Enhancing AI Capacity Building to Ensure the World Benefits from Digital Dividends

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The rapid advances in artificial intelligence (AI) technologies worldwide have a far-reaching impact on economic and social development and the progress of human civilization, bringing enormous opportunities to the world. As the largest developing country, China attaches great importance to its own AI capacity building. The *2024 Report on the Work of the Government* underlined the need to promote AI R&D and application and proposed the AI Plus Initiative to cultivate new quality productive forces. On September 25, 2024, China put forward the *AI Capacity-Building Action Plan for Good and for All* at the High-Level Meeting on International Cooperation on Capacity-Building of Artificial Intelligence, which advocates enhanced global cooperation to bridge the AI and digital divide. Both the AI Plus Initiative and the *AI Capacity-Building Action Plan for Good and for All* serve as concrete measures to contribute to the implementation of the UN 2030 Sustainable Development Agenda.

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I. Implementing the AI Plus Initiative to Cultivate New Quality Productive Forces

The Chinese modernization is unique in five ways. It covers a huge population, aims at common prosperity for all, features coordinated pursuits of material and cultural-ethical advancement, calls for harmonious coexistence between humanity and nature, and is achieved through peaceful development. The key to the Chinese modernization lies in scientific and technological modernization. AI is a strategic technology spearheading a new round of scientific and technological revolution and industrial transformation. It has a strong spillover and "head wild goose" effect and is expected to become a new engine in driving economic and social development, providing strong support for the realization of the multiple goals of Chinese modernization.

On March 5, 2024, Premier Li Qiang proposed in the government work report to "step up R&D and application of big data and AI and launch an AI Plus Initiative". Back in 2015, China launched the "Internet Plus Initiative", focusing on innovation and business startups, collaborative manufacturing, modern agriculture, smart energy, and green ecology, among others, to further promote the deep integration and development of the Internet and the real economy. It laid a solid foundation for the vigorous development of the digital economy in the next decade. The "AI Plus Initiative" launched this year will kick off a new round of digital capacity building in the context of breakthroughs in generative AI technology. Its goal is to accelerate the wide application of AI technology, optimize and upgrade the industrial structure, promote high-quality economic development, bring more benefits to the public, and inject new vitality into social development.

II. China's Experience in AI Capacity Building

Laying the groundwork in computing facilities and data resources for AI. In terms of computing facilities, in order to support the sustainable development of the AI industry, China has continuously strengthened the digitalization and intelligent transformation of traditional infrastructure, and accelerated the construction of intelligent computing facilities for AI training and reasoning. According to the Ministry of Industry and Information Technology, the total computing power in China exceeded 230 EFLOPS at the end of 2023, of which intelligent computing power reached 70 EFLOPS, with a growth rate of over 70%, accounting for more than half of the newly added computing power. **In terms of data resources,** the National Data Administration was established last year. The national data management system and mechanism have been improved rapidly, the national basic data system has matured, and the total amount of data resources has continued to grow. According to the *National Data Resources Survey Report (2023)*, the total amount of data production in 2023 reached 32.85 zebytes (ZB), a year-on-year increase of 22.44%. This year, the National Data Administration also launched the construction of a data labeling base for AI to promote the industrial supply capacity for AI data.

Empowering economic and social development with AI in a comprehensive and deep way. New breakthroughs have been made in cutting-edge large model technologies, showing great prospect for application in almost all industries. **The first is to empower the digital economy for improved quality and efficiency.** China's AI industry is increasingly active, with more than 4,500 enterprises, and a number of AI industry clusters such as the Beijing-Tianjin-

Hebei region, the Yangtze River Delta and the Pearl River Delta. At the same time, the integration of AI and manufacturing continues to deepen, accelerating the development of high-end, intelligent and green manufacturing industry. A total of 421 national intelligent manufacturing demonstration factories have been built. The application rate of digital R&D design tools in key industrial enterprises has reached 80.1%, and the digital control rate in key processes has reached 62.9%. With the transformation of the demonstration factories, the R&D efficiency has improved by about 20.7%, the production efficiency, 34.8%, the defective rate has been lowered by about 27.4%, and the carbon emission cut by about 21.2%. **The second is to raise efficiency and coordination in digital government services.** In recent years, China has made enormous efforts to develop digital government services, which are to be provided administered and coordinated via one website. The goal is to save time and trouble for the public and maximize the use of data, to provide equal, universal and easy access to public services. Many local governments have made the most of the Internet, to see that people can get things done without the need to visit government agencies in person. The use of large language models in government services will undoubtedly further enhance the efficiency of digital government. For example, in Nanhu District of Jiaxing City, Zhejiang Province, the "Zheng Xiaoyun" robot gives the public full access via one portal to government services under more than 1,000 scenarios, covering commercial registration, real estate, public provident fund, medical insurance and social security. People can get things done by chatting with the robot. **The third is to bring new life to traditional cultures.** With the rapid advances in generative AI, new formats and new modes such as AI generated content production (AIGC), digital humans and meta universe keep emerging, which are transforming

profoundly the way cultural contents are produced and disseminated, bringing unprecedented new experiences to users, and are expected to reinvigorate traditional cultures. For example, in the protection of cultural heritage, AI technology can be used in preservation, restoration, display, experiencing, discovery, innovation and dissemination. Recently, the Sanxingdui Museum launched a VR large-space immersive experience project at the archaeological excavation site. The audience is guided by "digital humans" who act as archaeologists, to travel through virtual scenes such as the Sanxingdui ancient city and archaeological excavation site. Similarly, AI plus tourism also has broad prospects. In May 2024, the Ministry of Culture and Tourism and other departments jointly issued the *Action Plan for Innovative Development of Smart Tourism* to deepen the integration of the digital economy and tourism. **The fourth is to enable easy and universal access to social services.** In recent years, the Chinese government has vigorously promoted the application of digital technology in social security, education, medical care and health, promoted social equity, and built a convenient and intelligent society for all. In the medical field, traditional image recognition has been widely used in medical image diagnosis. Similarly, the medical and health sector is also considered to be the focus of the application of large models, which has been explored by domestic large model companies and many large hospitals. The cases cover many important fields such as patient consultation, assistants to doctors, drug research and development, health science popularization and so on, which will bring profound changes to the medical sector. According to the National Health Commission, medical AI applications have been piloted in Shanghai, Zhejiang, Fujian, Anhui and Shenzhen. By the end of 2023, 257 AI applications such as intelligent auxiliary diagnosis and treatment, intelligent public

health and medical robots had been promoted. **The fifth is to support ecological and environmental sustainability.** Systematic solutions based on scientific and technological innovation are urgently needed to effectively address major environmental challenges, such as climate change, biodiversity protection, and coordinated and precise pollution control. The maturity of AI technology provides an effective technical path to solve the problems of traditional ecological environment management, such as lack of means, insufficient accuracy and inadequate decision-making and analyzing capacity. The 14th Five-Year Plan for Ecological Environment Monitoring proposes to draw a national map of ecological environment data and establish a network with the stereoscopic intelligence of the sky and the earth, so as to transform ecological governance from experience based to data based.

Governing AI for good to ensure responsible development and use of AI. The stronger the ability, the greater the responsibility. With the rapid advances in AI capacity, the risks involved in its application have also attracted worldwide attention. It is necessary to speed up development and strengthen governance at the same time. To this end, China always upholds a people-centred approach and adheres to the principle of AI for good. In March 2023, China promulgated the *Measures for the Management of Generative Artificial Intelligence Services*, and recently issued such technical documents as the *Framework for AI Security Governance* to keep improving the AI governance system. These governance measures give top priority to AI innovation and development, with effective prevention and resolution of AI security risks as the starting point and ultimate goal, aiming to build a governance mechanism entailing the participation of all stakeholders, integration of

technology and management and collaboration among division of labor. With improving systems, China is committed to developing trustworthy and responsible AI, turning AI governance principles based on broad consensus into workable standards and norms, and promoting industry self-discipline based on standards. By selecting best practice cases and carrying out third-party certification tests, China encourages enterprises to apply credible requirements to the whole life cycle of AI technology research, product development and application services, so as to ensure the safety, reliability and controllability of AI technology and application. At the same time, China actively promotes multi-stakeholder collaborative governance, forming a co-governance system of government guidance, enterprise self-governance, industry self-discipline and social supervision. On the enterprise side, enterprises that develop and apply AI are encouraged to improve their internal governance capabilities, actively carry out self-discipline and self-governance, and rely on public platforms such as industry organizations for information disclosure, resource sharing and communication. On the public side, it is important to raise the awareness of risk prevention across society, improve public AI literacy, encourage the media and the public to participate in supervision, to build a new pattern of AI governance with the support of all walks of life.

III. Contributing to the Global AI Capacity Building

Adhering to the people-centered approach and the principle of AI for good to forge consensus on AI development. In October 2023, during the Third Belt and Road Forum for International Cooperation, President Xi Jinping proposed the *Global Artificial Intelligence Governance Initiative*, which provided the world with a new perspective of AI governance in light of a community with

a shared future for mankind. In a systematic way, the Initiative expounds China's solution regarding AI development, security and governance. The Initiative proposes to ensure that AI develop in a way that is beneficial to the human civilization and, respecting relevant international laws, aligning AI development with the humanity's common values of peace, development, equity, justice, democracy and freedom. The Initiative demonstrates China's willingness to carry out communication and practical cooperation with the international community on global AI governance, and depicts a beautiful vision of AI technology benefiting all mankind.

Actively participating in the development of multilateral mechanisms and promoting international cooperation in AI governance and capacity building. On July 1, 2024, the China-sponsored resolution on *International Cooperation on Capacity Building of Artificial Intelligence* was adopted at the 78th United Nations General Assembly. The resolution follows the principle of putting people first, AI for good, and benefits for mankind, encourages international cooperation and practical actions to help all countries, especially developing ones, strengthen AI capacity building, calls for greater representation and voice of developing countries in global AI governance, and advocate an open, fair and non-discriminatory business environment. China took active actions after the resolution was adopted. On September 25, 2024, it put forward the *AI Capacity-Building Action Plan for Good and for All*. On AI governance, China always supports the central role of the United Nations in international cooperation to achieve inclusive and sustainable AI development and deliver the 2030 sustainable development agenda. This move reflects China's vision and fulfillment of its responsibility as a country with strong AI capabilities. In addition, China supported the publication of "AI

for Good: Innovate for Impact Final Report" by the International Telecommunication Union. From the 219 cases of 38 countries, 53 outstanding cases were selected, covering all 17 UN sustainable development goals. It can be seen that AI has been widely used in different fields such as medicine and health care, communication technology, care for vulnerable groups, agricultural production, transport technology, commerce, energy, environmental protection, government affairs and education, helping to accelerate the realization of the UN 2030 sustainable development goals in all dimensions. Statistics show that AI is no longer the "patent" of technology firms. Academic institutions, government agencies, traditional industries and other players are also adopting AI technology to promote intelligent upgrading of industries and achieve cross-border integration and efficiency improvement.

Gathering strength and building platforms for concrete progress in international cooperation on AI. On June 10, 2024, Foreign Minister Wang Yi said at the BRICS Foreign Ministers' Meeting that it is necessary to stay committed to the BRICS' founding principles of openness, inclusiveness and win-win cooperation, to take BRICS practical cooperation to a new level. He announced the establishment of the China-BRICS countries AI Development and Cooperation Center to strengthen cooperation on industrial synergy and capacity building. For nearly 20 years, BRICS countries have supported each other and helped each other succeed, and become a banner of "South-South cooperation". In the face of opportunities and challenges brought by AI, BRICS countries should "gather wisdom and pool strength", give full play to their comparative strengths in technology and industry, actively explore cooperation models based on complementary strengths, and build a development pattern of resources sharing.

As an international platform for BRICS countries to carry out AI cooperation, the Center encourages BRICS governments, enterprises, research institutions, industry associations and multilateral development institutions to participate in the work of the Center. By strengthening information exchange and technology cooperation, promoting application empowerment and capacity enhancement, deepening industrial synergy and project cooperation, and aligning governance standards and norms, the Center will deepen and substantiate AI cooperation among developing countries, and enable friends from BRICS countries to seek common development and share results.

IV. Looking Ahead: Deepening International Cooperation and Ensure AI Benefits the World

With the rapid evolution of emerging AI technologies such as large language models and reinforcement learning, the era of general AI is dawning. AI will play a great role in promoting economic growth, raising productivity efficiency, and improving quality of life, yet it will bring challenges in employment structure, digital and physical security, and ethics. In the journey of AI exploration, no one can stay unaffected. Every individual, every organization and every country has the right to embrace new technologies and should also enjoy the dividends of AI equally. To this end, there is a greater need for all countries in the world to ride the wave of scientific and technological development, and for the international community to strengthen cooperation to promote the safe, secure and controllable development of AI technology, so that AI can better serve and benefit mankind.