

New Stage in China's Digital Governance Transformation

Policy Express

By LIN Yuchen

The Cyberspace Administration of China has released a comprehensive guideline for the deployment and application of large AI models across government operations, marking a new stage in China's digital governance transformation.

The document standardizes how large AI models should be integrated into public administration, with the goal of improving efficiency, decision-making, and public services while ensuring safety, reliability and compliance.

At the heart of the guideline is the vision of "smart, secure and people-centered governance." AI models are expected to enhance complex semantic understanding, multimodal content generation, and knowledge integration, providing powerful tools to assist civil servants in delivering more convenient services to citizens and enterprises.

The framework identifies four core domains for AI applications: government services, social governance, administrative operations, and auxiliary decision-making.

In government services, AI-driven systems will support intelligent Q&A, automated form-filling, and personalized



Staff operate at an AI-driven system. (PHOTO: XINHUA)

guidance to streamline service delivery.

In social governance, technologies like computer vision and time-series modeling will strengthen infrastructure monitoring, risk prediction, and law enforcement efficiency.

For administrative operations, AI will assist in document drafting, information retrieval, and task distribution in government offices, reducing the burden on grassroots staff.

For auxiliary decision-making, AI will improve disaster prediction, emer-

gency response simulations, and policy evaluation through data-driven modeling and reasoning.

The guideline also emphasizes standardized deployment and collective management. Governments at all levels are instructed to avoid "fragmented" construction and share computing infrastructure under the "East Data, West Computing" project. Provinces, municipalities and autonomous regions are encouraged to establish unified service platforms to enable cross-departmental

AI model reuse, ensuring coordinated digital transformation.

Data governance forms the foundation of this effort. The authorities are required to build high-quality, traceable and authoritative datasets to train and refine government models. Strict management of data sources, security logs and algorithm behavior is mandated to prevent information leaks and protect state secrets.

Security and reliability are central to the framework. The document requires content auditing, algorithmic transparency, real-time risk controls, and user interface warnings to prevent misinformation and safeguard government credibility. It calls for comprehensive oversight throughout the model lifecycle — from training and deployment to operation and retirement — ensuring that AI remains an "auxiliary" tool rather than a decision-maker.

To sustain long-term success, the guideline introduces a continuous optimization mechanism, encouraging departments to update models regularly based on user feedback and technological advances. It also promotes the establishment of national standards, evaluation systems, and training programs to improve officials' AI literacy and strengthen public understanding of AI's role in governance.



Vibrant China

Building Global Hub for Data, Connectivity and Innovation in Hainan

By LIN Yuchen, HOU Meng & HE Peicong

In early 2025, Beijing-based Paratera, a computing power network veteran, chose the newly launched intelligent computing center in Lingshui Li autonomous county in Hainan province in south China for its AI model training and industrial simulation projects. The company needed powerful computing and stable data transmission — precisely what the center offers.

Such choices are not isolated cases. Across Hainan — from Haikou to Lingshui and beyond — digital services are empowering enterprises to break through global trade barriers. Cross-border data now flows directly to Southeast Asia in milliseconds, livestreams reach audiences in more than 10 countries, and digital manufacturing integrates seamlessly into global supply chains.

These regions, once considered a digital "dead-end" due to geographical and technological constraints, are undergoing a remarkable transformation — from a bottleneck to a seamless corridor — thanks to the power of digital services.

To help enterprises go global, first the digital infrastructure has to be built. Previously, Hainan's cross-border data had to be routed through Beijing, Shanghai, Guangzhou or Shenzhen, causing significant difficulties in international business communications.

That changed in 2024, when the Ministry of Industry and Information Technology approved the construction of the Haikou International Communication Gateway — the first such facility outside major Chinese cities in nearly three decades. This means Hainan will have direct data interconnection with Southeast Asia, gradually extending its reach to worldwide.

Infrastructure now forms the backbone of Hainan's transformation. Every village enjoys full fiber and 5G coverage, and cross-border submarine cables — one completed and two under construction — are connecting with Hong Kong,

Singapore and others, strengthening Hainan's role in global digital trade.

Parallely, there are projects like Hi-Cloud's Data Center, the world's first commercial underwater data center, located off the coast of Hainan. It uses seawater cooling and adaptive computing allocation to cut costs and deliver scalable processing for AI and cross-border data services.

With communication and computing power in place, Hainan is weaving a complete digital trade ecosystem — from application scenarios to policy safeguards. In the Haikou Fullsling Internet Industrial Park, Nigerian livestream host Usman sells to customers in Malaysia, Indonesia and the U.S., powered by a local media technology company and overseas warehouses that ensure delivery within days. Preferential tax policies, simplified customs declarations, and fast-track visas for foreign anchors make such success replicable.

The undersea data center in Lingshui has attracted heavyweights like China Telecom, Alibaba Cloud, and AI software provider SenseTime, becoming a nucleus for low-energy, high-efficiency data processing. Complementing these developments, the Hainan Free Trade Port has issued new data regulations and a "negative list" covering key sectors like deep-sea and seed industries — balancing openness with security.

Industrial clustering is amplifying the development momentum. The Haikou Fullsling Internet Industrial Park, home to more than 8,000 enterprises, including 31 Fortune 500 subsidiaries, generated over 50 billion RMB in digital economy revenue in 2024. Tailored services — from office incentives to R&D subsidies — are helping companies expand globally from this southern gateway.

According to a report released by the Chinese Academy of Sciences, Hainan's innovation environment rose six places year on year, reflecting a stronger foundation for sustainable digital growth. In 2024, the province's digital trade reached 28.79 billion RMB, with exports up nearly 80 percent.

Measures to Boost Innovative Enterprises in Digital Economy

By SUN Jin & LIU Yuanyuan

China's National Development and Reform Commission (NDRC), the National Data Administration, the Ministry of Finance and three other departments have released a set of measures to strengthen the cultivation of innovative enterprises in the digital economy.

The measures define innovative enterprises in the digital economy as enterprises that treat data as a key production factor and whose core drivers are digital-technology innovation, application-scenario innovation and data-value innovation. Such enterprises are characterized by high agility and rapid growth, and are seen as important practitioners for developing new quality productive forces.

Ten specific initiatives have been set out to accelerate the emergence of

more gazelle and unicorn enterprises in the digital economy.

A gazelle enterprise typically shows fast-growing revenue sales, generating at least a 20 percent revenue growth in about four years. A unicorn company is a private startup that has a valuation of more than one billion USD.

Key elements include strengthening multi-dimensional access to public data by encouraging local governments to establish public-data authorization and operation mechanisms and to build application-innovation ecosystems that ensure sustainable supply and reuse of public data.

Under the premise of data security and regulatory compliance, the measures also call for digital enterprises' fair participation in public-data development and exploring cost-sharing and revenue-sharing arrangements to meet

their early-stage data needs.

On the supply of computing resources, the measures push for more efficient matching of various computing power resources with enterprise demand. National hub nodes are encouraged to offer low-cost, wide-coverage, reliable and secure computing services to lower the threshold for digital enterprises to access necessary computing power.

To boost original and independent innovation, the measures call on state-owned companies, industry leaders, and platform enterprises to take the lead in advancing collaborative innovation. This includes integrating and sharing innovation resources and services with digital enterprises, accelerating the establishment of patent pools in key industrial sectors, and strengthening collaborative innovation across

entire industrial chains and platform ecosystems.

Local governments are encouraged to support innovative enterprises through intellectual property (IP) and R&D investment tailored to local conditions.

Additionally, a nationwide public IP service campaign has been proposed to help innovative digital enterprises.

The measures also require regional reform and development, as well as data management agencies, together with finance departments, to coordinate policies and services that support digital companies across their full lifecycle — from startup acceleration to scale-up — with the aim of fostering robust growth among high-potential digital enterprises.



Xiamen: Refining the Display Industry

Case Study

By LIN Yuchen & FU Xiaobo

Tianma Microelectronics unveiled its new flagship Organic Light-Emitting Diode (OLED) technology brand Tiangong Screen in Xiamen on September 19, marking a significant milestone for China's display industry. The brand, de-

veloped in the nation's pilot city for the optoelectronic display industry cluster, demonstrates how technological innovation and industrial policy are jointly driving China's leadership in advanced manufacturing.

The launch integrates breakthroughs such as self-developed optical sensing, dynamic refresh optimization, and Low Temperature Polycrystalline Oxide (LTPO) 3.0 technology. With harmful blue light reduced to 4.7 percent —

meeting medical-grade standards — the new screen protects visual health while delivering 95 percent color gamut coverage and ultra-low latency performance. As highlighted by experts, this represents not only advancement in product design but also the maturity of an independent innovation ecosystem led by domestic enterprises.

Behind these achievements lies a long-term strategy of combining innovation with capacity expansion. Since its founding in 1983, Tianma has grown into a global force by continuously upgrading production lines. The Tiangong Screen was developed on the TM18 production line in Xiamen, a sixth-generation flexible Active Matrix Organic Light Emitting Diode (AMOLED) facility, with a total investment of 48 billion RMB, the largest of its kind in China. In 2024, Tianma ranked third globally in shipments of flexible AMOLED smartphone panels, showing how domestic firms are entering the top tier of global competition.

Policy support has been essential. Xiamen Torch Development Zone for High Technology Industries, the city's industrial innovation engine, allocates more than two billion RMB annually for

research, technology breakthroughs, and talent recruitment. Over 30 innovation platforms, including Tianma's new display research institute, have been established, while 23 technical bottlenecks such as Micro-LED mass transfer have been overcome. With over 2,100 upstream and downstream enterprises, the zone now supports a complete display industry chain — from glass substrates to finished devices.

This synergy reflects China's broader strategy of building new quality productive forces through industrial clusters. By coordinating key enterprises, research institutes, and local governments, regions like Xiamen are supporting both innovation and resilience. Tianma's investment of more than 100 billion RMB in Xiamen since 2011 illustrates how national and local policies are aligning to create globally competitive industries.

The Tiangong Screen's significance, therefore, goes beyond technology. It is a vivid example of how China's display industry is moving toward self-reliance, international competitiveness and high-quality growth. As industrial chains deepen collaboration and innovation platforms expand, China is poised to transform its role from a global manufacturer to a global leader in advanced display technologies.

Torch Fire from Ice on Seafloor

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After the successful collection of the "source flame," researchers used the "Haima" ROV to place a permanent marker at the collection point on the seabed, inscribed with the Games' names, to commemorate this seminal moment.

Conquering major tech challenges
Collecting fire from the seabed was no easy task.

"The deep sea presents extreme challenges: high pressure, low temperatures, corrosion and darkness. While the 'Haima' ROV can dive to 4,500 meters, the pressure at that depth is equivalent to over one tonne pressing on a fingernail," explained Chen Zongheng, deputy director of the Methodology Institute at the Guangzhou Marine Geological Survey (GMGS).

Collecting the "source flame" required overcoming these obstacles. For instance, the combustion chamber had to withstand immense sea pressure, and specialized cameras needed pressure-resistant housing and precise remote control to document the process. In addition, filming with multiple ROVs faced challenges like maintaining position under pressure and filming in complete darkness. The entire process was recorded by an in-house developed, deep-sea 4K ultra-high-definition camera.

To train for the mission, the GMGS led the formation of a dedicated research team to the seabed in July 2024.

The team's "source flame" collection system overcame deep-sea pressure and sealing challenges, achieving breakthroughs in three key technologies: in-situ combustible ice collection, multi-channel gas flow precision control, and combustion environment maintenance and byproduct management, proving they were ready, willing and able.

All efforts worthwhile
Chen said that the team frequently uses the "Haima" for dives and has full confidence in it, but operating two ROVs from the same vessel is rare and requires extensive debugging.

"Seeing the complete footage of the 'Haima' on the seabed made all our efforts worthwhile," he said. Those efforts helped achieve a global milestone by being a pioneer in deep-sea ROV usage to integrate and deploy an in-situ combustible ice collection, decomposition, and ignition device, with the entire process recorded using ultra-high-definition equipment.

Featuring advanced unmanned deep-sea equipment, cutting-edge energy detection and ignition technologies, and strategic clean energy sources, the "source flame" collection — bridging sports and science — showcased China's innovation in deep-sea technology. It also highlighted the pioneering progress of the Guangdong-Hong Kong-Macao Greater Bay Area in marine equipment manufacturing, deep-sea exploration, and clean energy development.



Photo shows a manufacturing site in Xiamen. (PHOTO: XINHUA)