

Tech Innovates Hunan's Cultural Industry

Tech+Culture

By Staff Reporters

In the Malanshan (Changsha) Video Cultural and Creative Industrial Park in Hunan province in central China, the integration of culture and technology has not only improved the production efficiency of audio and video, but also given birth to new cultural formats.

Achieving assembly line production

One of the difficulties in the industrialization process for audiovisual production is the slow rendering speed. However, in Malanshan, the video supercomputing system's powerful processing capabilities have enhanced the rendering efficiency of a 4K commercial by over 100 times.

By integrating the Malanshan video industry cloud, enterprise private cloud, and external public cloud, the video supercomputing system has created a unified platform for computing power, storage, and bandwidth scheduling. It is capable of providing multi-tenant on-demand computing resource scheduling for ultra-high-definition video applications, while also serving as a computing power infrastructure for the metaverse industry.

This system enables performances by actors, scene arrangements, and lighting effects in a virtual studio. This innovation is expected to reduce the video production cycle and cost by



The Malanshan (Changsha) Video Cultural and Creative Industrial Park in Hunan province. (PHOTO: XINHUA)

more than 50 percent. In addition, the system supports cloud-based production, seamlessly connecting video shooting and production.

The system also has the potential to be applied in advanced manufacturing and new industrialization. In the future, there could be many new application scenarios by combining audiovisual with other industries.

Gathering innovative elements

Even if two persons are separated by mountains and seas, they can still feel like neighbors in a virtual scene simply by wearing special sunglasses.

This is not science fiction but the parallel vision project in the park. "We define it as the next generation of communication methods," said Zou Jun, the project leader of parallel vision. "It enables real-time face-to-face communication for remote business meetings, family exchanges, and educational activities."

The park is the cradle of innovative technologies. For example, a high-definition video can be quickly built with just text input, a video full of stereoscopic effects can be created by uploading a photo, and a corresponding style of music can be generated by la-

beling it with descriptors.

In February, a micro film about Peking Opera master Mei Lanfang created by the park team was released. Using AI to automatically generate content and extended reality technology, the film integrates the beauty of Chinese culture into the metaverse through the combination of the virtual and real, providing a digital display platform for traditional culture.

The emergence of new technologies has made the park a powerful magnet for gathering innovative talents and enterprises, leading the innovation of the cultural industry.

Regulating the E-bike Sector

By CHEN Chunyou & CUI Shuang

Chinese government departments recently released a slate of measures to promote the standardized and healthy development of the electric bicycle (e-bike) industry, and enhance the quality and safety level of related products.

A pivotal step in this direction is a specification formulated by the Ministry of Industry and Information Technology (MIIT), the State Administration for Market Regulation (SAMR) and the National Fire and Rescue Administration, which includes nine sections, ranging from enterprise layout, technological equipment to product quality and management, as well as intelligent and green manufacturing practices.

China is both a major producer and consumer of e-bikes, which have already

become an essential tool in people's daily transportation, especially in the food delivery sector.

According to MIIT, the number of e-bikes nationwide exceeds 350 million. In 2023, relevant domestic enterprises produced a total of 42.28 million e-bikes.

In addition to their popularity domestically, Chinese e-bikes also possess a significant market share globally. According to the China Bicycle Association, China's bicycle production and trade, including e-bikes, account for nearly 70 percent of the world's total.

However, the development of the e-bike industry still faces some challenges, such as a lack of leading enterprises and an urgency to refine its R&D capabilities.

For the sake of developing the

industry and improving product quality, MIIT solicited opinions on amending the mandatory national standard for e-bike charger safety technical requirements.

Usually, the charging devices of e-bikes are on-board chargers, which typically refer to chargers that are directly embedded into the e-bikes during manufacturing and cannot be detached with the aid of tools. The draft amendment adds a provision about protection against electric shocks, which may arise from this kind of design, stating that e-bike chargers shall not be designed, manufactured or used in on-board form.

Another rising concern is about lithium-ion batteries, which, together with lead-acid batteries, are the two main types of batteries used in e-

bikes. Currently, the proportion of domestic e-bike brands equipped with lithium-ion batteries exceeds 20 percent.

SAMR issued a mandatory national standard for the safety technical specification of lithium-ion batteries used in e-bikes in late April, which will take effect on November 1, 2024.

The specification stipulates the safety requirements for lithium-ion battery cells used in e-bikes and sets product safety thresholds for battery packs in seven aspects, such as electrical safety, mechanical safety, environmental safety and thermal diffusion, aiming to elevate the quality and safety level of e-bike lithium-ion batteries.

All lithium-ion batteries used in e-bikes are required to meet the requirements, said MIIT.

Guangxi Speeds up Sci-tech Transformation

Case Study

By LI Linxu

In its latest move to develop new quality productive forces, south China's Guangxi Zhuang Autonomous Region

is speeding up efforts to accelerate the transformation of sci-tech achievements.

During a recently held meeting to promote the industry-university-research cooperation in Guangxi, a series of agreements were reached among enterprises, universities, and research institutes.

The participating enterprises, including Guangxi Yuchai Machinery Group and Guangxi LiuGong Group, set out their technological innovation needs, while the participating universities and research institutes, such as Guangxi University and Guangxi Institute of Industrial Technology, released their needs for sci-tech achievements transformation.

Next, it will roll out a special campaign to further empower industrial innovation and development through the transformation of sci-tech achievements, according to an official from Guangxi's Science and Technology Department, adding that such efforts are an important part of the region's endeavor to promote high-quality development.

The campaign plans to solicit more than 1,000 sci-tech achievements from both inside and outside of Guangxi, and over 1,000 technological needs from enterprises in the region this year,

so as to advance the cooperation among these enterprises, universities, and research institutes.

A batch of new platforms and labs are expected to be built, and a range of replicable and promotable experience will be gained during the process.

In recent years, significant progress has been made by Guangxi to facilitate the transformation of sci-tech achievements.

To date, it has released four batches of pilot research bases for the transformation of sci-tech achievements.

Last year, the region also kicked off the construction of the first batch of demonstration zones for the transfer and transformation of sci-tech achievements.

Thanks to these concerted efforts, Guangxi climbed two spots to 22nd in the country's sci-tech innovation capabilities index in 2023, with more than 4,000 high-tech enterprises, according to official statistics.

Policy

Banks and Insurers to Strengthen 'Five Priorities'

By ZHONG Jianli

China's National Financial Regulatory Administration released a guideline for the banking and insurance sectors on May 9 to improve the work of five priority segments — technology finance, green finance, inclusive finance, pension finance and digital finance.

The guideline provides a comprehensive plan for financial institutions to jointly advance these five priorities.

Over the next five years, a multi-layered, widely accessible, diversified, and sustainable service system for the five priorities should be basically formed in the banking and insurance sectors, and drive the development of new quality productive forces.

To better serve sci-tech innovation, the guideline emphasizes enhancing the quality and efficiency of financial services, specifically providing comprehensive financial services throughout the life cycle of tech-based enterprises.

It advocates increasing credit lending within manageable risks, and meeting the medium and long-term financing needs of manufacturing industries. Advancing intellectual property financial services is also a priority.

Another focus is the "dual-carbon" goal, which involves strengthening the green financial system. This includes supporting energy conservation, emission and carbon reduction, afforestation, and disaster prevention in key industries and areas.

The guideline calls for developing

green financial products and services, exploring financing through environmental rights like carbon emission quotas, and promoting green insurance mechanisms to advance environmental protection, climate change initiatives, and the growth of green industries and technologies.

To enhance inclusive financial services, efforts should be made to offer sustained financial support to private, small and micro-businesses, and individual merchants to contribute to the comprehensive revitalization of rural areas.

To accelerate the development of pension finance, increased financial support should be given to the healthcare and elderly care industries to develop the "silver economy." Financial institutions should make their products and services more friendly to the elderly to improve the latter's service experience.

Finally, advancing digital finance is crucial. Banking and insurance institutions are encouraged to make digital transformations to improve their operational capabilities, enhance service quality, and reduce costs. Strengthening data security, network security, and risk management related to technological advancements is key to mitigating associated risks, according to the guideline.

The document reflects China's continuous efforts to promote high-quality development of the banking and insurance sectors and meet the diverse financial needs of the real economy and the public.



A solar thermal power station in Qinghai. (PHOTO: XINHUA)

Construction of Original Tech Sources Initiated

By CHEN Chunyou

Quantum information, brain-like intelligence and biomanufacturing are just a few of the 36 diverse fields of 52 original technology sources to be established with support from 40 central state-owned enterprises (SOEs).

This was announced recently when the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) launched the layout and construction of the second batch of central SOE original technology sources.

After the second phase of layout, 58 central SOEs will undertake the construction of 97 sources of original technologies.

The 24th meeting of the Central Commission for Comprehensively Deepening Reform, held in February 2022, approved the guiding opinions for promoting SOEs to build original technology sources.

Drawing from the experience of the first batch of construction, combined with new technological innovation trends and industrial advancements, as well as evolving needs of strategic

emerging and future industries, the SASAC has refined the overall layout of eight broad categories, 60 specific fields and 201 focused directions.

The second batch of central SOE original technology sources will further emphasize serving national strategic needs, focusing more on cutting-edge disruptive technology layout, and promoting industrial innovation through technological innovation, said the SASAC.

Central SOEs will be encouraged to intensify their efforts in constructing these two batches of sources, and accelerate the prioritized and strategically significant sources. They will also deeply implement 11 action plans, such as strengthening applied basic research, aiming to achieve a series of groundbreaking original achievements in quantum information, 6G, deep earth, deep sea, controlled nuclear fusion and cutting-edge materials.

Central SOEs will be urged to continuously improve their innovation systems, enhance their innovation capabilities, unleash their innovation vitality, and accelerate the development of new quality productive forces, according to the SASAC.



The Qinzhou port, Guangxi Zhuang Autonomous Region. (PHOTO: XINHUA)