

# Manufacturing Cities to Pilot Tech Upgrade

## Policy

By CHEN Chunyou

China will launch a pilot program for technological transformation in manufacturing cities, according to a notice issued by the Ministry of Finance and the Ministry of Industry and Information Technology in early April.

The notice emphasizes the pivotal role of central fiscal funds in catalyzing the technological transformation. Major moves will be implemented during this pilot period, including establishing a series of flagship demonstration projects, and encouraging enterprises to update their equipment, refine their processes and harness digital technologies to empower their growth.

This will drive the transformation and modernization of traditional industries, elevate the manufacturing industry to a high-end, intelligent and environmentally friendly development, and accelerate the cultivation of new quality productive forces.



Technicians inspect the newly commissioned intelligent spinning production equipment at a fiber material production company in Qingdao, east China's Shandong province. (PHOTO: VCG)

Prefecture-level cities or above are eligible to apply for the pilot program. Local governments are encouraged to jointly apply with central state-owned enterprises. The varying levels of development across the eastern, central, west-

ern, and northeastern regions will be taken into account to ensure a balanced layout.

Pilot cities should select about three leading sectors in manufacturing as the focus of the technological trans-

formation. During the implementation of the pilot program, it is expected that over 80 percent of enterprises above designated size would undergo digital technological transformation. The select industries should align with national strategic development plans and industrial orientations, and reflect the regional industrial foundation and strengths, while possessing features such as large output value and high industrial concentration.

The notice said within the identified key industries for technological transformation, the cities should select leading enterprises, industry leaders and enterprises with crucial roles in the industrial chain. The application and promotion of digital intelligence technology, green technology and innovative products will be accelerated in industrial clusters and sci-tech industrial parks.

Each industry should have at least one leading enterprise or industry champion, and each city should have at least one major project with an investment exceeding 500 million RMB.

The central government will reward each selected city, awarding a grant of no more than 300 million RMB in total.

## Case Study

# Beijing Sci-tech Innovation Hub Completes a Decade

By Staff Reporters

In 2014, it was planned that Beijing would become an international science and technology innovation hub, complementing its roles as a political and cultural center. To help achieve that goal, the International Center for Science and Technology Innovation was established the same year.

Since then, the center has helped Beijing make remarkable progress, emerging as a global leader in scientific research, high-impact researchers and innovation indexes. For eight consecutive years, Beijing topped the charts in the number of papers published in prestigious journals, showcasing the city's prowess in research and knowledge creation.

According to the Nature Index Science Cities 2023 rankings, Beijing maintained its position as the world's top city for scientific publications in over 80 nature sciences research journals for eight years in a row.

Beijing has also seen a significant increase in invention patents, with the number per capita quadrupling over the decade. This surge, from 48.2 patents per 10,000 people in 2014 to 262.9 patents in 2023, reflects the city's vibrant ecosystem for innovation and its relentless pursuit of technological advancements. The Science Citation Index also recognized Beijing as a global leader, with 411 highly cited scientists, surpassing American city Boston's count of 371.

The center also plays a crucial role in driving economic growth and job creation. The jump in the annual technology contract turnover from 313.6 billion RMB in 2014 to 853.69 billion RMB in 2023 highlights the

commercial impact of innovations emerging from Beijing's research institutions and startups. The rise in the number of national high-tech enterprises from 10,400 in 2014 to 28,300 in 2023, along with 114 unicorn companies, has solidified Beijing's position as a magnet for tech-driven entrepreneurship.

One of the cornerstones of the center's success is its focus on enhancing the innovation ecosystem. This includes initiatives to optimize national laboratories, promote breakthrough technologies, and nurture high-quality professionals. Establishing new industries and clusters, such as AI, aerospace, and biomedicine, has diversified Beijing's economic landscape and contributed to its global reputation as an innovation hub.

Looking ahead, Beijing's development roadmap includes perfecting research systems, building world-class science parks, implementing institutional reforms to support innovation, fostering international collaboration, and driving sustainable development initiatives.

These efforts underscore the city's commitment to remaining at the forefront of global innovation and shape the future of technology and research.

Overall, the International Center for Science and Technology Innovation's journey over the past decade exemplifies China's dedication to advancing science, technology and global leadership in innovation. With a solid foundation and strategic initiatives, Beijing is poised to continue driving impactful innovations that benefit society and propel economic growth in the years to come.

# Wider Opening Up of Value-added Telecom Services

By LI Linxu

In its latest move to align with high-standard international economic and trade rules, China will expand the opening up of value-added telecommunication services in pilot areas.

Foreign ownership limit in some value-added telecommunication services will be lifted in the pilot areas, according to a circular recently released by the Ministry of Industry and Information Technology (MIIT).

These services include internet data

centers, content delivery networks, and internet service providers.

Online data processing and transaction processing, information publishing platforms and information delivery services (excluding services related to internet news information, online publishing, internet radio and television, and internet culture management), and information protection and processing services, are also among the listed services.

The pilot areas consist of Beijing's national comprehensive demonstration zone for expanding opening up in the ser-

vice sector, the Lingang New Area of the China (Shanghai) Pilot Free Trade Zone and the pioneer area for socialist modernization in Shanghai's Pudong New Area, the Hainan Free Trade Port, and the Shenzhen Pilot Demonstration Area of Socialism with Chinese Characteristics.

The move is a follow-up to this year's government work report, as well as last December's central economic work conference, both of which vowed to ease market access in services sector such as telecommunications and healthcare.

It is China's latest effort to promote

high-standard opening up, advance the high-quality development of the country's telecommunication industry, and strengthen international cooperation in the sector, said an official from MIIT, adding that the country will expand the scope of pilot areas in due course based on the implementation of the pilot programs.

The policy is expected to further optimize the business environment for the telecommunication industry and facilitate foreign companies to invest in the sector.

# China to Update Industrial Equipment

By CHEN Chunyou

China will increase industrial equipment investment by more than 25 percent by 2027 compared to 2023. The utilization rate of digital R&D and design tools will exceed 90 percent in major enterprises, and more than 75 percent of the key production processes will be numerically controlled.

This is the goal of an industrial equipment renewal action plan co-released in early April by seven government departments, including the Minis-

try of Industry and Information Technology (MIIT), the National Development and Reform Commission and the Ministry of Finance.

Four measures will be implemented: advanced equipment renewal, digital transformation, green equipment promotion, and safety level improvement.

According to the MIIT, industrial equipment renewal will drive investment and enhance advanced manufacturing capacity, which is vital to the construction of a modern industrial system.

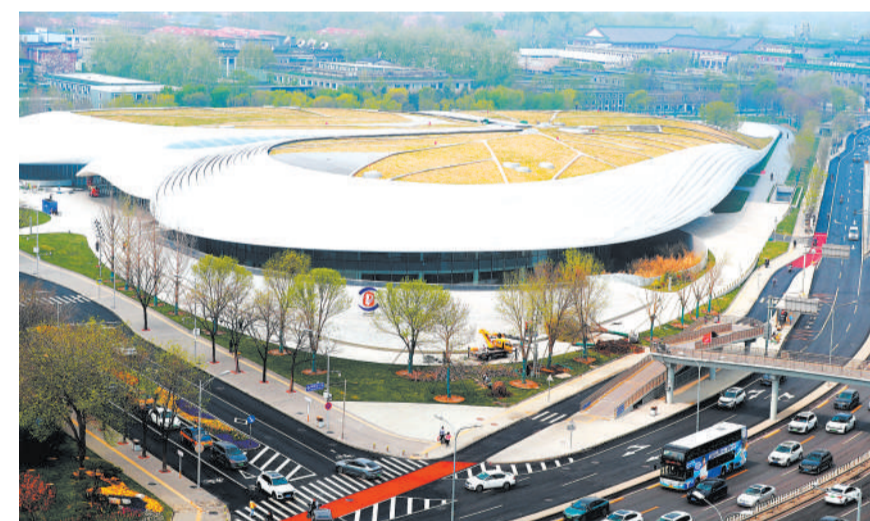
Digital transformation will cover all industrial enterprises above designated level in major industrial provinces, cities and key industrial parks. Production capacity below the benchmark level of energy efficiency in key industries will be phased out, and the energy efficiency of major energy-consuming equipment should meet the basic energy conservation requirement.

The action plan calls for eliminating outdated production equipment such as inefficient agricultural and con-

struction machinery. Enterprises in aviation, photovoltaics, power batteries and biological fermentation are encouraged to purchase advanced, high-tech and efficient equipment.

To push digital transformation, it stresses widespread application of technologies, such as AI, 5G and edge computing in the manufacturing process.

Special reboas by financial institutions will be set up for sci-tech innovation and technological transformation, and preferential tax policies will be also in place, as per the document.



The 2024 Zhongguancun Forum is scheduled to take place in Beijing from April 25 to 29. It will focus on cutting-edge fields such as AI, life sciences and new materials. The photo shows the permanent venue of the forum in Haidian district. (PHOTO: VCG)

# Digital Tech Unleashes New Quality Productive Forces

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Simultaneously, the digital economy enables global resource allocation and flow by transcending geographical constraints through online platforms. This efficient resource allocation expands market opportunities and encourages collaboration across regions and industries, facilitating the ongoing emergence of new quality productive forces.

## Creating new industries

Digital technology also promotes the emergence of new industries. In terms of enterprise development, China stands at the forefront globally in the expansion of digital economy unicorns and valuation as of 2022, capturing 38.0 percent and 47.1 percent of the total global share, respectively.

According to Cai Yuezhou, a research fellow from the Institute of Quantitative and Technological Economics at the Chinese Academy of Social Sciences, strategic emerging industries in

the digital realm, such as new energy, new materials, and advanced manufacturing, fall in the domain of new quality productivity.

Professors Gai Kaicheng and Han Wenlong from the Southwestern University underscored that the digital economy plays a pivotal role in supporting the development of new technologies, industries, and business models.

Firstly, it provides extensive application scenarios and data resources, driving the advancement of modern information technology.

Secondly, it fosters emerging industries, forging new avenues for high-quality productivity and optimizing industrial chains.

Thirdly, through data-driven innovation and digital integration, it forms the backbone of new industries and breakthrough technologies, accelerating progress in sectors such as new energy and biotechnology, they said.

## Furthering digitalization

In the future, digital technology will continue to enhance production capacity, particularly in human labor, means of labor, and the subject of labor.

With the proliferation of "black-light factories," the increasing application of drones, and growing commonality of "machine for man," many jobs requires a smaller workforce, leading to changes in worker requirements. Consequently, individuals are increasingly pursuing new occupations, especially those related to digital technology.

The *Future of Jobs Report 2023* published by the World Economic Forum predicts that global businesses will create approximately 69 million new jobs over the next five years. The fastest-growing types of jobs are predominantly driven by artificial intelligence and digitalization.

In China, the number of emerging digital occupations is also on the rise.

For example, according to a report released by the Chinese Academy of Personnel Sciences, the short video live broadcasting ecosystem has nurtured and spawned 174 new occupations including Internet marketer, store scouting person, and Internet recruiter. Moreover, it has introduced over 30 new career forms, encompassing roles like anchor, assistant broadcaster and product selector.

The increase in digitalization brings economic growth. According to the *2022 Digital China Development Report*, China's digital economy soared to 50.2 trillion RMB in 2022, accounting for 41.5 percent of the GDP, a significant increase compared to a decade ago. Forecasts indicate a continued upward trend, the digital economy is expected to reach 70.8 trillion RMB in 2025 and its contribution to China's GDP will exceed 50 percent in the near future.

# UNESCO Inspires Collaboration on Karst Research

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Prof. Dr. Shahbaz Khan, UNESCO representative to China, DPRK, Japan, Mongolia, and ROK, emphasized the role of karst landforms in carbon sequestration and maintaining ecological balance, stressing the continued efforts needed in this regard.

"This event, and the collaborations it fosters, like the China-Slovenia Joint Laboratory on Karst Geology and the Technical Committee on Karst under the International Organization for Standardization, are critical platforms for advancing our understanding and actions in these vital areas," he said.

The joint laboratory, initiated and supported by the Ministry of Science and Technology (MOST) in 2020, with

joint effort from China and Slovenia, aims to promote global monitoring and research in karst regions through cooperation.

The event, hosted by the CSTEC, aims to create a platform for domestic and foreign innovative entities in the karst carbon cycling field. It was jointly organized by the International Karst Research Center of UNESCO and the Institute of Karst Geology, Chinese Academy of Geological Sciences.

The organizers of this event also introduced the Talented Young Scientist Program initiated by MOST in 2013, welcoming foreign youth to conduct research in China and promote the long-term development of karst science and technology with their innovative thinking.