SESEC V Translation

Translation of SAMR Press Conference on Manufacturing Standardization

September | 2025

Seconded European Standardization Expert in China
(SESEC)

INTRODUCTION:

On 4 September 2025, the State Administration for Market Regulation (SAMR) held a press conference on the theme of "***Standards for Advanced Manufacturing to Support High-Quality Development of the Manufacturing Industry.***" During the conference, SAMR reported their standardization achievements in advanced manufacturing as of 2025 and their next steps. Key statistics on China's domestic and international standards were revealed. Subsequently, SAMR held a question-and-answer (Q&A) session for multiple state media outlets. Majority of the questions from the media centered on China's international standardization. SESEC has translated the transcript of the press conference.

Here is the link to the original article from SAMR:
https://www.samr.gov.cn/xw/xwfbt/art/2025/art_7b47f8a206ea4c34b82c79489ec46bc8.html

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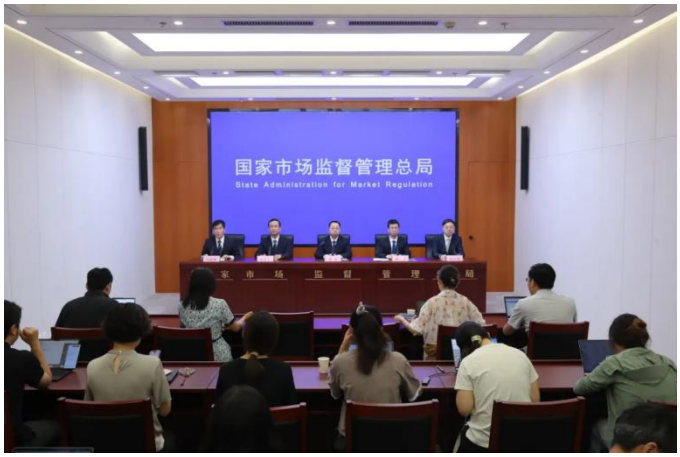
SAMR: Standards Support High-Quality Development of Manufacturing Industry



Sun Yanfeng, Deputy Director-General of the Publicity Department, SAMR:
Ladies and gentlemen, members of the media, good morning! Welcome to today's press conference. The theme of this event is *Standards for Advanced Manufacturing to Support High-Quality Development of the Manufacturing Industry.*

To give you a clearer understanding of the role and outcomes of standards in advanced manufacturing, we have invited:

- Mr. XIAO Han, Director-General, Standards Innovation Management Department, SAMR
- Mr. GUO Chenguang, Deputy Director-General, Standards Innovation Management Department, SAMR
- Mr. WEI Hong, Deputy Director-General, Standards Technology Management Department, SAMR
- Mr. SUN Hubing, Vice Minister, Jiangsu Provincial Administration for Market Regulation

They will share relevant updates and answer your questions.

Now, let me first invite Mr. Xiao Han to present an overview.

I. **Overview of the Standardization for Advanced Manufacturing**

Mr. Xiao Han, Director-General, Standards Innovation Department, SAMR:
Good morning, friends from the media. Thank you for your ongoing interest in and support for standardization work. I am pleased to introduce recent progress in standards for advanced manufacturing and their contribution to the high-quality development of the manufacturing sector.

Standards are a fundamental component of economic activity and industrial development. In advanced manufacturing, they provide essential technical support, guide industrial upgrading, and strengthen competitiveness. During the 14th Five-Year Plan period, SAMR has carried out a series of key initiatives:

1. **Strengthening top-level design and improving the standards system**

- In 2024, the Ministry of Industry and Information Technology (MIIT), the Ministry of Ecology and Environment (MEE), the Ministry of Emergency Management (MEM), and the National Standardization Administration (SAC) jointly issued the ***Action Plan on Standards to Guide Optimization and Upgrading of the Raw Materials Industry (2025–2027),*** highlighting the role of standards in driving high-end supply, structural optimization, green development, digitalization,

and safety in the raw materials sector.

- In addition, MIIT and SAC jointly issued the Guidelines for Construction of a Standards System for National Intelligent Manufacturing (2024 Edition) , outlining a standards framework to support industrial modernization.

- In July 2025, SAC and MIIT jointly issued the *High-Quality Standards System for Industrial Machine Tools* to enhance resilience and safety across industrial equipment supply chains.

These documents have been instrumental in shaping and improving China's advanced manufacturing standards system.

2. **Expanding standards supply to drive industrial upgrading**

Since the start of the 14th Five-Year Plan, more than **4,000 national standards** have been issued in key sectors including integrated circuits, new materials, new energy vehicles, robotics, and aerospace equipment. These standards support the construction of a modern industrial system and ensure supply chain stability. Examples include:

- **Intelligent manufacturing**: 491 national standards issued, providing guidance for digital and smart transformation to enterprises.

- **New energy vehicles**: 95 national standards issued, improving coordination across the upstream and downstream of vehicle industry chain, enhancing efficiency, and reducing costs.

- **Solar photovoltaics**: 221 national standards issued, helping curb irrational competition and promote high-quality development in the industry.

In addition, around **20% of association standards** focus on advanced manufacturing areas such as next generation IT and high-end equipment manufacturing, providing timely support for innovation and industrial upgrading.

3. **Advancing international standards to strengthen industrial competitiveness**

- During the 14th Five-Year Plan, China assumed **26 new secretariat positions** in international standards organizations, while Chinese experts took on **30 chairmanships** and **486 convenor roles** in international standard working groups.

- China submitted **880 new proposals** for international standards in areas including new energy vehicles, power systems, and aerospace and led the formulation of **532 international standards**.

- In addition, we have adopted a total of **4,210 international standards**, with a conversion rate of **over 90% in key sectors**.

- Platforms such as the Hongqiao International Economic Forum (in Shanghai) and Qingdao Forum on International Standardization have supported dialogues on international standards for electric vehicles, intelligent manufacturing, and AI.

4. **Promoting implementation and stimulating business vitality**

The adoption of advanced manufacturing standards has supported:

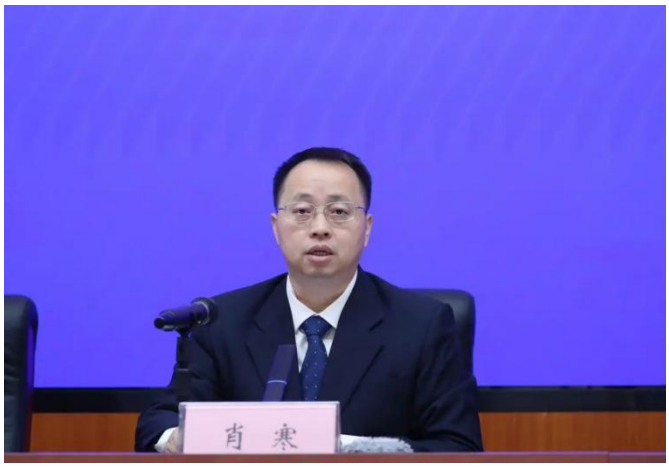
- Improved safety and emergency capabilities
- Upgraded energy storage equipment
- Healthy growth in the drone industry
- Addressing bottlenecks in new energy vehicle development

Internationally, China has led the development of standards in intelligent manufacturing, nanomanufacturing, smart grids, and new energy storage systems. These international standards help to reduce technical barriers, facilitate market access and guarantee the quality of our high-end equipment, key components and large-scale complete sets of equipment. Provide international recognition for Chinese products and enhance their competitiveness globally.

Standards are a key driver of high-quality manufacturing. They reduce costs, ensure product quality and safety, facilitate international trade, and strengthen competitiveness. Looking ahead, SAMR will continue to advance standardization in advanced manufacturing, supporting innovation, openness, and sustainable industrial growth, and contributing to the development of a strong manufacturing sector.

II. **Q&A**

Question 1 (Worker's Daily): As a critical component of the national economy, manufacturing is a pillar industry of China's economy and a key area of international trade. In the current global economic and trade environment, what important role has international standardization played in supporting the internationalization of China's manufacturing industry?



Answer from Mr. Xiao Han, Director-General, Standards Innovation Department, SAMR:
Standardization work has played four roles in supporting the high-quality development of China's manufacturing industry, particularly in promoting its internationalization:

First, **international standards enhance the international competitiveness of industries.**

In critical and emerging technologies such as artificial intelligence, cybersecurity, and brain-computer interfaces, as well as in key industries where China possesses advanced technologies, we have integrated Chinese expertise into international standards, thereby supporting the global expansion of these industries.

For example: in the field of brain-computer interfaces, Chinese experts are leading the development of a series of international standards that guide industrial development. Among these, the terminology international standard will unify global understanding and provide consensus to promote technological and industrial advancement in brain-computer interfaces, while the data format international standard will standardize data application formats, fostering innovation, application, and large-scale development of the

industry.

Second, **international standards drive the development of new business models.**

Driven by the digital economy and technological innovation, various new business models are flourishing. A series of international standards led by China provide unified technical specifications for these new models, strengthen their foundation, and promote global operational synergy.

For example: the world's first international standard for elderly care robots, led by China, offers benchmark references for the design, manufacturing, testing, and certification of such robots. It will guide the high-quality development of the global elderly care robot industry and benefit silver-haired populations worldwide.

Third, international standards facilitate international economic and trade exchanges.

For bulk trade products such as photovoltaic systems, new energy vehicles, power batteries, and household appliances, a series of international standards led by China provide unified technical specifications, promoting smooth integration in international trade.

For example: the international standard for ***IEC TS 62565-5-3:2025 Nanomanufacturing- Product specification-Part5-3: Nanoenabled energy storage – Blank detail specification ; silicon nanosized materials for the negative electrode of lithium-ion batteries***, led by China, establishes for the first time a key indicator system for such materials.

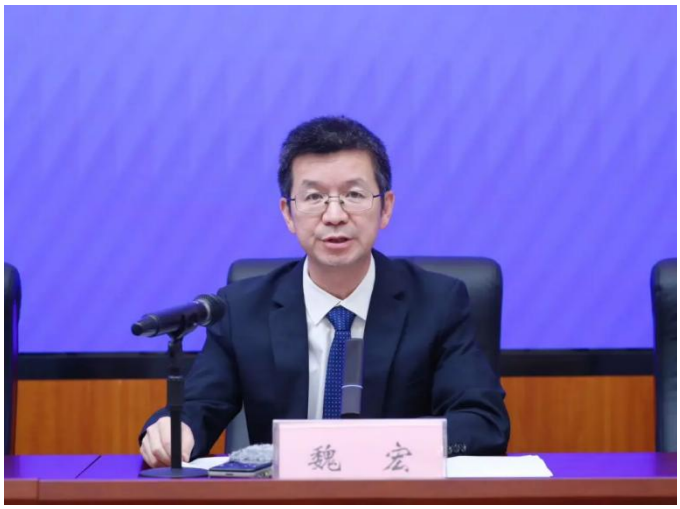
Fourth, **international standards support sustainable development.**

By developing international standards in areas such as carbon data traceability and carbon footprint accounting, we are unifying international quantification methods and data quality, addressing challenges in cross-border comparability and verification, and supporting environmental sustainability.

For example: the first international standard in the photovoltaic field focused on carbon footprint accounting, ***IEC 63667-1 Carbon Footprint Product Category Rules for Photovoltaic Products – Part 1: Photovoltaic (PV) Modules***, developed under China's leadership, provides a scientific basis and implementation pathway for quantifying the carbon emissions of photovoltaic modules throughout their lifecycle, injecting strong momentum into global new energy development and green transformation.

Next, we will guide more scientific and technological achievements into international standards, strengthen practical exchanges with other countries, and use standards as a bridge to continuously support the high-quality development of the manufacturing industry. Thank you!

Question 2 (People's Daily Overseas): The 2025 Government Work Report indicated the implementation of an initiative to enhance standards and lead the optimization and upgrading of traditional industries. Could you elaborate on which national standards have been issued this year to support the high-end, green, and intelligent transformation of China's manufacturing sector? Additionally, what are the key tasks to be prioritized in the next phase?



Answer from Mr. Wei Hong, Deputy Director-General, Standards Technology Management Department, SAMR

SAMR(SAC) has collaborated with relevant departments and promoted the development of national standards in related fields. Since the beginning of this year, **more than 600 relevant national standards** have been issued, strongly supporting and guiding the high-end, green, and intelligent transformation and upgrading of the manufacturing industry.

In terms of high-end transformation, a batch of national standards have been issued in key areas such as high-end basic components, electric vehicles, special processing machine tools, and cranes, leading the industry to leap towards higher value-added and higher technological content.

For example, the national standard ***GB/T 45381-2025 Gantry-type die sinking electrical discharge machines with movable crossbeam – Testing of the accuracy*** breaks through the limitations of traditional machine tools in terms of travel and accuracy, effectively improves the processing accuracy of large precision parts, and further meets the processing requirements of large components in fields such as aerospace.

In terms of green transformation, national standards have been issued for industries such as machinery, chemicals, and construction materials, covering energy consumption and efficiency, pollutant emissions, green product evaluation, and resource recycling, promoting the large-scale application of green technologies and equipment.

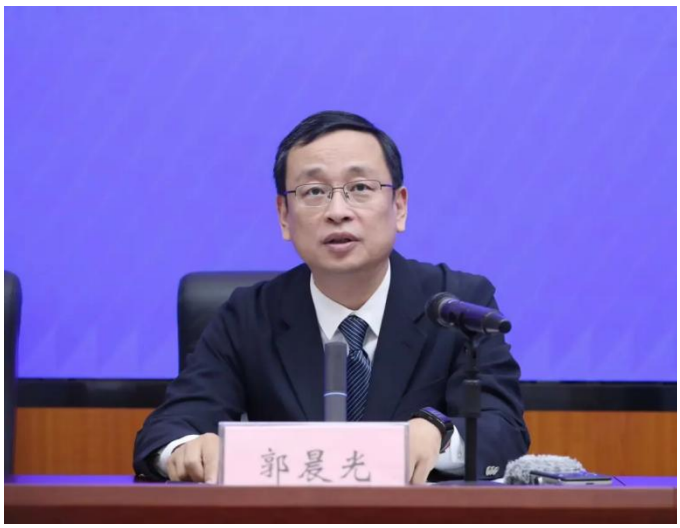
For example, the implementation of the national standard ***GB/T 45647-2025 Technical specification for carbon dioxide recovery and disposal in metallurgical lime kilns*** strongly promotes the research, development, and industrial application of carbon capture technology. Several steel enterprises, following the standard, have carried out the resource utilization of carbon dioxide in the steel process, which can reduce carbon dioxide emissions by 140 kilograms per ton of steel.

In terms of intelligent transformation, the development of standards related to the integration of emerging technologies such as artificial intelligence and the industrial internet with traditional industries has been strengthened. National standards for intelligent equipment and smart factories have been issued, effectively enhancing the digital and intelligent development level of the manufacturing industry. For example, the national standard ***GB/T 45341-2025 Digital transformation management—reference architecture*** provides a systematic transformation framework, focusing on solving problems such as vague strategic planning, unclear implementation paths, lack of emerging capability building, and insufficient drive by data element in enterprise digital and intelligent transformation, helping enterprises achieve digital and intelligent transformation and upgrading in stages.

In the next step, SAMR(SAC) will continue to advance related work in collaboration with relevant departments. On one hand, efforts will focus on key areas and weak links in the transformation and

upgrading of the manufacturing industry, increasing the supply of urgently needed, advanced, and applicable standards, accelerating standard updates and upgrades, with priority given to revising and formulating **more than 4,000 national standards** in fields such as artificial intelligence, the internet of things, recycling and reuse, energy consumption and efficiency, new materials, and high-end equipment. On the other hand, we will strengthen the implementation and application of standards, enhance monitoring the implementation of standards in key areas and industrial chains and promote the coordination of standards with industrial, fiscal, financial, and tax policies to ensure the effective implementation of standards. Thank you!

Question 3 (Phoenix Television): We've seen that many overseas projects and constructions have adopted Chinese standards. Could you elaborate on the role that standardization has played in advancing "the Belt & Road Initiative?"



Answer from Mr. Guo Chenguang, Deputy Director-General, Standards Innovation Management Department, SAMR:

Generally speaking, standardization has played a fundamental and guiding role in advancing the Belt and Road Initiative (BRI). In recent years, we have achieved substantial outcomes by using standards as a tool for "soft connectivity" to facilitate "hard connectivity" (refers to infrastructure connectivity) and strengthen "heart connectivity" (refers to people-to-people bonds). Among these efforts, advanced manufacturing standards have played a significant role in promoting high-quality development under the BRI.

On one hand, the development and promotion of international standards have helped unify technical specifications. For example, the international standard ***IEC TS 62882:2020 Hydraulic machines – Francis turbine pressure fluctuation transposition*** led by China, played a crucial role in the model acceptance testing of hydropower turbines in key BRI projects. International standards in intelligent manufacturing, such as those for mass customization, industrial process control systems, and industrial network buses, also led by China, have been adopted by many countries, facilitating the export of Chinese technologies and large-scale complete sets of equipment. Two international standards for the general design requirements of parabolic trough and tower solar thermal power plants have been applied in 8 key projects across 3 countries, providing core technical support for the global expansion of Chinese equipment manufacturing, engineering services, and operation management.

Note: These two international standards are:

- IEC 62862-3-1 Solar thermal electric plants – Part 3-1: General requirements for the design of parabolic trough solar thermal electric plants

- IEC 62862-4-1 Solar thermal electric plants – Part 4-1: General requirements for the design of solar

tower plants

On the other hand, by promoting mutual recognition and alignment between Chinese standards and those of BRI partner countries, we have supported the internationalization of industries. For instance, under the framework of the regular meeting mechanism between Chinese and Russian premiers, a civil aircraft standardization working group was established, which has completed mutual recognition of **307 civil aircraft standards** between China and Russia, laying a solid foundation for technical exchange and cooperation in this field. As Chinese electric vehicles gain increasing popularity in overseas markets, many trading partners have expressed interest in adopting Chinese standards. To date, 35 Chinese automotive standards have been adopted by countries such as Chile, Ecuador, and Nigeria, covering safety, battery systems, charging devices, and other areas, effectively supporting the development of international trade in electric vehicles. China and Laos jointly established the China-Laos Electric Power Standard Cooperation Committee to develop electric power standards supporting the construction of Laos' 500 KV power grid project. The application of Chinese smart manufacturing standards in overseas industrial parks has supported the construction of overseas factories such as Changan Automobile's Rayong plant in Thailand and BAIC's plant in South Africa.

Moving forward, we will further accelerate the "soft connectivity" of standards under the BRI, building mutually beneficial standardization partnerships across broader areas, at deeper levels, and with higher efficiency. We will focus on the internationalization needs of advanced manufacturing industries, deepen standardization cooperation with BRI partner countries in key sectors, increase the supply of foreign-language versions of Chinese standards, and actively implement a series of cooperative projects for standardization capacity building and overseas pilot applications. Through standards connectivity, we will serve and support the high-quality development of the Belt and Road Initiative. Thank you!

Question 4 (Jimu News): Intelligent manufacturing is at the core of high-quality development of manufacturing sector. Could you elaborate on the pivotal role that intelligent manufacturing standards play in driving technological innovation, transforming production models and bolstering industrial competitiveness?

Answer from Mr. Wei Hong, Deputy Director-General, Standards Technology Management Department, SAMR:

Smart manufacturing is a key engine driving the high-quality development of the manufacturing sector. As a critical technical foundation for industrial growth, standards play an irreplaceable role in guiding technological innovation and promoting the transformation and upgrading of smart manufacturing. In recent years, SAMR, together with MIIT and other departments, has continuously improved the smart manufacturing standards system, providing strong support for the transformation, upgrading, and enhanced competitiveness of the manufacturing industry.

First, standards guide technological innovation in intelligent manufacturing and support the high-end development of the manufacturing sector. Intelligent equipment and industrial software together form the technological framework of intelligent manufacturing. In this regard, we have developed a series of standards covering performance testing and safety requirements for smart equipment, as well as functional specifications and interoperability standards for industrial software. These standards define key technologies and quality management requirements for intelligent products, guiding enterprises to focus on breakthroughs in core technologies and effectively enhancing the technical level and product quality of China's manufacturing industry. Through standardization, we have promoted the research, development, and application of high-end equipment, driving the manufacturing sector toward the high end of the value chain. For example, in the field of industrial robotics, we have established design specifications for human-robot collaborative industrial robots, as well as standards for flexible control and production environment communication architecture, providing technical assurance for the healthy development of the industrial

robotics industry.

Second, standards drive industrial transformation in intelligent manufacturing and accelerate intelligent upgrades in the manufacturing sector. Production lines, workshops, and factories are the core arenas for the digital transformation and intelligent upgrading of manufacturing. Focusing on this critical area and addressing its challenges, we have developed a series of pioneering and innovative national standards, such as ***GB/T 43064-2023 Guidelines for intelligent plants construction***, ***GB/T 41255-2022 Smart factory – General technical requirements,*** and ***GB/T 38129-2019 Smart factory – Safety and security control requirements***. These standards provide clear direction and implementation pathways for enterprises undergoing intelligent transformation. To date, China has established over 30,000 basic-level smart factories, more than 1,200 advanced-level smart factories, and over 230 exemplary-level smart factories. According to statistics, these exemplary smart factories have achieved an average reduction of 28.4% in product development cycles, an average increase of 22.3% in production efficiency, an average decrease of 50.2% in defect rates, and an average reduction of 20.4% in carbon emissions, demonstrating significant improvements in quality, efficiency, and carbon reduction.

Moving forward, we will continue to focus on the needs of industrial development, accelerate the development of standards in cutting-edge fields, deepen the synergy between standards and industrial policies, and consistently use high standards to guide the high-quality development of the manufacturing sector, providing solid support for advancing new industrialization. Thank you!

Question 5 (China Central Television-Live China Radio): Developing future industries is a strategic move to foster new quality productive forces. As a leading manufacturing province, Jiangsu has been proactively planning its *"10+X" Future Industry* cluster in recent years. It has actively explored and precisely implemented measures to develop new quality productive forces based on local conditions. In response to the "question of the future" posed by these emerging industries, how is Jiangsu leveraging standards to play a guiding role? What innovative measures will it adopt going forward?

Note: *"10+X" Future Industry* is Jiangsu's provincial initiative that focuses on developing future-technologies-related industries, such as semiconductor, general intelligence, virtual reality, future internet, hydrogen energy, zero-carbon and so on.

Answer from Mr. Sun Hubing, Vice Minister, Jiangsu Provincial Administration for Market Regulation:

Future industries represent the direction of a new round of technological revolution and industrial transformation. Whether we can proactively plan the standardization of future industries and leverage standards to play a guiding role in these new fields is a major new challenge before us. As a leading manufacturing province, Jiangsu, under the guidance and support of SAMR, has undertaken explorations and attempts in response to this "question of the future," achieving initial results.

First, we have planned ahead by organizing the development of a three-year action plan for future industry standardization. In collaboration with provincial departments of development and reform, science and technology, and industry and information technology, we have comprehensively outlined key tasks for standardization over the next three years, focusing on 10 growing future industries and cutting-edge fields such as quantum technology. By 2027, we aim to gradually improve the standard system for future industries and develop over 100 new standards of various types.

Second, we have taken proactive steps by quickly establishing a number of technical standardization organizations for future industries. New standardization committees have been set up for synthetic biology, drones, and other future industries, while existing committees for artificial intelligence and nanotechnology have been strengthened. These efforts promote exchange and cooperation among technical organizations, universities, industry associations, and enterprises.

Third, we have piloted initiatives by exploring and developing a batch of standards related to future industries. Leading companies in future industries have been encouraged to participate in standard formulation. In recent years, Jiangsu has taken the lead in developing **4 international standards**, **28 national and sector standards**, and has issued and implemented 13 local and association standards. For the first time, we have released a list of ten outstanding cases of future industry standards and led the development of national standards such as ***GB/T 44831-2024 General technical requirements of skin-on-a-chip*** and ***GB/T 43885-2024 Silicon carbide epitaxial wafers*** empowering and enhancing the development of Jiangsu's future industries.

Moving forward, we will fully implement the directives of the SAMR and the Jiangsu Provincial Party Committee and Government, further advancing the three-year action plan for future industry standardization.

First, we will deepen standardization reform and innovation to support the high-quality development of future industries. We will organize participation in the formulation of international, national, and sector standards, transforming local technological advantages into national standardization strengths. We will explore the implementation of a "list-based" mechanism for key local standards and pilot it in future industries. Social organizations will be supported to independently develop and implement advanced association standards.

Second, we will strengthen open cooperation in standardization to enhance the international influence of future industries. We will leverage platforms such as the **Sino-German Standardization Cooperation (Suzhou) Innovation Center** to promote international exchange and cooperation in standardization. Efforts will be made to explore the establishment of an international standards alliance for future industries, aiming to build a globally influential hub for future industry technical standards.

Third, we will promote the long-term implementation and application of standards to stimulate innovation in future industries. Enterprises, universities, research institutes, and key laboratories will be engaged to attract diverse talent to participate in the formulation and promotion of "future" standards. A series of pilot standard application projects will be advanced to guide enterprises in using standards to address challenges and difficulties on the path to the future, ultimately providing a standardized answer to the "question of the future."

Thank you!

End of the conference.

Introduction of SESEC Project

The Seconded European Standardization Expert in China (SESEC) is a visibility project co-financed by the European Commission (EC), the European Free Trade Association (EFTA) secretariat and the three European Standardization organizations (CEN, CENELEC and ETSI). Since 2006, there has been four SESEC projects in China, SESEC I (2006-2009). SESEC II (2009- 2012), SESEC III (2014-2017), SESEC IV (2018- 2022) and SESEC V (2022-2025). Dr. Betty XU is nominated as the SESEC expert and will spend the next 36 months on promoting EU-China standardization information exchange and EU-China standardization cooperation.

The SESEC project supports the strategic objectives of the European Union, EFTA and the European Standardization organizations (ESOs). The purpose of SESEC project is to:

- **Promote European and international standards in China;**
- **Improve contacts with different levels of the Chinese administration, industry and standardization bodies;**
- **Improve the visibility and understanding of the European Standardization System (ESS) in China;**
- **Gather regulatory and standardization intelligence.**

The following areas have been identified as sectoral project priorities by the SESEC project partners: Internet of Things (IoT) & Machine-to-Machine(M2M) communication, communication networks & services, cybersecurity & digital identity, Smart Cities (including transport, power grids & metering), electrical & electronic products, general product safety, medical devices, cosmetics, energy management & environmental protection (including eco-design & labeling, as well as environmental performance of buildings).