



A view of Qingdao city in East China.
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Sci-tech innovation used to fuel city’s development

Qingdao issues policies to aid profitable progress of core industry

By WANG JINHUI
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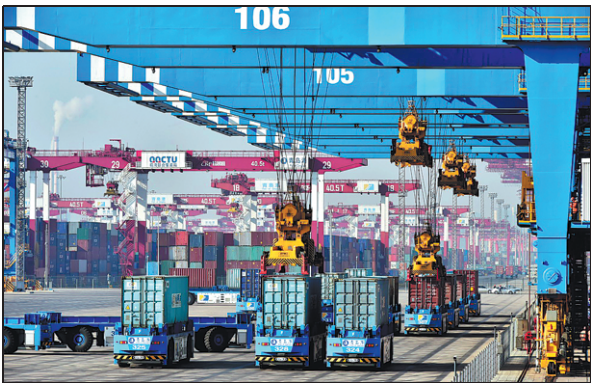
With the goal of building a technologically strong city with core competitiveness, Qingdao in East China's Shandong province has taken scientific and technological innovation as the hallmark of regional economic and social development and injected impetus into the nation's new quality productive forces.

Li Tianchuan, director at the Qingdao bureau of science and technology, said sci-tech is a field that requires continuous reform. Qingdao adheres to the dual-drive of sci-tech and institutions, focusing on reform in four major aspects: the transformation of scientific and technological achievements, investment, industry, and management.

He mentioned that from an institutional perspective, Qingdao is introducing an array of incentive policies to assist the transformation of sci-tech achievements.

The city also recruits talents with strategic thinking, experience and innovative capabilities to lead cutting-edge research projects. The first batch of which will focus on areas such as synthetic biology, biomedicine, artificial intelligence and tech services, Li noted.

Currently, Qingdao can claim more than 3,000 sci-tech achievements and it has established 23 national-level incubators and 70 innovation spaces. The city's ranking in the Global Innovation Index



The automatic wharf at Qingdao Port. PROVIDED TO CHINA DAILY

2024, which was released by the World Intellectual Property Organization in September, has risen from 80 in 2019 to 20 this year.

Qingdao has also introduced a stable growth mechanism for special funds and guided the mobilization of social capital to support innovation.

Data show that the local government — in conjunction with central State-owned enterprises and industry institutions — has established 144 funds with a total value of 145.9 billion yuan (\$20.18 billion). They have invested in more than 520 projects led by enterprises such as Kengic Intelligent Technology, Alnnovation, and Yisa.

At the same time, Qingdao focuses on major strategic and industrial needs, laying out more than 100 sci-tech projects each year.

For instance, it has built demonstration projects in liquid crystal display terminals, virtual reality and perovskite solar cells. It has also

delivered the world's first 100,000-ton large-scale aquaculture vessel and unveiled the world's first commercial carbon-fiber subway train.

Furthermore, Qingdao has launched key projects such as the Qingdao branch of the Jingjinji National Center of Technology Innovation, the Qingdao research institute of Beihang University, and Inspur's AI research center; and it is nurturing advanced manufacturing clusters for smart home appliances and rail transit equipment; established six new industrial demonstration bases; and possesses six national-level characteristic industry clusters for small and medium-sized enterprises.

Technological innovation serves as the fundamental driving force for the new industrialization, said Liu Dachuan, director of the Qingdao bureau of industry and information technology.

He added that in recent years, Qingdao has leveraged the role of

enterprises as the main force of innovation. The industrial sector has contributed more than 60 percent of the city's total societal research and development investment, Liu added.

As an example, key companies including Haier and Hisense in the smart home appliance industry are leading the wave of technological innovation through their own iterative upgrades. They have shed the label of “traditional home appliances” and are moving toward smart home appliances, the industrial internet, and the internet of things.

To date, the city houses more than 9,300 national sci-tech SMEs, nearly 8,000 national high-tech enterprises, 190 “hidden champions”, 39 national manufacturing single champions, and 17 unicorn enterprises.

Qingdao has stated its aim is to double five key indicators by 2028: the number of technology-based enterprises, the total amount of R&D funds in society, the number of innovation platforms at or above provincial level, the amount of technology contract transactions, and the number of technology brokers.

The city is making strides in boosting the integration of technology and industry, building a modern industrial system led by tech innovation, bolstering advantageous industries such as smart home appliances, rail transit equipment, and high-end chemicals, and starting a new round of equipment automation and digital upgrades.

It will develop clusters in strategic emerging industries such as next-generation information technology, AI, new energy, and new materials, laying out more than 100 key technology projects and major technological demonstration projects each year.

Tech focus to boost marine sector

By WANG JINHUI

The coastal city Qingdao is building a highland for the modern marine economy based on its sci-tech innovation and solid industrial foundation, local officials said.

At a recent conference on high-quality development of the marine economy, Zeng Zanrong, Party secretary of Qingdao, said that the city has superior natural marine resources, leading scientific research capabilities, a strong industrial base, and transport hubs.

“The ocean is Qingdao's most prominent feature and advantage,” he said.

Zeng emphasized that it is essential to promote the integration of marine sci-tech with industrial innovation, build vital platforms, enhance the role of enterprises, deepen industry-university-research collaborations, introduce talents, and continuously boost the driving force for high-quality development of the marine economy. At the same time, the city should adhere to the direction of high-end, intelligent, green, and cluster growth.

Qingdao has recently introduced an action plan for accelerating the construction of an international marine sci-tech innovation center,



The 100,000-ton smart fish farming ship in Qingdao.
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based on the Haichuang Plan issued in 2021.

Referred to as Haichuang Plan 2.0, it supports the construction of a modernized marine industry system that is intelligent, green, open and secure, helping Qingdao to lead China's marine technology self-reliance.

Li Tianchuan, director of the Qingdao bureau of science and technology, said the new plan aims to add more than 10 new innovation platforms, crack more than 100 marine technologies, attract 200 top talents, and introduce more than 1,000 high-tech enterprises in the next three years.

He noted that the new Haichuang Plan — leveraging the advantages of marine research, resource endowment and industrial foundation — highlights areas such as marine information, ships and marine equipment, intelligent maritime transportation, marine bioproducts, modern fisheries, seawater desalination and marine energy, as well as the future internet of things marine industries and deep-sea development.

Haichuang Plan 2.0 covers six major projects and 18 key tasks. Specifically, it proposes to build high-end marine platforms with a four-

VR conference shines light on industrial trends

By LI YYOU
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The 2024 World Virtual Reality Innovation Conference was held on Nov 12 and 13 in Laoshan district, Qingdao, as a part of the city's efforts to fuel the VR industry, which is considered to be a key driver for to innovation-driven development.

As an international summit in the field of VR, the conference gathered domestic industry elites, research experts and numerous managers from well-known companies, serving as a platform to showcase the latest technologies, products and concepts in the fields of VR and artificial intelligence.

During the conference, a VR industry development report of 2024 and a brief analysis of the VR industry's development trends were released, sparking extensive discussions on the current development of the industry and future trends.

The Action Plan for the Integration and Development of Virtual Reality and Industry Applications (2022-26) issued by five ministries including the Ministry of Industry and Information Technology proposed that by 2026, the overall scale of China's VR industry, including related hardware, software and applications, will exceed 350 billion yuan (\$48.4 billion).

Qingdao is one of the earliest cities in China to enter the track of developing the VR industry, according to officials. In 2016, Qingdao proposed the strategy to build itself into the “China's VR industry city”. In 2022, Shandong province designated Qingdao as the “center” for VR development in its industrial layout and initiated the construction of the VR industry park in Laoshan district.

Just before the conference,

Shandong province released its 2025-27 action plan to promote innovation and the high-quality development of 10 representative industries in the province. Qingdao is regarded as a hub to drive the usage scenarios, innovation and interaction of VR and AI.

In September 2022, the Qingdao Virtual Reality Industrial Park in Laoshan district became the city's first officially listed specialized park for the emerging industry. The park has gathered a number of high-profile companies such as Goertek and DPVR so far.

The first-phase project of VR integrated machines and optical modules in the industrial park has installed 22 production lines, forming a full industry chain of core component production. It includes integrated machines and optical modules, display modules, acoustic modules and chips, with an expected annual output value of 7 billion yuan.

In terms of technological innovation, Laoshan district has brought together 13 provincial-level innovation platforms such as the national VR innovation center and the national engineering laboratory for VR and AI technologies and applications, which will continuously empower the industry's development.

Additionally, the Qingdao city government worked with Laoshan district to introduce policies to support project settlement from 12 aspects. These include talent incentives, fixed asset investment and research and development innovation. With the improvement of the Qingdao VR industry, more related companies are investing in Qingdao. This year, the Qingdao Virtual Reality Industrial Park has introduced more than 30 high-quality projects in the VR field.



Visitors try a VR “roller coaster” at the 2024 World Virtual Reality Innovation Conference held in Qingdao recently.
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Environmental base aims to spur innovative solutions

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A construction agreement was recently signed in Beijing for the establishment of the China-Shanghai Cooperation Organization's ecological and environmental protection innovation base, which will be located in Qingdao, Shandong province.

The project is expected to support Qingdao's advancements in green technology, green finance and innovative green industries, opening up fresh avenues for a comprehensive green transformation within the city's economic society, local officials said.

It also signifies Shandong's commitment to setting new benchmarks for green and low-carbon initiatives while expanding collaborative efforts in the environmental sector. As a pivotal industrial hub and a strategic economic cornerstone in China, the province is deepening its initiatives to build pilot zones for green, low-carbon and high-quality development.

By strengthening the shift from old to new economic drivers of growth, Shandong is exploring transformative pathways for development and bolstering regional development vitality.

Qingdao, a key driving force for economic and social progress in the province, is at the forefront of propelling a comprehensive green transformation. During the 14th Five-Year Plan (2021-25), the city has recorded a cumulative 10.3 percent reduction in energy intensity, surpassing the national average by a significant margin.

Notably, five enterprises have been recognized as national leaders in energy efficiency and water conservation. By October, Qingdao boasted 65 companies listed on the national green manufacturing roster, leading the province.

Also, 47 companies have been acknowledged as provincial green factories, with an additional 14 companies distinguished for their management of green supply chains, both of which solidify Qingdao's position as a leader in green industrial practices within the province.

The establishment of the innovation base in Qingdao is intricately linked to the pioneering institutional innovations within the China-SCO Local Economic and Trade Cooperation Demonstration Area in Jiaozhou, a county-level city of Qingdao.

The demonstration area, along with the Jiaodong airport economic demonstration zone, is spearheading the SCO green and low-carbon sci-tech innovation park project. With a planned construction area of 450,000 square meters, it is expected to be completed by the end of this year.

This park project is dedicated to crafting a national-level comprehensive green and low-carbon industrial hub and a low-carbon demonstration zone aligned with the Belt and Road Initiative.

Leveraging the advantages of the SCO platform, the park aims to export solutions for green, low-carbon, and high-quality development to SCO member nations and countries and regions involved in the BRI.