



The 11th GIO Roundtable Summary

March, 2023



Overview of the 11th GIO Roundtable

- 27 organizations, 35 attendees
- 4 new attendees from significant organizations

Barcelona, 16		
Cat.	Org.	Name
Industry Organizations	3GPP	Issam Toufik
	5GSA	Luigi Licciardi
	5G-MAG	Jordi J. Gimenez
	ETSI	Luis Jorge Romero
	German Platform I 4.0	Juergen Grotepass
	GeSI	Luis Neves
	NetworldEurope	Rui Luis Aguiar
	<u>6G Health Institute</u>	<u>Christoph Thuemmler</u>
	All	Zhiqin Wang
	CCSA	Ku Wen
	CHINA INFO 100	Yan Zhu
	ITS	Yan Xu
IVI	Ogura Nobuyuki	
<u>5G Forum</u>	<u>Chang KyungHi</u>	
Speaker	Roland Beger	Carsten Rossbach
GIO special advisor	WBBA	Martin Creaner
Beijing, 8		
Industry Organizations	BSI	Frank Zhang
	ECC	Dong Li
	EuropElectro	Xu Wang
	<u>Fraunhofer</u>	<u>Xiaolong Ma</u>
	SAC/TC 124	Dan Liu
	UWA	Wengang Zhang
	FUXI INSTITUTION	Xiaodong Lee
GIO Special Advisor	5GDNA	Zemin Yang
Online, 4		
Industry Organizations	UK 5G/6G IC	Rahim Tafazolli
	<u>Fraunhofer ISST</u>	<u>Markus Spiekermann</u>
GIO Operation Team	TM Forum	Joann O' Brien
	UK 5G/6G IC	Bernard Hunt

Agenda				
Session	Topic	Speaker	Organization	Time(CET)
Opening	New Faces Introduction	New faces	--	09:00 - 09:10
	Opening remarks	William Xu Zhiqin Wang	GIO Chair GIO Cochair	09:10 - 09:20
Industry Development	Overview of the Achievements and Prospects of Industry Digitalization Under the Vision of GIO	Martin Creaner	WBBA/GIO	09:20 - 09:30
Industry Digitalization	The Outlook of Industry Digitalization	Carsten Rossbach	Roland Berger	09:30 - 09:50
	Progress and Prospect of Connected Factor	Zhiqin Wang	All	09:50 - 10:10
	Progress and Consensus on Data Platform	Markus Spiekermann	Fraunhofer ISST	10:10 - 10:30
	Open Discussion: Opportunities and Cooperation Priorities in the Field of Industrial Digitalization	All Participants	--	10:30 - 11:00
Coffee break				11:00 - 11:20
Integration ICT with Green Development	ICT Enabling Green: ETSI	Luis Jorge Romero	ETSI	11:20 - 11:40
	CCSA and NetworldEurope's Cooperation: Progress of Green ICT	Ku Wen Rui Luis Aguiar	CCSA NetworldEurope	11:40 - 12:00
	European Research Progress on Methods and Regulatory Mechanisms for Green and ICT-Enabled Industries	Luis Neves	GeSI	12:00 - 12:20
	Open Discussion: The Role Played by Industry Organizations in Integrating ICT with Green Development and Follow-up Key Topics	All Participants	--	12:20 - 12:50
Summary	Main Conclusions	Martin Creaner	WBBA/GIO	12:50 - 13:00

Main feedbacks and Suggestions

Feedbacks:

- Better than the previous 10 roundtables.
- We see more organizations to join this year.
- Rich content sharing and a great chance China-EU communication.

Follow-up topics:

- Trend: the impact of **intelligent world** on the transformation of industry digitalization.
- Technology: **Cloud service** based on AI, **digital twins**, **autonomous network**, **digital product passport**.
- Policies: policies and regulations of **data exchange**.
- Practice: **path and process** of implementation based on current status
- Cases: **ECC integrated industrial testbed**, **UWA Malanshan Film and Television base**, **All Midea 5G-Connected Factory** etc.



Key Messages—Opening Remarks and GIO Review

William Xu, GIO Founder & Chair

- We are very grateful for all of the GIO members for their great contribution in the past five years, and we have also seen the release of many white papers and the reach of consensus.
- The standardization circle, industry circle shall strive towards globalization, unification and large-scale application, **adhere to global standards and global communication**, which is beneficial for world peace and development, as well as stability.
- We tried to refer to the face to face meeting. For the next workshop, I suggest we could have it held in Hongkong or some other cities in mainland China for a larger scale roundtable.
- We could talk more about the **intelligent world** in the future, about how they could **impact all walks of life** – as we transform from digitalization to **intelligent digitalization**.
- We wish to have certain **small and medium scale of workshops and meetings** as well.



Zhiqin Wang, the 11th GIO co-chair

- ICT and other digital technologies have brought great convenience to your life and work. At the same time, ICT technology is also empowering thousands of industries, driving and accelerating digital transformation of industrial production and manufacturing models.
- All has actively carried out work in top-level design technology of the industrial internet, industrial practices, international cooperation and other aspects, and have gain abundant results. We also provide multi-directional support for the digital transformation and upgrading of industrial enterprises.
- So I hope through this GIO roundtable, we can exchange experience, share information, inspire ideas, seek for consensus, and **jointly explore new methods, new models, and new paths for the digital transformation and sustainable development of industry**.



Martin Creaner, Director General of WBBA, GIO special advisor

- **Core data of GIO:**
 - **45 different industry organizations** from right across the world have been involved in various GIO meetings from all different aspects of industry standardization during the past five years, about 25 of those organizations have been consistently involved in at least half the meetings.
 - **10 GIO roundtables, 15 workshops;**
- **Value of GIO:**
 - Focus on industry digital transformation, cross-industry opportunities, **information sharing**, define the direction of progress, and **promote bilateral/multilateral cooperation**.
 - **Transformation topics:**
 - **Horizontal:** digital transformation architecture, trusted data space, ecosystem and information sharing, sustainable industrial infrastructure;
 - **Vertical:** intelligent manufacturing, intelligent transportation system, digital health etc.
 - **Whitepaper release:** discuss digital transformation architecture and industrial digital ecosystem.



Key Messages—Industry Digitalization

Carsten Rossbach, Senior Partner of Roland Berger

- Human life and needs are constantly evolving. The requirements for industrial enterprises are extended from basic low-cost and high-quality delivery to a wider, diversified and complex cross-cutting field.
- In the future, the industry will have seven characteristics: integration of virtual and real, large-scale customization, flexible adaptation to changes, reliable and mutual trust, decent work, nature-friendly, and ecological co-prosperity. **Digital technology** has become the **most key technology foundation for mankind to move towards the intelligent world**.
- China is one of the important growth points of the future global market, and the **robot industry** will be **an effective means** for China to develop **advanced manufacturing industry** in the future.
- Through the analysis of 16 industries and 5 groups of industry portraits in China, **there are 12 common scenes** of digitalization in different industries, with the characteristics of **cross-industry versatility and high value**, such as sustainable development, cloud factory shared manufacturing etc.
- **Digitalization of industrial equipment, fully-connected industrial network, cloud-based industrial software, and value-based-industrial data** will promote comprehensive digital transformation of industries and new industrialization.

Zhiqin Wang, All, Vice President of CAICT

- **High-performance, high-intelligence, and high-convergence technologies**, such as 5G and Time-Sensitive Networks (TSNs), have become the cornerstone of the evolution of the next-generation industrial network.
- **Industrial Network 3.0** is driven by new industrial internet paradigms and business models. It supports innovative applications capable of people-machine collaboration. It also features highly convergent technologies, flexible deployment, measurable services, and programmable interfaces.
- **5G connected factories** refers to the new-generation information technology represented by 5G, as it constructs new form of infrastructure by rating or upgrading the production site, therefore, forming a more advanced factory digital infrastructure.
- The construction of fully connected factories focuses vertically on ten key industries, and are horizontally divided into three levels: **production line level, workshop level and factory level**, to help enterprises achieve quality improvement, cost reduction, efficiency increase, green and safe development.
- All is actively promoting the implementation of new technologies such as **5G, TSN, and industrial PON** to support enterprises in building fully connected factories.

Markus Speikermann, Head of Data Business Department of Fraunhofer ISST

- Europe is in lack of mainstream platforms for collaborative data processing and exchange, which restricts the value monetization of digital assets.
- **4 key initiatives:**
 - ▣ **Sharing:** IDS focuses on the protocol layer and aims to realize the interoperability of data space, and also implements data classification and policy description through DCAT and ODRL standards respectively.
 - ▣ **Trust:** GAIA-X builds a trust framework and formulates common rules for data and services.
 - ▣ **Integration:** DSS supports the development and cooperation of different communities and promotes standardization.
 - ▣ **Industry:** The Catena-X automotive network, using the GAIA-X trust framework and IDS protocol, provides a unified network base for automotive industry participants.



Key Messages—Discussion1—Industry Digitalization

Follow-up Topic Direction

- **Juergen Grotepass, German Platform Industrie 4.0/ZVEI:** We can see two use cases of highly integrated products and interconnected factories on HANNOVER Fair 2023: IVI in Japan, VDMA and ZVEI in Germany are already working on tracing carbon footprints and require the participation of service providers. We hope to discuss **the contribution of ICT to the carbon footprint of the overall value chain.**
- **Zeming Yang, 5GDNA:** Invite representatives from vertical industries to share the **ROI of industry digitalization** and the **priorities** of enabling technology application from the business perspective.
- **Rui Luis Aguiar, NetworkEurope:** Introduce the **ROI of technologies** related to industry digital transformation **separately** to provide **clearer reference, and guidance** for SMEs and consider using existing systems and knowledge.
- **Nobuyuki Ogura, IVI:** We should consider not only the objectives, but also the **path and process** of implementation based on the status quo.
- **Xiaodong Lee, Fuxi Institution:** Through the GIO platform, we could help build a **global unified platform** to ensure that **data is interpretable, identifiable, make sure the ownership of the data can be confirmed and accessible.**

Existing Practices of Different Organizations

- **Frank Zhang, BSI:** For the social effects of digital technologies, such as providing a safer and healthier working environment for employees, standard organizations can assist in formulating and promoting corresponding international standards. BSI has accumulated a lot of practices. BSI hopes to **draw on best practices to develop standards, promote and ensure digital transformation through the application of standards.**
- **Wengang Zhang, UWA:** Film and television content production utilizes a large number of digital technologies, such as virtual shooting, 5G, cloud, AI, network storage, digital people, etc. The cloud film and television production and service base built in Malanshan, Hunan Province, has built four content production lines and served more than 1,000 film and television enterprises, and is expected to create 100 billion yuan of output value by 2025. UWA continues to explore the **industrialization of film and television**, and will become a category in industrial digitalization in the future.
- **Dong Li, ECC:** **The integrated industrial test bed** of ECC can be shared on the GIO platform. It is planned to establish a system covering several provinces and municipalities in China. It is hoped that European and Japanese partners will join us in the future and become an international test bed.

Cross-organization communication requirements

- **TM Forum & All:** Roles of telecom service providers in 5G fully connected factories, and how to provide services in an evolutionary manner; How to choose between different connectivity levels (production lines, workshops, and industries)?



Key Messages—Integration ICT with Green Development

Luis Jorge Romero, Director General of ETSI

- **ICT is the key factor that directly and indirectly drives sustainable development.**
 - **Improve energy efficiency:** Energy-saving technologies (architecture, system, and network)
 - **Reduce carbon emissions:** Alternative Energy Technology
 - **Reduce waste/pollution:** Software, equipment recycling/refurbishment, etc.
- **ETSI Promotes Sustainable Development from Different Perspectives**
 - **TC EE (Environmental Engineering): The Engineering aspects of telecom equipment installation standards,** European Commission eco-design policy, etc.
 - **TC ATTM (Access, Terminals, Transmission& Multiplexing):** The operations& Physical aspects of telecom equipment standards, urban and community ICT industry **waste disposal;**
 - **ISG OEU (Operational Energy Efficiency for Users): Impact of ICT operations on the ecosystem,** Participation in the CEN-CENELEC-ESTI Coordination Group on Smart Grid (CGSG)
 - **SSC (oneM2M Sustainability Sub Committee): the role of IoT in sustainability.**
 - **3GPP: Energy saving/Energy efficiency** improvement through 5G
- ETSI attaches great importance to sustainable development issues and continuously deepens and disseminates ideas through **annual plans, special issues, websites, and seminars.**

Rui Luis Aguiar, Chair of the Steering Board of

NetworldEurope; Ku Wen, Chairman of the Board of CCSA

Common understanding on workshops:

- Innovation should be the most critical element of sustainable development: especially **network structure innovation**, evaluation process should be transparent, measurable and comparable.
- **Common network indicators:** comprehensively reflect energy efficiency, carbon reduction, coverage, and service requirements, such as NCIe.
- **E2E solution** is in need, evaluation of innovative information technology enables digital transformation to bring global energy emission.
- Green evaluation methods require **global cooperation**, open innovation, timely and credible comparison as the basic principles.

Output: SRIA

- Network architecture innovation: **diversified solutions**, meet different SLAs and security requirements, **network performance and energy efficiency are considered in KPIs.**
- Technological innovation: application of technologies such as **B5G, edge AI, and F5G** can reduce carbon emissions of the entire industry and ecosystem.
- Research work plan: Intelligent Network and Service Alliance organization work plan (2023); 6G sustainable development project and standardization (2024).

Luis Neves, GeSI CEO

- **Sustainable development should be discussed from the perspective of human beings, not technology.**
 - **Effective energy consumption reduction** is the only way to reduce carbon emissions, and **renewable energy** should also be concerned.
 - Digital technologies have penetrated into various industries, such as energy, agriculture, health care, and education. The boundaries between ICT and other industries have been blurred. **Targeted digitalization is required.**
 - Addressing challenges such as **climate, cyber security and privacy, and circular economy.**
- Leading and participated activities around EU by GeSI.
 - Cooperate with ITU to release the **assessment methodology for ITC technologies to enable industrial carbon reduction** in April, and transfer the methodology the European Commission.
 - Cooperated with Deloitte to launch the **European Green Digital Coalition.** 37 enterprises investing in the development and deployment of green digital solutions, industry collaboration to develop methodologies and tools to assess the impact of digital technologies on the environment, suggestions and guidelines for industry cooperation in developing green digital transformation
 - Future direction: Explore the development of **common indicators** to measure the environmental footprint of electronic communications services, the development of **codes of conduct for sustainable telecommunications networks** at the EU level, etc.

Key Messages—Discussion 2—Integration ICT with Green Development

Role of ICT in Green Industry Transformation

- **Yan Xu, ITS:** Investing in the telecom industry can bring direct and indirect benefits, namely the greening of the telecommunications system and the benefits that other industries derive from it, **not only the environment, but also the society and governance.** Hong Kong has invested heavily in fintech over the past five years and this year began **using technology to regulate the financial industry.**

Enabling Technology

- **Rui Luis Aguiar, NetworldEurope:** **Network assets, digital twins, digital product passports,** etc. need to be defined, and use them to quickly and easily build connected factories and validate them in a sustainable way. AI helps to classify different digital twins in a sustainable way, and we hope to explore further through the GIO platform.

Gaps and actions to be implemented

- **Xiaolong Ma, Fraunhofer:** We should carry out international cooperation on data exchange, **introduce laws and regulations to support international data exchange,** and focus on green development.
- **Frank Zhang, BSI:** **Government policies or standards help drive enterprises to adopt new technologies to achieve smart manufacturing and green manufacturing.** Standards such as 14064 and 14067 are related to the measurement of the carbon footprint of the entire industry chain. It takes time to build a consensus and implement it.



2023 Follow-up Work Plan

1

Roundtable

The 12th GIO Roundtable

1. Time and Address

- HC(9.20-22), in Shanghai

2. Topic Direction

- Intelligent industry transformation (Suggested)

3. Optimization Measures

- Discuss the agenda and bright spots, to ensure the quality (April – May), communications with GIO special advisers, GIO Operation Team monthly meeting, internal communication with product lines/IDT.
- Invite the guests as early as possible, further improve the quality of participants: comprehensive review of key industry organizations, invite CXO of key organizations, and other academicians in related fields.

2

Workshops

Potential Opportunities

★ 1. Data Space Workshop

ChinaInfo100 Annual Summit, Jul.- Aug, location TBD

★ 2. ICT Enabling Sustainability Workshop

Digital with Purpose Global Summit, Sep. 27th – 29th, Lisbon, held by GeSI

3. Digital Health Workshop

Global Health Forum of Boao Forum for Asia, time and location TBD

Other workshop in verticals will be held :

ICV Roadmap Workshop: ERTICO-ITS Annual Summit, May, Lisbon, ERTICO & CSAE participate

3

Platforms

Diversified means of branding

1、Website

GIO website upgrade (better interaction experience, more content format allowed)

2、Media interview and promotion

- Arrange media interview for selected industry leaders
- Develop articles based on industry leaders' speech and promote on related industry organizations' websites.

3、Video Production

Industry cases and practices promotion, such as: Malanshan Film and Television Service Base, Midea fully-connected factory, ECC integrated industrial testbed.

Apr.

May

Jun.

Jul.

Aug.

Sep.

Oct.

Nov.

Dec.

GIO Roundtable

The 12th GIO Roundtable

Workshops

ICV Roadmap Workshop

Data Space Workshop

Digital Health Workshop

ICT Enabling Sustainability Workshop

Communication Platforms

GIO Website Upgrade

Media interview and promotion

Video production of successful cases

Thank you.



Collaborating for Digital Economy Growth
Building a Better Intelligent World