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Seconded European Standardisation Expert in China

(SESEC)

Index

Takeaways

China Meets Europe: SESEC Presented at Hamburg Summit

On 30 November 2021, the Digital Hamburg Summit 2021 took place, with the aim to promote further dialogue between Europe and China. Dr Betty XU, Director of the Seconded European Standardization Expert in China (SESEC) project, together with Rada Rodriguez from Signify and Jenny XIANG from Brose China, discussed the implications of China's new standardisation strategy for European companies.

SAC Sets Plan for the Development of National Standards in the Next Five Years

On 6 December 2021, SAC, together with nine other ministries, issued the *14th Five-Year Plan for Developing the National Standards System Promoting "High-Quality" Development".* The policy sets out principles, goals, and key areas for the development of national standards during the 14th five-year period (2021-2025); it also outlines measures to improve the national standardization system.

China to Strictly Regulate Energy Efficiency

On 18 October 2021, *Several Opinions on Strictly Regulating Energy Efficiency and Advancing Energy Conservation and Carbon Reduction in Key Areas* was jointly issued by the National Development and Reform Commission (NDRC) with four other national industries. The target key industries and data centers mainly refer to steel, electrolytic aluminum, cement, plate glass, oil refining and ethylene.

Action Plan for Carbon Emission Peak Before 2030 Put forward in China

On 26 October 2021, the State Council released the *Carbon Emission Peak Action Plan before 2030*, which sets out major targets such as increasing the share of non-fossil energy consumption, improving energy efficiency and reducing carbon dioxide emission intensity, and calls for the implementation of "ten actions to peak carbon emissions".

China First Mandatory Standard of Carbon Emissions, to Largely Reduce the Carbon Intensity in New Residences and Public Buildings

GB 55015-2021 General Specification of Energy Efficiency and Renewable Resources Utilisation in Construction Sector will take effect on April 1, 2022. The Specification requires the carbon intensity in newly-built residences and public buildings to be reduced by an average level of 40% compared to the level stipulated by the energy efficiency designing standards in 2016, and the average carbon intensity to be reduced by up to 7 kgCO/(m·a).

14th Five-year Plan for China Information and Communications Industry

On 1 November 2021, the Ministry of Industry and Information Technology (MIIT) issued the *14th Five-year Plan for the Development of Information and Communication Industry*, which includes four major parts and 26 development priorities, and describes the development blueprint of the information and communication industry in China.

14th Five-Year Plan for Digital Economy

On 12 January 2022, according to the Xinhua News Agency, the State Council issued the *14th Five-Year Plan for Digital Economy* which specifies the guiding philosophy, fundamental principles, goals, key tasks and safeguarding measures for advancing the digital economy during the 14th Five-Year period (2021-2025).

China Issues the 14th Five-Year Plan for the Development of Intelligent Manufacturing

On 28 December 2021, the Ministry of Industry and Information Technology (MIIT), together with seven other ministries, issued the *14th Five-Year Plan for the Development of Intelligent Manufacturing*. The Plan will guide the development of intelligent manufacturing (IM) industry through the next five years (the 14th five-year period).

China Intelligent Manufacturing Standardisation Guideline

On 17 November 2021, Ministry of Industry and Information Technology (MIIT) and Standardisation Administration of China (SAC) released the final version of the *Guidelines for the Construction of the National Intelligent Manufacturing Standard System (2021 Edition)*. The majority of the document remains unchanged compared with the call for comments released in July 2021.

China Cross-border Data Transfer Administration Specified in Detail

On 29 October 2021, the Cyberspace Administration of China (CAC) released a call for public comments through the *Measures on Security Assessment of Cross-border Data Transfer*. The latest Measures depict security processes and approval materials, along with data scope and industry regulatory bodies for data transfer assessment outside mainland China.

What is “Important Data”? New Standard Provides the Answer

On 13 January 2022, SAC/TC260 issued a call for comments on a new standard: *Information security technology – guideline for identification of critical data (draft for comments).* The standard will provide basic principles and criteria for the identification of “important data”, as well as the format to describe them.

Horizontal Issues

1. China Meets Europe: SESEC Presented at Hamburg Summit

#Horizontal and Policy Issues

On 30 November 2021, the Digital Hamburg Summit 2021 took place, with the aim to promote further dialogue between Europe and China. The EU High Representative/Vice President Josep Borrell, the Chinese Vice Premier LIU He and the acting German Federal Minister of Economic Affairs & Energy spoke at the Summit. Jörg Wuttke from EUCCC, Professor JIANG Feng, and Sylvia Schwaag Serger were invited to discuss prospects for EU-China economic cooperation after the pandemic. The list of the other keynote speakers can be found at https://www.hamburg-summit.com/en/#.

During the panel on standardisation, Dr Betty XU, Director of the Seconded European Standardization Expert in China (SESEC) project, together with Rada Rodriguez from Signify and Jenny XIANG from Brose China, discussed the implications of China's new standardisation strategy for European companies. European companies should take active part in the Chinese standards system, not least because Chinese rules on all levels are set to gain global influence. Multinational companies are recommended to align the standardisation efforts of their headquarters and their China-based subsidiaries. In addition, the harmonisation of standards in the EU must be faster to ensure that the European standards system maintains its leading role.

China and Europe, as driving forces behind the recovery of the world economy, should continue to strengthen pragmatic economic and trade cooperation in the post-epidemic era, jointly promote green and low-carbon transformation, deepen trade and investment cooperation, and maintain a safe and smooth supply chain.

2. SESEC Roundtable on China Standardisation Outline Successfully Held

#Horizontal and Policy Issues

On 16 November 2021, SESEC successfully organised the online "China Standardisation Policy Exchange Roundtable". The event featured as keynote speakers YU Xinli, Director of China Association for Standardisation (CAS), and Secretary General of China Communication Standardisation Association (CCSA); they analysed the *Outline for the Development of National Standardisation*, and shared additional insights on standardisation development in China in the field of information and communication.

Specifically, Director YU Xinli introduced the background of the *Outline*, including international standardisation developments as well as China's standardisation reforms. Director Yu then focused on the core content of the

Outline, summarising its framework in a way that facilitated full understanding by the audience – mostly comprised of representatives of foreign companies.

Secretary General WEN Ku briefed the participants on the main work of industry and information technology standards in 2021, as well as on the main tasks of CCSA in implementing the *Outline* and its standardisation activities. Secretary General Wen also provided an overview of EU-China standardisation cooperation in the field of information and communication.

In answering questions from the audience, Director YU Xinli analysed the impact of the *Outline* on foreign enterprises, explained the importance of digitisation of standards, and made a detailed explanation of the conversion rate of international standards – which is a key priority issue for foreign enterprises. Secretary General WEN Ku expressed his gratitude to the European enterprises for their attention to China's standardisation development, hoping that foreign enterprises will participate more actively in China's standardisation work and put forward valuable opinions and suggestions.

The SESEC Roundtable helped European standardisation organisations and enterprises to gain a more in-depth understanding of China's standardisation policies and trends, as well as ways to participate in China's standardisation activities – thus promoting further cooperation between Chinese and European industries.

3. SAC Sets Plan for the Development of National Standards in the Next Five Years

#Horizontal and Policy Issues

On 6 December 2021, SAC, together with nine other ministries, issued the 14th Five-Year Plan for Developing the National Standards System Promoting "High-Quality" Development" (hereinafter referred to as the "Plan"). The plan sets out principles, goals, and key areas for the development of national standards during the 14th five-year period (2021-2025); it also outlines measures to improve the national standardization system, and ultimately contribute to the achievement of"high-quality development".

1. **Principles.** The Plan states that national standardization work shall follow the principles of being innovation-led, demand-oriented, industry chain-supported, openness and alignment, and high quality and efficiency.

2. **Goals.** The Plan sets qualitative and quantitative goals for 2025. In terms of qualitative goals, it is required that national standards shall cover all sectors, while their structure shall be optimized, higher quality standards produced, more openness and alignment to international standards achieved, standards setting capacities enhanced, and standards implemented in a more efficient way. In terms of quantitative goals, the Plan puts forward indictors as follows,

    - The average duration of standards development shall not exceed 18 months;
    - Standards shall be reviewed within 5 years;
    - Conversion rate of international standards shall reach at least 85%;
    - Chinese national standardization technical organizations shall be able to mirror at least 85% of international technical organizations;
    - 50 national-level standards verification and test bodies shall be set up;
    - 50 national-level standards innovation bases shall be built;

- 500 new pilot or demonstration projects for standards implementation shall be established

3. **Key areas.** The Plan identifies 32 key areas in 9 sectors for national standards development.

No.	Sectors	Key standardization areas
1	Agriculture	Whole industry chain of agriculture
		Green development of agriculture and rural areas
		Rural governance
2	Food and consumer products	Food safety and quality
		Consumer product safety and quality
		Products for infants, children, and the elderly
		Medical supplies
3	High-end manufacturing	Digital transformation of the manufacturing sector
		Green manufacturing
		High-end equipment
		Materials
4	New generation information technology and biotechnology	New information infrastructure
		Basic software and hardware
		Cybersecurity
		Biotechnologies
5	Urban construction	City sustainability
		Smart cities
		City infrastructure
6	Services	Service for industrial production
		Service for daily life
		Public service
7	Business environment	Administrative management and service
		Protection of market operators and optimization of market environment
		Law enforcement supervision
		Business environment evaluation
8	Public security emergency response	Management of public safety emergency response
		Management of emergency supplies
		Personal protective equipment
9	Ecology protection	Natural resources
		Efficient recycling of resources
		Ecological and environmental standards
		Peak carbon emission and carbon neutrality

4. **Measures.** The Plan depicts measures to improve the national standardization system from six dimensions:

- Optimization of mandatory national standards;
- Enhancement of the quality and relevance of voluntary national standards;

- Conversion of R&D achievements into national standards;
- Adoption of association standards in the national standardization system;
- Adoption of international standards;
- Management and promotion of national reference materials.

In October 2021, the State Council released the National Outline for Standardization Development, which outline the directions for China's standardization work in the following decades. The Plan aims to support the implementation of the Outline in the field of national standards, with more specific areas determined and measures adopted.

Regarding the key standardization areas, the Plan presents a broader scope covering more areas that have not been included before, reflecting China's focus on supporting the sustainable, green, and digital development of the industries, economy, and society.

To improve the standardization work system, the Plan sets measures to optimize the supply capability of high-quality standards, improve standardization processes, and to enrich sources of standardization projects. For the supply capability of high-quality standards, the Plan, e.g., states: "(we shall) strengthen the coordination and alignment of mandatory national standards with laws, regulations and policies". It will contribute to the consistency of China's regulatory system and therefore reduce enterprises' compliance costs. For standardization processes, The Plan, e.g., reads "(we shall) enhance the transparency and efficiency of standardization processes". For sources of standardization projects, the Plan highlights the establishment of specific mechanisms to convert R&D achievements, association standards, and international standards into national standards.

All in all, the Plan indicates that China's national standardization system will become, over the next five years, more open and transparent, fitting for the digital age, and conforming to international good practices. However, many measures it proposes are still at their early stage of development; more detailed design and planning for effective implementation are required.

EU-CLERA kindly made the translation of the policy document, please find attached the full text in English.

Background: What is the "High-quality development"?

"High-quality development" is a development pattern that the CCP Centre Committee has determined for Chinese economy for the 14th Five-year plan period and afterwards, shifting from the previous pattern of rapid growth that characterised the decades since the reforms and opening-up policy was introduced in the late 1970s. There hasn't been a clear official definition of this term, but top government leaders' explanation may give a hint: "'High-quality development' features innovation-driven, balance, green, openness and inclusiveness, and shall involve reforms in quality, efficiency and growth forces amid economic development", Vice-Premier Liu He said in an article published in People's Daily on 24 November 2021.

Energy efficiency

4. China to Strictly Regulate Energy Efficiency

#Energy management & Environmental protection

On 18 October 2021, *Several Opinions on Strictly Regulating Energy Efficiency and Advancing Energy Conservation and Carbon Reduction in Key Areas* was jointly issued by the National Development and Reform Commission (NDRC) with four other national industries. These other four ministries are the National Energy Administration (NEA), Ministry of Industry and Information Technology (MIIT), Ministry of Ecology and Environment (MEE), and the State Administration for Market Regulation (SAMR).

The Opinions specify general goals for China's energy efficiency and conservation work in two phases:

- by 2025, the proportion of energy production that reaches benchmark level is going to exceed 30 percent for key industries. Electricity utilization efficiency for data centers is also not going to exceed 1.5, and that of big data centers to not exceed 1.3.
- by 2030, further improvement is going to be made within key industries' energy efficiency base levels and benchmark levels; providing strong support to carbon peaking goals.

Several key tasks are also articulated in the Opinions:

- setting industrial energy efficiency benchmark standards based on scientific methods
- referring to the admission values and qualification values of current national energy conservation standards
- strictly implementing categorized management
- reducing production capacity for over-capacity industries
- elevating entrance threshold for under-capacity industries
- eliminating backward production technology and products
- advancing energy conservation technology transformation
- strengthening market application of green technology and equipment
- enhancing construction of supporting system
- firm energy efficiency and carbon emission calculation, measuring, reporting, inspection, and evaluation mechanisms
- advancing the green development of data centers

The target key industries and data centers mainly refer to steel, electrolytic aluminum, cement, plate glass, oil refining and ethylene. China will continue to take increasingly more effective measures.

This regulation would have an impact on foreign stakeholders in the mentioned sectors. China's determination on fulfilling the carbon peak and carbon neutrality goals will lead to further development of similar regulations on energy consumption. Rules and administrations on energy-intensive industries are likely going to be stricter to achieve the green transition. Therefore, such sector-relevant companies are suggested to proactively act on the transition in advance to get some market advantage.

Carbon emission

5. Action Plan for Carbon Emission Peak Before 2030 Put forward in China

#Energy management & Environmental protection

On 26 October 2021, the State Council released the *Carbon Emission Peak Action Plan before 2030*, which sets out major targets such as increasing the share of non-fossil energy consumption, improving energy efficiency and reducing carbon dioxide emission intensity, and calls for the implementation of "ten actions to peak carbon emissions" throughout the whole process and all aspects of economic and social development.

According to the Action Plan, by 2025, the proportion of non-fossil energy consumption in China will reach 20 percent, energy consumption per unit of GDP will decrease by 13.5 percent from that in 2020, and carbon dioxide emission per unit of GDP will decrease by 18 percent, laying a solid foundation for peaking carbon dioxide emission. By 2030, the share of non-fossil energy consumption in China will reach about 25%, and carbon dioxide emissions per unit of GDP will drop by more than 65% compared with that in 2005, with the goal of peaking carbon emissions by 2030 successfully achieved.

The Action Plan calls for the implementation of "ten actions to peak carbon emissions", including:

- Green and low-carbon energy transition
- Energy saving, carbon reduction and efficiency increase
- Carbon peaked in industrial sectors
- Urban and rural construction carbon peak
- Green and low-carbon transportation
- Circular economy helping reduce carbon emissions
- Green and low-carbon technological innovation
- Consolidated and improved capacity of carbon sinks
- Green low-carbon national action
- Ordered carbon peak in each region

It also makes appropriate arrangements for international cooperation and strengthened policy support.

The tasks set out in the Plan directly relate to the energy sector, demonstrating China's determination to achieve carbon emission peak in the energy sector. For example, the green and low-carbon energy transition action calls for safe carbon reduction, implementing the replacement of renewable energy on the premise of ensuring energy security, and accelerating the construction of a clean, low-carbon, safe and efficient energy system.

6. China First Mandatory Standard of Carbon Emissions, to Largely Reduce the Carbon Intensity in New Residences and Public Buildings

#Carbon emission

China's first mandatory standard of carbon emission in the construction sector, *GB 55015-2021 General Specification of Energy Efficiency and Renewable Resources Utilisation in Construction Sector* (hereinafter referred to as "the Specification"), will take effect on April 1, 2022. The Specification requires the carbon intensity in newly-built residences and public buildings to be reduced by an average level of 40% compared to the level stipulated by the energy efficiency designing standards in 2016, and the average carbon intensity to be reduced by up to 7 kgCO/(m·a).

In terms of energy efficiency, the Specification requires the average designed energy consumption level of newly-built residential buildings and public buildings to be further lowered by 30% and 20%, respectively, based on the results achieved after the implementation of the energy efficiency designing standard in 2016. Specifically, the average rate of energy efficiency of residential buildings in severe cold and cold regions should be 75%; residential buildings in other climatic regions should be 65%, while public construction 72%. Furthermore, all the buildings should be embodied with energy efficiency design, regardless of whether they are newly-built buildings, expanded buildings, rebuilt buildings or renovated buildings for energy efficiency.

Regarding the utilisation of renewable resources, the Specification requires that overall plans for architectural ensemble and the individual building should set stages for the utilization of renewable resources. For instance, the Specification requires newly-built buildings to be equipped with solar energy systems; the design service life of solar thermal collectors in solar thermal systems shall be more than 15 years, while that of photovoltaic modules in photovoltaic power systems be over 25 years.

Based on the Specification, the statistics of energy consumption in the construction sector should include the amount of power consumption, coal/gas/fuel consumption, heat consumption in central heating, cooling consumption in central cooling, as well as the utilization rate of renewable resources. The energy consumption system in the construction sector should be managed based on the statistics for category, region, and subentry. Also, the renewable energy system should be statistically managed separately.

The following points about the Specification are especially noteworthy for relevant enterprises:

- Wide coverage. The Specification covers the regulation on newly-built buildings, existing buildings, renewable energy systems, construction debugging/delivery-receiving acceptance/operation/management, etc.
- Clarified mandatory standard on carbon intensity. The past standards on construction-related carbon emissions are only for recommended implementation. For example, the *GB/T 50378-2019 Green Buildings Assessment Standard*, *GB/T 51141-2015 Green Retrofitting of Existing Buildings Assessment Standard* in 2015 and its draft for comments in 2020 do not have any mandatory requirements for carbon intensity.
- Improvement of the level of energy efficiency design for newly-built buildings. The Specification raises the requirements for the limitation of thermal performance of residential buildings and public buildings. What distinguishes the Specification from the currently effective energy efficiency standards applicable to most areas is that the average level of designed energy consumption is reduced by 30% and 20%, respectively, based on the current national standards and sector standards. Furthermore:
    - The energy efficiency ratio of residential buildings in severe cold and cold regions should be 75%.

  - The energy efficiency ratio of residential buildings in other climatic regions should be 65%.
  - The energy efficiency ratio of public buildings should be 72%
- Newly-added specification of energy efficiency design for buildings in mild regions and industrial buildings. Compared to the GB 51245-2017 *Uniform Standard of Industrial Buildings Energy Efficiency Design*, the Specification introduces the energy efficiency design specification for buildings in mild regions and the industrial buildings, thus expanding the application range of industrial standards. Industrial constructions in mild regions must therefore be in strict compliance with the Specification.
- Overall improvement of the requirement for the efficiency of air-conditioning (HVAC) system and of illumination.

ICT and digitalization

7. 14th Five-year Plan for China Information and Communications Industry

#ICT

On 1 November 2021, the Ministry of Industry and Information Technology (MIIT) issued the *14th Five-year Plan for the Development of Information and Communication Industry*, which includes four major parts and 26 development priorities, and describes the development blueprint of the information and communication industry in China. It is a guiding document for the next five years to accelerate the building of a digital China, promote high-quality development of the information and communication industry, guide the behavior of market players, and allocate government public resources.

Compared with previous five-year plans, this Plan further highlights the functions and positioning of the information and communication industry: it is a strategic, fundamental and pioneering industry to build new national digital infrastructure, provide network and information services, and comprehensively support economic and social development. The Plan has identified 26 development priorities and 21 key projects in five areas. It has for the first time clearly put forward the key tasks of strengthening cross-regional and cross-industry coordination.

When it comes to international cooperation, the Plan calls for deepening international exchanges and cooperation on standards, research and development, investment and governance rules in 5G, 6G, artificial intelligence, and the Internet of Things. China will actively participate in global digital governance, promote the construction and improvement of international cooperation schemes, and contribute Chinese solutions to the world on key issues such as legal rules, standard development, resource management, cybersecurity, and industry regulation. China will actively participate in the formulation of rules for international organisations, encourage Chinese enterprises and public institutions to take an in-depth part in international standardisation activities and jointly develop international standards.

The Plan outlines a broad blueprint for the five-year development of the information and communication industry. The whole industry should follow the goals of the planning guidelines, grasp the opportunities of digital development, face up to difficulties and challenges, gather the strong joint force of high-quality development of the industry, and turn the blueprint into reality.

8. 14th Five-Year Plan for Digital Economy: the Added Value of the Digital Economy's Core Industries to Reach 10% of GDP by 2025

#Digital transformation #Digitalization

On 12 January 2022, according to the Xinhua News Agency, the State Council issued the *14th Five-Year Plan for Digital Economy* (hereinafter referred to as the "Plan") which specifies the guiding philosophy, fundamental principles, goals, key tasks and safeguarding measures for advancing the digital economy during the 14th Five-Year period (2021-2025).

According to the Plan, by 2025, China's digital economy will be in full extension mode. The added value of the core industries of digital economy is set to account for 10% of GDP by 2025, up from 7.8% in 2020. By 2035, the country's digital economy will have reached a new level of prosperity and maturity, and a unified, fair and modern market system with orderly competition will have been established. Furthermore, the conditions for developing digital economy, and the level of the industry system, are set to rank among the world's strongest by 2035.

The Plan sets the principle of "making competition fair, and the market secure and orderly": this highlights the fundamental role of policy in regulating the market competition, at the same time stressing the importance of anti-monopoly work and prevention of disorderly capital expansion. Indeed, to advance the digital economy it is required to strengthen market supervision and macroeconomic policies, and completing the regulation system.

This Plan has impact on your "futuristic" digital life!

Autopilot, autonomous deliveries, cloud exhibitions, etc: these will be central elements of our futuristic life – to which digital economy is indispensable!

Recently, the *14th Five-Year Plan for Digital Economy* (hereinafter referred to as the Plan) was issued. How will the digital economy develop through the next five years? What impacts will it make on our daily lives?

What is digital economy?

Following the agricultural economy and industrial economy, the digital economy is a new economic formation in which data serves as the key element, modern IT as the carrier, integrative application of ICT and digital transformation as the key driving forces, and the promotion of fairness and efficiency as the fundamental purpose.

What are the goals for developing the digital economy?

By 2025, China's digital economy will be in full extension mode. Specifically, the Plan sets out the following quantitative indicators:

- The added value for the core industries of digital economy will account for 10% of GDP.
- The number of active IPv6 users will reach 800 million.
- The 1000M broadband service is set to cover 60 million households.
- The size of software and information technology services will reach 14 trillion yuan.
- The popularity of industrial Internet platforms will climb to 45%.
- The size of retail sales online will reach 17 trillion yuan.
- The size of E-commerce transactions will reach 46 trillion yuan.
- The number of real-name users with access to e-government services will reach 800 million.

By 2035, China's digital economy will reach a new level of prosperity and maturity. An unified, fair and modern market system with orderly competition will have been shaped. Furthermore, the conditions for developing digital economy, and the level of the industry system, are set to rank among the world's strongest by 2035.

What are the detailed tasks for achieving the goal?

- Optimizing and upgrading the digital infrastructure, specifically by:
  a. Building a comprehensive and intelligent digital information infrastructure, featuring high speed, ubiquity, space-earth integration, Cloud-Network integration, intelligence and agility, green and low-carbon emissions, and secure and controllable systems.
  b. Constructing a national-level integrated big data center system, coordinating computing power, algorithms, data and application resources
  c. Establishing an intelligent and efficiently integrated infrastructure. Deploying efficiently AI infrastructure
- Making full use of data elements, specifically by:
  a. Supporting all entities in collecting data in compliance with laws and regulation. Enhancing the processing capacity for data resources. Fostering and expanding the data service industry.
  b. Accelerating the establishment of market rules for data elements. Fostering market entities, and completing the governance system. Enhancing the circulation in the market of data elements
  c. Exploiting multiple systems for developing and utilizing data elements, compatible with different kinds of data and led by practical application
- Advancing the digital transformation of the industry, specifically by:
  a. Guiding enterprises in nurturing a digitalized mindset. Enhancing employees' digital skills and capacities for data management. Advancing the digitization level of enterprises' design, production, processing, business management, and sales service, in a comprehensive and systematic manner
  b. Guiding industrial parks in building the digital infrastructure. Applying digital skills to enhancing the capacity for managing and providing services
  c. Building an ecosystem of digital transformation services, driven by both market-based services and public services, and supported by technology, capital, talents, data and other elements, thus solving the barriers for enterprises' digital transformation originating from the lack of capacity, methods and confidence
- Promoting digital industrialization, specifically by:
  a. Enhancing the capacities for fundamental technology R&D, by taking advantage of the country's socialist system, new type of country's Source-centralized System and large size of the domestic market.
  b. Elevating the supply level of basic software and hardware, core electronic components, key basic materials and production equipment. Strengthening the self-supply capacity of key products.
  c. Promoting the sound development of the platform economy. Deepening the application of the sharing economy in life services. Advancing the intelligent economy based on digital technologies. The following new business modes in particular await further development:
  d. Strengthening resources and data sharing, online-offline coordinated innovation, the sharing of production capacities, as well as supply chain collaboration – under the leadership of digital economy leading enterprises
- Elevating the digitization level of public services

- Improving the governance system for the digital economy, specifically by:
    a. Exploiting appropriate governance systems to contribute to the sound development of the digital economy. Formulating more flexible and efficient policies. Innovating the collaborative governance system
    b. Enhancing the capacity and role of digital governance to regulate market, to encourage innovation and to protect consumers' rights
- Strengthening the construction of the security system for digital the economy
- Expanding international cooperation on digital economy

What are the safeguarding measures?

- Strengthening coordination and implementation
- Expanding financial support
- Improving the digital skills and knowledge of the public
- Launching pilots and demonstrations
- Strengthening supervision and evaluation

Intelligent manufacturing

9. China Issues the 14th Five-Year Plan for the Development of Intelligent Manufacturing

#Intelligent manufacturing

On 28 December 2021, the Ministry of Industry and Information Technology (MIIT), together with seven other ministries, issued the *14th Five-Year Plan for the Development of Intelligent Manufacturing* (hereinafter, referred to as the "Plan*")*. The Plan will guide the development of intelligent manufacturing (IM) industry through the next five years (the 14th five-year period).

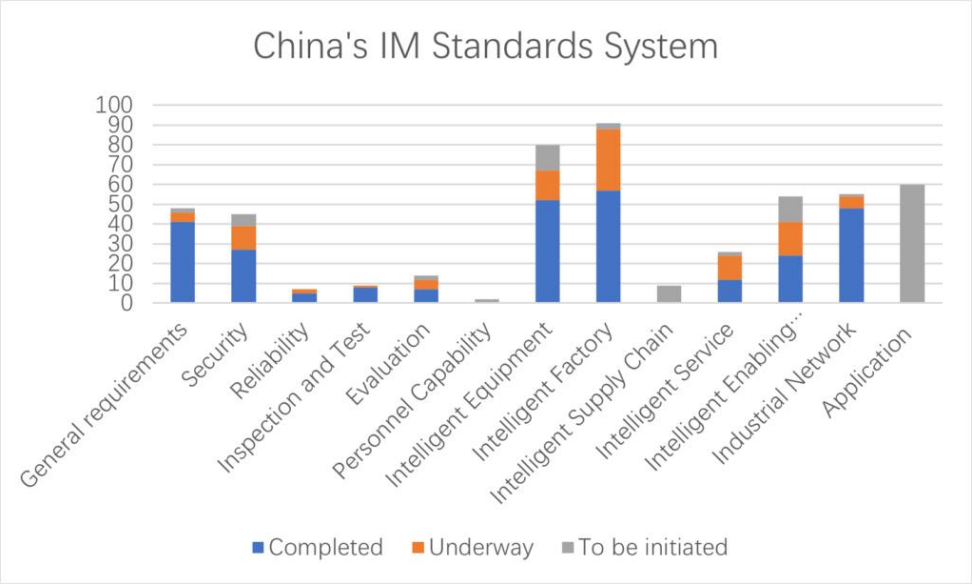
The Plan first sets the quantitative objectives to be achieved for the IM industry in 2025, specifically:

- Transformation of the manufacturing sector: more than 70% large-scale manufacturing enterprises shall be digitalized, and 500 demonstration IM factories established.
- Supply of IM technologies and equipment: supplies of IM equipment and software shall satisfy 70% and 50% of market demand, respectively, and 150 IM solution providers shall be fostered.
- Strengthening the foundations for industry development: an IM standards system shall be established, with 200+ national and sector standards developed/revised. IM network infrastructure shall be set up, of which 120+ influential industrial internet platforms shall be established.

To achieve these objectives, the Plan outlines four key tasks:

- Facilitate innovation. The Plan identifies four product technologies and four system integration technologies as breakthrough points, and encourages leading enterprises, universities and research institutes to build up innovation incubators and test and verification platforms, in order to facilitate innovations as well as their transformation.
- Promote application. The Plan proposes to build up IM demonstration factories, implement the SME digitalization promotion project, and develop roadmaps to guide IM implementation in sectors of equipment manufacturing, electronics, raw materials, and customer products.
- Strengthen self-sufficiency. The Plan highlights the development of four kinds of IM equipment and six kinds of industrial software, with the aim to ensure the autonomy of China's IM industry chain.
- Reinforce the foundations. The Plan stresses the importance of standardization, infrastructure construction, and cyber and data security in supporting the development of IM industry.

By now, China has planned 442 standards for its IM standards system, of which 281 have been completed, 108 are being developed, and 53 yet to be initiated – according to the *Guidelines for the Construction of the National Intelligent Manufacturing Standard System (2021*) (hereinafter, referred to as the "Guidelines") issued in November 2021. The degree of completion of every branch of the system are illustrated in the figure below.



It can be seen that there is a huge gap in application standards, hampering the implementation of the IM standards system in actual production.

Therefore, the Plan proposes to establish the application standards systems for the sectors of textile, petrochemicals, building materials, automobile, aerospace, shipbuilding, power equipment, urban rail transport, household appliance, food, steel, nonferrous metals, and new energy. It also requires "(relevant SDOs) to accelerate the development of industry application standards", and while "(the state) shall carry out pilot implementation of IM standards, form a standards group where national standards, sector standards, and association standards complement and coordinate with each other, and promote the application of the pilot achievements among SMEs and enterprises in the same industry". All these statements indicate that the focus of IM standardization will turn to industry application in the next five year, and more sector and association standards may be included into the current standards system that is dominated by national standards, to support their implementation in various application scenarios.

10. China Intelligent Manufacturing Standardisation Guideline

#Intelligent manufacturing

On 17 November 2021, Ministry of Industry and Information Technology (MIIT) and Standardisation Administration of China (SAC) released the final version of the *Guidelines for the Construction of the National Intelligent Manufacturing Standard System (2021 Edition)*. The majority of the document remains unchanged compared with the call for comments released in July 2021.

The Guidelines were first compiled in 2015 and then revised in 2018 by the General Group of National Intelligent Manufacturing Standardization – which is led by the China Electronic Standardization Institute (CESI). CESI is the core driving force of standardization work within China's electronic and information technology sector, providing key support to the formulation of relevant policies and regulations. The standardization activities in intelligent manufacturing led by CESI are the counterparts of standardization organizations such as the International IEC/SyC

SM (IEC Systems Committee Smart Energy) and the ISO/TMB/SMCC (ISO Technical Management Board Smart Manufacturing Coordination Committee).

The main contents of this revision include:

- In terms of basic common standards, a "capacity" subsystem was added. It consisted of "capacity evaluation" and “capacity requirements" standards; The “inspection and test” subsystem was also changed from the previous "test items" and "test methods", to" inspection and test requirements", " inspection and test methods" and " inspection and test technologies".
- In terms of intelligent equipment standards, the "identification and sensing" subsystem is divided into "sensors and instruments", and "cognitive and identification equipment"; "additive manufacturing" is changed to "additive manufacturing equipment"; while "inspection and testing equipment" was added.
- In terms of intelligent factory standards, the "intelligent logistics" subsystem was changed to "factory intelligent logistics"; while the " intelligent factory construction" was deleted.
- The "intelligent supply chain" subsystem was added.
- In terms of intelligent service standards, "other new modes" were added, and the relevant branches of "operation and maintenance service" and "network collaborative manufacturing" were modified according to the standard system and revision.
- In terms of intelligent enabling technology standards, two subsystems of “digital twin" and "blockchain" were added; the branch of "artificial intelligence" and "industrial big data" was modified in the light of technology application,
- In terms of industrial network standards, two new branches: "industrial network integration" and "industrial network resource management" was added.
- In terms of industry application standards, the ten key areas of the 2018 edition were modified, by including shipping and marine engineering equipment, building materials, petroleum textile, steel, railway, aerospace, automobile, non-ferrous metals, electronic information, power equipment, etc.

Cybersecurity

11. China cross-border data transfer administration specified in detail

#Cybersecurity & Digital identity

On 29 October 2021, the Cyberspace Administration of China (CAC) released a call for public comments through the *Measures on Security Assessment of Cross-border Data Transfer*.

With the releasing and implementation of several important laws to establish a better cybersecurity scheme (*Cybersecurity Law, Data Security Law*, and *Personal Information Protection Law*), CAC finally issued the Measures three days before the effective date of the *Personal Information Protection Law (PIPL)*. This is not the first time that China set up regulations to administrate cross-border data transfer. The previous two attempts include the *Assessment Measure for Cross-Border Transfer of Personal Information and Important Data* (released for comments on 13 October 2017), and the *Assessment Measure for Cross-Border Transfer of Personal Information* (released for comments on 13 June 13 2019). However, neither Measure has been finalized nor implemented.

After two years, China has finally published detailed rules on the data transfer across its borders, completing the operational basis for cross-border data security assessment mentioned in three laws, which has long been a concern for foreign companies. The latest Measures depict security processes and approval materials, along with data scope and industry regulatory bodies for data transfer assessment outside mainland China.

In general, according to the Measures, all data processors, as long as they conduct cross-border data transfer, should carry out data exit risk self-assessment. If the data processor meets any of the following circumstances, it shall also (through the local provincial cyberspace administration) apply for the cross-border data transfer security assessment to CAC:

- Personal information and important data collected and generated by Critical Information Infrastructure Operator (CIIO).
- Important data involved in the to-be transferred batch.
- Data transfer applicant is a handler who deals with or possesses more than one million people's information.
- The applied data involves more than 100 thousand people's information or over 10 thousand people's sensitive information.

China's efforts on protecting data security have accelerated in the past two years, and cross-border data transfer seems to be one of the critical control points. Policies on cross-border data management would initiate impact on existing business models, system architecture, and potential scope of financial costs, efforts, and technical adjustments for foreign stakeholders. First, extensive capital and ongoing expenses would be spent on building up the IT environment and data management for mainland China. Secondly, foreign stakeholders should engage or

build a local cybersecurity team (including security governance and security operations) to ensure proper cybersecurity protection and market compliance.

12. What is "Important Data"? New Standard Provides the Answer

#Cybersecurity #Key data

On 13 January 2022, SAC/TC260 issued a call for comments on a new standard: *Information security technology – guideline for identification of critical data (draft for comments).* The standard will provide basic principles and criteria for the identification of "important data", as well as the format to describe them.

The protection of "important data" has been repeatedly highlighted in China's policies and regulations. However, what constitutes "important data" – and how to identify it – has never been clearly determined. On 14 November 2021, CAC released a draft regulation: *Administrative rules on the security of network data (draft for comments),* indicating that China's push to shape the regulatory system for "important data" is speeding up. In this context, developing a standard to define the scope of "important data" and providing approaches to identify it, has become an urgent task.

Information security technology – guideline for identification of critical data (draft for comments) is developed exactly for this purpose.

According to the explanation of the draft standard, its development adheres to the following principles:

- Focus on national security and avoid over-extension of the scope of "important data". Specifically, "important data" shall be defined from the perspectives of national security and public interests; its scope shall be narrowed down as much as possible, excluding the data about enterprises' production and operations, internal management, personal information, etc. "important data" does not include secrets or classified information, as China has established a clear working and protection system for these; still, data relating to the business sector and enterprises' systems might fall into the scope of the "important data". For data on which administrative departments of the industry have formulated and implemented data protection policies and standards, these rules should be followed when identifying important data.
- Abide by international conventions, while taking into account Chinese characteristics. Cybersecurity shall be safeguarded in an open environment, secured data flows shall be promoted to meet the needs of globalization, and international good practices shall be used as reference to facilitate the construction of the community of shared future of cyberspace. In the context of booming mobile internet applications and increasingly diversified internet business models, the formulation of standards shall reflect China's conditions and management demands, and embody the Chinese government's principles and stance on internet governance and data security.
- Apply both qualitative and quantitative methods, and highlight operability. The combination of qualitative and quantitative methods shall be applied to identify "important data", while the specific approaches for identification shall vary according to actual situation. Data in certain sectors and application fields may be identified as "important data" due to their importance. There may also be cases where data is not identified as "important data" under general circumstances, but may become identified as such once its quantity reaches a certain volume. In this case, a quantitative approach shall be adopted to determine the boundary of the "important data".

The draft standard proposes six principles to guide the identification of "important data":

- Focus on the impact on security.
- Highlight key targets to be protected.
- Consistency with the current legislation.
- Comprehensive consideration of risks.
- Combination of qualitative and quantitative methods.
- Dynamic identification and review.

Furthermore, the draft standard puts forward 14 criteria to determine if a data fall into the scope of the "important data", namely:

- Consideration of China's strategic reserve and mobility capability in emergencies
- Support to the operations of key infrastructure and the production of key industrial sectors.
- Reflection on the security of key information infrastructure, so that data cannot be used to conduct network attacks
- Linkage with export control items
- Possibility to be used by other countries and organizations to launch military strikes against China
- Reflection on the physical safety of key targets and venues, and on the location of geographic targets that are not disclosed, so that it could be utilized by terrorist groups and criminals for sabotage.
- Possibility to be used to disrupt the supply chain of critical equipment and system components, so as to launch network attacks such as advanced persistent threat (PAT).
- Relation with basic data on population health and physiological conditions, ethnic characteristics, genetic information, etc.
- Relation with basic data on national natural resources and environment;
- Relation with China's scientific and technological strengths and international competitiveness.
- Relation with the production and transaction of sensitive items, and the provision and use of important equipment, so that it could be used by foreign governments for adopting sanctions on China.
- Relation with classified information generated in the course of providing services to government agencies, military enterprises and other sensitive and important organizations.
- Relation with government affairs data, work secrets, intelligence data, and law enforcement and judicial data that are not made available to the public.
- Relation with other data that may affect the security of national politics, land, military, economy, culture, society, science and technology, ecology, resources, nuclear facilities, overseas interests, biology, outer space, polar regions, deep sea, etc.

The deadline for submitting comments to the draft standard is 13 March 2022. European enterprises and standardization stakeholders are encouraged to contribute actively, considering the importance of the standard and the potential impact on their operations.

The text of the draft standard (in Chinese language) can be accessed via

https://www.tc260.org.cn/front/bzzqyjDetail.html?id=20220113195354&norm_id=20201104200036&recode_id=45625

Special report of this edition:

2022 Annual Plan and Updates of Chinese AI Standards Formulation

In January, 2021, the National Information Security Standardization Technical Committee's Subcommittee for Artificial Intelligence (TC 28/SC 42) disclosed their 2022 annual plan and updates regarding the reports, tests, and standards formulation in AI. Under the TC 28/SC 42, there are eight working groups responsible for specific work of AI. The disclosure is unfolded by eight groups' progress.

Part I: the Chip and System

Brief introduction to the Chip and System Research Work Group:

The Chip and System Research Work Group was considered and established in the first planetary meeting of the National Information Security Standardisation Technical Committee (NISSTC) Technical Committee (TC 28) Subcommittee (SC 42) for Artificial Intelligence on August 6, 2020. Their work focuses on the research of Artificial Intelligence (AI) chip and system technology and product, and standardisation to support high-quality development of the industry.

Group Leader: Huawei

Deputy group leader： Yitu and China Electronics Standardisation Institute.

Contact: Wei Bao 18611871223 / 010-64102854

Achievements in AI chip and system:

- *T/CESA 1169-2021 Information technology - Artificial intelligence - Specification for performance benchmarking for server systems*
- *T/CESA 1043-2019 Server for deep learning specification*
- *T/CESA 1119-2020 AI chips - Test index and test method of deep learning chips for cloud side*
- *T/CESA 1120-2020 AI chips - Test metrics and test method of deep learning chips for edge side*
- *T/CESA 1121-2020 AI chips - Test metrics and test method of deep learning chips for terminal side*

The on-going work of the Work Group:

Category	Name
Report	*White paper on effective computing capacity of China's AI technology*
Report	*White paper on China's future computing network technology and industrial application*
Standard	*20192139-T-469 Information technology - Artificial intelligence - Platform resources supply*
Standard	*IEEE P2937 Standard for performance benchmarking for AI server systems*
Standard	*Artificial intelligence - Specification for performance benchmarking for server systems*
Standard	*Artificial intelligence - Specification for uniform accelerator processor interface*

Standard	*Artificial intelligence computing device dispatch and collaboration - Part 1: computing virtualization*
Standard	*Artificial intelligence computing device dispatch and collaboration - Part 2: distributed computing structure*
Standard	*Operator - related standardisation*
Test	Test for AI technology performance benchmarking for server systems, and uniform accelerator processor interface

Part II: the Product and Service

Brief introduction to the Product and Service Work Group:

The Product and Service Work Group was considered and established in the first planetary meeting of the National Information Security Standardisation Technical Committee (NISSTC) Technical Committee (TC 28) Subcommittee (SC 42) for Artificial Intelligence on August 6, 2020. Their work focuses on intelligent products of all kinds based on Artificial Intelligence (AI) technology, and standardisation of intelligent service applicable to and required by sectors of all kinds.

Group leader: Zhu Yajun from Beijing Xiaomi Mobile Software Co.,Ltd

Deputy group leader: Li Jun from Cloudwalk Technology Corp.

Deputy group leader: Dai Wei from Shenzhen Tencent Computer System Co., Ltd.

(Secretariat Contact: Ma Chenghao 16600049001 / 010-64102859)

Achievements in AI product and service:

- *T/CESA 1038-2019 Information technology - Artificial intelligence - Classified assessment on intelligent assistant's capabilities*
- *T/CESA 1039-2019 Information technology - Artificial intelligence - Classified assessment for machine translation capabilities*
- *T/CESA 1041-2019 Information technology - Artificial intelligence-Reference model of service capability maturity evaluation*

The on-going work of the Work Group:

Category	Name
Report	*White paper on the product and service of AI technology*
Standard	*Artificial intelligence - Specification for service capability maturity assessment*
Standard	*Artificial intelligence - Classified assessment for machine translation capabilities*
Standard	*Artificial intelligence - Technical requirements for evolution of intelligent services adaptation*
Standard	*Artificial intelligence - Technical requirements for safety assurance of intelligent microservice adaption*
Standard	*Artificial intelligence - Functional requirements for intelligent microservice*

	adaption platform
Standard	*Artificial intelligence - Framework for natural interaction platform*
Standard	*Information technology - Artificial intelligence y-Technical requirements and testing approach for dialogue system technology*
Standard	*Information technology - Artificial intelligence - Technical requirements for active service of smart home appliances*
Standard	*Smart household control centre - General technical specification*
Test	Evaluation for smart speakers
Test	Evaluation for intelligent assistant

Part III: the Model and Algorithm

Brief introduction to the Model and Algorithm Work Group:

The Model and Algorithm Work Group was considered and established in the first planetary meeting of the National Information Security Standardisation Technical Committee (NISSTC) Technical Committee (TC 28) Subcommittee (SC 42) for Artificial Intelligence on August 6, 2020. Their work focuses on the review and analysis of AI fundamental model and algorithm, specification for generic model and algorithm in key areas, research on AI development framework and open platform, and related standardisation to support industrial application.

Group leader: Wu Wenjun from Beihang University

Deputy group leader: Ma Yanjun from Beijing Baidu Netcom Science and Technology Co.,Ltd.

Deputy group leader: Mei Jingqing from Beijing Megvii Technology Limited

(Secretariat Contact: Ma Chenghao 16600049001 / 010-64102859)

Achievements in AI Model and Algorithm:

- *T/CESA 1026—2018 Artificial intelligence - Assessment specification for deep learning algorithms*
- *T/CESA 1034—2019 Information technology - Artificial intelligence - Sample size and algorithm requirements for few-shot learning*
- *T/CESA 1036—2019 Information technology - Artificial intelligence - Quality elements and testing methods of machine learning model and system*
- *T/CESA 1037—2019 Information technology - Artificial intelligence - Framework and functional requirements of system for machine learning*
- *T/CESA 1040—2019 Information technology - Artificial intelligence - Code of practice for data annotation of machine learning*

The on-going work of the Work Group:

Category	Name
Research report	*Report on fairness and supervision of artificial intelligence algorithm*
Research report	*White paper on technical development and industrial application of artificial intelligence algorithm and model*
Standard	*IEEE P3142 Recommended practice on distributed training and inference for large-scale deep learning models*
Standard	*Information technology - Artificial intelligence - Technical*

	requirements and evaluation indicators for multi-hardware platform adaption of deep learning framework
Standard	*Information technology - Artificial intelligence - guidelines for model management*
Standard	*Artificial intelligence - Technical requirements for Application Programming Interface (API) of deep learning inference engine*
Standard	*Artificial intelligence - Functional and technical requirements for deep learning framework*
Standard	*Series standards of information technology - Neural network representation and model compression*
Standard	*Artificial intelligence - Code of practice for data annotation of machine learning*
Standard	*Artificial intelligence - Specification for machine learning system*
Standard	*Artificial intelligence - Specification for deep learning algorithm assessment*
Standard	*Artificial intelligence - Technical requirements for algorithm management of multi-algorithm application system*

Part IV: the Trustworthiness Research

Brief introduction to the Trustworthiness Research Work Group:

The Trustworthiness Research Work Group was considered and established in the first planetary meeting of the National Information Security Standardisation Technical Committee (NISSTC) Technical Committee (TC 28) Subcommittee (SC 42) for Artificial Intelligence on August 6, 2020. Their work focuses on research on elements of trustworthiness in Artificial Intelligence (AI) system. They explore the testing technology, evaluation methods, and application channels for all elements and the whole process of AI system. Furthermore, their mission is to improve the trustworthiness capability of AI system from multi-dimensions: hardware, datasets, algorithms, systems, etc.

Group leader: Xue Yunzhi from Institute of Software Chinese Academy of Sciences

Deputy group leader: Wang Xiaoyu from Intellifusion

Deputy group leader: Jiang Hui from Shanghai SenseTime Intelligent Technology Co., Ltd.

Deputy group leader: Gao Xuesong from Qingdao Haixin Electronics Industry Holding Co., Ltd.

(Secretariat Contact: Li Binbin 15624952070 / 010-64102859)

Achievements in Trustworthy Research:

- *Analysis Report on AI Ethical Risks*
- *T/CESA 1026—2018 Artificial intelligence - Assessment specification for deep learning algorithms*
- *T/CESA 1036—2019 Information technology - Artificial intelligence - Quality elements and testing methods of machine learning model and system*

The on-going work of the Work Group:

Category	Name

Report	*White paper on trustworthy AI standardisation*
Report	*Practical cases of R&D of trustworthy AI technology*
Report	*Research report on fairness and supervision of AI algorithm*
Standard	*Artificial intelligence - Risk assessment and management*
Standard	*Technical framework for trustworthy AI technology*
Standard	*Artificial intelligence - Guidelines for ethics and social relations*
Standard	*Artificial intelligence - Assessment for dataset quality*
Standard	*Artificial intelligence - Technical requirements for privacy protection in machine learning system*
Standard	*Artificial intelligence - Robustness requirements and evaluation methods for neural network*
Standard	*Artificial intelligence - Trustworthy technical requirements for computing device*
Test	Risks assessment of AI products

Part V: the Computer Vision

Brief introduction to the Computer Vision Work Group:

The Computer Vision Work Group was considered and established in the first planetary meeting of the National Information Security Standardisation Technical Committee (NISSTC) Technical Committee (TC 28) Subcommittee (SC 42) for Artificial Intelligence on August 6, 2020. Their work focuses on standardisation of computer vison system and product in manufacturing, finance, healthcare, security, transportation, etc. Their mission is to support the high-quality publicizing and application of computer vision technology so as to achieve deep integration of AI technology and the real economy.

Contact: Ma Shanshan 18813126328 / 010-64102854

Achievements in Computer Vision:

- *20190805-T-469 Information technology - Computer vision -Terminology*
- *T/CESA 1035-2019 Information technology - Artificial intelligence - Audio, video and image analysis algorithm interface*
- *T/CESA 1107—2020 Technical requirements and testing and evaluation methods for personnel tracking system based on video images*
- *T/CESA 1108—2020 Technical requirements and testing and evaluation methods for intelligent human body temperature detection and identification system*
- *T/CESA 1109—2020 Technical requirements and testing and evaluation methods for intelligent medical image aided diagnosis system*

The on-going work of the Work Group:

Category	Name
Report	*Collection of industrial inspection system cases*
Report	*White paper on computer vision standardisation*
Report	*Guidelines for implementation and evaluation of object classification in application scenarios*
Standard	*IEEE P3110 Standard for computer vision (CV) - Algorithms, application programming interfaces (API), and technical requirements for deep learning framework*
Standard	*Artificial intelligence - Trustworthy technical specifications for computer vision system*
Standard	*Artificial intelligence - Technical specifications for intelligent character recognition*
Standard	*Artificial intelligence - Technical specifications for deep image synthesis system*
Standard	*Information technology - Artificial intelligence - Interface technical requirements for deep learning-based computer vision algorithm*
Standard	*Artificial intelligence - Technical specification for video and image content audit system*
Standard	*Artificial intelligence - Technical specification for vehicle recognition - Part 1: motor vehicles*
Standard	*Artificial intelligence - Technical specification for vehicle recognition - Part 2: non-motor vehicles*
Standard	*Information technology - Computer vision - Framework for processing application tasks*
Standard	*Machine vision-related standardisation*
Test	Personnel tracking, OCR, content audit, deep fake, machine vision, etc.

Part VI: the Automated Driving

Brief introduction to the Automated Driving Standardisation Work Group:

The Automated Driving Standardisation Work Group was considered and established in the first planetary meeting of the National Information Security Standardisation Technical Committee (NISSTC) Technical Committee (TC 28) Subcommittee (SC 42) for Artificial Intelligence on August 6, 2020. Their mission is to formulate standards and establish generic standard system of AI application in Intelligent Connected Vehicles (ICV) area. Mainly, the standard system will cover specifications and requirements for generic key technology of driving environment

fusion perception, the control of intelligent decision-making, reconfigurable design of complex system and multi-mode test and evaluation. Their mission is to support the application of automated driving technology in certain scenarios, and spur high-quality development of automated driving industry.

Contact: Song Wenlin 13601099746 / 010-64102854

Achievements in Automated Driving:

- *White paper on scenarios description language for automated driving*

The on-going work of the Work Group:

Category	Name
Report	*White paper on standardisation system of virtual simulation evaluation in automated driving*
Standard	*Artificial intelligence - Automated driving systems of automated delivery vehicles - Definition and requirements for simulation scenario - Part 1: urban road*
Standard	*Artificial intelligence - Automated driving systems of automated delivery vehicles - Definition and requirements for simulation scenario-Part 2: enclosed industrial park*
Standard	*Artificial intelligence - Requirements for simulation scenario of automated driving systems - Part 1: automated delivery vehicles*
Standard	*Artificial intelligence - Requirements for simulation scenario of automated driving systems - Part 2: minibus*
Standard	*Artificial intelligence - Functional requirements for simulation platform of automated driving systems*
Test	Test for intelligent decision - making and control algorithm in automated driving
Test	Test for simulation platform of automated driving

Part VII: the Basic Standards

Brief introduction to the Basic Standards Work Group:

The Model and Algorithm Team was considered and established in the first planetary meeting of the National Information Security Standardisation Technical Committee (NISSTC) Technical Committee (TC 28) Subcommittee (SC 42) for Artificial Intelligence on August 6, 2020. Their work focus on basic national standards formulation, including the standards of Artificial Intelligence (AI) terminology, the AI management system, etc. They are also in charge of the corresponding management of ISO/IEC JTC 1/SC 42 international standardisation.

Group leader: China Electronic Technology Standardisation Institute

Deputy group leader: Tang Jie from Tsinghua University

Deputy group leader: Liu Haijun from Zte Corporation

Contact: Sun Ning 010-64102854 / 13718074606

Achievements in AI Model and Algorithm:

- *20190851-T-469 Information technology - Artificial Intelligence - Terminology*
- *ISO/IEC TR 24372 Information technology - Artificial intelligence - Overview of computational approaches for AI systems*

The on-going work of the Work Group:

Category	Name
Standard	*Information technology - Artificial intelligence - Management system*
Standard	*ISO/IEC TS 4213 Information technology - Artificial intelligence -Assessment of machine learning classification performance*
Standard	*ISO/IEC 5259-4 Artificial intelligence - Data quality for analytics and machine learning (ML) - Part 4: Data quality process framework*
Standard	*ISO/IEC TS 8200 Information technology - Artificial intelligence - Controllability of automated artificial intelligence systems*
Ad-hoc group research	*Machine Learning Computing Devices Ad-hoc group*

Annex: the on-going standardisation work of ISO/IEC JTC 1/SC 42

Part VIII: the Knowledge Graph

Brief introduction to the Knowledge Graph Work Group:

The Knowledge Graph Work Group was considered and established in the first planetary meeting of the National Information Security Standardisation Technical Committee (NISSTC) Technical Committee (TC 28) Subcommittee (SC 42) for Artificial Intelligence on August 6, 2020. Their work focuses on top-level design of knowledge graphs standardisation and the analysis of standardisation requirements. Their mission is to promote the domestic relevant standard researching, formulating and publicizing, to support international standardisation work related to knowledge graph, to promote standardisation of knowledge elements exploration, collection, flow and application.

Contact: Li Ruiqi 18518688242 / 010-64102797

Achievements in AI Model and Algorithm:

- *White paper on knowledge graphs standardisation (2019 Edition)*
- *Collection of cases: Knowledge graphs assisting virus containment and economic restoration*

- *Era of cognitive intelligence: Knowledge graphs application cases collection*
- *Type selection and application guidelines for knowledge graphs (2021 Edition)*

The on-going work of the Team:

Category	Name
Standard	*ISO/IEC WD 5329 Information technology - Artificial intelligence - Reference architecture of knowledge engineering*
Standard	*20192137-T-469 Information technology - Artificial intelligence - Technical framework for knowledge graphs*
Standard	*CESA-2020-2-019 Artificial intelligence - Specification for classification and grading of knowledge graphs*
Standard	*CESA-2020-2-020 Artificial intelligence - Assessment and test specification for knowledge graphs performance*
Standard	*IEEE P2807 Framework of knowledge graphs*
Standard	*IEEE P2807.1 Standard for technical requirements and evaluating knowledge graphs*
Standard	*IEEE P2807.2 Guide for application of knowledge graphs for financial services*
Standard	*IEEE P2807.3 Guide for electric-power-oriented knowledge graph*
Standard	*IEEE P2807.4 Guide for scientific knowledge graphs*
Testing & Certification	Testing and cerfication for knowledge graphs establishment of platform
Testing & Certification	Testing and cerfication for knowledge graphs application platform

Annex

The 14th Five-Year Plan on Building the National Standard System that Promotes High-Quality Development

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 three SESEC projects in China, SESEC I (2006-2009). SESEC II (2009- 2012) and SESEC III (2014-2017). In April 2018, SESEC IV was officially launched in Beijing, China. Dr. Betty XU was 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 sectorial 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 & labelling, as well as environmental performance of buildings).

SESEC IV China Standardization and Technical Regulation Bimonthly Newsletter

SESEC IV China Standardization and Technical Regulation Bimonthly Newsletter is the gathering of China regulatory and standardization intelligence. Most information of the Monthly Newsletter was summarized from China news media or websites. Some of them were the first-hand information from TC meetings, forums/workshops, or meetings/dialogues with China government authorities in certain areas.

In this Bimonthly Newsletter

In this Bimonthly Newsletter, some news articles were abstracted from Chinese government organizations. All new published standards, implementation or management regulations and notice are summarized; original document and English version are available.

Abbreviations

SAMR	State Administration for Market Regulation	国家市场监管总局
CAS	China Association	中国标准化协会
CCC	China Compulsory Certification	中国强制认证
CCSA	China Communication Standardization Association	中国通信标准化协会
CEC	China Electricity Council	中国电力企业联合会
CEEIA	China Electrical Equipment Industrial Association	中国电器工业协会
CELC	China Energy Labeling Center	中国能效标识中心
CESI	China Electronic Standardization Institute	中国电子标准化研究所
CMDSA	Center for Medical Device Standardization Administration	医疗器械标准管理中心
CNCA	Certification and Accreditation Administration of China	中国国家认证认可监督 管理委员会
CNIS	China National Institute of Standardization	中国国家标准化研究院
CNREC	China National Renewable Energy Center	中国国家可再生能源中 心
EPPEI	Electric Power Planning and Engineering Institute	电力规划设计总院
IEC	International Electrotechnical Commission	国际电工委员会
ITEI	Instrumentation Technology and Economy Institute	机械工业仪器仪表综合技术与经济研究所
MEE	Ministry of Ecology and Environment	中国生态环境部
MIIT	Ministry of Industry and Information Technology of People's Republic of China	中国工业和信息化部
MoH	Ministry of Health	卫生部
MoHURD	Ministry of Housing and Urban-Rural Development	住房与建设部
MOT	Ministry of Transport	中国交通运输部
MOST	Ministry of Science and Technology	中国科学技术部
NDRC	National development and reform commission People's Republic of China	中国国家发改委
NIFDC	National Institute of Food and Drug Control	中国食品药品检定研究 院
SAC	Standardization Administration of China	国家标准化管理委员
SGCC	State Grid Corporation of China	国家电网
TC	Technical Committee for Standard Development	标准化技术委员会