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Innovation Pathway New 5-Year Plan's Sci-tech Modernization Blueprint

By Staff Reporters

The Recommendations of the Central Committee of the Communist Party of China for Formulating the 15th Five-Year Plan for National Economic and Social Development, were made public on October 28.

According to the Recommendations, Chinese modernization must be underpinned by modernization in science and technology. They detail the goal of "Achieving Greater Self-Reliance and Strength in Science and Technology and Steering the Development of New Quality Productive Forces" in four specific aspects.

The four aspects of deployment, despite being in different areas, are interconnected, jointly forming the core support for the modernization of science and technology to empower Chinese modernization.

Original innovation and core technologies

The Recommendations stressed promoting advances in original innovation and breakthroughs in core technologies in key fields.

The 15th Five-Year Plan's call to strengthen original innovation was also a priority of the 13th and 14th Five-Year Plans. Chen Jin, director of the Research Center for Technological Innovation at Tsinghua University, believes that China's sci-tech innovation strategy is transforming from "scale expansion" to "quality leap."

"Original innovation, as the fundamental driving force for innovation-driven development, will play a key leading role," Chen said. "In the future, the vast number of scientific and technological personnel should pay more attention to the groundbreaking innovations that go from zero to one," he added.

However, breakthroughs in original innovation are not where it ends. "We must solve problems in practice through innovation and serve the construction of a modern industrial system," Chen emphasized.

Integrating technological and industrial innovation

The Recommendations advocate promoting full integration between technological and industrial innovation, something that Chinese Academy of Sciences (CAS) Academician Zhu Meifang, understands deeply. *See page 2*



The China Pavilion at the 8th China International Import Expo is being held in Shanghai from November 5 to 10. (PHOTO: ZHONG Jianli/ Science and Technology Daily)

CIIE Turns China's Vast Market into Global Opportunity

By ZHONG Jianli

China will continue to seek high-quality growth and unwaveringly promote high-standard opening up, making new contributions to the world economy. Chinese Premier Li Qiang reaffirmed that on November 5 during his keynote speech at the opening ceremony of the eighth China International Import Expo (CIIE) and the Hongqiao International Economic Forum in Shanghai.

This year's CIIE has participants from 155 countries, regions and international organizations with more than 4,000 overseas exhibitors, a record high. A total of 461 new products, technologies and services have made their global or China debut, demonstrating the vitality of China's super-large market.

Launchpad for innovation

"First launches" dominated the expo as companies from around the world used the CIIE to release their new products, highlighting technological advances

and industry applications.

AI remains a central theme. Since the CIIE first established an AI zone at its fifth edition, AI-driven solutions have continued to expand across industry boundaries and reshape competitive dynamics.

Hexagon unveiled AEON, an industrial humanoid robot making its global debut. Zhou Qing, a regional operations director of Hexagon Manufacturing Intelligence, said the robot integrates sensor suites with AI-driven task control and spatial intelligence to meet safety and automation needs across automotive, aerospace, transport and manufacturing sectors.

Siemens Healthineers staged the Asian premiere of three new scanners in its Photon-Counting CT family, and opened a dedicated AI zone to showcase its latest AI-enabled solutions for clinical precision decision.

"While promptly introducing our innovations to the Chinese market, we continue to drive local innovation, joining hands with our Chinese partners to con-

tribute to global medical progress," said Wang Hao, president of Siemens Healthineers Greater China, and a member of the company's Global Leadership Council.

MNCs' gateway to growth

Against a backdrop of global economic uncertainty, multinational corporations (MNCs) are using the expo to signal their stronger confidence in the Chinese market — bringing not only products but also investment plans.

Danish MNC Danfoss, active in China for nearly three decades, showcased energy-efficient solutions aimed at data centers, zero-carbon parks, smart agriculture and industrial decarbonization. "China's clearer green and low-carbon goals in its 15th Five-Year-Plan period are creating vast application scenarios for Danfoss' efficiency and electrification solutions," said Xu Yang, president of Danfoss China, calling the CIIE a key bridge for turning these opportunities into concrete cooperation. *See page 3*

STI Frontier

T1400: A Push Towards Tonne-class Era of Low-altitude Equipment

By LIN Yuchen & ZHU Hong

On October 30, the new unmanned helicopter Boying T1400 successfully conducted its first flight in the skies over Harbin, northeast China's Heilongjiang province. The T1400 is a heavy-lift unmanned helicopter developed by Harbin United Aircraft Technology Co., Ltd. With its powerful performance in payload, altitude, endurance and adaptability, the T1400 signals China's formal entry into the tonne-class low-altitude economy.

70 years of aviation heritage

The T1400's success is built on the foundation of more than seven decades of aviation expertise accumulated in Hei-

longjiang, one of China's earliest aviation industrial hubs. The province has built a complete ecosystem — from basic research to mass production — fostering generations of aircraft engineers and innovators.

With strong policy backing and a "green channel" support mechanism across provincial, municipal and district levels, United Aircraft's Harbin base achieved a remarkable feat: completing its large UAV industrial complex from groundbreaking to full operation in just one year.

Inside the intelligent factory, automated guided vehicles shuttle between digital production lines, transporting ma-

terials and equipment. The same base that mass-produces the Q100 agricultural drone has now given birth to the T1400 — a flagship product positioned to propel Heilongjiang's low-altitude economy toward the 100-billion-RMB scale.

Redefining UAV standards

Designed for extreme environments, the T1400 pushes the technological frontier of heavy-lift unmanned aerial vehicles (UAVs).

With a maximum takeoff weight of 1,400 kilograms and a payload capacity of 650 kilograms, it addresses a long-standing industry pain point — insufficient load and endurance. *See page 3*

Chad's Farming Prowess Grows with Chinese Expertise

International Cooperation

By Staff Reporters

The village of Midekin in Chad's Hadjer-Lamis Region looked festive. Villagers, local leaders and agricultural experts from China had gathered to celebrate a bumper harvest and the laughter of farmers mingling with the hum of harvesters reflected the cheerful and vibrant atmosphere.

Chad's major agricultural exports include sesame, gum arabic and cotton while rice is the main staple crop, crucial for food security. However, due to insufficient funds, outdated agricultural technology, and the hot and arid climate, the local rice production was consistently low for a long time. Each year, the government had to import vast quantities of rice, yet food shortages threatened the population.

In 2006, a team of Chinese experts arrived in Chad as part of China's agricultural technical assistance mission to Chad. For nearly two decades, they have cultivated farmland, constructed irrigation facilities, and introduced modern equipment such as transplanting machines and harvesters.

They have also promoted the use of high-quality rice seeds, helping Chadian farmers grow them on 600,000 hectares and trained nearly 3,000 farmers, agricultural officials and technicians.

Mahamat Ahmad Alhabo, secretary general of the Presidency of Chad, calls the high-yield rice cultivation techniques introduced by Chinese experts a breakthrough for his country.

"I am amazed by (the expertise) of our (Chinese) friends," he said. "They demonstrate that if we want to, in Chad we can produce enough rice to feed the population and contribute to a balanced diet. And what's more, we can export it for sale to generate income."

He Qiaosheng, head of the eighth group of Chinese experts, said more than 10 crop varieties have been selected, with three ready for inclusion in Chad's national seed catalog. *See page 4*

WEEKLY REVIEW

LAMOST Still Tops in Data Volume

According to the National Astronomical Observatories of the Chinese Academy of Sciences, as of October 2025, LAMOST — the Large Sky Area Multi-Object Fiber Spectroscopy Telescope — had cumulatively released 28.07 million spectra and 11.59 million sets of stellar parameters, maintaining the world's leading position in terms of data volume.

1st Remote Micro Eye Surgery Operated by 5G Robot

On November 2, the world's first remote robotic subretinal injection surgery spanning 4,200 kilometers was successfully carried out between the cities of Guangzhou in southeast China and Urumqi in the northwest, using a 5G robot for eye surgery independently developed by China. It marks a crucial leap from "feasibility" to "practicality" in the field of remote high-precision eye surgeries in China.

Certain AI Models Become Self-seeking

A new study from Carnegie Mellon University's School of Computer Science reveals that as AI systems become more intelligent, they tend to behave more selfishly. The researchers discovered that large language models (LLMs) with advanced reasoning abilities show self-centered behavior, struggle to cooperate, and may negatively impact group performance. In short, the better an LLM is at reasoning, the less cooperative it becomes.

Human Kidney Organoids Put into Pig Kidneys

A research team led by the Institute for Bioengineering of Catalonia, Spain, successfully combined human kidney organoids with pig kidneys outside the body and transplanted them back into the same animal, creating the world's first functional human-pig hybrid kidney. It could be a significant step toward repairing damaged organs before transplantation.

New Graphic

China is home to
over 20 million
IoT-related enterprises

The number of mobile
IoT connections reached
2.88 billion

The scale of core IoT
industry has exceeded
2.4 trillion RMB

Source: Ministry of Industry and Information Technology
Designed by Science and Technology Daily

WECHAT ACCOUNT



E-PAPER

