IOFDS). Over the course of the week, five key events took place: the DSA Open Forum, IEEE SA P3800 WG meeting, AODP conference, IDSA Data Spaces Discovery Day Tokyo, and the IOFDS meeting. The event provided an invaluable opportunity for stakeholders to share the latest trends in data federation and foster collaboration across industries.

1.2 Weekly Schedule



Date	Time	Venue	Event
7-Oct	10:00-11:30; 13:00-17:30	3F Hall, Daiwa Ubiquitous Computing Research Building, Hongo Campus	DSA Open Forum
8-Oct	10:00-12:00	3F Hall, Daiwa Ubiquitous Computing Research Building, Hongo Campus	IEEE SA P3800 WG
8-Oct	14:00-17:20	3F Hall, Daiwa Ubiquitous Computing Research Building, Hongo Campus	10th AODP Summit 2024, Dialogue Meeting

9-Oct	10:00-18:30	Fukutake Hall, Hongo Campus	Joint Symposium: 10th AODP 2024 Summit and 2nd Data Spaces Discovery Day Tokyo 2024
10-Oct	9:30-17:00	Yayoi Hall Annex, Yayoi Campus	4th IOFDS Meeting (Day 1)
11-Oct	9:30-17:00	Special Conference Room of Ito Hall, Hongo Campus	4th IOFDS Meeting (Day 2)

1.3 Hosts/Co-Hosts

- Interfaculty Initiative in Information Studies, The University of Tokyo
- Data Society Alliance (DSA)
- International Open Forum on Data Society (IOFDS)
- Asia Open Data Partnership (AODP)
- International Data Spaces Association (IDSA)
- IDSA Japan Hub

Note: Hosts/Co-Hosts may vary by event.

1.4 In-Cooperation

- Digital Agency
- Information-technology Promotion Agency (IPA)
- Robot Revolution & Industrial IoT Initiative (RRI)
- Association for Promotion of Infrastructure Geospatial Information Distribution (AIGID)
- Industrial Value-chain Initiative (IVI)

Note: Hosts/Co-Hosts may vary by event.

1.5 Special Sponsors

- SoftBank Corp.
- NTT Data Group
- PwC Consulting LLC

1.6 Sponsors

- EverySense, Inc.
- Japan Data Exchange Inc.
- Huawei Technologies Japan KK
- Fujitsu Ltd.
- Mitsubishi Electric Corp.

2 Event report

2.1 DSA Open Forum

2.1.1 Program

10:00–11:30 DATA-EX Award Ceremony
11:30–13:00 Lunch Break
13:00–13:10 Opening Remarks
13:10–13:30 DSA Introduction
13:30–13:50 What is DATA-EX?
13:50–14:10 Report from the DATA-EX Promotion Task Force
Activities Introduction
14:10–14:30 “The Era of Data-Centric Systems” Eiichi Tanabe, Planning Officer, Digital Agency
14:30–14:50 “METI's Initiatives for Supply Chain Traceability” Manabu Moriya, Director, Information Economy Division, Ministry of Economy, Trade and Industry
14:50–15:00 Coffee Break
15:00–15:20 “International Data Trading Market Creation Project” Hiroshi Mano, Executive Managing Director/Secretary General
15:20–15:40 “Overview of SIP Phase 3 and BRIDGE, and Cross-Domain Data Collaboration” Tetsuya Umehara, Deputy Director-General (SIP/BRIDGE), Council for Science, Technology and Innovation, Cabinet Office
15:40–16:00 “Data-Related Initiatives at the Digital Infrastructure Center (DISC)” Miku Odagiri, Deputy Director, Digital Infrastructure Center, Information-technology Promotion Agency
16:00–16:20 “Approach to Manufacturing Data Spaces” Kazuo Nakajima, Industrial IoT Promotion Coordinator, Robot Revolution & Industrial IoT Initiative
16:20–16:40 “University of Tokyo Data Space Technology International Testbed” Speaker: Noboru Koshizuka, Professor, Interfaculty Initiative in Information Studies, The University of Tokyo
16:40–16:50 Coffee Break
16:50–17:00 “About the Digital Policy Forum” Yasuhiko Taniwaki, Representative Secretary, Digital Policy Forum
17:10–17:30 “Digital Trust Infrastructure Strategy and Introduction to JDTF” Satoru Tezuka, Chairman, Digital Trust Council

2.1.2 Number of participants

113 (on-site only)

2.1.3 Summary

2.1.3.1 Opening

DSA Introduction by Hiroshi Mano

Hiroshi Mano introduced the DSA (Data Society Alliance), emphasizing its mission to foster data collaboration, coordinate global data federation platforms, and promote data sovereignty through the IOFDS/International Data Society Alignment TF in collaboration with major organizations. He highlighted DSA's efforts in supporting data federation platform development across industries and regions and its initiatives in trust services and data utilization infrastructures.

What is DATA-EX? by Hiroshi Mano

Hiroshi Mano introduced "DATA-EX," a DSA initiative providing technologies and standards to support the development of data federation platforms across industries. DATA-EX enables secure and efficient data exchange in a loosely coupled federated model, offering tools like data catalog search, management, visualization, and analytics. Mano highlighted its future focus on addressing social needs like carbon footprint tracking and ensuring interoperability with international platforms like Gaia-X.

Report on the DATA-EX Promotion Task Force by Noriaki Okui

Noriaki Okui outlined the DATA-EX Promotion Task Force's role in advancing the societal implementation of DATA-EX through collaboration with municipalities, technical standards development, academic partnerships, and international cooperation. He introduced initiatives like disaster data spaces for relief efforts and Japan-Europe Data Space Collaboration projects. Okui emphasized interoperability with global platforms like Gaia-X and compliance with Europe's carbon footprint regulations as key goals.

2.1.3.2 Activities Introduction

The Era of Data-Centric Systems by Eiichi Tanabe, Digital Agency

Tanabe introduced the "Ouranos" project, facilitating secure CFP data sharing in automotive and battery sectors. He outlined strategies for integrating digital infrastructure into industry and enhancing Japan's competitiveness through DX.

Efforts by METI for Supply Chain Traceability by Gaku Moriya

Moriya emphasized data platforms for supply chain transparency, including initiatives like ABtC, leveraging blockchain for secure information sharing. He discussed international collaborations with IPA and Catena-X and efforts to balance sustainability and competitiveness.

International Data Trading Market Creation Project by Hiroshi Mano

Mano described the project’s goal to establish a global data trading market, focusing on data sovereignty and interoperability. Collaboration with IEEE for standardization and Southeast Asian countries for regional integration was emphasized.

Overview of SIP Phase 3 and BRIDGE by Tetsuya Umehara, CSTI

Umehara outlined cross-sectoral data utilization through SIP and BRIDGE, addressing societal challenges via agile development. He presented projects in energy, infrastructure, and healthcare, showcasing potential societal value.

Data Initiatives at Digital Infrastructure Center by Mirai Odagiri, IPA

Odagiri discussed efforts to establish data spaces and develop tools like data dictionaries. He emphasized international collaboration (e.g., ASEAN) and challenges like infrastructure and interoperability.

Initiatives for Manufacturing Data Spaces by Kazuo Nakajima, RRI

Nakajima highlighted RRI's focus on transforming manufacturing with data spaces, addressing circular economy challenges. He stressed the need for global perspectives and collaboration with entities like Gaia-X.

Data Space Technology Testbed by Noboru Koshizuka, University of Tokyo

Koshizuka introduced the university's initiatives in building operational testbeds for data spaces, including collaborations with Catena-X and regional partners. He emphasized education and Federated AI development.

Digital Policy Forum by Yasuhiko Taniwaki, DPFJ

Taniwaki stressed integrated governance for AI, data, and digital systems, proposing Japan-specific laws modeled after EU standards. He emphasized international partnerships, particularly with Europe and Asia.

Digital Trust Foundation Strategy by Satoru Tezuka, JDTF

Tezuka presented JDTF's initiatives, including multilayered trust services like electronic signatures. He emphasized interoperability and the importance of global cooperation for a unified trust framework.

2.2 IEEE DTS WG

2.2.1 Agenda

1. Call to Order
2. Approval of the Agenda
3. IEEE Patent/Copyright Policy
4. Approval of the 86th Meeting Minutes
5. Presentations and Discussions:
   - Newcomer Orientation
   - Schedule for P3800 Publication
   - Awards for P3800
   - Progress of P3800.1
   - Nomination for P3800.1 Officers
   - Q&A Session
6. Future Meeting Schedule
7. New Business
8. Adjournment

2.2.2 Number of Participants

34 including both on-site and virtual.

2.2.3 Summary

The meeting covered updates on P3800 and P3800.1. A newcomer orientation introduced the IEEE standards process and an overview of the projects. The P3800 publication is expected by the end of 2024, pending IEEE-SA editor feedback, and contributor recognition awards are being planned.

For P3800.1, the draft submission is scheduled for March 2026, with completion by December 2026. Nominations for Vice Chair, Secretary, and Technical Editor were opened, with Yamada expressing interest as Secretary. Discussions also touched on modifying the original PAR and co-sponsorship with IEEE societies.

In the Q&A, participants asked about accessing standards, membership requirements, and co-sponsorship logistics. Active WG members can access documents freely, while non-members must purchase them. The meeting concluded with the approval of the next session's schedule and no new business.

2.3 AODP Summit 2024 day1

2.3.1 Program

1. Opening Remarks
   Noboru Koshizuka, Chair, AODP Summit 2024
2. Report of AODP
   Erica Lin, Executive Secretary, AODP
3. AODP Working Group Updates
   Industry WG: Tim Chen
   Data Space WG: Noboru Koshizuka
   Application WG was presented after Partner Updates
4. Keynote Speech
   "Towards an International Standard for Global Interoperable Data Spaces with Trust"
   Lars Nagel, CEO, International Data Spaces Association (IDSA)
5. Partner Updates (80 minutes)
   BigObject (Taiwan): Allen Wang
   India's Digital Economy: Vikram Upadhyaya
   DSA and DATA-EX (Japan): Hiroshi Mano
   Korea: NIA Representative
   Cambodia: ODC Representative
   Vietnam: IPS Representative
   Philippines: Representative from FOI Program
   *AODP Application WG: Pyrou Chung
6. General Discussion & Closing Remarks
   Proposal for the 2025 AODP Summit location and chair
   Working group updates
   Next steps
7. Group Photo & Networking Reception

2.3.2 Number of Participants

69 including both on-site and virtual.

2.3.3 Summary

2.3.3.1 Opening Remarks

Noboru Koshizuka, Chair of the AODP Summit 2024, opened the event, commemorating the 10th anniversary of the Asia Open Data Partnership. He reflected on the progress of AODP since its establishment, emphasizing the importance of fostering open data collaboration across Asia, Europe, and other regions. Koshizuka highlighted contributions from member countries such as Japan, Singapore, and Korea, along with insights from European initiatives. The importance of sponsors, including SoftBank, NTT Data, and PwC Consulting, was acknowledged, reinforcing their vital role in supporting open data ecosystems.

2.3.3.2 Key Presentations

"Report of AODP" by Erica Lin

Erica Lin, Executive Secretary of AODP, presented an overview of the organization's progress and future direction. She emphasized the central role of AODP in fostering a robust data-sharing network

across Asia and supporting open data standards. Key achievements included building partnerships among member organizations and promoting collaborative projects. Lin also detailed challenges in data governance and the need for innovative strategies to maximize the potential of open data. She introduced a promotional video highlighting AODP initiatives and encouraged active participation in upcoming projects to advance the data economy.

AODP Working Group Updates

- Industry WG (Tim Chen): Tim Chen highlighted efforts to improve data quality and promote real-time data sharing in Taiwan and Southeast Asia. Seminars, MOUs, and partnerships were instrumental in expanding the reach and effectiveness of the group.
- Data Space WG (Noboru Koshizuka): Koshizuka introduced the concept of data spaces as a trusted framework for secure, sovereign data sharing. He showcased case studies from Japan, India, and Taiwan and outlined plans for collaborative projects to enhance interoperability and trust.

Note: Application WG was reported after the partner update.

Keynote Speech by Lars Nagel (IDSA)

Lars Nagel, CEO of the International Data Spaces Association (IDSA), delivered an inspiring keynote on the importance of establishing global standards for interoperable data spaces. He emphasized the role of trust, data sovereignty, and decentralization in fostering secure and efficient data-sharing ecosystems. Nagel highlighted IDSA's achievements, including the development of standardized protocols, collaborative efforts with global initiatives like Gaia-X, and capacity-building programs to train professionals in data space management. He called for broader participation to unlock the transformative potential of data spaces, which he described as essential for innovation, economic growth, and societal benefits across industries such as automotive, logistics, and green energy.

2.3.3.3 Partner Updates

BigObject (Taiwan): Allen Wang addressed the challenges of data quality in AI applications, proposing sustainable data practices using their "Data Planet" model. Generative AI and Retrieval Augmented Generation (RAG) were highlighted as solutions to address environmental and operational inefficiencies.

India: Vikram Upadhyaya discussed transformative innovations driven by the "Digital India" initiative, showcasing case studies in automotive and healthcare, which utilized advanced data-driven techniques to solve complex challenges.

Japan (DSA and DATA-EX): Hiroshi Mano detailed updates on the DATA-EX platform, emphasizing its modular architecture that supports stakeholders in building autonomous data spaces. Global collaborations and practical applications, such as Kyoto's evacuation planning system, were showcased.

Korea: Korea's representative outlined progress in AI-specific datasets, public data access platforms, and strong legal frameworks. Initiatives such as AI training datasets in healthcare and transportation were highlighted as key drivers of innovation.

Cambodia: The ODC representative described efforts in drafting comprehensive open data policies and grassroots engagement through hackathons and awareness campaigns.

Vietnam: Vietnam's representative discussed advancements in data-sharing policies, highlighting the National Population Database and challenges in cross-sector collaborations.

Philippines: Updates on the FOI program focused on AI-driven tools for streamlining government information requests, reinforcing transparency and public trust.

***AODP Application WG:** Pyrou Chung emphasized ethical challenges in environmental data use, calling for inclusive governance and localized solutions to ensure equitable outcomes.

2.3.3.4 General Discussion and Closing

2025 AODP Summit Proposal: Japan proposed hosting the next summit outside Tokyo, which received unanimous support. Formal agreements are pending.

Working Group Updates:

Application WG: Addressed challenges in coordinating ethics, AI, and climate change initiatives.

Industry WG: Focused on building partnerships in South Asia and collaborating with the Data Space WG.

Data Space WG: Announced plans for a testbed and collaborative projects aimed at enhancing interoperability.

The session concluded with a networking reception and a group photo, reinforcing connections among participants and setting the stage for continued collaboration.

2.4 AODP Day2/IDSA Data Discovery Day

2.4.1 Program

1. Opening Remarks
   Noboru Koshizuka (Professor, The University of Tokyo / IDSA Japan Hub Coordinator / Chair, AODP Summit 2024)
2. Guest Remarks
   Keisuke Murakami (Digital Agency, Japan)
   Kenji Hiramoto (Information-technology Promotion Agency, Japan)
3. Keynote Speeches
   Chi-Ming Peng (Minister of Environment, Taiwan): From Open Data to Open Government
   Lars Nagel (CEO, International Data Spaces Association): Data Spaces and Global Data Economy
   Hiroshi Mano (General Secretary, DSA): The Role of Federated Data Systems and DATA-EX
4. MOU Signing Ceremony
   Between Open Data Alliance (Taiwan) and DSA (Japan)
5. AODP Panel Session
   Chair: Noboru Koshizuka
   Panelists:
   Gopal (India Urban Data Exchange)
   Jon Ho Choi & Jo Bucha (Korea)
   Allen Wang (BigObject, Taiwan)
6. Group Photo
7. Technology and Business Lectures
   Shinsuke Miyayama (SoftBank): Blueprint for Digital Society Infrastructure
   Masaru Dobashi (NTT Data Group): The Future of Business Systems Accelerated by Data Spaces
   Kenichi Tsujioka (PwC Consulting): Challenges in Data Exchange

Taka Matsutsuka (Fujitsu Research): Towards Trust Interoperability in Data Spaces

8. IDSA Panel Session:
   Christoph Mertens (International Data Spaces Association (IDSA))
   Dandan Wang (Specialist Solution Architect, T-Systems International GmbH)
   Akira Sakaino (Evangelist, Director, NTT Communications)
   Yenwei Zheng (Customer Experience Program Manager, Microsoft Japan)
   Hirotsugu Seike (Project Assistant Professor, The University of Tokyo)
   Kazuo Nakashima (General Manager, Industrial IoT, Robot Revolution & Industrial IoT Initiative (RRI))
   Masaru Dobashi (NTT Data)
   Florian Mohr (Innovation Leader - Data Space Technologies, Fujitsu)
   Noboru Koshizuka (Professor, The University of Tokyo / IDSA Japan Hub Coordinator / Chair, AODP Summit 2024)
9. Panel session "Collaboration between Asia and Europe on Data Space"
   Christoph Mertens (International Data Spaces Association (IDSA))
   Dong Po DENG (Vice-President of Organization for Data-driven Application (ODA), Taiwan)
   Akira Sakaino (Evangelist, Director, NTT Communications)
   Kenji Hiramoto (Director General of Digital Infrastructure, Information-technology Promotion Agency, Japan (IPA))
   Hiroshi Mano (General Secretary, Data Society Alliance (DSA))
   Noboru Koshizuka (Professor, The University of Tokyo / IDSA Japan Hub Coordinator / Chair, AODP Summit 2024)
10. Summary and Closing Remarks by Noboru Koshizuka

2.4.2 Number of Participants

191 including both on-site and virtual

2.4.3 Summary

2.4.3.1 Opening Remarks

Noboru Koshizuka opened the symposium by welcoming participants and emphasizing the importance of Asia-Europe collaboration in building data spaces. He highlighted the transition from siloed data systems to interconnected platforms and the growing need to address non-open data. Koshizuka outlined the event's objective: fostering discussions on data governance, interoperability, and global standardization to overcome barriers in secure and trusted data sharing.

2.4.3.2 Guest Remarks

Keisuke Murakami (Digital Agency, Japan) reviewed the progress Japan has made in promoting data spaces since the establishment of the Digital Agency three years ago. He pointed to advancements in fostering awareness among industry leaders and technical experts. Highlighting the need for automation in cross-organizational data exchanges, Murakami provided a case study on leveraging EV battery data for secondary use in compliance with European regulations. He concluded by calling for stronger alignment between technological solutions and policy frameworks to achieve seamless interoperability.

Kenji Hiramoto (IPA, Japan) focused on the integration of AI and data, noting that AI relies heavily on high-quality, secure, and ethically sourced data. He emphasized challenges like ensuring

data ownership and balancing innovation with privacy concerns. Using examples from global AI initiatives, he advocated for international cooperation to build standardized data platforms that enable secure, large-scale data flows. Hiramoto also stressed the critical need for trust in fostering data-sharing ecosystems.

2.4.3.3 Keynote Speeches

Chi-Ming Peng (Minister of Environment, Taiwan): "From Open Data to Open Government"
Peng shared Taiwan's journey toward open governance, emphasizing transparency and public trust. Key initiatives included live-streaming major policy announcements and publishing government datasets. He highlighted Taiwan's ambitious net-zero goals, supported by carbon pricing mechanisms, AI-driven environmental monitoring, and innovative waste management systems that repurpose materials for circular economies.

Lars Nagel (CEO, IDSA): "Data Spaces and Global Data Economy"
Nagel described data spaces as vital infrastructures for a sustainable digital economy, akin to GSM standards in telecommunications. He introduced IDSA's foundational work, including the Dataspace Protocol and Eclipse Dataspace Components, which facilitate secure and sovereign data sharing. Use cases ranged from automotive collaborations in Catena-X to smart city and healthcare data platforms. Nagel concluded with a vision of interconnected ecosystems where trust and governance enable seamless cross-border data transactions.

Hiroshi Mano (General Secretary, DSA): "The Role of Federated Data Systems and DATA-EX"
Mano introduced DATA-EX as a platform for secure, federated data-sharing systems, with connectors ensuring seamless communication between stakeholders. He detailed how "data usage rights" facilitate transparent and automated transactions, minimizing manual negotiations. Mano highlighted Japan's leadership in collaborative projects, such as disaster resilience platforms in Kyoto, which integrate AI and open data to enhance predictive capabilities.

2.4.3.4 MOU Signing Ceremony

The MOU signing between Taiwan's ODA and Japan's DSA formalized a partnership to advance data sharing in public transportation. Representatives Tim Chen and Noriaki Okui emphasized the symbolic importance of this collaboration, likening the two countries to siblings working toward a shared digital future. The ceremony concluded with a photo session, celebrating this milestone.

2.4.3.5 AODP Panel Session:

Chair: Noboru Koshizuka

Gopal (India Urban Data Exchange): Gopal presented the IUDX platform, operational in 52 cities, that integrates IoT data for urban services like traffic management. He also shared agricultural applications where data replaces traditional collateral in small-scale farming loans.

Jon Ho Choi & Jo Bucha (Korea): Highlighted Korea's K-NDI strategy, which prioritizes data sovereignty and standardized interfaces to unify public institutions under a common data-sharing framework. They described projects that enable single-window access for users, improving data accessibility and interoperability.

Allen Wang (BigObject, Taiwan): Wang discussed mobility data spaces and collaborations with local partners across Asia. He emphasized building trust ecosystems to overcome barriers like inconsistent data quality and regulatory constraints.

Q&A sessions:

Q1: What are the main barriers to implementing data spaces across Asia?

Gopal (India): Regulatory inconsistencies across countries remain a significant challenge, especially in sectors like healthcare and agriculture. While IUDX operates successfully in urban settings, scaling to rural areas requires more flexible policies and infrastructure investments.

Jon Ho Choi (Korea): Interoperability is a major hurdle. Although Korea's K-NDI strategy emphasizes standardization, differences in legal frameworks and technical standards across Asia complicate collaboration. He also highlighted the importance of trust frameworks to build confidence among stakeholders.

Allen Wang (Taiwan): Trust and data quality are critical issues. Many organizations lack the confidence to share data due to concerns about misuse or privacy breaches. Taiwan is experimenting with localized governance models to address these concerns, starting with mobility data spaces.

Q2: How can trust be established to facilitate cross-border data sharing?

Allen Wang (Taiwan): Building trust requires transparency and accountability. Taiwan has adopted IDSA connectors to ensure that all data transactions comply with predefined rules. He suggested joint pilot projects, such as the planned Proof of Concept (PoC) with Japan, to demonstrate the feasibility of secure data exchanges.

Jon Ho Choi (Korea): Trust frameworks must include mechanisms for authentication, certification, and governance. Korea's K-NDI uses a unified registry to track data transactions, giving participants control over their data while maintaining transparency.

Q3: What role does AI play in enhancing the value of data spaces?

Gopal (India): AI can transform raw data into actionable insights, especially in urban planning and agriculture. For example, AI algorithms applied to IUDX data have improved traffic management and optimized resource allocation in Indian cities.

Allen Wang (Taiwan): AI integration with data spaces can enable real-time data analytics, such as predicting urban mobility patterns. However, he stressed that AI models require access to high-quality and well-structured data, which is still a challenge in many regions.

Q4: Are there any successful examples of cross-border data collaborations in Asia?

Allen Wang (Taiwan): Wang highlighted Taiwan's partnership with Japan, focusing on mobility data. The collaboration aims to standardize data formats for public transportation systems, allowing seamless integration of services like route optimization and passenger flow analytics.

Gopal (India): Gopal shared an example of an agricultural data exchange in collaboration with ASEAN partners. Data on crop yields and weather patterns are being shared to improve productivity and address food security challenges.

Q5: What next steps should be taken to scale data spaces in Asia?

Jon Ho Choi (Korea): He called for the establishment of a regional data governance framework to harmonize standards and policies. This could involve forming an Asia Data Alliance to align efforts across countries.

Gopal (India): Capacity-building initiatives are essential. Training programs for data scientists and engineers, along with public awareness campaigns, can accelerate adoption.

Allen Wang (Taiwan): Governments should incentivize participation in data spaces through subsidies or tax benefits, particularly for small and medium enterprises. He also stressed the importance of demonstrating tangible benefits through pilot projects.

2.4.3.6 Technology and Business Lectures

Shinsuke Miyayama (SoftBank): “Blueprint for Digital Society Infrastructure”
Miyayama outlined SoftBank’s decentralized infrastructure vision, integrating data centers, 5G/6G networks, and AI services. He highlighted the "Super Distributed Computing Infrastructure," enabling resource optimization and innovative applications in sectors like logistics and healthcare. Collaboration among government, academia, and industry was proposed as essential for building equitable and sustainable digital ecosystems.

Masaru Dobashi (NTT Data Group): “The Future of Business Systems Accelerated by Data Spaces”
Dobashi showcased NTT Data’s leadership in global initiatives, such as Japan Mobility Dataspace and Gaia-X collaborations. He stressed the need for interconnected data-sharing platforms as the backbone of future IT infrastructure. Dobashi concluded by emphasizing the importance of sovereignty in global data exchanges, ensuring compliance with regional regulations while enabling innovation.

Kenichi Tsujioka (PwC Consulting): “Challenges in Data Exchange”
Tsujioka explored data monetization as a strategy to create business value, noting that only 15% of Japanese companies currently use external data. He highlighted PwC’s work in smart cities, using advanced geospatial data to enhance urban planning, disaster prevention, and mobility. Tsujioka called for frameworks that simplify cross-industry data sharing and empower organizations to address societal challenges.

Taka Matsutsuka (Fujitsu Research): “Towards Trust Interoperability in Data Spaces”
Matsutsuka emphasized trust frameworks as the key to achieving interoperability in global data-sharing ecosystems. He outlined Fujitsu’s phased approach, beginning with regional trust frameworks like Factory-X and DATA-EX, and progressing toward global mutual recognition. Ongoing initiatives include testbeds to validate these frameworks, addressing challenges in authentication and compliance.

2.4.3.7 IDSA Panel Session

Christoph Mertens, from the International Data Spaces Association (IDSA), emphasized the critical role of data spaces in securing data sovereignty and enabling cross-industry data sharing. He highlighted the IDS Reference Architecture Model as a global standard for secure data transactions and stressed the importance of adapting and implementing these frameworks across regions to foster global partnerships.

Dandan Wang, a Specialist Solution Architect at T-Systems International GmbH, presented success stories of European data space projects, particularly in mobility and supply chain sectors. She emphasized the progress in ensuring data security and interoperability through advanced technological solutions while underlining the need for compliance with regional regulations. Wang reiterated T-Systems’ commitment to supporting global adaptation of data spaces.

Akira Sakaino, Evangelist and Director at NTT Communications, discussed infrastructure development for data collaboration and its practical applications in business. He highlighted efforts to enhance interoperability in sectors such as smart cities and industrial IoT, stating that NTT’s initiatives contribute to regional economic revitalization and the creation of a global data ecosystem.

Yenwei Zheng, Customer Experience Program Manager at Microsoft Japan, shared examples of data space development leveraging Microsoft Azure. He highlighted the integration of AI with data spaces as a driver of new business opportunities and focused on Microsoft's initiatives to advance data sharing in the Japanese market while aligning with global standards.

Hirotsugu Seike, Project Assistant Professor at the University of Tokyo, explained the ongoing research and future prospects for data spaces at the university. He emphasized collaborations with IDSA Japan Hub to promote international research and standardization, highlighting the potential of technical demonstrations and educational programs in driving societal implementation.

Kazuo Nakashima, General Manager for Industrial IoT at the Robot Revolution & Industrial IoT Initiative (RRI), underscored the significance of data spaces in Japan's industrial IoT landscape. He detailed RRI's efforts in digitalizing smart factories and supply chains, stressing that international standardization and interoperability are key to maintaining global competitiveness.

Masaru Dobashi, Senior Specialist at NTT Data, highlighted the transformative potential of data spaces in strengthening global business networks. He cited initiatives such as the Japan Mobility Dataspace and Ouranos Ecosystem, showcasing progress in these areas. Dobashi emphasized the importance of global collaboration and improving regional interoperability for success.

Florian Mohr, Innovation Leader for Data Space Technologies at Fujitsu, focused on the importance of trust frameworks in enabling secure and efficient data sharing. He outlined challenges related to interoperability between data spaces and proposed phased solutions to address these issues. Mohr highlighted Fujitsu's contributions to advancing a global data ecosystem through its technical expertise.

Noboru Koshizuka, Professor at the University of Tokyo and Chair of the AODP Summit 2024, discussed the importance of data spaces in promoting cross-industry data collaboration in Japan. He highlighted the university's role in providing a testbed for validating interoperability and advancing standardization, emphasizing the value of Asia-Europe cooperation in fostering a global data economy.

These insights collectively highlighted the transformative role of data spaces in enabling secure, interoperable, and innovative ecosystems across industries and regions, showcasing a unified commitment to advancing global data collaboration.

2.4.3.8 Panel session "Collaboration between Asia and Europe on Data Space"

Christoph Mertens (International Data Spaces Association (IDSA)) emphasized the critical need for a unified framework for data spaces to enable collaboration between Asia and Europe. He discussed the IDS Reference Architecture Model's role in fostering secure, sovereign, and interoperable data sharing. Mertens called for alignment in standards and governance to establish trust and enhance global cooperation.

Dong Po Deng (Vice-President of Organization for Data-driven Application (ODA), Taiwan) shared Taiwan's experiences in developing mobility and public data applications within data spaces. He highlighted the importance of interoperability for cross-border collaboration and described Taiwan's efforts to overcome regulatory barriers. Deng also pointed to Taiwan's MOU with Japan's DSA as a key example of fostering international partnerships.

Akira Sakaino (Evangelist, Director, NTT Communications) presented NTT Communications' initiatives to build secure and scalable infrastructure for cross-border data sharing. He discussed practical applications like smart cities and emphasized the importance of investment in interoperable technologies. Sakaino highlighted NTT's role in connecting Asia and Europe through robust data sharing solutions.

Kenji Hiramoto (Director General of Digital Infrastructure, Information-technology Promotion Agency, Japan (IPA)) described Japan's strategy for developing data spaces, focusing on improving data quality and aligning with international standards. He highlighted IPA's role in fostering collaboration between industry and academia to innovate data-sharing solutions. Hiramoto also underscored Japan's contributions to global standardization efforts and its participation in European initiatives.

Hiroshi Mano (General Secretary, Data Society Alliance (DSA)) emphasized the shared goals of interoperability and trust-building between Asia and Europe. He argued against telecommunications companies monopolizing data ecosystems, advocating for open and collaborative models. Mano also highlighted the importance of aligning governance structures and technical standards, citing ongoing pilot projects as examples of successful collaboration.

Q&A Session

Q1: How can Asia and Europe overcome differences in regulations to enable effective collaboration in data spaces?

Christoph Mertens: Suggested harmonizing legal frameworks through international standardization efforts and bilateral agreements, emphasizing the importance of trust-building mechanisms.

Dong Po Deng: Highlighted the need to create interoperable trust frameworks to bridge gaps caused by regulatory differences and shared Taiwan's experience in adapting to international standards.

Kenji Hiramoto: Stressed Japan's active participation in international discussions to align its frameworks with European models while addressing domestic regulatory challenges.

Q2: What are the main technical challenges in achieving cross-border interoperability?

Akira Sakaino: Identified differences in data formats and protocols as key barriers and emphasized the importance of adopting federated architectures to ensure compatibility.

Dong Po Deng: Highlighted Taiwan's efforts in developing universal connectors and pointed out that trust and security remain significant challenges in technical interoperability.

Christoph Mertens: Discussed the role of the IDS Reference Architecture Model in addressing technical discrepancies and ensuring smooth integration across systems.

Q3: How can trust frameworks be effectively implemented to support cross-border data sharing?

Hiroshi Mano: Emphasized the importance of transparent governance structures and highlighted DATA-EX as a model for fostering trust in cross-border exchanges.

Noboru Koshizuka: Pointed out that testbed environments, like the one developed at the University of Tokyo, play a critical role in validating trust frameworks and building confidence among stakeholders.

Kenji Hiramoto: Stressed that Japan's digital infrastructure initiatives aim to incorporate standardized trust mechanisms to align with global expectations.

Q4: What are the key areas where Asia and Europe can learn from each other in developing data spaces?

Christoph Mertens: Highlighted Europe's regulatory advancements and Asia's innovative approaches to implementing practical use cases as mutual learning opportunities.

Noboru Koshizuka: Noted that Asia could benefit from Europe's comprehensive governance frameworks, while Europe could leverage Asia's rapid development and adoption of new technologies.
Akira Sakaino: Emphasized the potential for knowledge sharing in smart city and mobility data spaces, which are priorities for both regions.

Q5: How can scalability and security be balanced in cross-border data space projects?
Akira Sakaino: Explained that advanced encryption and federated models can ensure both scalability and security while adhering to regional compliance requirements.
Dong Po Deng: Shared Taiwan's approach of integrating secure-by-design principles into mobility data applications to ensure scalability without compromising trust.
Hiroshi Mano: Stressed the importance of iterative testing through pilot projects to refine the balance between scalability and security.

2.4.3.9 Closing Remarks

Lars Nagel (CEO, International Data Spaces Association (IDSA)), highlighted the importance of global collaboration to realize the full potential of data spaces. He emphasized the need for continued efforts in standardization and interoperability to build trust and enable seamless data sharing across borders. Nagel reiterated IDSA's commitment to supporting international partnerships and fostering innovation through data spaces, inviting all stakeholders to engage actively in these initiatives.

Tim Chen (President, Organization for Data-driven Application (ODA), Taiwan), reflected on the significance of Asia-Europe collaboration in advancing data-driven societies. He underscored the potential of data spaces to address shared challenges such as mobility and sustainability. Chen also emphasized the importance of practical applications and mutual learning, highlighting Taiwan's commitment to strengthening ties with international partners, including Japan, through pilot projects and knowledge exchange.

Noboru Koshizuka (Professor, The University of Tokyo / IDSA Japan Hub Coordinator / Chair, AODP Summit 2024), summarized the session's key insights, stressing the importance of trust, interoperability, and open governance in data spaces. He emphasized the value of pilot projects and testbeds in validating frameworks and fostering innovation. Koshizuka expressed optimism about the potential for deeper collaboration between Asia and Europe, thanking all participants and calling for continued dialogue and cooperative efforts.

2.5 IOFDS day 1

2.5.1 Agenda

1. Opening Remarks & Self-Introductions
   Hiroshi Mano (Data Society Alliance)
   Noboru Koshizuka (The University of Tokyo/Data Society Alliance)
   Masanari Yashiro(Ministry of Internal Affairs and Communications, Japan）
2. Keynotes
   Shinichi Urakawa, Skyage Inc. CEO, OEPC(Ouranos Ecosystem Promotion Center) Director, RIKKYO Univ. Graduate School of AI Visiting Professor
   Inder Gopal (CEO, India Urban Data Exchange (IUDX))

Chi-Ming PENG （Founder of Asia Open Data Partnership Honored Chair of Organization for Data-driven Application (ODA))

3. Status Reports 1
   Ulrich Ahle (CEO, Gaia-X Association)
4. Keynote Speech
   Keisuke Murakami Digital Agency, Japan
5. Status Reports 2
   Lars Nagel (CEO, International Data Spaces Association (IDSA))
   Chandra Challagonda (CEO, FIWARE Foundation)
   Didier Navez (Dawex)
   Sebastian Schneider (R&D Head of Processes, DMG MORI Manufacturing USA)
6. Status Reports 3
   Dominik Rohrmus (LNI Labs Network Industrie 4.0), Ingo Sawilla (TRUMPF), Klaus Ottradovetz (Distinguished Expert Digital Ecosystems, Eviden International Germany GmbH)
   Florian Mohr (Innovation Leader - Data Space Technologies, Fujitsu)
   Sven Löffler (T-Systems International GmbH)
7. Keynote
   Marco Schuldt (BMWK/Lead Industrie 4.0 and data ecosystems, Federal Ministry for Economic Affairs and Climate Action, Germany)
8. MoU Signing Ceremony

2.5.2 Number of attendants

130 including both on-site and virtual

2.5.3 Summary

2.5.3.1 Keynote Presentations

Shinichi Urakawa (Skyage Inc., OEPC, Rikkyo University) presented the Ouranos Ecosystem's role in achieving compliance with EU battery regulations through data interoperability. Highlighted collaboration with Catena-X for supply chain resilience and cross-industry data integration. Discussed use cases in transportation and circular economy, emphasizing challenges in aligning Japan's fragmented data platforms.

Inder Gopal (India Urban Data Exchange) showcased successful initiatives in India, such as urban data platforms in 52 smart cities and agricultural data exchanges. Emphasized privacy, differential privacy techniques, and federated learning for secure AI applications. Highlighted open-source frameworks and modular platform components adaptable to multiple sectors.

Chi-Ming Peng (Ministry of Environment, Taiwan) traced Taiwan’s transition from open data to open government, focusing on transparent governance and climate-related initiatives. Discussed the integration of AI for administrative efficiency and green growth strategies. Advocated for collaborative approaches in addressing global environmental challenges.

Keisuke Murakami (Digital Agency, Japan) discussed Japan’s push for data-driven supply chain optimization through data spaces. Highlighted the potential of inter-company and cross-border data collaborations across ASEAN, India, and Africa. Addressed challenges in integrating connector-based and blockchain-based data exchange models.

Marco Schuldt (BMWK) highlighted Germany's collaborative data ecosystem initiatives like Catena-X and Factory-X. Emphasized the importance of aligning legal frameworks between Japan and Germany to support cross-border innovation. Called for strengthened partnerships between both countries to enhance industrial competitiveness.

2.5.3.2 Status Reports

Ulrich Ahle (Gaia-X) outlined Gaia-X's framework for decentralized, trusted data spaces with global applicability. Emphasized compliance, modular interoperability, and trust anchors to ensure seamless cross-border data exchange. Highlighted collaborations with Japan, including a digital clearing house pilot.

Lars Nagel (IDSA) presented IDSA's progress on creating a global data spaces standard. Introduced the Data Space Protocol (DSP) for real-time data exchange and governance. Discussed collaboration with organizations like Gaia-X and Catena-X for interoperable and dynamic data spaces.

Chandra Challagonda (FIWARE) discussed FIWARE's contributions to open-source frameworks and the development of smart data models across domains. Highlighted its role in mobility and manufacturing data spaces. Showcased tools for real-time data sharing and interoperability with global standards like DSP.

Didier Navez (Dawex) shared Dawex's approach to trusted data transactions and industry-specific data exchanges. Emphasized regulatory compliance with the EU Data Act and integration with Gaia-X standards. Highlighted use cases in mobility, media, and manufacturing.

Sebastian Schneider (DMG MORI) introduced the IM-X initiative for global manufacturing data ecosystems. Highlighted goals for supply chain resilience and sustainability through predictive data analytics and digital product passports. Stressed the need for global standardization across regions.

Dominik Rohrmus (LNI Labs)/Ingo Sawilla (TRUMPF)/ Klaus Ottradovetz (Eviden) provided updates on Manufacturing-X and Factory-X initiatives. Emphasized collaborative governance, autonomous production, and remote operations using digital twins and AI. Advocated for aligning existing global standards to achieve interoperability.

Florian Mohr (Fujitsu) updated on Catena-X's development as a decentralized data sharing platform for the automotive industry. Highlighted interoperability challenges with other ecosystems like Japan's Ouranos platform. Discussed progress in digital product passports and circular economy efforts.

Sven Löffler (T-Systems) highlighted T-Systems' work on trust anchors and cross-border interoperability. Introduced the Living Lab initiative for rapid prototyping of data space applications in collaboration with NTT and the University of Tokyo. Advocated for global trust framework alignment.

2.5.3.3 MoU Signing Ceremony

Dominik Rohrmus, representing LNI 4.0 e.V, and Noriaki Okui, representing Data Society Alliance (DSA), formally signed the Memorandum of Understanding (MoU).

2.6 IOFDS day 2

2.6.1 Agenda

1. Opening Remarks
   Hiroshi Mano (Data Society Alliance)
   Noboru Koshizuka (The University of Tokyo/Data Society Alliance)
2. Status Reports 4
   Hiroshi Mano (General Secretary, Data Society Alliance (DSA))
   Takafumi Ochiai (Head of Policy Research Institute and Senior Partner, Atsumi & Sakai)
   Noboru Koshizuka (Professor, The University of Tokyo / SIP3 Sub Program Director)
   Maiko Meguro (Director, Digital Agency)
   Kenji Hiramoto (Director General of Digital Infrastructure, Information-technology Promotion Agency, Japan (IPA))
   Taka Matsutsuka (Fujitsu)
3. Technology Lectures
   Hiroshi Mano (CEO, EverySense Japan,K.K.)
   Susumu Koseki (Mitsubishi Electric Corporation)
   Yuki Nobekawa (Chief Operating Officer, Japan Data Exchange Inc.)
4. Status Reports 5
   Xiaomi An (Professor, Renmin University of China)
   Hiroshi Mano (Chair, IEEE SA P3800)
   T V Gopal (Professor, Anna University)
   Didier Navez (Dawex, representing Trusted Data Transaction)
5. General Discussion
6. Event Wrap-up and Closing Remarks

2.6.2 Number of attendants

70 including both on-site and virtual.

2.6.3 Summary

2.6.3.1 Opening Remarks

Hiroshi Mano (Data Society Alliance) welcomed participants and outlined the agenda, emphasizing status reports from Japan, technical presentations, and discussions on standardization and action plans. Stressed the importance of collaboration and future planning under IOFDS.

Noboru Koshizuka (The University of Tokyo) encouraged active participation in discussions and acknowledged the importance of the meeting in advancing cross-border data collaborations.

2.6.3.2 Status Reports

Hiroshi Mano (DSA) presented updates on DATA-EX, emphasizing its role as a federated data collaboration platform. Introduced concepts like data usage rights securities and the integration of open and private data with AI for innovative solutions.

Takafumi Ochiai (Atsumi & Sakai) discussed Japan's data and AI policy, highlighting frameworks for interoperability, ethical AI governance, and international agreements for cross-border data flows.

Noboru Koshizuka (The University of Tokyo) introduced the Japan Mobility Data Space (JMDS), focusing on secure data sharing across Japan's transportation networks. Addressed challenges in integrating private operators' data into a unified framework.

Maiko Meguro (Digital Agency) provided updates on Japan's DFFT initiatives, emphasizing public-private partnerships and cross-border data governance. Highlighted efforts to align international frameworks like OECD and G7 with Japan's policies.

Kenji Hiramoto (IPA) shared updates on IPA's work in digital governance, including a simplified data quality framework and AI-driven solutions. Highlighted the importance of semantic interoperability and AI infrastructure.

Taka Matsutsuka (Fujitsu) discussed interoperability challenges in international data spaces, proposing a three-step approach to align frameworks and laws across regions. Emphasized the need for collaborative testbeds.

Xiaomi An (Renmin University) presented ongoing ISO/IEC work on data governance for smart cities, focusing on use case analysis and common considerations. Highlighted challenges in interoperability, security, and data-driven innovation.

Hiroshi Mano (IEEE SA P3800) provided an overview of the IEEE P3800 standard for data trading systems, emphasizing flexibility, traceability, and governance for multilateral data exchanges.

T.V. Gopal (Anna University) explored the concept of sovereignty in digital ecosystems, emphasizing governance frameworks that align with societal complexities and technological advancements.

Didier Navez (Dawex) provided updates on the Trusted Data Transaction (TDT) initiative, highlighting efforts to establish a European standard for trusted data exchanges and inviting collaboration on cross-border use cases.

2.6.3.3 Technology Lectures

Hiroshi Mano (EverySense Japan) demonstrated the Kyoto Data Marketplace, showcasing the use of AI to integrate open and private data for practical solutions. Highlighted dynamic trading mechanisms and the importance of trust in data exchanges.

Susumu Koseki (Mitsubishi Electric) introduced the Serendie platform for integrating diverse data sources to create value through data-driven solutions. Emphasized its application across multiple sectors to address societal challenges.

Yuki Nobekawa (Japan Data Exchange) presented the JDX platform, focusing on secure data exchanges in private environments. Highlighted recent developments and the platform's role in supporting industries with sensitive data needs.

2.6.3.4 General Discussion

Participants emphasized the importance of trust frameworks and interoperability for global data exchanges. A proposal to develop a testbed for cross-border data spaces was discussed, with plans to present it at the March 2025 Data Spaces Symposium in Warsaw.

The formation of task forces to advance connectors and standards development was agreed upon. Collaborative efforts with SDOs (ISO, IEC, IEEE) and regional organizations (e.g., CEN/CENELEC) were encouraged.

2.6.3.5 Wrap-Up

Action items included preparing an annual IOFDS report by December 2024 and planning the next IOFDS meeting, tentatively scheduled for March 2025 in Warsaw.

Participants were invited to try new trustworthy frameworks and propose local hosts for future meetings.

The meeting concluded with acknowledgments of the importance of fostering trust and interoperability in advancing global data spaces.

Acknowledgments and Editorial Note

Isamu Yamada of the Data Society Alliance (DSA), serving as the secretariat of the International Open Forum on Data Society (IOFDS), compiled this report based on the speaker's presentations and discussions, including participants. Each speaker has made efforts to review the content. We thank all contributors for their valuable input and cooperation.