Special Project of AI for Science Unveiled

Policy

By LI Linxu

In its latest moves to promote the use of AI in frontier sci-tech R&D, China has launched the deployment of a special project of AI for Science.

The project, jointly launched by the Ministry of Science and Technology (MOST) and the National Natural Science Foundation of China (NSFC), will focus on key problems in basic disciplines, such as mathematics, physics, chemistry and astronomy, as well as R&D needs in key fields, such as drug discovery, gene research, biology breeding and new materials R&D.

It is tasked with advancing the innovation of AI models and algorithms for major scientific problems, developing a batch of specialized platforms for typical R&D fields, and laying out a system for frontier sci-tech R&D.

Under the project, MOST will accelerate the construction of a national open innovation platform for the new genera-

tion of AI public computing power.

The heterogeneous and integrated development of high-performance computing centers and intelligent computing

centers will be encouraged.

Meanwhile, research entities will be encouraged to provide open access to their scientific data in the principle of

classification and gradation.

Now, AI for science has become a new frontier for AI. The project will further enhance system layout and overall guidance, so as to promote the deep integration of AI and sci-tech R&D, advance the opening and convergence of resources, and boost innovation capabilities, said an official from MOST.

The ministry pledges to pool together interdisciplinary R&D teams, promote the establishment of an innovation consortium, and build international academic exchange platforms to address common human scientific challenges, including cancer diagnosis and treatment, and the climate crisis.

Experts believe that AI has become an important tool in sci-tech R&D, while AI for Science is expected to become a driving force in revolutionizing the paradigm of sci-tech R&D.

The project is a follow-up to the country's *New Generation Artificial Intelligence Development Plan*, which pledges to create an open and coordinated system for AI sci-tech innovation, and deploy major sci-tech projects in a forward-looking vision.
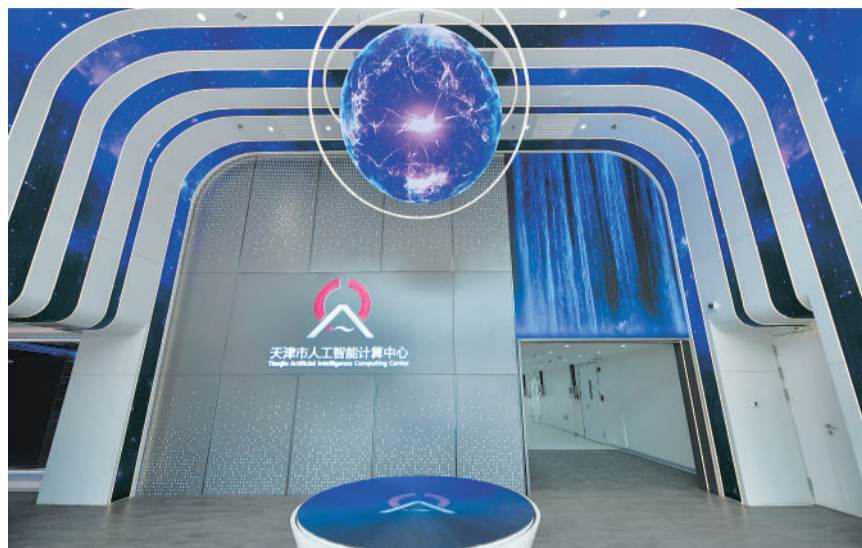
Photo shows a view of the recently inaugurated Tianjin Artificial Intelligence Computing Center. The center's first batch of 100 petaflops of computing power has been fully loaded and put into operation, and an additional 200 petaflops will be added in the future, providing inclusive public computing services for artificial intelligence application enterprises, universities and scientific research institutions. (PHOTO: XINHUA)

Sci-tech Awards by Social Forces Encouraged

By LI Linxu

Organizations or individuals, from both home and abroad, are encouraged to set up sci-tech awards, particularly the high-level and specialized awards in the key disciplines and fields, according to a policy recently released by the Ministry of Science and Technology (MOST).

The awards targeted at young or female sci-tech personnel or those conducting researches in the fields of basic research or frontier sci-tech, are also greatly welcomed.

To guide their healthy development, the policy laid out a series of management rules and regulations.

Sci-tech awards set up by social forces have become an important part of sci-tech awards systems with Chinese characteristics, said an official from MOST, adding that these awards have played a positive role in stimulating innovation vitality of sci-tech personnel.

In recent years, sci-tech awards set up by social forces have witnessed continuous growth in China. Statistics show that, to date, there are 297 such awards, including Future Science Prize, Ho Leung Ho Lee Foundation Award, Li Siguang Geological Science Award, Hua

Luogeng Mathematics Prize, and Zhou Peiyuan Mechanics Award.

Compared with well-known state sci-tech awards funded by public expenditure, such as the State Natural Science Award, the State Technological Invention Award, and the State Scientific and Technological Progress Award, sci-tech awards set up by social forces have diverse fund sources, flexible award cycle periods, and dedicated coverage scope, which can help meet the needs of talent incentives at various levels.

The evaluation orientation of sci-tech awards set up by social forces should focus on the quality of, performance of, and contribution to sci-tech innovation, with emphasis on the scientists or first line sci-tech personnel who have made the original innovation, according to the policy.

The administrative department of science and technology under the State Council is responsible for the guidance, supervision, and administration of such awards at national or international level, while those regional awards will be guided, supervised and administrated by local administrative departments of science and technology, as per the policy.

Digital Tech Drives Transformation of Real Economy

By CHEN Chunyou

Experts from various research institutes and enterprises, recently shared their insights on the digital future, and discussed the revolutionary impact of next-generation information technology on production and living.

The gathering took place at the Enterprise Science & Technology Innovation Development Forum, held in Shenzhen on March 24, which set its focus on the integration of the digital economy and real economy to promote high-quality development.

Delegate Liu Huanbin, a professor at the South China University of Technology, promotes this focus. The high-

quality growth of enterprises can be achieved through the integration of the digital economy and real economy, he said, noting a key to achieving this integration is to combine the next-generation information technology with enterprises' production technology and experience, which requires cross-border collaborative innovation.

Meanwhile, Chen Zhijie, academician of the Chinese Academy of Engineering and executive vice president of Federation of Guangdong Academicians, said that Tencent and Huawei have applied leading-edge technologies to traditional industries, such as cultural relic preservation and industrial processes, helping them to generate greater pro-

ductivity.

Liu added that many difficulties need to be resolved, like how to send all data of an enterprise to the digital cloud space, so that they can be shared at the same frequency and achieve efficient collaboration, and how to develop better process AI models that meet the needs of various industries with the rapid development of AI technology.

Shan Libo, director general of China Center for Promotion of SME Development affiliated with the Ministry of Industry and Information Technology, said small and medium-sized enterprises are still facing challenges in promoting digital transformation due to a lack of solid foundations, digital equip-

ment, and talent resources.

Harsh as the facts are, they are actually a blessing in disguise, which means there is huge room and potential to accelerate the development of the digital economy by applying next-generation information technology, said Shan.

Simulation and digital twin technologies would be very promising in the future, said Chen Shiyi, academician of the Chinese Academy of Sciences and president of the Eastern Institute for Advanced Study, noting that they can be used to replicate the physical world through computing power, and can help intelligent manufacturing, and simulate disaster scenarios and city management during disasters.

The award ceremony of the 17th Chinese Young Women in Science Award held in Beijing on July 15, 2022. (PHOTO: XINHUA)

Beijing Rolls Out a Plan for Web 3.0 Innovation

Case Study

By MIAO Qing & ZHONG Jianli

Beijing has unveiled a plan to encourage Web 3.0 innovation and support the development of core technologies in key areas, such as AI, blockchain, and high-performance computing chips.

Titled *Work Plan for Innovative Development of Beijing Web 3.0 Industries (2023-2025)*, the document was jointly released by Beijing Municipal Science & Technology Commission, the Administrative Commission of Zhongguancun

Science Park, and the Beijing Municipal Bureau of Economy and Information Technology on March 17.

It stressed that Beijing will establish a world-class hub for Web 3.0 sci-tech innovation and industrial development.

This goal will be pursued through a series of strategic initiatives, including making significant breakthroughs on fundamental core technologies, building generic technology-supporting platforms, creating exemplary scenarios for Web 3.0 applications, and improving Web 3.0 risk management.

With a focus on Web 3.0 infrastructure and interactive terminals, Beijing

will dedicate its technological innovation to key areas, such as AI, blockchain, high-performance computing chips, communications networks, extended reality (XR) terminals and content production.

Taking the AI industry for example, Beijing will provide substantial support for the development of AI-generated content (AIGC) — a technology that uses AI models and deep fusion to generate texts, images, or videos automatically.

AI-based 3D modeling technology will also be encouraged, which will contribute to Web 3.0 content production. The city will support multi-model inter-

active technologies, including smart voice recognition, emotion capture, motion capture and others.

These initiatives are designed to bolster the Web 3.0 application ecosystem and support the continued growth and innovation of this rapidly evolving industry, according to the document.

In addition, to create the service platform for the circulation of digital assets, Beijing will conduct research on data classification and digital asset registration and issuance in accordance with laws and regulations, and explore ways to build a regulatory and governance model for Web 3.0 industries.

China's Vehicles Take on Global Market

"In the field of NEVs, China has established a technical standard system, formed a complete and controllable industrial system, and significantly improved its innovation capability," said Zhu Yifang, from China Automotive Strategy and Policy Research Center.

A report by CleanTechnica shows that 10 Chinese auto companies are listed on the global top 20 bestselling NEV brands, and contributed nearly 40 percent of the annual global total sales in 2022. According to CAAM, Chinese automobile exports exceeded three million units in 2022, up 54.4 percent year-on-year.

Such a surge in overseas sales is distinguished amid the gloomy global automobile industry that was overshadowed by the COVID pandemic, geopolitical conflicts and uncertainties. The accelerating global march of China's indigenous brands, such as Chery, BYD and Geely, is supported by a robust automotive industrial and supply chain, which is more resilient and less impacted by external factors, said Ye.

Zhu noted that since 2020, the global auto market has been hit hard due to the pandemic. China took timely and effective pandemic prevention and control measures to promote the domestic automobile industry and market recovery before reaching out to the global market, laying a good foundation for the substantial growth of China's automobile exports.

Win-win cooperation

The globalization of China's automobile industry brings not only a grow-

ing market share, but also the collaboration in technology and supply chains, as well as cultural exchanges, said Yin Tongyue, chairman of Chery.

As Chinese automobile enterprises go global, they have been sharing opportunities with their local partners and become deeply integrated into the global auto industrial chain. Through localization, Chinese enterprises are contributing to the socio-economic development of those countries.

In March, at a new car launch event in Amman, Jordan, BYD announced a strategic cooperation plan with local car dealers. The two sides will cooperate in sales, after-sales service and maintenance to provide better service for Middle East consumers. While selling cars, BYD is also providing technology training to overseas dealers and partners, said Luo Hao.

Geely is committed to promoting localization in overseas markets in terms of product, supply chain, human resource and marketing. Taking supply chain as an example, Geely currently has several manufacturing factories around the world, and will further strengthen local manufacturing and local purchasing.

Chinese auto enterprises have carried out close cooperation with their European counterparts throughout the entire NEV industrial chain, said Jean Le Pavec, a former French diplomat to China, adding that they have built not only vehicle assembly factories, but also ancillary facilities such as charging piles, as well as production lines of power batteries.

Recovery of 88 Critical Water Resources Planned

Baiyangdian Lake, northern China's largest freshwater wetland, is dubbed the "kidney of northern China" that functions as a regulator of the region's ecology. (PHOTO: VCG)

By MIAO Qing & CHEN Chunyou

The Ministry of Water Resources (MWR) released the *River and Lake List of Mother River Recovery Action (2022-2025)* on March 17, which aims to promote the high-quality development of water resources and recover the ecosystems of lakes and rivers.

To address the pressing issues of halted river flows, shrinking lakes and drying water bodies, MWR has meticulously researched and analyzed the situation to identify 88 critical water resources, comprising 78 rivers and 10 lakes, for inclusion in the recovery plan. These lakes and rivers are situated across 20 provinces in China.

MWR urged all departments to devise tailored recovery strategies for each

river and lake. These solutions should focus on achieving goals, solving problems, and gaining good results.

To ensure effective recovery, MWR has mandated the full utilization of modern technologies to reach a thorough understanding of each water resource factor. Departments will then be able to better monitor and manage the recovery process.

International cooperation is expected between stakeholders. Li Guoying, minister of water resources, attended the 9th High Level Dialogue Conference of the China-Europe Water Platform on March 21, one day before World Water Day. Li called for strengthening cooperation between China and Europe in water management, both in policy and technology, emphasizing joint efforts to address global water challenges.