Industry Data Value Workshop Summary

Collaborating for Digital Economy Growth,
Building a Better Intelligent World.

GLOBAL INDUSTRY ORGANIZATIONS

About the Industry Data Value Workshop

Goals: Discuss about cutting-edge technologies and practices in Europe, Japan, and China, and explore potential directions and opportunities for cooperation to promote industrial digital transformation.

Date: 28th Feb, 2022

Place: Beijing, China/ Barcelona, Spain

Theme: Industry Data Value

Co-host: AII, IDTA

Agenda

- **Opening Remarks**
  William Xu, Jianbo Hu, Meik Billmann

Enabling Technology

- **Industrial Data Spaces**
  Boris Otto
- **Trusted Data Matrix Foster Industrial Data Sharing and Circulation**
  Sha Wei
- **The Role of Industrial Digital Twins for Sustainable Manufacturing and Cross Industries Collaboration**
  Meik Billmann
- **Enabling Technology of Connected Industries Open Framework (ClOF)**
  Yasuyuki Nishioka
- **Coffee Break**

Go to Market Approach

- **Equipment Data Value**
  Jinsong Ouyang
- **Present and Future of Data Value from Digital Twin**
  Massimo Canducci
- **Digital Asset Model Research and Exploration Sharing**
  Ting Wang
- **Machine Digital Asset Case Sharing**
  Zhenhua Chen
- **Open Discussion**
- **Summary**

Overview of the Industry Data Value Workshop

Attendees: 26 attendees from 20 organizations

Online: 9 attendees from 8 organizations

Onsite: 17 attendees from 11 organizations

- **Main conlusions and outputs**

- Only the interconnection and sharing of data can bring the greatest value to the industry, otherwise it will increase the cost of digital transformation. On this basis, data security and credibility must be guaranteed. The specification of a trust-based unified data system is a common challenge for global industry. Our vision is to share data securely and reliably to provide valuable services for value aggregation and growth.
- At present, industrial data has become an important production factor, and it is the key to promoting the digital, networked and intelligent development of the manufacturing industry. Exploring the construction of a trusted industrial data space is to promote the sharing and circulation of industrial data in a wider, more fully and orderly manner. Effective means are also an important way to stimulate the value of data elements and expand the multiplier effect of data productivity. We suggest that all parties further build consensus and advance collaboratively, take data innovation as a link, actively create a data governance ecosystem, and aim at openness and collaboration to improve data circulation and sharing capabilities.

The progress of Japan is quite unexpected. I feel that Japan has done a lot of real things, which is different from the previous perception. Through GIO, there is a channel to understand the latest developments in the global industry.---Jianbo Hu, AII, CAICT

This is a very substantial and meaningful Workshop. Due to language issues, it is difficult to participate in the discussion process. However, it can be fully felt that all parties involved have a strong resonance and the same understanding of the current situation and the issues/problems they are facing.---Yasuyuki Nishioka, IVI

What positive drivers have the EU made to promote the development of digitalization, and what are the details? These may be more interesting to GIO experts from various countries.---Jinsong Ouyang，SAC/TC 124

Industry Data Value Workshop Participants

Connected Across the Globe: 6 onsite in Barcelona, 11 onsite Beijing, 7 online in Beijing, Shanghai, Shenzhen, Shenyang, Frankfurt, Berlin, Tokyo

Role	Organization	Guest	Title
Chair	Huawei	William Xu	Director of the Board, President of the Insititute of Strategic Research
Co-chairs	AII	Jianbo Hu	Secretary General
	IDTA	Meik Billmann	CEO
Speakers	Fraunhofer ISST	Boris Otto	Director
	AII	Sha Wei	Vice-Chief Engineer
	IVI	Yasuyuki Nishioka	Chairman
	SAC/TC 124	Jinsong Ouyang	Vice Chairman
	Engineering Group	Massimo Canducci	Chief Innovation Officer
	ECC	Ting Wang	Chairman of New Industrial Controlling Committee
	CMTBA	Zhenhua Chen	Leader of the Platform Team
Participants	5G-ACIA	Andreas Mueller	Chairman
	5GSA	Luigi Licciardi	Chairman
	AII	Xinhao Jiang	Vice Director of the Vertical Industry Working Group
	CHINA INFO 100	Yan Zhu	Member of the Executive Committee
	EuropElectro/ZVEI	Xu Wang	General Manager
	Fraunhofer FOKUS	Thomas Magedanz	Director of NGNI
	German Platform Industrie 4.0/ZVEI	Juergen Grotepass	Member of Research and Innovation WG
	IDSA	Markus Spiekermann	Director
	SAC/TC 124	Dan Liu	Vice-Chief Engineer
	UK 6GIC	Rahim Tafazolli	Director
GIO Special Advisors	5GDNA	Zemin Yang	Chairman, GIO Special Advisor
	GIO Secretariat	Martin Creaner	GIO Special Advisor
	GIO Secretariat	Christopher Ganz	GIO Special Advisor
Moderators	GIO Secretariat	Haiping Che	Coordinator
	German Platform Industrie 4.0/ZVEI	Juergen Grotepass	Member of Research and Innovation WG

Key messages – Chairs' Address

William Xu, GIO Chair, Director of the Board, President of the Institute of Strategic Research, Huawei

- The interconnection and sharing of data can produce the greatest value to the industry, otherwise it will increase the cost of digital transformation. On this basis, it is also necessary to ensure the security and credibility of data. The workshop mainly includes guests from Europe, Japan and China. These countries are mainly manufacturing and industry-oriented. It is of great value to these countries to formulate industrial data standards, frameworks and interconnection bases in the industry.

Jianbo Hu, Secretary General of AII , Vice-President of CAICT

- At present, industrial data has become an essential productive factors, which is the key to promote the digital, networked and intelligent development of manufacturing industry. Exploring and building a credible industrial data space is not only an effective means to promote the sharing and circulation of industrial data in a wider range, more fully and orderly, but also an important way to stimulate the value of data elements and expand the multiplier effect of data productivity. We suggest that all parties should further build consensus and promote cooperation, actively create a data governance ecosystem with data innovation as the link, and improve the ability of data circulation and sharing with the goal of openness and coordination.

Key messages —Enabling Technology

Boris Otto，Director of Fraunhofer ISST

- All we need to build data space is there, let's just do it.

Sha Wei，Vice-Chief Engineer of AII

- trusted industrial data space based on consensus requirements, standards and management tools has the basic functions of trusted operation environment, use control, identity authentication, classification and grading, smart contract and trusted transmission. It is a data management and control system and value ecosystem covering the whole life cycle of data. It is a new infrastructure to realize the efficient configuration of data elements.

Meik Billmann，CEO of IDTA

- The Asset Administration Shell (AAS) implements the Digital Twin for Industry 4.0 for Greater Digital Value Creation.

Yasuyuki Nishioka，Chairman of IVI

- CIOF (Connected Industry Open Framework) is a platform to enable data sharing, distribution and trading between manufacturing units based on contract. This solution was developed by IVI, verified by several use cases of member companies and released as a commercial product.

Key messages —Go to Market Approach

Jinsong Ouyang， President of ITEI & Vice Chairman of SAC/TC 124

- The equipment value has developed from the traditional equipment ‘ontology value as the main and the service value as the supplement’, to a new value system of "physical equipment (ontology value & service value) + data assets".

Massimo Canducci，Chief Innovation Officer of the Engineering Group

- Digital Twin applications should become as soon as possible Autonomous Digital Twin, a new concept where the digital objects, receiving real time data and providing real time actions, is able to direct interact with real objects without human supervision. This concept introduces the possibility to find the best scenario in the digital world using multiple strategies based on artificial intelligence, and directly apply it in the real world.
- Human body will be the new frontier of Digital Twin. Having wearable devices and different sensors on the human body allows to collect a large quantity of data that can be used not only to check people health, but also to test treatments in digital way and instantly verify how they work before giving them to the patients.

Ting Wang，Vice Chairman of New Industrial Controlling Committee of ECC

- In Industry 4.0, manufacturing model has ushered in major changes, and model-based manufacturing will become the mainstream. Data Asset Modeling is a model-which based manufacturing enabling technology.

Zhenhua Chen，Leader of the Platform Team of CMTBA

- To build a digital economic system in traditional fields, there must be “things” with strong industry attributes as data anchors. Industry digital asset operators are the key players in exploring new systems, new models, and new formats of digital economy.

Summary of Open Discussion

- Q1: How to support and incentify data sharing among stakeholders to jointly create value in networked ecosystems?
- Q2：What are the needs of the stakeholders (infrastructure providers, suppliers, industrial integrators, end users, etc.) and what services could address these in the digitalized ecosystem?
- Q3：How can the entry barrier for SME (small medium enterprises) be lowered to gain value from digitalized ecosystems?

- The Industry Data Value Workshop in 9th GIO Roundtable Workshop shows the need for data usage in larger scale cross enterprises / industries / regions.
- Data movement and sharing maximizes data value, enabling data driven services across industries. It is a new production paradigm of incremental executable knowledge as a service.
- The enabling technologies are data dictionary / information models standard (digital twin, asset administration shell), IDS to protect data privacy and security, industrial or regional data center / cloud (e.g. GAIA-X) to share data and knowledge among enterprises and industries.

Thank you

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