

## Translation



**CSET** CENTER *for* SECURITY *and*  
EMERGING TECHNOLOGY

*The following official pronouncement lays out, in broad strokes, China's approach to the development of standards. The document sets near-term (2025) and medium-term (2035) goals for standardization—both international and domestic—in China, and links standards-setting with virtually every aspect of Chinese society.*

### Title

The Chinese Communist Party Central Committee and the State Council Publish the "National Standardization Development Outline"  
中共中央 国务院印发《国家标准化发展纲要》

### Source

Xinhua News Agency (新华社), October 10, 2021. Xinhua is China's state press agency.

*The Chinese source text is available online at:*

[http://www.news.cn/politics/zywj/2021-10/10/c\\_1127943309.htm](http://www.news.cn/politics/zywj/2021-10/10/c_1127943309.htm)

*An archived version of the Chinese source text is available online at: <https://perma.cc/CB6V-VQDV>  
U.S. \$1 ≈ 6.4 Chinese Yuan Renminbi (RMB), as of November 8, 2021.*

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Standards are the technical support for economic activities and social development and are an important aspect of the country's foundational systems. Standardization plays a fundamental and leading role in advancing the modernization of the national governance system and governance capacity. In the new era, in order to spur high-quality development and comprehensively build China into a modernized socialist country in an all-round way, there is an urgent need to further strengthen standardization. This outline has been formulated for the purpose of promoting the uniform development of standardization

## I. Overall Requirements

(i) Guiding ideology. Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Chinese Communist Party (CCP) thoroughly implemented the spirit of the 19th Party Congress and the Second, Third, Fourth, and Fifth Plenums of the 19th CCP Central Committee, promoted the "five-in-one" overall layout,<sup>1</sup> and coordinated the promotion of the "four comprehensivels" strategic layout.<sup>2</sup> We must adhere to the people-centered (以人民为中心) development philosophy, root

<sup>1</sup> Translator's note: The "five in one" ( “五位一体” ) refers to economic development, political development, cultural development, social development, and development of ecological civilization.

<sup>2</sup> Translator's note: The "four comprehensivels" ( “四个全面” ) are: comprehensively establish a well-off society, comprehensively deepen reform, comprehensively govern the country according to law, and comprehensively govern the party strictly.

ourselves firmly in the new stage of development (新发展阶段), implement the new development concept (新发展理念), construct the new development pattern (新发展格局), optimize the governance structure of standardization, enhance the governance effectiveness of standardization, and improve the level of internationalization of our standards. We must construct a standards system for promoting high-quality development, support high-tech innovation, spur high-level opening up to the outside, and lead high-quality development. We must do all of this in order to provide firm support for comprehensively establishing China as a modernized socialist world power<sup>3</sup> and to realize the Chinese dream of the great rejuvenation of the Chinese nation.

## (ii) Development Goals

By 2025, China will have achieved a shift in the source of standards from being government-driven to being driven equally by the government and the market, and standards operations will shift their primary focus from being industry- and trade-driven to focusing on the economy and society as a whole. Standardization work will shift from being domestically driven to a model of mutual promotion between domestic and international interests. And finally, the development of standardization will shift from quantity and scale to a qualitative benefit model. Standardization will be more effective in promoting the country's overall competitiveness, will promote high-quality economic and social development, and will play a greater role in constructing the new development pattern.

—— In-depth development of standardization in all fields. Standards in agriculture, industry, service industries, and social endeavors will all be covered. The standardization status of emerging industries will be prominently featured. Health, safety, and environmental standards will be strongly supported, and the popularization of standardized agricultural production will steadily increase. The standards system for promoting high-quality development will be basically complete.

—— Dramatically improve the level of standardization. The proportion of standardization research content in general purpose key technologies and applied science and technology (S&T) programs and projects will reach more than 50%. The government will further optimize the structure for the creation of standards and for the market's independent establishment of standards, shortening the average period for the formulation of national standards to less than 18 months. The digitization of standards will have continuously improved, and the economic, social, quality, and ecological benefits from standardization will be fully realized.

—— Significantly enhance the degree of standardization and opening up. International cooperation on standardization will be further expanded, and

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<sup>3</sup> Translator's note: This translation renders the Chinese word 强国 qiángguó—which literally means "strong nation"—in English in two different ways, depending on context. When qiángguó is used in the general geopolitical sense, it is translated "world power," as in the phrase "socialist modernized world power" (社会主义现代化强国). When the Chinese text refers to a specific flavor of qiángguó, it is translated "powerhouse," as in the phrase "S&T powerhouse" (科技强国). For a more thorough discussion in English of the Chinese word qiángguó, see: <https://www.newamerica.org/cybersecurity-initiative/digichina/blog/lexicon-wangluo-qiangguo/>

international partnerships in standardization with mutually beneficial results will be strengthened. The exchange of standardization personnel and technical cooperation will also be strengthened, achieving interconnectedness and sharing of standardized information on a wider scale. The transparency of China's standards formulation and the internationalization environment will be optimized. The degree of consistency between national standards and the key technical indicators of international standards will greatly improve, and the conversion rate of international standards will reach more than 85%.

— Further solidification of the foundation for standardization and development. China will establish a number of world-class comprehensive and professional standardization research institutions, a number of national quality standards laboratories, and more than 50 national technological standards innovation bases, forming a national quality infrastructure system that integrates standards, metrology, certification, accreditation, inspection, and testing, fundamentally meeting the demands of economic and social development in the standardized service industry.

By 2035, the standardization system of structural optimization, advanced, reasonable, and internationally compatible standards will be more robust, and the standardization management system with Chinese characteristics will be more complete, fully forming a standardization work arrangement that is market-driven and government-guided, in which enterprises are the mainstay and society participates, and that is open and integrated.

## **II. Promotion of interactive development between standardization and S&T innovation**

(iii) Strengthen standards research in key technical fields. Conduct standardized research in artificial intelligence (AI), quantum information, biotechnology, and other fields. Utilizing the integration of informatization (信息化) and industrialization for new generation information technology (IT) with broad potential for future applications such as big data, blockchain, healthcare, new energy, new materials, etc., China will simultaneously deploy technological research and development (R&D) in coordination with research on and formulation of standards and their promotion in industry, to accelerate the pace of industrialization for new technologies. Study and formulate technical standards in such areas as smart ships, high-speed railways, new energy vehicles, intelligent connected vehicles, and robots, and promote industrial transformation. Timely and complete standards relevant to the technical safety standards in areas such as biomedical research, molecular breeding, and self-driving cars will be formulated, raising the level of safety risk management in technical fields.

(iv) Use S&T innovation to improve the level of standards. A linkage mechanism between major S&T projects and standardization work will be established, making standards an important foundation of S&T programs. Research on core technical indicators of standards will be intensified, with a focus on supporting the development of standards for basic general use technology, industrial general use technology, emerging industries, and integrated technologies. Prompt incorporation of the results

of advanced application of S&T innovation into the standards will raise the overall level of the standards. Awards will be given to key technical standards that meet the requirements, stimulating the vitality of innovation in standardization throughout society.

(v) Improve the mechanism of standards for the conversion of S&T achievements into practical applications (科技成果转化). Evaluation mechanisms and service systems for standards related to the conversion of S&T achievements into practical applications will be improved to promote standardization of services for technical managers as well as the evaluation of S&T achievements. The patent system for essential standards will also be improved to enhance the protection of intellectual property rights (IPR) during the formulation of standards and promote the industrial application of innovative achievements. In addition, the national standardization system for technical documents will be improved, while expanding channels for standardizing S&T achievements. Development of standards will be integrated into the development of general purpose technology platforms, shortening the development cycle for new technologies, new industrial processes, new materials, and new methods, and accelerating the conversion of S&T achievements into practical applications.

### **III. Raise the level of industrial standardization**

(vi) Solidify the foundation for industrial development. The construction of core basic parts (components), advanced basic processes, key basic materials, and industrial technology standards will be intensified, accelerating the development and application of basic general purpose standards. Research into databases and other standards will be conducted to raise the level of standards design, formulating safe, reliable, and internationally advanced standards for general purpose technologies.

(vii) Promotion of industrial optimization and upgrading. A high-end equipment manufacturing standardization foundation project will be implemented, and standards for smart manufacturing, green manufacturing, and service-oriented manufacturing will be improved to form a cluster of standards for industrial optimization and upgrading. Key standards in some areas are moderately ahead of the average level of industrial development. Standards for expanding domestic demand will be improved, which will continuously improve the standard and quality of consumer goods, and will comprehensively promote consumption. The standardization and branding of the service industry will be promoted to improve service industry standards, placing focus on strengthening standardization in such areas as the food cold chain, modern logistics, e-commerce, item coding, wholesale and retail, and real estate services. Standards for S&T will be improved and promoted for products, services, and infrastructure in the financial sector, to effectively prevent and mitigate financial risks. The standardization of the integrated development of advanced manufacturing and modern service industries will be accelerated, and cross-industry and cross-domain standardization will also be encouraged. Standards for the integration of big data and industry will also be established to promote both digital industrialization and industrial digitization.

(viii) Guide the rapid and healthy development of new products, new business formats (新业态), and new models. Pilot projects will be conducted for the standardization of new industries, and research on standardization for emerging industries and future industries will also be carried out. A number of new standards driven by applications must also be formulated, and new business formats and models for the development of new industries require cultivation. Focusing on the intelligent transformation needs in food, healthcare, emergency response, transportation, water conservancy, energy, finance, and other fields, the improvement of relevant standards will also be accelerated. Standards and norms for data resource property rights, transaction flows, cross-border transmission, security protection, etc., will be established to promote the standardization of the platform and sharing economy and support the development of the digital economy. There will be a standards-based improvement in the mechanisms for scientific and effective supervision, and social organizations will be encouraged to use standardized means to strengthen self-discipline and maintain market order.

(ix) Enhance the stability of the production chain and overall comprehensive industrial competitiveness. Focusing on production, distribution, circulation, and consumption, there will be an acceleration in research, development, and application of technologies and standards for key links, areas, and products to enhance the core competitiveness of industry. The connection and driving role of key technical standards in industrial coordination and technical collaboration will be maximized, implementing standardization to help key industries stabilize their chains, promote the effective connection of upstream and downstream standards in the production chain, and enhance the level of production chain and supply chain modernization.

(x) Boost the quality and efficiency of new types of infrastructure. Special actions to standardize new types of infrastructure will be implemented to accelerate the development of a series of standards for information infrastructure, such as communication network infrastructure, new technology infrastructure, computing infrastructure, etc. Coordinated efforts will be undertaken to develop standards for integrated infrastructure, establish standards for the industrial Internet, and formulate standards for innovation infrastructure to support scientific research, technological development, and product development to promote the transformation and upgrading of traditional infrastructure.

#### **IV. Improve assurance for green development standardization**

(xi) Establish and improve standards for a carbon emission peak and carbon neutrality. The updating and upgrading of energy conservation standards will be accelerated, with a number of compulsory national standards for energy consumption quotas and for the energy efficiency of products and equipment which must be promptly revised. Energy consumption quota requirements for key products will be raised, the coverage of energy consumption quota standards will be expanded, and supporting standards for energy accounting, testing, certification, evaluation, auditing, etc., will also be improved. The improvement of carbon emission verification and accounting standards for regions, industries, enterprises, products, etc., will be

accelerated. Standards for greenhouse gas emissions from key industries and products will be formulated, and the standard labelling system for low-carbon products will also be improved. Standards for renewable energy will be improved, and standards for ecological carbon sinks, carbon capture, utilization, and storage will be developed. Carbon emission peak and carbon neutralization projects will be implemented.

(xii) Continuous optimization of standards for ecosystem building and protection. Standards for ecological environmental quality and ecological environmental risk management and control will be constantly improved, leading to continuous improvement of the ecological environment. Standards for pollution prevention and control will be further improved, as well as standards for pollutant discharge, supervision, prevention, and control, and the bottom line for controlling polluting emissions will be consolidated. Standards for responding to climate change will be comprehensively improved, and standards for mitigating, adapting to, monitoring, and evaluating climate change will be formulated and revised. Standards for the quality and functional utilization of ecosystems in mountains, forests, fields, lakes, grasslands, and deserts will be formulated. The study and formulation of standards for the comprehensive prevention and control of soil erosion, ecological protection and restoration, as well as ecosystem services and evaluation will be accelerated. In addition, standards for ecological carrying capacity assessments, ecological resource evaluation and monitoring, biodiversity protection, ecological benefit assessment, and the realization of value from ecological products will also intensify, increasing the supply of high-quality ecological products and ensuring ecological security.

(xiii) Promote the economical and intensive use of natural resources. Standards for surveying, registering, assessing, evaluating, and monitoring natural resources will be unified, and standards for the economical and intensive development and utilization of land, mineral resources, and other natural resources will be developed. Standards for the green exploration and development of energy resources will also be promoted. The standardization of the natural resource asset management system must be promoted with a focus on natural resource asset inventory statistics and asset accounting. Uniform technical standards for territorial spatial planning will be formulated, and the mechanism for evaluating the carrying capacity of resources and the environment and the suitability of territorial spatial development will be improved. Standards for the development and protection of marine resources will be formulated, and the marine economy will be developed to serve the overall plan for land and sea.

(xiv) Solidify the foundation for green production standards. Standards for the development of green agriculture will be fully established, such as those relevant to soil quality, soil monitoring and evaluation, quality of agricultural inputs, moderate-scale farming (适合规模养殖), cyclical ecological agriculture, and food safety for agricultural products, in addition to monitoring and early warning. Standards for cleaner production will also be fully established, and standards for resource recycling, green product design, green packaging, green supply chain, comprehensive utilization of industrial waste, etc. will be continuously improved. Standards for green development such as green finance, ecotourism, etc. will be fully established. Standards for green construction will be established, and the standards for green

architectural design, construction, operations and maintenance (O&M), and management will be improved. Finally, standards for the construction of green communities and villages covering all types of green living facilities will also be established.

(xv) Strengthen guidance for green consumption standards. Standards for green products will be improved, criteria for the categorization and evaluation of green products will be established, and the labels for green and organic products will be normalized. Standards for green living will also be established, such as standards for energy and water conservation, green procurement, waste categorization, food and beverage waste, green travel, and green homes. Evaluation standards for green public institutions will be established for specific categories, alongside the rational formulation of consumption quotas and waste emission targets.

## **V. Accelerate the standardization process for urban and rural development and social construction**

(xvi) Promote the standardization of rural revitalization. Strengthen guidance of standards and carry out a standardization initiative for rural revitalization. Strengthen construction of high-standard farmland, accelerate the development of smart agricultural standards, and accelerate the improvement of standards for the entire modern agriculture production chain, strengthening the standardization of digital rural areas, establishing standardized services and popularization platforms for agriculture and rural areas, and promoting the standardization of industries with local characteristics. Standards for rural construction and evaluation will be improved, and the standardization of rural living environments will also be accelerated, with emphasis on rural environmental monitoring and evaluation, village appearance improvement, rural housing construction, rural household waste and sewage management, rural sanitary latrine construction and transformation, and public infrastructure construction. The standardization of holidays and leisure, rural tourism, the homestay economy (民宿经济), and the protection and utilization of traditional villages will also be advanced to promote the integrated development of the primary, secondary, and tertiary industries in rural areas.

(xvii) Promote standardization in the construction of new urbanization (新型城镇化). Standards for the allocation of public resources will be studied and formulated, and standards for the construction of county towns and small towns, as well as standards for the construction of public facilities in small towns, will be established. Standards for the evaluation of urban medical examinations will be studied and formulated, and standards for the evaluation of the construction and quality of urban living environments will be improved. Standards for urban ecological restoration and functional improvement, the urban information model platform, construction project disaster prevention, renewal and transformation, and sponge city construction will also be improved. The standardization of urban design will be promoted, along with the preservation and continuance of urban history and culture and local flavor, and the renovation of old neighborhoods, and standards for the construction of neighborhoods and public facilities, will be improved. Standards for intelligent urban infrastructure

construction, operations, management, and services will be established. Standards for urban leisure and slow systems (城市休闲慢行系统) and comprehensive management services will be formulated. Standards for the application of new generation IT in urban infrastructure planning and construction, urban management, emergency response, and other aspects will be studied and formulated. Standards for housing will be improved, as will standards for real estate information and data, and property services. Standards for smart construction will be promoted, and standards for building information model technology and construction site monitoring will be improved. An initiative to standardize cities will be launched, smart city standards will be improved, and sustainable urban development will be promoted.

(xviii) Promote the standardization of administrative management and social governance. The development and application of administrative standards will be further explored, with a focus on the development and promotion of standards for administrative examination and approval, government services, government openness, fiscal expenditure, intelligent supervision, court science, trial enforcement, legal services, and public resource transactions. The standardization of the digital society, digital government, and business environment will be accelerated, and the standards for trading market factors of production (要素) will be improved, promoting construction of a high-standard market system. The formulation and implementation of standards in areas such as the collection and use of credit information, data security and personal information protection, and cybersecurity assurance systems and capacity building will all be enhanced. Innovation in social governance standardization will be promoted with a focus on rural governance, integrated management centers, and management by grid (网格化管理), and we will launch a movement to standardize social governance.

(xiv) Strengthen standardization work in public security. Upholding the primacy of the people and the primacy of life, a standardized foundation for public safety will be built, and standards for public security, criminal law enforcement, counterterrorism, transportation, production safety, emergency management, and disaster prevention and mitigation will be improved. The web of safety standards for food, pharmaceuticals, pesticides, food and energy, water resources, biosecurity, material resource reserves, product quality, special equipment, labor protection, fire protection, mines, construction, and cybersecurity will be tightened, and standards for protection against natural disasters, such as floods and droughts, forest and grassland fires, geological disasters, and earthquakes, will be improved as well as standards for data sharing in major projects and various infrastructure, thereby ensuring the safety of people's lives and property. The development of standards in areas such as prevention, control, and treatment of major epidemics and national emergency response and rescue will be accelerated to seize opportunities for the improvement of national standards for safeguarding major security risks in emergencies. A multi-agency, multi-regional, multi-system, rapidly interconnected, unified and efficient public security standardization and coordination mechanism will be established to promote the formulation and implementation of major standards.

(xx) Promote the standardization of basic public services. Basic public service standard construction projects will be implemented in areas for social services such as early childhood education, education and training, labor compensation, healthcare, elder care, housing, and support for the disadvantaged, with emphasis on improving and promoting nationally uniform technical standards for social security, labor guidance, employment and entrepreneurship services, social work, elder care services, children's welfare, services for the disabled, social assistance, funeral public services, and public education, in addition to public culture and sports, and housing security, so that the benefits of development can reach the entire population more equitably.

(xxi) Raise the level of standards for ensuring a high quality of life. A comprehensive range of health standards covering multiple fields will be established, focusing on the universalization of healthy living, the optimization of health services, the promotion of healthy eating, the improvement of health assurance, the construction of a healthy environment, the development of the health industry, and other areas. Standards for public sports facilities, fitness for all, training competitions, fitness guidance, online and intelligent events, etc. will be formulated, establishing standards for sports that are scientifically sound and comprehensive in scope. Special actions will be undertaken to standardize elder care and domestic service, improving standards for vocational education, smart communities, and community services, and enhancing standardization in the field of charities. Standardization-building in the production of radio, television, and online audio-visual content will be accelerated, as well as standardization-building for intelligent network broadcasting, intelligent terminal reception, and smart security safeguards, and comprehensive standards for media broadcasting will be established. The standardization of cultural and tourism products and services, consumer protection, park construction, and scenic spot management will all be improved.

## **VI. Raise the level of standardization in opening up to the outside**

(xxii) Deepen exchanges and cooperation on standardization. China will fulfill the responsibilities and obligations of member states of the International Organization for Standardization (ISO), and will actively participate in international standardization activities. Through the promotion of synergistic cooperation with other Belt and Road<sup>4</sup> countries in the field of standards, China will strengthen the standardization dialogue between BRICS countries and APEC, deepen regional standardization cooperation in the Northeast Asia, Asia-Pacific, Pan-American, European and African regions. China will also promote the sharing of standards information and services, and develop mutually beneficial partnerships for cooperation in standardization. As a member of the UN and the ISO, China will promote the formulation of international standards in areas such as climate change, sustainable cities and communities, clean water and sanitation, animal and plant health, green finance, digital fields, etc., and will share its experience in standardization to actively participate in international standardization activities such as health and well-being, gender equality, and quality education, and will contribute to

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<sup>4</sup> Translator's note: The "Belt and Road" ( "一带一路" ) refers to the Silk Road Economic Belt (丝绸之路经济带) and the 21st Century Maritime Silk Road (21世纪海上丝绸之路).

the achievement of the UN Sustainable Development Goals. China will also support developing countries in enhancing their capacity to use standardization to achieve sustainable development.

(xxiii) Enhance support of trade facilitation standards. Comparative analysis of standards in key areas will be continuously conducted, and international standards will be actively adopted. Mutual recognition between Chinese and foreign standards will be vigorously promoted, and degree of consistency between China's standards and international standards will also be improved. A multilingual version of Chinese standards will be launched, and the compilation of foreign language versions of Chinese standards for bulk trade goods and outsourcing projects will be accelerated. Standards for trade in services will be formulated, and standards for digital finance and the China International Trade Single Window (国际贸易单一窗口) will be improved. The integration of domestic and foreign trade quality standards, inspection and quarantine standards, and certification and accreditation standards will be promoted to advance the policy of "same line, same standard, same quality." Innovative and standardized working mechanisms will support the establishment of a global network of high-standard free trade areas.

(xxiv) Promote the coordinated development of domestic and international standardization. Cooperation in standardization between S&T, industry, and finance will be coordinated and promoted, to encourage universality of policies, rules, and standards. An international standardization working mechanism composed of government guidance, enterprises as the mainstay, and industry-academia-research institute collaboration will be established. A project to boost the internationalization of standards will be implemented to promote the compatibility of Chinese standards with international standards. The institutionalization of standards will be advanced to ensure that foreign-invested enterprises participate in standard-setting in accordance with the law. Enterprises, community groups (社会团体), and research institutions will be encouraged to actively participate in various international professional standards organizations. Relocation of international professional standards organizations to China will be encouraged.

## **VII. Promote Reform and Innovation in Standardization**

(xxv) Optimize the standard supply structure. The vitality of the standardization of market entities will be unleashed, to optimize the dual structure of government-enacted standards and standards formulated autonomously by the market, and significantly increase the proportion of standards formulated autonomously by the market. Organizational standards (团体标准) will be vigorously developed, and an organizational standards training and excellence plan will be implemented, promoting the demonstration of the application of organizational standards, maximizing the role of enterprises with technological advantages, and guiding community groups in formulating original and high-quality standards. The construction of compulsory, unified, and compulsory national standards will be accelerated, creating a solid baseline for ensuring personal health, safety of life and property, and ecological and environmental security. There will be a synchronized

advance in the reform of recommended national, industry, and local standards, and coordination of recommended standards will be enhanced to prevent local protectionism and industry monopolies. The mechanisms for the government to promulgate standards for the independent formulation of standards in the credit market (采信市场) must be completely formed.

(xxvi) Deepen innovation in standardization operating mechanisms. Standard innovative enterprise systems and standard financing credit enhancement systems will be established, and enterprises will be encouraged to build technology-, patent-, and standard-linked innovation systems. Leading enterprises will be encouraged to establish a mechanism for joint cooperation on standards with research institutions and small and medium-size enterprises, and a system for enterprise standard leaders will be implemented. A nationally coordinated regional standardization work mechanism will be established to incorporate the needs of regional development standards into the construction of the national standards system, achieving synergy between regional standard development plans and technical rules to serve the implementation of major national regional strategies (国家重大区域战略). The standard-setting process, platforms, and tools will be continuously optimized. Mechanisms for enterprises, consumers, and other relevant parties to participate in standard-setting and revision will be improved. The iteration of upgrades to standards will also be accelerated, improving the quality of standards.

(xxvii) Promote the integrated development of standards and national quality infrastructure. With standards as the guiding principle, the distribution of national quality infrastructure resources will be coordinated to promote the unified construction and management of national quality infrastructure, and improve the institutional mechanisms for the integrated development of national quality infrastructure. The role of standards in metrological quantification, intelligentized (智能化) inspection and testing, and market-oriented certification will be strengthened, in recognition of the role of globalization. Through the comprehensive application of AI, big data, blockchain, and other new generation IT, quality governance will be improved, spurring a rise in quality. The supply of national quality infrastructure whole-chain technical solutions will be enhanced, and standardized methods will be used to promote the deep fusion of national quality infrastructure integration services and industrial value chains.

(xxviii) Strengthen the implementation and application of standards. A standard system for citing regulations and supporting standards for policy implementation will be established, and the standards for formulating regulations and policy documents will be actively applied. The application of advanced standards and mechanisms in certification, inspection and testing, government procurement, and bidding will be improved, promoting macroeconomic regulation, industrial promotion, industry management, market access, and quality control based-standards. Mechanisms for contract implementation based on standards or standard clauses will be improved. A standard copyright system, submission system, and a standard trading system for standards formulated autonomously by the market will be established, and standard copyright protection will be strengthened. Standardization pilot demonstration work

will be carried out in accordance with relevant national regulations, and the work mechanisms for benchmarking will be improved. Enterprises will be encouraged to improve their ability to implement standards, targeting the advanced international level.

(xxix) Strengthen supervision over the formulation and implementation of standards. The traceability, supervision, and error correction mechanisms covering the entire process of the formulation and implementation of standards promulgated by the government will be improved, and closed-loop management of standards development, implementation, and information feedback will be achieved. Third-party evaluations of standard quality and standards implementation will be conducted to strengthen standards review and maintain updates. A standardized mechanism for evaluating good behavior of organizations will be improved. Industry self-discipline and supervision by society will be strengthened, maximizing the role of the market in picking winners and losers among the standards for organizations. The self-declaration disclosure and supervision system of enterprise standards will be effectively implemented, incorporating compliance of enterprises' products and services with the standards into the construction of the social credit system. A standards reporting and complaint mechanism will be established to encourage the public to supervise the implementation of standards.

#### **VIII. Consolidating the developmental base for standardization**

(xxx) Raise the level of technical support for standardization. Standardization theory and applied research will be intensified, to build a standardized S&T system with comprehensive standardization research institutions at the national level as the lead, and industry, regional, and local standardization research institutions as the backbone. The role of well-positioned enterprises (优势企业) in the standardization S&T system will be maximized. The professional standardized technical organization system and the cross-disciplinary working mechanism will be improved, and openness and transparency will be enhanced. China will establish a number of national quality standards laboratories, national standards verification points, and national product quality inspection and testing centers. Standard technologies will be effectively integrated, such as testing and certification, IPR, standard samples, and other resources to advance the construction of national technological standards and innovation bases. A national digital standards library and a standardized public service platform with unified coordination and division of responsibilities across the country will be established. Machine-readable standards and open-source standards will be developed, transforming standardization work into a digitized, networkized (网络化), and intelligentized format.

(xxxii) Vigorously develop the standardization service industry. Policies and measures to promote the development of standardization high-tech service industries, such as standards, metrology, certification, inspection, and testing will be established, and market entities in the standardization service industry will be cultivated and enhanced to encourage areas which meet criteria to explore the establishment of clusters of standardization service industries, and to improve the standardization

service evaluation mechanisms and standardization service statistics analysis and reporting systems. Standardization service institutions are encouraged to target the actual needs of micro-, small, and medium-size enterprises, integrate upstream and downstream resources, and provide overall standardization solutions. Vigorously develop new standardization service tools and models, elevating the level of service specialization.

(xxxii) Strengthen construction of standardization personnel teams. Standardization will be incorporated into general higher education, vocational education, and continuing education, and pilot integration of professional and standardization education will be conducted. A multilevel training system for practitioners will be established, and standardization professional training and comprehensive education on national quality infrastructure will be conducted. A vocational ability assessment and incentive mechanism for talent in the field of standardization will be established and improved. Build a professional workforce that is proficient in international rules and technical expertise. The standardization capacity of researchers will be expanded, maximizing the role of standardization experts in national S&T decision-making and consultation to build a national high-end knowledge base for standardization. Construction of grassroots standardization management teams will be strengthened to support construction of standardization professional personnel teams in the western region.

(xxxiii) Create a standardized and sound social environment. World Standards Day and other thematic activities will be fully utilized to publicize the role of standardization, popularize the concepts, knowledge, and methods of standardization, raise awareness of standardization throughout society, and promote standardization as an important tool for government management, social governance, and corporate governance. The role of standardization social organizations as bridges and links will be maximized to conduct propaganda for standardization in all aspects, through multiple channels, to build a compelling narrative around standardization. A culture of standardization must be vigorously cultivated and developed.

## **IX. Organization and Implementation**

(xxxiv) Strengthen organizational leadership. The Party's comprehensive leadership of standardization must be upheld. The system of joint inter-ministerial meetings for standardization and coordination under the State Council will be further improved, along with the unified, authoritative, and efficient management system and work mechanisms, and departmental coordination and vertical linkage will be enhanced. All provinces (and autonomous regions, and province-level municipalities) will establish and improve the coordination and promotion of standardization work, and will incorporate standardization work into evaluation and appraisal of government performance. Relevant departments in all regions should effectively connect and synchronize the main tasks of this *Outline* with the national economic and social development plan to ensure that all tasks are carried out in practice.

(xxxv) Improve support policies. Relevant departments in all regions must strengthen policy support for finance, credit, and human resources, and promote policy coordination in S&T, industry, and trade. Commendations will be awarded in accordance with relevant regulations. The guiding role of government fiscal funding will be fully utilized to actively guide the investment of social capital<sup>5</sup> in standardization. The statistical survey system for standardization must be improved, and standardization development evaluations must be conducted, incorporating relevant indicators into national economic and social development statistics. The evaluation mechanism for the implementation of this outline shall be established, and the relevant results will be used as an important basis for improving standardization work. Important matters should be reported to the Party Central Committee and State Council to request instructions in a timely manner.

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<sup>5</sup> Translator's note: The Chinese term 社会资本, translated literally as "social capital," and its synonyms "social funding" (社会资金), "social investment" (社会投资), and "social financing" (社会融资), refer to any source of funding outside of government budget outlays. These terms encompass investment by private individuals and private institutions. However, investment from state-funded entities such as state-owned enterprises (SOEs), including state-run banks, also falls under the umbrella of "social capital."